



Assessing New Product Development strategies in the South African retail industry

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REMARKS

The reader is reminded of the following:

- This dissertation follows the article-based format stipulated by the Work Well Research Unit within North-West University's Faculty of Economic and Management Sciences and comprises three published scholarly articles in DHET-accredited journals.
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ABSTRACT

Title: Assessing New Product Development strategies in the South African retail industry

Small and medium-sized enterprises (SMEs) play a critical role in employment creation, innovation, and inclusive economic development in emerging economies. However, within South Africa's highly concentrated and buyer-dominated grocery retail sector, many SMEs struggle to secure and sustain access to formal retail supply chains despite demonstrating product creativity and entrepreneurial intent. Persistent new product failures and limited retailer listings suggest an innovation–commercialisation gap, in which firms generate ideas but lack the structured capabilities required to translate them into market-ready, retailer-compliant offerings. While prior research has largely focused on external constraints such as finance and policy support, comparatively little empirical attention has been paid to the internal new product development (NPD) capabilities that underpin SME market legitimacy and retail access.

This study addresses this gap by assessing the state of NPD strategies among South African SMEs and examining how organisational capabilities influence product success and participation in formal retail value chains. Grounded in the Resource-Based View, Dynamic Capabilities Theory, and signalling and institutional perspectives, the research conceptualises NPD as a strategic organisational capability through which SMEs sense opportunities, validate products, coordinate internally, and demonstrate reliability to powerful retail buyers.

A sequential explanatory mixed-methods design was employed. The quantitative phase surveyed 74 non-listed SMEs to evaluate the relationships between strategic orientation, research-led validation, and internal collaboration and their influence on retailer access outcomes. The qualitative phase comprised semi-structured interviews with 20 listed SMEs to explore how successful firms institutionalise, adapt, and sustain NPD practices in real-world retail contexts. Statistical analyses, including exploratory factor analysis and regression modelling, were integrated with reflexive thematic analysis to generate meta-inferences.

Findings indicate that structured, research-based NPD routines (particularly systematic validation, documentation, and cross-functional integration) significantly enhance SMEs' credibility and likelihood of retail inclusion. Conversely, informal and ad hoc approaches are associated with higher product failure and exclusion. The study develops an integrated Retail-Ready NPD

Capability Model demonstrating how internal capability configurations translate into external legitimacy and sustained market participation.

The thesis contributes theoretically by extending capability-based explanations of SME innovation within buyer-dominated systems, methodologically by illustrating the value of mixed-methods integration for capability research, and practically by providing actionable guidance for SMEs, retailers, and policymakers seeking to strengthen inclusive participation in formal retail markets. Collectively, the findings offer a contextually grounded framework for enhancing SME competitiveness and reducing new product failure in emerging-market retail environments.

Key words: New product development; SME innovation capability; Dynamic capabilities; Retail supply chains; Market access; Buyer power; Mixed-method.

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TABLE OF ABBREVIATIONS

ACAP	Absorptive capacity
AI	Artificial Intelligence
AVE	average variance extracted
CE	Concurrent Engineering
CM	Category Management
CSR	Corporate Social Responsibility
DCT	Dynamic Capabilities Theory
DTIC	Department of Trade, Industry and Competition
EFA	Exploratory Factor Analysis
ESD	enterprise and supplier development
FMCG	fast-moving consumer goods
GDP	Gross Domestic Product
IBC	International Business Conference
IBM SPSS	International Business Machine's Statistical Package for Social Science
IC	Internal Collaboration
KMO	Kaiser-Meyer-Olkin
KPI	Key Performance Indicators
LED	Local Economic Development
NPD	New Product Development
NR	NPD research
OECD	Organisation for Economic Co-operation and Development
OI	Open Innovation
OLS (regression)	Ordinary Least Squares regression
POPI	Protection of Personal Information
R&D	Research and Development
RBV	Resource-Based View
RR	Retailer relationship
RTA	Reflexive Thematic Analysis
SCS	Statistical Consultation Services
SEDA	Small Enterprise Development Agency

SEFA	Small Enterprise Finance Agency
SEM	Structural Equation Modelling
SKU	Stock Keeping Unit
SME	Small and Medium-sized Enterprise
SMME	Small, Medium and Micro Enterprises
SO	Strategic Orientation
SRM	Supplier Relationship Management
SSRN	Social Science Research Network
VIF	Variance Inflation Factors
VRIN	Valuable, Rare, Inimitable, and Non-substitutable

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CHAPTER 1: RESEARCH BOUNDARIES AND FRAMEWORK

1.1 INTRODUCTION

South Africa's grocery retail sector remains one of the most structurally concentrated industries in the national economy, with a small number of vertically integrated supermarket chains exerting significant buyer power and influencing supplier access (Competition Commission South Africa, 2019). This buyer-driven configuration creates stringent entry barriers for small and medium-sized enterprises (SMEs), who must comply with rigorous quality, packaging, certification, and supply-readiness criteria to obtain shelf space in formal retail channels (das Nair & Landani, 2020). As a result, SMEs face systemic challenges in achieving meaningful integration into formal value chains, despite their centrality to employment, innovation, and industrial diversification.

Within this environment, new product development (NPD) functions as both a mechanism of innovation and a strategic signal of supplier capability. NPD is defined as the structured transformation of ideas into market-ready offerings that satisfy customer needs and retailer specifications. Research consistently shows that SMEs with stronger innovation and NPD capabilities achieve superior performance, adaptability, and competitiveness (Isa *et al.*, 2024). Conversely, SMEs with weak NPD routines experience higher failure rates due to inadequate testing, insufficient market intelligence, fragmented collaboration, and limited investment in research-led development (Omari *et al.*, 2024). In the South African context, where buyer power is high and information asymmetry is pervasive, SMEs' ability to demonstrate validated, reliable, and compliant NPD processes becomes a critical determinant of legitimacy.

Innovation capability is increasingly conceptualised through the lens of dynamic capabilities, which emphasise a firm's ability to sense opportunities, seize them through strategic action, and transform internal routines to remain competitive amid environmental turbulence (Dejardin *et al.*, 2023). Dynamic capabilities are particularly important in emerging markets, where resource constraints, policy uncertainty, and infrastructure challenges compel SMEs to continuously adapt their innovation processes (Mashingaidze *et al.*, 2022). In buyer-dominated retail ecosystems, these capabilities are closely tied to structured NPD routines, quality management systems, and collaborative practices that reduce uncertainty for powerful retailers evaluating new supplier offerings.

Despite the proliferation of supplier development programmes and government initiatives intended to support SMEs' access to formal retail markets, empirical evidence indicates that relatively few SMEs secure listings or sustain long-term commercial relationships (das Nair & Landani, 2020). Many SMEs demonstrate creativity but lack the internal research, testing, documentation, and cross-functional collaboration required to meet retailer expectations. This results in a persistent innovation-access gap, where the ability to generate new product ideas does not translate into market entry.

Given these challenges, assessing the state of SME NPD strategies within South Africa's retail sector is essential. A deeper understanding of how SMEs design, implement, and adapt their NPD processes (and how these processes influence their interactions with retail buyers) can provide valuable insights for industrial policy, inclusive value chain development, and innovation capability strengthening. This study, therefore, investigates the internal and external capability configurations that underpin NPD success, focusing on how SMEs navigate structural power asymmetries, retailer requirements, and resource constraints in the pursuit of product legitimacy and retail access. Although the study draws implications for the broader retail environment, the empirical investigation is specifically bounded to SMEs participating in formal grocery retail supply chains linked to major South African retailers.

This study adopts a capability-based theoretical perspective, drawing primarily on the Resource-Based View and Dynamic Capabilities Theory to conceptualise new product development capability as a strategic organisational resource. These perspectives are complemented by institutional and signalling considerations to explain how SMEs translate internal NPD capabilities into externally credible indicators of legitimacy within buyer-dominated retail systems. This theoretical positioning informs the development of the research questions, the conceptual framework, and the study's empirical design.

1.2 BACKGROUND TO THE STUDY

1.2.1 Importance of SMEs in the South African Retail Industry

Small and medium-sized enterprises (SMEs) are widely recognised as critical contributors to economic growth, employment creation, and entrepreneurial activity in emerging economies (Quoc Trung *et al.*, 2021). In South Africa, SMEs play a particularly important role in retail-linked value chains, where they operate as manufacturers, processors, wholesalers, and niche suppliers serving both formal and informal retail markets (Department of Small Business Development, 2022). Longitudinal national data indicate that SMEs account for a substantial share of employment and business activity in trade-related sectors, underscoring their centrality to the retail economy (Department of Small Business Development, 2022).

Beyond their quantitative contribution, SMEs enhance competitive diversity and localisation within retail markets by supplying differentiated and locally produced goods that respond to consumer demand (Loury-Okoumba & Mafini, 2021). However, South Africa's grocery retail sector is characterised by high levels of concentration and buyer power, which significantly shape the conditions under which SMEs can access formal retail supply chains (Competition Commission South Africa, 2019). This study specifically focuses on SMEs operating within South Africa's formal grocery retail supply chains, with empirical attention centred on suppliers engaging with large national retail structures. Empirical research on supplier development in the South African retail industry indicates that dominant retailers impose stringent listing requirements, performance monitoring systems, and risk management practices that disproportionately affect smaller suppliers with limited capabilities (Breytenbach *et al.*, 2020).

Despite strong policy emphasis on SME development and localisation, evidence suggests that many South African SMEs remain marginalised from formal retail markets due to structural barriers and internal capability constraints (SEDA, 2022). Academic studies confirm that challenges related to scale, operational reliability, and compliance limit SMEs' ability to transition from informal trading to sustained participation in formal retail channels (Loury-Okoumba & Mafini, 2021). This tension between the recognised importance of SMEs and their constrained retail participation provides an important backdrop for examining innovation capability development within the sector (Quoc Trung *et al.*, 2021).

1.2.2 Importance of New Product Development in the South African Retail Industry

New product development (NPD) is a critical mechanism through which firms compete in retail environments characterised by intense competition and limited shelf space (Guzik, 2023). In such environments, retailers prioritise suppliers that demonstrate the ability to deliver differentiated, reliable, and market-responsive products, making innovation capability a central determinant of supplier selection (Neboh & Mbhele, 2020). As a result, continuous NPD is essential for sustaining competitiveness and securing long-term relationships with retailers (Bashir *et al.*, 2020).

For South African SMEs, NPD assumes greater importance because it functions not only as a value-creation activity but also as an indicator of supplier readiness and legitimacy in buyer-dominated retail markets (das Nair & Landani, 2020). Evidence from South African retail supplier development programmes indicates that suppliers lacking robust product development and innovation capabilities are more likely to experience rejection, delisting, or financial distress due to retailers' risk-averse procurement practices (Breytenbach *et al.*, 2020). National empirical data further indicate that many SMEs struggle to translate product ideas into commercially viable offerings due to weak planning, limited testing, and inadequate market validation processes (SEDA, 2022).

Emerging-market research reinforces these findings by demonstrating that firms relying on informal or ad hoc NPD approaches experience higher failure rates and lower innovation performance than firms that institutionalise structured development practices (Bashir *et al.*, 2020). These dynamics highlight the importance of NPD capability as a strategic requirement for SME participation in South Africa's formal retail sector (das Nair & Landani, 2020).

1.2.3 Classification of SMEs

SMEs are typically classified using quantitative criteria such as employee headcount and financial indicators, although specific thresholds vary across countries and sectors (Quoc Trung *et al.*, 2021). In empirical research, size-based classification remains widely used because it provides a consistent basis for comparing firms' resource endowments, organisational structures, and strategic constraints (Quoc Trung *et al.*, 2021). In emerging economies, SMEs are further distinguished from large firms by lower levels of formalisation, centralised decision-making, and constrained access to finance and advanced technologies (Isa *et al.*, 2024).

In South Africa, official SME classification frameworks distinguish among micro, small, and medium enterprises for regulatory and policy purposes, thereby shaping eligibility for funding, support programmes, and compliance requirements (SEDA, 2022). Longitudinal national data indicate that micro and small enterprises face greater survival challenges and market access barriers than medium-sized firms, particularly within trade and retail-related sectors (SEDA, 2022). From an innovation perspective, these distinctions are significant because firm size influences NPD investment capacity, process formalisation, and tolerance for innovation-related risk (Omari *et al.*, 2024).

1.2.4 The New Product Development Process

The new product development process is commonly described as a staged pathway that includes idea generation, screening, concept development, feasibility analysis, testing, and commercialisation (Guzik, 2023). However, contemporary NPD scholarship increasingly critiques rigid linear interpretations of this process and emphasises the importance of iteration, learning loops, and adaptive decision-making (Trott, 2022). Sectoral studies further demonstrate that NPD processes are frequently tailored to industry-specific conditions, technological capabilities, and market requirements (Wijewardhana *et al.*, 2021).

Empirical evidence shows that SMEs often struggle to implement structured NPD processes due to limited financial resources, skills shortages, and weak internal coordination mechanisms (Omari *et al.*, 2024). Research within South African retail supplier development programmes indicates that inadequate testing, documentation, and process discipline increase perceived risk for retailers evaluating new products (Breytenbach *et al.*, 2020). Consequently, the effectiveness of the NPD process plays a decisive role in determining whether SME products progress from concept to retail listing (das Nair & Landani, 2020).

1.2.5 Strategies for NPD Success in the Retail Industry

Research on NPD strategy consistently identifies systematic market research and early validation as critical drivers of product success, as these practices improve alignment between product concepts and market needs (Guzik, 2023). Emerging-market studies further indicate that firms achieve stronger NPD outcomes when they replace ad hoc decision-making with structured development practices and clear evaluation criteria (Bashir *et al.*, 2020). In retail environments,

these strategies are particularly important because product failures can lead to delisting and significant financial losses (Neboh & Mbhele, 2020).

Additional evidence highlights the importance of quality management systems, structured testing, and evidence-based learning in mediating the relationship between innovation effort and commercial performance (Omari *et al.*, 2024). SMEs that institutionalise validation, documentation, and continuous improvement routines are better positioned to reduce uncertainty for retail buyers and demonstrate operational readiness (Isa *et al.*, 2024). South African research confirms that retailers favour suppliers who exhibit adaptability, process discipline, and consistent performance, reinforcing the strategic importance of robust NPD capabilities for sustained retail participation (Breytenbach *et al.*, 2020).

1.3 PROBLEM STATEMENT

Despite sustained policy commitment to small and medium-sized enterprise (SME) development and innovation in South Africa, the failure rate of new products introduced by SMEs remains persistently high, particularly within formal retail supply chains (Bashir, Saeed & Abbas, 2020). Empirical evidence indicates that, although numerous enterprise and supplier development initiatives have been implemented by governments, retailers, and development agencies, relatively few SMEs achieve sustained commercial integration into buyer-dominated retail markets (das Nair & Landani, 2020). This pattern suggests that policy support alone has been insufficient to overcome the structural and capability-related barriers faced by SMEs seeking retail access.

Findings from the Competition Commission's Grocery Retail Market Inquiry further confirm that, while many SMEs produce innovative consumer goods, only a small proportion meet formal retailer listing requirements, which typically include compliance with stringent quality, packaging, traceability, and proof-of-supply standards (Competition Commission South Africa, 2019). Retailers' emphasis on risk management and supply reliability means that SMEs unable to demonstrate consistent operational and product performance are frequently excluded, regardless of product novelty (Breytenbach *et al.*, 2020). As a result, innovation alone does not guarantee market access within concentrated retail systems.

This outcome highlights a persistent innovation–commercialisation gap, whereby SMEs demonstrate creativity and market awareness but lack the structured, research-based new product

development (NPD) processes required to translate ideas into products that meet formal retail standards (Guzik, 2023). Recent studies show that weaknesses in NPD planning, insufficient market research, and limited validation and testing practices significantly increase the likelihood of new product failure among SMEs (Falahat *et al.*, 2024). Without formalised NPD routines, SMEs often rely on informal experimentation, resulting in inconsistent product quality, poor scalability, and higher product mortality rates (Bashir *et al.*, 2020).

Although the literature on SME innovation in emerging economies has expanded, much of this research has focused on external constraints such as access to finance, regulatory barriers, and institutional support mechanisms, with comparatively less attention paid to the internal NPD capabilities that underpin sustained competitiveness (Quoc Trung *et al.*, 2021). Moreover, existing empirical studies have predominantly examined manufacturing- or technology-oriented SMEs, offering limited insight into buyer-dominated retail systems in which supplier legitimacy is shaped primarily by retailer-defined performance and compliance criteria rather than by producer capabilities alone (das Nair & Landani, 2020). Consequently, there remains insufficient understanding of which specific NPD strategies enable SMEs to progress from ideation to formal retail listing and long-term participation.

This gap is further compounded by the absence of empirically grounded, context-specific models that link internal NPD capability development to external buyer requirements in the South African retail environment. While international research has proposed innovation capability and NPD process frameworks applicable across sectors, these models often fail to account for the realities of emerging-market SMEs operating under conditions of retail concentration, asymmetric power relations, and institutional inequality (Trott, 2022; Wijewardhana *et al.*, 2021). As a result, SMEs lack practical guidance on how to structure, validate, and institutionalise NPD processes to reduce product failure risk and enhance retailer acceptance.

At the policy level, the capability deficit undermines South Africa's development ambitions because national planning frameworks explicitly position SMMEs as central to inclusive growth and structural transformation objectives, yet implementation gaps persist in translating policy intent into sustained enterprise outcomes (Matsieli & Mutula, 2025; Farisani, 2022). Empirical evidence from South Africa indicates that, although policy and legal frameworks exist to support

SMMEs, meaningful support often fails to reach firms consistently in practice, thereby weakening the intended impact of development strategies (Farisani, 2022). In parallel, innovation capability is repeatedly shown to be a significant driver of SME growth and resilience in South Africa, implying that weak innovation and commercialisation capability directly limit employment creation and broader development outcomes (Maingehama, 2025). More broadly, research on African industrialisation and global value chains indicates that limited upgrading and weak capability development constrain the potential for value addition and job creation, reinforcing the need to understand how SMEs build capabilities that enable sustained participation in formal value chains (Jegede & Muchie, 2024). Accordingly, addressing the mismatch between policy ambition and market outcomes requires a deeper empirical understanding of SME-level innovation and commercialisation processes within buyer-dominated retail supply chains (Matsieli & Mutula, 2025; Jegede & Muchie, 2024).

Accordingly, the research problem addressed in this study is the limited empirical understanding of how South African SMEs develop, adapt, and institutionalise NPD strategies that reduce product failure and meet formal retailer listing requirements. The study therefore seeks to assess the state of NPD strategies among SMEs in the South African retail industry, identify the internal capability factors contributing to product failure, and determine which dimensions of NPD capability most effectively support new product success and sustained retail access. This problem statement provides the foundation for the research aim, objectives, and questions presented in the subsequent sections.

1.4 RESEARCH AIM AND OBJECTIVES

1.4.1 Research Aim

The overarching aim of this study was to assess the state of new product development (NPD) strategies among small and medium-sized enterprises (SMEs) operating within South Africa's formal grocery retail sector, with a specific focus on understanding how SMEs develop, adapt, and institutionalise capabilities that enhance product success and enable entry into formal retail supply chains. The study aimed to integrate empirical findings from both unlisted and listed SMEs to provide a comprehensive analysis of the NPD ecosystem and to identify capability areas that can reduce the high rate of new product failure among South African firms.

1.4.2 Research Objectives

To achieve the above aim, the study pursued the following specific objectives:

1. To assess the current state of new product development (NPD) practices among SMEs in South Africa's retail sector, with particular attention to the use of structured, research-based, and collaborative approaches.
2. To identify the key factors contributing to new product failure among South African SMEs in the retail industry, including internal capability constraints and external market barriers.
3. To examine the NPD strategies and dynamic capability dimensions that enable SMEs to mitigate product failure risks and meet retailer listing and compliance requirements.
4. To synthesise theoretical and empirical insights from global and South African literature to contextualise NPD capability development within emerging-market retail supply chains.
5. To develop an integrated conceptual model—the *Retail-Ready NPD Capability Model*—that links internal NPD competencies to buyer legitimacy and SME competitiveness in South Africa's retail environment.

Each of these objectives was operationalised through both quantitative and qualitative phases, enabling triangulation and contextual depth. The quantitative strand focused on measuring key constructs and testing relationships statistically, while the qualitative strand explored how these capabilities materialised in real-world SME experiences.

1.5 RESEARCH QUESTIONS

The study was guided by the following primary and subsidiary research questions. Each question reflects the investigative sequence of the mixed-methods design and aligns with the stated objectives.

1.5.1 Primary Research Question

How did South African SMEs develop and institutionalise NPD strategies capable of improving product success and facilitating access to the formal retail sector?

1.5.2 Secondary Research Questions

1. What was the current state of NPD practices among SMEs in South Africa's retail industry?

2. What factors contributed to high new product failure rates among South African SMEs in the retail sector?
3. Which NPD strategies and capability dimensions enabled SMEs to overcome barriers to product success and retail access?
4. What insights did the literature and empirical evidence provide regarding best practices for NPD implementation in emerging markets?
5. How could SME new product failure rates be reduced through structured, evidence-based innovative practices aligned with retailer requirements?

These questions collectively structured the research process, informed the survey and interview instruments, and guided the integration of quantitative and qualitative results into a unified explanatory model.

1.6 RESEARCH METHODOLOGY

1.6.1. Phase 1: Literature Study

A comprehensive literature study was undertaken as the first phase of the research to establish a robust theoretical and conceptual foundation for the empirical investigation. The primary purpose of this phase was to develop a systematic understanding of the key constructs underpinning the study, namely new product development (NPD) capability, strategic orientation, internal collaboration, research-led validation, and retailer-supplier relationships within buyer-dominated retail environments. The literature study further informed the development of the study's theoretical framework, conceptual model, research hypotheses, and empirical instruments.

Secondary data for the literature review were drawn from a wide range of peer-reviewed academic sources, including recent scholarly journals and books on new product development (NPD) strategies, capability development, and innovation outcomes in small and medium-sized enterprises. The review focused on identifying best practices in NPD, common causes of NPD failure, and structural challenges faced by SMEs operating in buyer-dominated market environments. Electronic searches were conducted across multiple international bibliographic databases, including EBSCOhost, Emerald Insight, Scopus, Web of Science, PubMed, JSTOR, and

ScienceDirect, to ensure broad disciplinary coverage and access to high-quality research. In addition to academic literature, selected industry and policy reports were consulted to provide contextual insight into retail markets and SME participation. These included publications from Statistics South Africa and international market intelligence providers such as Nielsen, Mintel, and Euromonitor, as well as other relevant publicly available online materials.

Consistent with the thesis's article-based format and the study's objectives, the literature review was structured around several interrelated focus areas that collectively informed the empirical design. First, the literature examined new product development in SMEs, with specific attention to innovation under resource constraints and institutional uncertainty. This included analysis of NPD processes, success and failure factors, and the distinctive characteristics of SME innovation compared to large firms, particularly in emerging-market contexts. Second, a theoretical foundation was established through engagement with the Resource-Based View (RBV) and Dynamic Capabilities Theory (DCT). These perspectives were used to conceptualise NPD capability as a strategic organisational resource and to explain how SMEs sense, seize, and transform opportunities in turbulent and buyer-dominated environments. The literature further incorporates signalling and institutional perspectives to explain how SMEs convert internal capabilities into credible external signals that reduce information asymmetry and facilitate retail access.

Third, the literature explored key organisational capability domains relevant to SME participation in formal retail supply chains. These included strategic orientation, internal cross-functional collaboration, and NPD research capability, with emphasis on how structured validation, documentation, and learning routines support both innovation performance and relational legitimacy with powerful retail buyers. Fourth, the review examined the structure and dynamics of the South African retail sector, focusing on buyer power, supplier development programmes, listing requirements, and institutional barriers to SME participation. This contextual analysis was essential for grounding the study within the realities of a highly concentrated retail environment and for interpreting empirical findings.

The outcomes of the literature study directly informed the development of the conceptual framework and hypotheses, guided the operationalisation of constructs in the quantitative survey

instrument, and shaped the design of the qualitative interview protocol. In this way, Phase 1 of the research ensured that the empirical phase was theoretically grounded, contextually relevant, and methodologically coherent. A description of the empirical research design and procedures employed in Phase 2 of the study is presented in the following sections.

1.6.2. Empirical Study

1.6.2.1 Research Design

This study adopted a sequential explanatory mixed-methods research design, in which quantitative data collection and analysis preceded qualitative inquiry. Such designs involve an initial quantitative phase followed by a qualitative phase to explain, elaborate on, and contextualise the quantitative results in greater depth, making them well-suited to research on complex organisational phenomena. This approach has been articulated in methodological debates and applied in studies demonstrating that the qualitative component provides interpretive depth, thereby enhancing understanding of patterns revealed in quantitative data (Toyon, 2021; Majuddin *et al.*, 2022; Kerari *et al.*, 2023). The design was selected to address the study's aim of examining how small and medium-sized enterprises (SMEs) develop and institutionalise new product development (NPD) strategies within the constraints of formal retail supply chains. The quantitative phase provided a structured assessment of NPD-related practices and capabilities across a sample of SMEs, and of the factors with which these SMEs struggled, while the qualitative phase enabled deeper exploration of how successful SMEs overcame these struggles to be listed at the major retailer and how they sustain their listings. Furthermore, the quantitative study examined factors affecting success in securing product listings at a major retailer, whereas the qualitative study explores success in sustaining shelf presence and retailer listings. Integration of the two strands was planned at the interpretation stage to support comprehensive explanation and theory development.

1.6.2.2. Research Philosophy

The research was grounded in a pragmatic research paradigm, which places primary emphasis on the research problem and the practical value of knowledge production rather than commitment to a single philosophical tradition. Pragmatism has been widely advanced as a suitable foundation for mixed-methods research because it supports methodological pluralism and allows researchers to

draw on diverse forms of evidence to address applied, real-world issues (Kaushik & Walsh, 2019; Allemang *et al.*, 2022). Within this study, a pragmatic stance enabled the purposeful integration of quantitative and qualitative approaches to develop both explanatory and contextual understandings of how SMEs build new product development capabilities. Quantitative methods were used to identify patterns and variations across firms, while qualitative methods provided insight into the SMEs' experiences, interpretations, and organisational processes. This philosophical orientation was consistent with the study's applied objectives, supporting the generation of findings relevant to SMEs, retail partners, and policymakers (Foster, 2024; Gillespie *et al.*, 2024; Shan, 2023).

1.6.2.3 Research Approach and Strategy

A sequential explanatory mixed-methods strategy was adopted, in which results from the quantitative phase informed the emphasis and structure of the subsequent qualitative inquiry. This approach enables initial statistical patterns to be explored in greater depth through follow up qualitative investigation, strengthening explanation and interpretation (Toyon, 2021; Kerari *et al.*, 2023). In the study, the quantitative questionnaire assessed the weaknesses of unlisted SMEs and then administered the same questions to listed SMEs to examine how those weaknesses were overcome. The quantitative phase was conducted using a deductive logic, drawing on theory-informed constructs related to new product development practices and organisational capability. In contrast, the qualitative phase was guided by an inductive orientation, allowing themes and meanings to emerge from participants' experiences and organisational contexts. The deliberate combination of deductive and inductive reasoning reflects the iterative character of contemporary mixed-methods research and supports the development of integrated explanations that link empirical findings with theoretical insight (Bazeley, 2024; Foster, 2024).

1.6.2.4 Population and Sampling

The study focused on two groups of small and medium-sized enterprises (SMEs) that were directly engaged in formal retail supply chains. The quantitative phase targeted SMEs that were not yet listed but were actively seeking entry into the major retailer under study, whereas the qualitative phase focused on SMEs that were already supplying that retailer. Across both phases, purposive sampling was used to ensure that participating firms were well aligned with the study's analytical emphasis on new product development (NPD) capability within consumer goods sectors. This

sampling approach is widely regarded as appropriate for explanatory and mixed-methods research where conceptual relevance and information richness are prioritised over statistical representativeness (Ahmad & Wilkins, 2025; Mwita, 2022).

The quantitative sample comprised 74 SMEs from a total population size of 92, greater than commonly cited minimum thresholds for multivariate techniques such as exploratory factor analysis and regression modelling in applied business research (Hair *et al.*, 2019). The qualitative phase included 20 SMEs, although data saturation was reached at the end of 17th interview, and in-depth analysis, consistent with contemporary qualitative research guidance emphasising saturation as a function of study scope, sample specificity, and analytic goals (Hennink & Kaiser, 2022).

1.6.2.5 Research Instruments

1.6.2.5.1 Quantitative Instrument

Quantitative data were collected using a structured questionnaire designed to examine new product development (NPD) practices and associated organisational capabilities within SMEs. Key constructs were operationalised through Likert-type items measured on a four-point response scale ranging from strongly disagree (1) to strongly agree (4). Likert-type scales are commonly employed in organisational, innovation, and management research as they provide a systematic and interpretable means of capturing attitudes, practices, and self-reported behaviours across firms (Hair *et al.*, 2019). The questionnaire was administered electronically and included items addressing strategic orientation, NPD-related activities, internal coordination mechanisms, and interactions with retail buyers. Firm-level characteristics, including enterprise size, firm age, and sector classification, were incorporated as contextual variables to support the interpretation and analysis of the results.

1.6.2.5.2 Qualitative Instrument

Qualitative data were gathered through semi-structured interviews, guided by a flexible interview protocol. This approach was selected to ensure consistent coverage of core topics while allowing scope for participants to elaborate on their experiences, interpretations, and organisational processes in-depth (Brinkmann & Kvale, 2019; Kabir, 2024). Semi-structured interviewing is widely recognised as appropriate for exploratory and explanatory qualitative research where both

comparability and depth of insight are required (Brinkmann & Kvale, 2019; Kabir, 2024). Interview questions focused on NPD processes, organisational practices, and SMEs' interactions with retail buyers, enabling exploration of how strategic and operational decisions were enacted within the constraints of formal retail supply chains & internal capability constraints.

1.6.2.6 Data Collection Procedures

Quantitative data were collected using an online survey platform (Google Forms) and distributed through SME development networks and retailer-linked enterprise support program. Participants were provided with an information sheet outlining the study's purpose, voluntary nature, and confidentiality provisions prior to participation.

Qualitative data were collected through face-to-face individual interviews. Primary data from the interviews were recorded using a digital recorder and stored in Atlas.ti™ version 8 for Windows. Interviews were audio-recorded with participants' consent and transcribed verbatim for analysis. Data collection was scheduled to accommodate participants' operational constraints and peak retail trading periods.

1.6.2.7. Data Analysis Techniques

Quantitative data analysis was conducted with support from the Statistical Consultation Services (SCS) at North-West University using IBM SPSS Statistics (Version 28). Initial analysis involved descriptive statistics to summarise key characteristics of the dataset and provide an overview of SME new product development (NPD) practices and organisational capabilities (Hair *et al.*, 2019; Rahman & Muktadir, 2021). Bivariate correlation analysis was subsequently conducted to examine associations between the independent constructs and NPD performance outcomes, followed by multiple linear regression analysis to assess the predictive relationships among variables (Rahman & Muktadir, 2021).

Prior to conducting regression and factor analyses, the suitability of the data was evaluated by assessing sampling adequacy and inter-item correlations using the Kaiser-Meyer-Olkin (KMO) measure and Bartlett's Test of Sphericity (Ghorbany *et al.*, 2025). These tests confirmed that the data met the assumptions required for factor analytic procedures. Exploratory factor analysis (EFA) was then employed to examine the underlying factor structure and support construct

validity, consistent with contemporary best practice guidance for exploratory research designs in applied business and management research (Hair *et al.*, 2019). Internal consistency reliability was assessed using Cronbach's alpha coefficients, interpreted in accordance with current psychometric recommendations that emphasise contextual and construct-specific evaluation of reliability estimates (Zumbo, 2025).

Qualitative data were analysed using reflexive thematic analysis, following a structured six-phase analytical process. This approach emphasises researcher reflexivity, analytic transparency, and coherence among data, codes, and themes, making it well-suited to the interpretive examination of organisational practices and experiences (Naeem *et al.*, 2023).

Integration of quantitative and qualitative findings was achieved through a meta-inference process, in which statistical results were systematically compared and interpreted alongside qualitative explanations. This integrative strategy enabled the development of a coherent and comprehensive account of SME NPD capability development by linking observed patterns with contextualised organisational insights, in line with contemporary mixed-methods integration principles (Bazeley, 2024).

1.7 VALIDITY, RELIABILITY, AND TRUSTWORTHINESS

Quantitative validity was addressed through a combination of content validation procedures and statistical assessment of construct structure. Prior to full data collection, the survey instrument was subjected to expert review (from the Statistical Consultancy Services of North-West University) and pilot testing to evaluate item clarity, construct coverage, and response interpretation. Pilot testing is widely recommended in survey research to identify ambiguities, refine item wording, and strengthen instrument validity before large-scale administration (Taherdoost, 2021).

Construct validity was examined using exploratory factor analysis (EFA), which is appropriate when constructs have not been extensively validated within a specific empirical context (Goretzko *et al.*, 2019). The suitability of the dataset for factor analysis was assessed using the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's Test of Sphericity, both of which are recommended preliminary checks for evaluating factorability in exploratory research (Goretzko *et al.*, 2019). Factor retention decisions were informed by eigenvalues greater than one, item

communalities exceeding 0.40, and factor loadings of 0.50 or higher, consistent with current best practice guidance for EFA in applied social science research (Rogers, 2022).

Evidence of convergent and discriminant validity was further assessed by examining the average variance extracted (AVE) and inter-construct correlations. AVE values meeting or exceeding recommended thresholds indicate that items share sufficient variance with their underlying construct, while low inter-construct correlations support conceptual distinctiveness between constructs (Goretzko *et al.*, 2019).

Reliability was evaluated using Cronbach's alpha coefficients for each construct. Alpha values were interpreted in line with contemporary psychometric guidance, which recognises that acceptable thresholds depend on scale length, construct complexity, and research purpose, particularly in exploratory studies (Shrestha, 2021). Where reliability values fell below acceptable levels, affected subscales were excluded to preserve measurement integrity.

Qualitative trustworthiness was ensured through attention to credibility, dependability, confirmability, and transferability (Kiger & Varpio, 2020). These criteria were operationalised through transparent documentation of analytic procedures, reflexive engagement with the data, and the use of thick contextual description to support interpretive depth. Such practices are widely recommended for strengthening the quality and rigour of qualitative analysis in organisational and applied research (Kiger & Varpio, 2020).

Together, these procedures support the validity, reliability, and trustworthiness of the study findings and provide a robust methodological foundation for examining SME new product development capability within formal retail supply chains.

1.8 ETHICAL CONSIDERATIONS

Ethical approval for the study was granted by the North-West University Economic and Management Sciences Research Ethics Committee (Approval No. NWU-00574-20-A4). The study was conducted in accordance with contemporary principles of ethical research involving human participants, including informed consent, voluntary participation, confidentiality, and responsible data management. Prior to data collection, participants were provided with clear information

regarding the purpose of the study, the nature of their involvement, and the intended use of the data, and written informed consent was obtained (Xu *et al.*, 2020; Kazembe *et al.*, 2024).

Participation in both the survey and interview phases was entirely voluntary, and participants were informed of their right to withdraw at any stage without penalty. Given the commercial sensitivity of interactions between SMEs and large retail buyers, additional measures were implemented to safeguard participant anonymity and minimise potential reputational or competitive risk (Cragg *et al.*, 2025; Stenfors *et al.*, 2020). These measures included anonymising organisational identifiers, aggregating results, and securely storing all digital data in accordance with institutional and data protection requirements. Such precautions are widely recommended in organisational and business research where disclosure could result in professional or economic harm to participants (Cragg *et al.*, 2025; Stenfors *et al.*, 2020).

1.9 SIGNIFICANCE AND CONTRIBUTION OF THE STUDY

This study makes theoretical, methodological, and practical contributions to the literature on SME innovation and participation in formal retail supply chains. Theoretically, it extends research on SME innovation capability by demonstrating how structured NPD research capability functions as a critical mechanism through which SMEs convert innovation intent into market legitimacy within buyer-dominated systems. In doing so, the study contributes to emerging debates on capability signalling and legitimacy formation under conditions of information asymmetry in concentrated markets (Kohtamäki *et al.*, 2019).

Methodologically, the study illustrates the value of a sequential explanatory mixed-methods design for examining complex organisational capabilities that cannot be fully understood through a single methodological lens. By integrating quantitative pattern identification with qualitative process explanation, the study demonstrates how mixed-methods approaches can yield richer, more credible explanations of capability development and enactment in applied business contexts (Bazeley, 2024).

In practice, the findings provide empirically grounded insights for SMEs, retail buyers, and policymakers by identifying the specific capability domains that support sustained success in new product development and in accessing formal retail markets. These insights have direct relevance for SME capability-building initiatives, retailer-supplier development programmes, and public

policy interventions aimed at strengthening innovation outcomes in constrained and highly competitive supply chain environments (das Nair & Landani, 2020; Saghiri & Mirzabeiki, 2021).

1.10 SCOPE OF THE STUDY

This study examined how small and medium-sized enterprises (SMEs) develop and institutionalise new product development (NPD) capabilities within formal national retail supply chains. The empirical focus was on SMEs operating in consumer goods sectors, particularly those seeking entry into, or already participating in, highly concentrated grocery retail markets. The study was conducted within the South African context, where buyer dominance, stringent listing requirements, and information asymmetries shape supplier participation.

A sequential explanatory mixed-methods design was employed. The quantitative phase focused on unlisted SMEs and examined the relationships between internal NPD capability domains—strategic orientation, NPD research capability, and internal collaboration—and perceived outcomes related to retail access and engagement. The qualitative phase focused on SMEs already supplying at least one national retail chain and explored how these capabilities were enacted, adapted, and sustained in practice following retail listing.

The scope of the study was limited to the supplier perspective and did not include primary data from retail buyers or other supply chain intermediaries. The analysis concentrated on internal organisational capabilities rather than external market conditions, pricing strategies, or retailer-specific procurement policies. The study aimed to generate explanatory and practice-oriented insights into SME capability development rather than to produce statistically generalisable findings across all sectors or geographic contexts.

1.11 LIMITATIONS OF THE STUDY

Several limitations should be considered when interpreting the findings of this study. First, the quantitative phase relied on a non-probability, purposive sample of SMEs, which limits the statistical generalisability of the results. While the sample size was adequate for exploratory factor analysis and regression, the findings should be interpreted as analytical rather than population-representative.

Second, the study employed self-reported data, which may be subject to response bias, particularly regarding perceptions of organisational capability and retailer engagement. Although steps were taken to enhance the measurement of validity and reliability, the possibility of social desirability or recall bias cannot be fully excluded.

Third, the qualitative phase focused exclusively on SMEs that had already secured retail listings. While this enabled in-depth exploration of post-listing capability enactment, it excludes the perspectives of unsuccessful applicants and retail buyers themselves. As a result, the findings reflect the supplier-side interpretation of retailer expectations and constraints rather than a fully dyadic view of retailer-supplier relationships.

Fourth, the study adopted a cross-sectional design, capturing capability development at a specific point in time. This limits the ability to observe how NPD capabilities evolve longitudinally, particularly in response to changing retail requirements, market shocks, or organisational learning.

Finally, the study was conducted among SMEs linked to a single major retailer in South Africa due to constraints on accessibility. While the findings are relevant to other buyer-dominated and emerging-market contexts, caution should be exercised when extrapolating the results to different retailer group settings.

1.12 CHAPTER LAYOUT AND SUMMARY

This thesis is organised into seven chapters, each building upon the previous to provide a coherent narrative and empirical foundation for understanding the state of new product development (NPD) strategies in South Africa's retail industry. The structure integrates theoretical, methodological, and empirical components within an article-based PhD framework, ensuring both academic rigour and alignment with publication standards.

Chapter 1: Introduction

Chapter 1 introduced the study and established its conceptual and contextual foundation. It outlined the background of the South African retail sector and the relevance of NPD for SME competitiveness. The chapter presented the research problem, aim, objectives, and questions, while detailing the methodological design, validity and reliability measures, ethical considerations, and

significance of the study. It concluded with an overview of the thesis structure to guide the reader through subsequent chapters.

Chapter 2: Literature Review

Chapter 2 provides a comprehensive and critical review of the existing literature on new product development, innovation capability, and SME competitiveness in emerging markets. It synthesises global theoretical perspectives such as dynamic capabilities, absorptive capacity, and innovation systems theory, with regional and South African empirical studies. The chapter identifies knowledge gaps regarding SME innovation in buyer-dominated retail systems and situates the current study within that scholarly discourse. The chapter concludes with a theoretical framework underpinning the research.

Chapter 3: Research Methodology

Chapter 3 elaborates on the methodological procedures summarised in Chapter 1. It explains the philosophical underpinnings of the pragmatic mixed-methods paradigm and details the sequential explanatory design employed to gather and integrate quantitative and qualitative data. The chapter covers sampling strategies, data collection instruments, analytical techniques, validity and reliability measures, and ethical protocols. It concludes by explaining how quantitative and qualitative results were integrated to produce a comprehensive understanding of SME NPD capability development in South Africa.

Chapter 4: Article 1 – Evaluating Factors that Impact SME’S NPD Success in the South African Retail Industry (Nurture Journal publication)

Chapter 4 presents the first article, published in *Nurture* (Online ISSN: 1994-1633/ Print ISSN: 1994-1625). This paper investigates the foundational NPD capabilities required for SMEs to transition from informal innovation to formal market readiness. Using quantitative survey data from 74 unlisted SMEs, it analyses the relationships between strategic orientation, internal collaboration, and NPD research capability in predicting retailer access outcomes. The article contributes to the theoretical refinement of innovation capability constructs and establishes the empirical base for the broader thesis.

Chapter 5: Article 2 – Assessing the State of NPD Strategies in the South African Retail Industry (IBC Conference publication)

Chapter 5 presents the second article, published at the *International Business Conference (IBC) 2025*. This study builds on the findings of the first paper by examining how the implementation of NPD strategy and internal collaboration practices affect SME performance post-listing. Drawing on qualitative insights from 20 listed SMEs, the paper explores the processes by which firms institutionalise innovation routines, maintain relationships with retailers, and adapt to market feedback. The article provides a detailed account of how SMEs operationalise the dynamic capabilities necessary for sustained product success.

Chapter 6: Article 3 – Toward an Integrated Model of SME New Product Development Capability in South Africa’s Retail Sector: A Synthesis of Qualitative and Quantitative Findings (Published in Scientific Culture)

Chapter 6 comprises the third article, published in *Scientific Culture* (ISSN: 2408-0071). This integrative paper synthesises the findings from both quantitative and qualitative phases to assess the overall state of NPD strategies within the South African retail sector. It presents the final Retail-Ready NPD Capability Model, demonstrating how NPD research capability mediates the relationship between innovation intent and market legitimacy. The article concludes by articulating evidence-based policy and managerial recommendations to enhance SME participation in formal retail supply chains.

Chapter 7: Summary and proposed model

The final chapter consolidates the entire thesis by synthesising theoretical, empirical, and practical insights. It revisits the research objectives and demonstrates how they were achieved through the integrated findings of the three articles. The chapter also discusses the study’s overall contributions to theory, methodology, policy, and practice. Limitations and opportunities for future research are outlined, followed by specific recommendations for SMEs, retailers, and policymakers seeking to advance inclusive innovation ecosystems in South Africa.



Figure 1.1: Overview of the study (*Source: Own compilation*)

1.13 SUMMARY

This chapter introduced the study by outlining the research context, problem statement, objectives, scope, and significance of the investigation. It situated the study within the challenges faced by small and medium-sized enterprises in developing and institutionalising new product development capabilities within buyer-dominated retail environments and provided an overview of the methodological approach adopted. The chapter established the study's foundation by clarifying its purpose and contribution. Chapter 2 presents a critical review of the relevant literature and theoretical perspectives that inform the conceptual framework and the research design.

CHAPTER 2: LITERATURE REVIEW

2.1 INTRODUCTION

This chapter critically reviews the literature on new product development (NPD), innovation capability, and small and medium-sized enterprise (SME) participation in formal retail supply chains, with particular emphasis on emerging-market contexts. The purpose of the literature review is to establish the theoretical and empirical foundations that inform the study, identify gaps in existing scholarship, and provide a basis for developing the theoretical and conceptual frameworks and the research hypotheses guiding the empirical investigation.

Contemporary innovation research increasingly treats new product development (NPD) as an organisationally embedded, capability-driven process, rather than a stand-alone technical task (Marzi *et al.*, 2021; Robson *et al.*, 2023). Recent NPD scholarship shows that development outcomes are strongly influenced by firms' capabilities to execute NPD stages effectively, integrate knowledge across functions, and coordinate internal mechanisms that convert ideas into competitive offerings (Marzi *et al.*, 2021; Robson *et al.*, 2023). This capability logic is particularly relevant for SMEs because resource constraints make NPD performance highly dependent on how well firms mobilise and recombine knowledge and routines, including structured learning processes that support development and commercialisation (Idrees *et al.*, 2022). In highly concentrated, buyer-dominated retail environments, these organisational capabilities must also be observable and credible: SMEs often need to demonstrate evidence of product research, validation and operational readiness to reduce buyer uncertainty and overcome supplier entry and continuity barriers (das Nair & Landani, 2021; Nabee & Swanepoel, 2021; Ma *et al.*, 2021).

In emerging economies such as South Africa, small and medium-sized enterprises (SMEs) constitute a critical pillar of employment generation, entrepreneurial dynamism, and inclusive economic participation, yet their effective integration into formal retail value chains remains structurally constrained (World Bank, 2024; Statistics South Africa, 2024). Recent national evidence indicates that although SMEs account for approximately 60% of total employment and represent over 90% of formally registered firms, their contribution to sustained economic growth and market penetration remains limited due to persistent structural barriers, including regulatory complexity, infrastructural deficits, limited access to finance, and constrained organisational

capabilities (Statistics South Africa, 2024; Department of Small Business Development, 2024). Comparative international analyses further demonstrate that SMEs in emerging economies encounter systemic disadvantages within highly concentrated value chains, where asymmetric bargaining power, weak supplier development mechanisms, and limited upgrading opportunities inhibit firm-level learning, innovation, and scalability (OECD, 2022; OECD, 2023). These challenges are particularly acute within buyer-dominated retail systems, in which a small number of large retailers exert significant control over procurement standards, pricing structures, and market entry conditions, thereby reinforcing exclusionary dynamics and entrenching unequal power relations between dominant buyers and smaller suppliers (Zhao, 2019; Visser and Alford, 2024; OECD, 2023).

This chapter, therefore, synthesises literature across four interrelated domains: SME innovation in emerging markets; NPD processes, models, and failure patterns; buyer-dominated retail systems; and capability-based and institutional theories. Through critical integration of these strands, the chapter positions the study within the broader scholarly discourse and establishes the foundation for examining how SMEs develop and institutionalise NPD capabilities in constrained retail environments.

2.1.1 Scope and Approach to the Literature Review

The literature review adopted a selective, integrative, and theory-driven approach, consistent with the study's explanatory aims and the article-based structure of the thesis. Rather than attempting an exhaustive review of all literature related to innovation or small business management, the review prioritised sources that directly inform the study's focus on new product development (NPD) capability, organisational processes, and SME participation in buyer-dominated retail systems.

The scope of the review was guided by two key considerations. First, literature was selected for its relevance to explaining how SMEs develop, institutionalise, and signal NPD capability under conditions of resource constraints and asymmetric buyer power. Second, emphasis was placed on contemporary theoretical and empirical research, with particular attention to peer-reviewed studies published since 2019, supplemented by foundational works as necessary to establish theoretical grounding.

The review synthesises literature across multiple domains, including SME innovation in emerging-market contexts, NPD processes and models, buyer-dominated value chains, and organisational capability development. These bodies of literature are integrated using the Resource-Based View, Dynamic Capabilities Theory, and institutional and signalling perspectives, which together provide a coherent analytical lens for examining both internal capability development and external legitimacy dynamics.

This approach ensures that the literature review is purpose-built to support the development of the theoretical framework, conceptual model, and hypotheses that guide the study's empirical phases. In doing so, the chapter moves beyond descriptive summarisation to provide a critical synthesis that directly underpins the research design and analytical strategy adopted in subsequent chapters.

2.2 SMES AND INNOVATION IN EMERGING-MARKET CONTEXTS

SMEs are widely recognised as key drivers of innovation, employment generation, and inclusive economic growth in emerging economies, where they are central to entrepreneurship dynamics and productive upgrading (OECD, 2023). However, their innovation trajectories differ markedly from those of large firms because resource scarcity and capability constraints interact with institutional environments to shape how SMEs search for, develop, and implement innovations (Istipliler *et al.*, 2023). Recent research further shows that SME innovation performance in emerging economies is shaped not only by internal capabilities but also by institutional voids and asymmetric governance conditions that influence opportunities for learning and upgrading (Colovic & Schruoffenegger, 2021).

Innovation among SMEs in emerging markets often takes incremental, adaptive, and frugal forms that prioritise affordability, feasibility under constraint, and responsiveness to local demand conditions over radical technological novelty (Hossain, 2020). While these approaches can enhance flexibility under resource scarcity, they can also constrain SMEs' ability to produce the formal evidence, codified routines, and audit-ready documentation that powerful downstream buyers frequently require in regulated procurement environments (Curto & Gaspar, 2021).

In South Africa, Micro, Small and Medium Enterprises contribute 87% to employment and SMEs contribute over 40% to Gross Domestic Product (GDP), yet continue to face barriers linked to finance constraints, infrastructural reliability, and managerial capability limitations that undermine

performance and growth (OECD, 2023; UNDP, 2024). National firm-level evidence on market structure and concentration underscores that competitive conditions and power asymmetries can be especially pronounced in downstream markets, which has implications for SME market access and upgrading potential (OECD, 2023). This pattern supports the argument that organisational capability development (rather than innovation intent alone) often becomes decisive for sustained competitiveness under concentrated market conditions (Istipliler *et al.*, 2023).

Recent literature further emphasises that SME innovation outcomes are strongly shaped by external legitimacy and relational embeddedness, particularly in buyer-driven supply chains where lead firms structure requirements and control access to high-value markets (Talay *et al.*, 2020). Accordingly, SMEs seeking access to formal retail markets must align innovation activities with buyer expectations regarding quality assurance, compliance, traceability, and risk mitigation, which function as governance mechanisms as much as operational standards (Curto & Gaspar, 2021). As a result, innovation success increasingly depends on SMEs' ability to combine internal learning with externally recognisable validation signals that meet buyer governance thresholds and reduce perceived procurement risk (Talay *et al.*, 2020).

2.3 NEW PRODUCT DEVELOPMENT (NPD): PROCESSES, OUTCOMES, AND FAILURE IN SMES

New product development (NPD) constitutes a core organisational capability through which firms translate innovation intent into commercially viable offerings and sustain competitive advantage in dynamic markets (Iqbal & Suzianti, 2021). For small and medium-sized enterprises (SMEs), NPD assumes heightened strategic significance because product innovation represents a primary mechanism for differentiation, growth, and market positioning under conditions of resource scarcity and intense competition (Saunila, 2020; Falahat *et al.*, 2020). Despite its centrality, empirical evidence consistently reports elevated rates of NPD failure among SMEs, particularly in consumer goods sectors characterised by rapid demand shifts, regulatory complexity, and buyer-dominated governance structures (Victory *et al.*, 2021). These failures are increasingly attributed not to deficits in creativity or entrepreneurial orientation, but rather to weaknesses in organisational capability, process integration, and the alignment of innovation activities with external market requirements (Iqbal & Suzianti, 2021).

Recent scholarship emphasises that SME NPD outcomes are shaped by the interaction between internal resource constraints and external institutional and governance conditions, particularly within concentrated retail markets where dominant buyers impose stringent compliance, quality, and documentation requirements (Talay *et al.*, 2020). Under such conditions, the design and governance of NPD processes become critical mechanisms through which SMEs manage uncertainty, coordinate learning, and generate the formal validation signals necessary for market access (Cooper & Sommer, 2020). Consequently, understanding the strengths and limitations of dominant NPD process models is essential for explaining both NPD performance and failure patterns in SME contexts.

2.3.1 Dominant NPD Process Models

The NPD literature identifies a range of process models designed to structure innovation activities, reduce uncertainty, and enhance decision quality across the idea-to-launch pathway (Cooper, 2021; Iqbal & Suzianti, 2021). These models differ in their underlying assumptions regarding uncertainty, organisational learning, managerial control, and market responsiveness, and are commonly categorised into linear, iterative, integrated, and hybrid process architectures (Iqbal & Suzianti, 2021; Cooper & Sommer, 2020). Early NPD frameworks primarily adopted linear and stage-based logics, emphasising formal planning, sequential execution, and rigorous evaluation to control development risk (Cooper & Sommer, 2020). More recent approaches, however, advocate iterative learning, experimentation, and integration of customer feedback in response to heightened environmental dynamism and technological change (Žužek *et al.*, 2021; Iqbal & Suzianti, 2021).

2.3.1.1 Linear and Stage-Gated Models

Linear and stage-gated models conceptualise NPD as a sequence of discrete stages separated by formal decision points, with the objective of progressively reducing technical, commercial, and operational uncertainty (Cooper, 2022; Žužek *et al.*, 2021). The most widely diffused of these models is the Stage-Gate framework, which structures development activities around defined phases of scoping, business case development, product design, testing, and commercialisation, each governed by managerial evaluation checkpoints (Cooper, 2022).

Despite these limitations, linear and stage-gated models remain influential within buyer-dominated retail systems, where formal evaluation routines, testing documentation, and compliance

certification function as central governance mechanisms for supplier selection and risk management (das Nair & Landani, 2021; Talay *et al.*, 2022). In such contexts, structured NPD processes provide legitimacy signals that enable SMEs to demonstrate reliability, product conformity, and operational competence to dominant buyers (Cooper, 2022; Nabee & Swanepoel, 2021)

2.3.1.2 Iterative, Agile, and Lean Models

Iterative NPD models, including agile and lean-informed development, emphasise short learning cycles, rapid prototyping, and systematic customer feedback as mechanisms to reduce uncertainty and accelerate the refinement of product concepts (Palsodkar *et al.*, 2023). In contrast to linear execution logics, these approaches conceptualise NPD as an adaptive sequence of experiments in which features and specifications evolve through repeated testing, evaluation, and reprioritisation. Recent synthesis research shows that agile NPD has increasingly been adopted as a structured response to volatile markets because it strengthens feedback integration, enhances responsiveness, and supports continuous learning across the development pathway (Palsodkar *et al.*, 2023).

In parallel, lean product development scholarship frames “speed” and “learning” as performance outcomes of disciplined waste reduction and front-loaded problem-solving, which together can shorten lead times and improve development quality (Cukor *et al.*, 2023). Empirical work in physical product development further indicates that agile practices can generate perceived added value, particularly through stronger customer integration and improved responsiveness, while also surfacing practical barriers related to acceptance and day-to-day integration into established development routines (Heimicke *et al.*, 2021).

For SMEs specifically, agile and lean approaches are frequently positioned as risk-mitigating logics because they enable earlier market validation, staged commitment of scarce resources, and faster detection of misalignment before costs escalate (Žužek *et al.*, 2021). However, the relatively light formalisation typical of many iterative approaches can create a misfit in buyer-dominated, highly regulated retail environments, where legitimacy is partly demonstrated through audit-ready documentation, traceability, and conformity evidence rather than product performance alone (Fraser *et al.*, 2020).

In such contexts, suppliers may face additional compliance burdens because buyers' requirements and acceptance of audit schemes are shaped by risk profiles, regulatory demands, and reputation protection, thereby increasing the evidentiary threshold for market access (Adebiyi & Bourquin, 2025). Accordingly, for resource-constrained SMEs, the implementation challenge is not merely "being iterative," but ensuring that iterative learning outputs are translated into formal artefacts (e.g., specifications, test records, quality documentation) that remain intelligible and credible to external evaluators (Fraser *et al.*, 2020).

2.3.1.3 Integrated and Concurrent Models

Integrated and concurrent NPD models seek to overcome the rigidity of linear development approaches by enabling overlapping activities, cross-functional collaboration, and early integration of market and technical knowledge, thereby improving development speed and responsiveness (Žužek *et al.*, 2021; Cooper & Sommer, 2020). These models conceptualise NPD as a networked learning system in which design, engineering, manufacturing, procurement, and marketing functions interact continuously throughout the development lifecycle to reduce rework and enhance knowledge integration (Cooper & Sommer, 2020; Heimicke *et al.*, 2021). Empirical evidence indicates that concurrent development architectures reduce cycle time, strengthen cross-functional coordination, and enhance the quality of innovation, particularly in technologically intensive and uncertain environments (Žužek *et al.*, 2021; Heimicke *et al.*, 2021).

However, integrated and concurrent models impose substantial coordination, managerial, and absorptive capacity demands, which frequently exceed the organisational capabilities of SMEs operating under conditions of financial, human, and infrastructural resource scarcity (Iqbal & Suzianti, 2021; Saunila, 2020). The complexity inherent in overlapping task execution may amplify information overload, role ambiguity, and decision latency, particularly in firms lacking formal project governance structures and cross-functional integration routines (Heimicke *et al.*, 2021; Iqbal & Suzianti, 2021). Consequently, while integrated and concurrent models offer strong theoretical performance advantages, their practical effectiveness remains contingent upon organisational maturity, managerial capability, and internal coordination capacity (Cooper & Sommer, 2020; Žužek *et al.*, 2021).

2.3.1.4 Hybrid NPD Models

In response to the limitations of both linear and purely iterative frameworks, contemporary scholarship increasingly advocates hybrid NPD models that integrate structured governance mechanisms with agile experimentation and iterative learning loops (Cooper & Sommer, 2020; Cocchi *et al.*, 2021). Hybrid architectures embed short development sprints within gated decision structures, thereby enabling rapid customer feedback and iterative refinement while preserving formal accountability, compliance, and portfolio control (Cooper & Sommer, 2020; Žužek *et al.*, 2021). Empirical studies demonstrate that hybrid models improve development efficiency, enhance product–market alignment, and reduce late-stage uncertainty, particularly in complex and regulated environments characterised by technological dynamism and market volatility (Cocchi *et al.*, 2021; Heimicke *et al.*, 2021).

For SMEs, hybrid NPD systems provide a pragmatic mechanism for balancing flexibility and discipline, enabling strategic allocation of scarce resources across exploration and exploitation activities while mitigating the risks associated with both excessive formalisation and uncontrolled experimentation (Iqbal & Suzianti, 2021; Saunila, 2020). In buyer-dominated retail markets, hybrid approaches are especially advantageous because they support compliance with formal procurement standards and documentation requirements while preserving adaptive capability, market responsiveness, and learning-based innovation (Cooper & Sommer, 2020; Cocchi *et al.*, 2021). Consequently, hybrid models are increasingly conceptualised as best-fit NPD architectures for SMEs operating under conditions of institutional complexity, regulatory scrutiny, and asymmetric power relations within contemporary retail value chains (Žužek *et al.*, 2021; Cooper & Sommer, 2020).

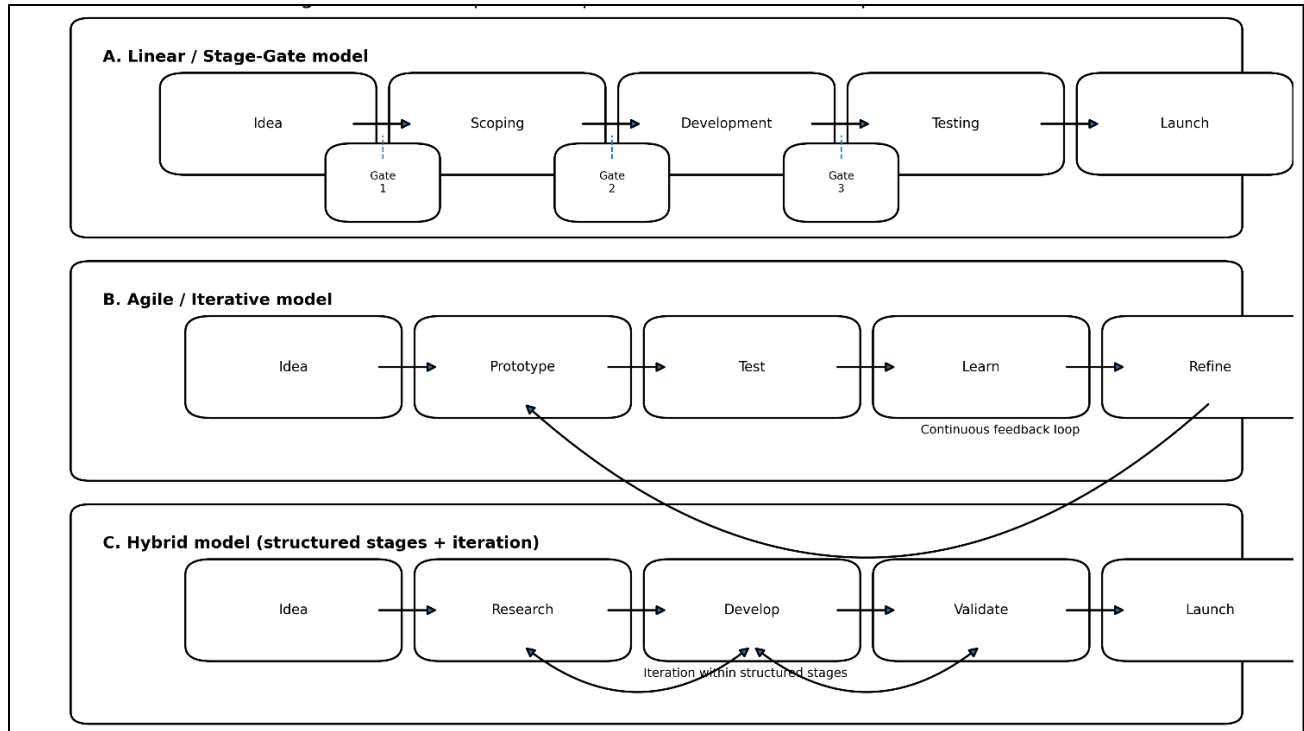


Figure 2.1: Conceptual Comparison of NPD Process Models (*Source: Own compilation*)

2.3.2 Limitations of Traditional NPD Models in SMEs

Despite their conceptual and managerial contributions, traditional NPD models exhibit significant structural limitations when applied to SME contexts, particularly within emerging economies and buyer-controlled market systems characterised by institutional complexity, resource scarcity, and power asymmetries (Iqbal & Suzianti, 2021; Saunila, 2020). Linear and highly formalised development frameworks frequently impose excessive administrative and coordination burdens, constraining organisational flexibility and diverting scarce managerial resources away from market engagement, experimentation, and learning activities (Cooper & Sommer, 2020; Heimicke *et al.*, 2021). Moreover, rigid sequencing assumptions embedded in traditional NPD architectures often fail to accommodate the uncertainty, informality, and improvisational problem-solving that characterise innovation processes in resource-constrained SMEs, thereby limiting adaptive responsiveness and opportunity recognition (Iqbal & Suzianti, 2021; Saunila, 2020).

Iterative and agile NPD approaches, while promoting responsiveness, experimentation, and learning agility, may insufficiently address the governance requirements embedded within

regulated and buyer-driven markets, where formal documentation, traceability systems, audit procedures, and compliance verification constitute essential mechanisms of supplier legitimacy and risk management (Fraser *et al.*, 2020; Shevchenko *et al.*, 2020). In such contexts, SMEs adopting purely agile development architectures may struggle to generate the externally recognisable validation signals required to secure market access, scale production, and sustain long-term buyer relationships, particularly when procurement decisions are shaped by reputational risk, regulatory exposure, and standardised auditing regimes (Ahmed & Shafiq, 2022; Peng *et al.*, 2022). These limitations underscore the need for context-sensitive NPD architectures that reconcile learning flexibility with governance discipline, enabling SMEs to balance adaptive experimentation with the formal accountability structures required by buyer-dominated and institutionally demanding retail environments (Cooper & Sommer, 2020; Cocchi *et al.*, 2021).

2.3.3 NPD Failure Patterns and Capability Gaps

Recent empirical research indicates that NPD failures among SMEs most commonly arise from misalignments between internal organisational capabilities and external market requirements, rather than from deficits in creativity or idea generation alone (Saunila, 2020; Iqbal & Suzianti, 2021). These misalignments reflect limitations in managerial coordination, learning integration, and strategic resource deployment, which constrain SMEs' ability to convert innovation intent into scalable commercial outcomes (Cooper & Sommer, 2020; Heimicke *et al.*, 2021). Process-related failures frequently emerge when firms lack formalised development routines, structured evaluation mechanisms, and cross-functional coordination frameworks, resulting in inconsistent execution, insufficient testing discipline, and elevated late-stage rework (Iqbal & Suzianti, 2021; Žužek *et al.*, 2021).

Market failures, by contrast, are commonly linked to insufficient customer integration, weak demand sensing, and limited early-stage validation, leading to product offerings that fail to achieve sustainable product–market fit (Hossain, 2020; Heimicke *et al.*, 2021). In resource-constrained SMEs, limited absorptive capacity and restricted access to formal market research infrastructures exacerbate these vulnerabilities by constraining the systematic incorporation of customer insights into product development decisions (Saunila, 2020; Iqbal & Suzianti, 2021). Consequently, even technically robust innovations frequently underperform commercially when firms are unable to

translate experiential learning into structured development outputs and market-aligned value propositions (Cooper & Sommer, 2020; Žužek *et al.*, 2021).

In buyer-dominated retail systems, governance failures constitute a distinct and particularly restrictive failure mechanism, arising when SMEs are unable to comply with procurement standards relating to quality assurance, traceability, certification, and formal risk mitigation procedures (Fraser *et al.*, 2020; Shevchenko *et al.*, 2020). These governance requirements impose substantial documentation, audit, and compliance burdens that often exceed the financial, managerial, and infrastructural capacities of small suppliers, thereby intensifying capability gaps and raising barriers to market entry (Ahmed *et al.*, 2022; Peng *et al.*, 2022). As a result, SMEs may experience restricted market access and limited opportunities for scaling, even when product concepts demonstrate strong technical merit and customer appeal (Shevchenko *et al.*, 2020; Ahmed *et al.*, 2022).

Collectively, these failure patterns underscore the central role of organisational capability development in mediating the relationship between innovation intent and commercial performance, particularly within institutional contexts characterised by regulatory scrutiny, buyer power asymmetries, and high compliance thresholds (Cooper & Sommer, 2020; Cocchi *et al.*, 2021). This perspective reinforces the importance of integrating learning-based experimentation with structured governance routines, enabling SMEs to navigate the demands of adaptability, accountability, and market legitimacy simultaneously (Žužek *et al.*, 2021; Iqbal & Suzianti, 2021).

2.3.4 Implications for NPD Process Selection

The preceding analysis indicates that NPD process selection in SMEs must explicitly account for internal resource constraints, environmental uncertainty, and the institutional conditions governing market access, rather than relying on universal best practice prescriptions derived primarily from large-firm contexts (Iqbal & Suzianti, 2021; Saunila, 2020). In emerging-market retail environments characterised by buyer dominance, regulatory scrutiny, and formal compliance regimes, neither purely linear nor purely agile NPD models offer sufficient explanatory or practical adequacy, as each exhibits structural misalignment with the combined demands of adaptability and governance discipline (Cooper & Sommer, 2020; Žužek *et al.*, 2021). Instead, contemporary scholarship increasingly supports hybrid NPD frameworks as theoretically grounded mechanisms

for balancing learning flexibility, iterative experimentation, and formal validation requirements across complex innovation contexts (Cooper & Sommer, 2020; Cocchi *et al.*, 2021).

For SME suppliers, hybrid process architectures facilitate adaptive experimentation within structured governance boundaries, enabling firms to respond dynamically to evolving market signals while simultaneously generating the documentation, traceability, and compliance artefacts required for buyer legitimacy and procurement approval (Žužek *et al.*, 2021; Fraser *et al.*, 2020). This synthesis aligns with dynamic capability perspectives, which conceptualise NPD capability as an evolving organisational competence shaped by the interaction between internal learning processes and external institutional constraints (Saunila, 2020; Iqbal & Suzianti, 2021). Accordingly, this framework provides the analytical foundation for the empirical investigation presented in Chapter 5, guiding the examination of how SMEs operationalise hybrid NPD routines to reconcile innovation agility with governance discipline in buyer-dominated retail systems (Cooper & Sommer, 2020; Cocchi *et al.*, 2021)

2.4 BUYER-DOMINATED RETAIL SYSTEMS AND SME PARTICIPATION

Formal grocery retail systems are increasingly characterised by high levels of market concentration and structural buyer power, through which dominant retailers exercise significant control over supplier selection, contractual governance, and access to consumer markets (Reardon *et al.*, 2021; Gereffi, 2020). Within such systems, large retailers operate as institutional gatekeepers, imposing stringent requirements related to product quality, safety certification, compliance documentation, traceability, and risk mitigation as prerequisites for market participation (Reardon *et al.*, 2021; Shevchenko *et al.*, 2020). These governance mechanisms enable retailers to manage reputational exposure, regulatory liability, and operational risk, while simultaneously reinforcing entry barriers for smaller and less formally organised suppliers (Gereffi, 2020; Ahmed & Shafiq, 2022).

In South Africa, grocery retail markets are highly concentrated, with a small number of dominant national chains exerting substantial influence over procurement standards, supplier inclusion, and value chain governance, thereby creating significant entry barriers for SMEs (Competition Commission of South Africa, 2019). The Grocery Retail Market Inquiry documents how buyer power, centralised procurement systems, and private standard enforcement systematically disadvantage small producers and processors by increasing compliance costs and limiting

opportunities for market access and scaling (Competition Commission of South Africa, 2019). These structural conditions intensify the challenges faced by SMEs seeking to participate in formal retail value chains, particularly with respect to certification, audit readiness, and logistical integration (Reardon *et al.*, 2021; Gereffi, 2020).

Buyer-dominated retail systems therefore require SMEs to demonstrate not only innovative and differentiated product offerings, but also credible organisational capability, including documented research processes, product validation protocols, quality assurance systems, and operational readiness (Shevchenko *et al.*, 2020; Ahmed & Shafiq, 2022). SMEs that lack such formalised capabilities are frequently perceived as high-risk suppliers, resulting in heightened scrutiny, exclusion from preferred supplier programmes, or premature termination of buyer relationships (Peng *et al.*, 2022; Ahmed & Shafiq, 2022). Consequently, SME participation in formal grocery retail markets is increasingly mediated by the ability to generate externally recognisable legitimacy signals that align innovation outputs with the governance expectations of dominant retail buyers (Shevchenko *et al.*, 2020; Reardon *et al.*, 2021)

2.5 NEW PRODUCT DEVELOPMENT CAPABILITY AS A STRATEGIC ORGANISATIONAL CAPABILITY

Recent innovation scholarship increasingly conceptualises new product development (NPD) not merely as a project-level sequence of tasks, but as an organisational capability embedded in routinised patterns of coordination and learning that can be deployed repeatedly across product introductions (Galli Geleilate *et al.*, 2021). From this perspective, NPD capability reflects a firm's capacity to reliably convert ideas into market-ready offerings while managing interdependencies across functions and external partners under conditions of uncertainty and change. This capability-oriented framing aligns with dynamic capabilities scholarship, which emphasises that sustained performance depends on how firms build, integrate, and reconfigure capabilities to remain aligned with shifting environments (Teece, 2020).

For SMEs, the development of NPD capability is particularly consequential because performance gains from capability deployment can be especially pronounced for smaller ventures, yet the same deployment can also amplify coordination risks if supporting routines and controls are underdeveloped (Colombo, Piva, Quas & Rossi-Lamastra, 2021). Accordingly, SMEs' NPD

outcomes are highly sensitive to their ability to mobilise scarce resources, orchestrate cross-boundary collaboration, and institutionalise learning mechanisms that stabilise execution without eliminating adaptive responsiveness (Galli Geleilate *et al.*, 2021). Empirical evidence from SME-focused capability research further indicates that innovation-oriented capabilities, particularly those involving structured learning and knowledge mobilisation, are positively associated with firm performance, including under turbulent or crisis-like conditions (Otache & Usang, 2021).

In buyer-influenced market settings, NPD capability also functions as a credibility and risk reduction signal because buyers often interpret structured routines, evidence of validation, and disciplined execution as indicators of supplier reliability (Bafera & Kleinert, 2023). In this sense, NPD capability extends beyond product advantage to include the organisation's ability to produce buyer-legible "proof" (e.g., documented validation, process maturity, and consistent delivery behaviours) that reduces perceived exchange risk. Consequently, NPD capability can be theorised simultaneously as (i) a performance-relevant capability that supports repeatable product introduction and (ii) a legitimacy-relevant signal that strengthens SMEs' prospects of market access in governance-intensive channels (Bafera & Kleinert, 2023). This capability-oriented view supports recent calls to move beyond prescriptive "one-best-way" NPD models toward explaining how firms configure and stabilise development routines in response to contextual constraints and evaluation regimes (Teece, 2020). In this study, NPD capability is therefore conceptualised as a higher-order organisational capability encompassing strategic intent, internal orchestration, and research-led validation routines, rather than as compliance with any single NPD process template (Galli Geleilate *et al.*, 2021).

2.6 THEORETICAL FRAMEWORK

To explain how SMEs develop and deploy NPD capability within buyer-dominated retail systems, this study applies a multi-theoretical framework integrating the Resource-Based View (RBV), Dynamic Capabilities Theory, and institutional and signalling perspectives (Beamish & Chakravarty, 2021). Together, these lenses enable analysis of (i) how SMEs build and reconfigure internal capability bundles and (ii) how those capabilities are evaluated externally under governance-intensive market conditions characterised by information asymmetry (Huemer & Wang, 2021). This integrative approach is appropriate because buyer-dominated retail

environments tend to reward not only product novelty but also credible evidence of process maturity, compliance-readiness, and execution reliability (Schilling-Vacaflor & Gustafsson, 2024).

2.6.1 Resource-Based View

RBV explains performance differences by emphasising that firms create advantage through strategically relevant resources and capabilities that are embedded in organisational routines and difficult for competitors to replicate (Beamish & Chakravarty, 2021). Recent RBV scholarship further highlights that advantage is often produced through bundles of interdependent resources, rather than isolated assets, because value creation depends on how resources are combined and mobilised in use (Huemer & Wang, 2021). Accordingly, NPD capability can be conceptualised as a composite organisational resource bundle encompassing coordination routines, knowledge integration practices, and repeatable development discipline that enables SMEs to generate differentiated offerings.

However, RBV is limited in explaining how firms systematically renew or reconfigure such bundles when environments shift, as it focuses more on resource heterogeneity than on the mechanisms of adaptation over time (Teece, 2020). For this reason, RBV provides a necessary baseline for conceptualising NPD capability as a strategic organisational asset, but it must be complemented by dynamic capability logic to capture adaptation in the face of buyer power and regulatory change.

2.6.2 Dynamic Capabilities Theory

Dynamic capabilities theory extends RBV by foregrounding the firm's capacity to sense opportunities and threats, seize them through coordinated action, and transform resource configurations as environments evolve (Teece, 2020). This perspective is particularly relevant for SMEs, because smaller firms often operate under heightened volatility and must repeatedly adjust routines and resource allocations to remain aligned with shifting market and institutional requirements (Engelmann, 2024). In NPD contexts, dynamic capabilities help SMEs integrate market intelligence, redesign development routines, and reconfigure internal knowledge processes in response to buyer feedback, compliance expectations, and changing risk assessments. Strategic management scholarship also links dynamic capabilities to the governance of innovation under uncertainty, showing how capability renewal enables firms to maintain strategic coherence while

navigating environmental change (Teece, 2020). Dynamic capabilities, therefore, provide a strong basis for theorising NPD capability as an adaptive, learning-oriented competence rather than a static adherence to a single process template (Engelmann, 2024).

2.6.3 Institutional and Signalling Perspectives

While RBV and dynamic capabilities explain internal capability formation and renewal, institutional and signalling perspectives explain how those capabilities are judged and legitimised externally within structured market fields (Risi *et al.*, 2023). Institutional scholarship emphasises that organisational behaviour is shaped by formal rules and normative expectations that define what counts as legitimate practice within a field, including expectations around compliance systems, accountability, and verifiable procedures. In buyer-dominated retail settings, institutional pressures are often intensified because suppliers may be required to demonstrate traceability, quality assurance, and auditability in response to regulatory regimes and private governance standards (Schilling-Vacaflor & Gustafsson, 2024).

Signalling theory complements this by explaining how firms communicate otherwise unobservable qualities, such as reliability, competence, and process maturity, to external audiences under conditions of information asymmetry (Connelly *et al.*, & Zhou, 2024). Within this logic, SMEs can be expected to rely on observable indicators—such as documented research, validation evidence, and structured routines—as signals that reduce buyer uncertainty about supplier risk. A signalling-based reading further clarifies why SMEs with comparable innovation potential may experience divergent outcomes depending on whether they can translate internal capability into credible, buyer-legible evidence (Bafera & Kleinert, 2023). This multi-theoretical integration therefore underpins the conceptual model developed in Section 2.8 by linking internal NPD capability formation to external legitimacy thresholds within governance-intensive retail systems (Beamish & Chakravarty, 2021).

2.7 CORE CAPABILITY DOMAINS UNDERPINNING SME NPD

Building on the integrated theoretical framework, contemporary innovation and SME scholarship identifies several organisational capability domains as critical to effective NPD performance in small firms operating within governance-intensive and buyer-dominated retail systems (Carrasco-Carvajal *et al.*, 2023; Otache & Usang, 2021). These domains reflect the internal organisational

mechanisms through which SMEs mobilise resources, coordinate activities, and institutionalise learning under conditions of market uncertainty and resource scarcity (Saunila, 2020; Iqbal & Suzianti, 2021). Drawing on prior empirical research and the analytical focus of this study, three core NPD capability domains are emphasised: strategic orientation, internal cross-functional collaboration, and research-led validation capability (Carrasco-Carvajal *et al.*, 2023; Bafera & Kleinert, 2023).

2.7.1 Strategic Orientation

Strategic orientation reflects the extent to which NPD activities are guided by explicit strategic intent, market awareness, and long-term organisational objectives, enabling firms to align product development investments with competitive positioning and growth trajectories (Salehe *et al.*, 2024; Wach *et al.*, 2020). SMEs exhibiting strong strategic orientation systematically integrate market intelligence, customer insights, and competitive analysis into NPD decision-making, thereby improving opportunity recognition and development prioritisation (Wach *et al.*, 2020; Carrasco-Carvajal *et al.*, 2023). Empirical evidence demonstrates that strategic orientation enhances SME innovation performance by improving resource allocation efficiency, reducing strategic drift, and strengthening coherence between development initiatives and business objectives (Salehe *et al.*, 2024; Otache & Usang, 2021).

Within formal retail contexts, strategic orientation enables SMEs to prioritise product concepts that align with retailer category strategies, consumer trends, and procurement expectations, thereby reducing the likelihood of misaligned development trajectories and premature project termination (Reardon *et al.*, 2021; Schilling-Vacaflor & Gustafsson, 2024). This alignment enhances SMEs' capacity to position innovation investments within buyer-defined opportunity spaces, increasing the probability of successful product adoption and sustained retail participation (Peng *et al.*, 2022; Bafera & Kleinert, 2023).

2.7.2 Internal Cross-Functional Collaboration

Effective NPD requires sustained coordination across multiple organisational functions, including marketing, operations, finance, procurement, and quality assurance, to integrate diverse knowledge bases and manage interdependencies throughout the development lifecycle (Huemer & Wang, 2021; Heimicke *et al.*, 2021). In SME contexts, cross-functional collaboration is often informal

and emergent, yet remains central to innovation performance because it facilitates rapid problem-solving, knowledge recombination, and execution coherence (Saunila, 2020; Iqbal & Suzianti, 2021). Empirical studies consistently show that SMEs with stronger internal collaboration achieve superior innovation outcomes, faster development cycles, and enhanced responsiveness to external feedback during NPD projects (Heimicke *et al.*, 2021; Otache & Usang, 2021).

In buyer-dominated retail environments, cross-functional collaboration further supports the timely generation of documentation, compliance artefacts, and validation evidence required for procurement approval and audit processes (Shevchenko *et al.*, 2020; Fraser *et al.*, 2020). The ability to coordinate commercial, operational, and technical inputs, therefore, becomes a critical determinant of SMEs' capacity to translate product concepts into retail-ready offerings that satisfy both market and governance requirements (Ahmed and Shafiq, 2022; Peng *et al.*, 2022)

2.7.3 Research-Led Validation Capability

Research-led validation capability refers to the firm's ability to systematically generate, document, and apply market, consumer, and technical evidence throughout the NPD process to reduce uncertainty and support evidence-based decision-making (Hossain, 2020; Carrasco-Carvajal *et al.*, 2023). This capability encompasses structured activities such as consumer testing, pilot production, feasibility assessment, regulatory compliance verification, and iterative product refinement based on empirical feedback (Hossain, 2020; Žužek *et al.*, 2021). Recent empirical studies identify research-led validation as a central determinant of SME innovation success, particularly in formal market contexts where buyers demand documented evidence of product performance, safety, and regulatory compliance (Bafera & Kleinert, 2023; Schilling-Vacaflor & Gustafsson, 2024).

SMEs that institutionalise systematic validation routines are better positioned to reduce buyer uncertainty, signal organisational competence, and demonstrate process maturity, thereby strengthening legitimacy and increasing the likelihood of sustainable retail participation (Ahmed & Shafiq, 2022; Peng *et al.*, 2022). Consequently, research-led validation capability functions not only as a mechanism for technical risk reduction but also as a strategic signalling device that mediates SME access to buyer-controlled market channels (Bafera & Kleinert, 2023; Shevchenko *et al.*, 2020). The conceptualisation of research-led validation capability within this study extends

beyond general market research activities. It specifically refers to structured validation practices involving product testing, consumer feedback mechanisms, compliance verification, retailer readiness assessment, and iterative refinement processes.

2.8 CONCEPTUAL FRAMEWORK

Building on the literature reviewed and the theoretical framework developed in Sections 2.5–2.7, this study proposes a conceptual framework that explains how organisational capability domains influence SME new product development (NPD) outcomes within buyer-dominated retail systems (Teece, 2020; Carrasco-Carvajal *et al.*, 2023). The framework integrates dynamic capability, institutional, and signalling perspectives to capture both internal capability formation and the external governance conditions shaping retail market participation (Bafera & Kleinert, 2023; Reardon *et al.*, 2021).

The framework conceptualises NPD capability as a higher-order organisational capability that mediates the relationship between three core capability domains (strategic orientation, internal cross-functional collaboration, and research-led validation capability) and SME outcomes related to retail NPD performance and market access (Saunila, 2020; Žužek *et al.*, 2021). This structure reflects a capability-based logic in which bundles of underlying organisational routines and practices enable SMEs to institutionalise NPD processes that align simultaneously with internal strategic objectives and external buyer expectations (Huemer & Wang, 2021; Teece, 2020).

Strategic orientation provides direction and coherence to NPD activities by aligning product development efforts with market requirements, competitive positioning, and long-term organisational objectives, thereby enhancing decision quality and resource allocation efficiency (Salehe *et al.*, 2024; Carrasco-Carvajal *et al.*, 2023). Internal cross-functional collaboration facilitates the integration of diverse functional knowledge and the operational coordination required to execute NPD effectively, thereby enabling rapid problem-solving, iterative learning, and consistent execution (Heimicke *et al.*, 2021; Iqbal & Suzianti, 2021). Research-led validation capability enables SMEs to generate credible evidence of product feasibility, consumer acceptance, and regulatory compliance, thereby reducing information asymmetry and perceived risk for retail buyers and supporting procurement legitimacy (Hossain, 2020; Bafera & Kleinert, 2023).

NPD capability is positioned as a mediating construct because it captures the firm's ability to transform these underlying domains into repeatable, scalable, and externally legitimate development outcomes rather than isolated project-level successes (Teece, 2020; Žužek *et al.*, 2021). Retail NPD performance and market access represent the downstream outcomes of this capability, reflecting both commercial success and sustained participation in formal retail supply chains governed by compliance, traceability, and risk management requirements (Ahmed and Shafiq, 2022; Reardon *et al.*, 2021).

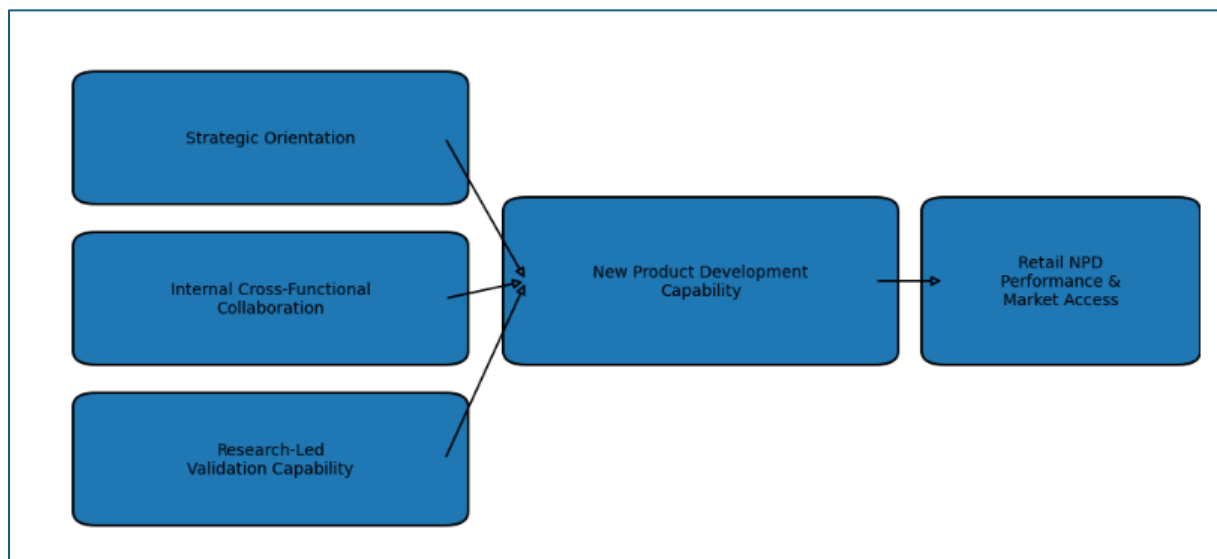


Figure 2.2: Conceptual framework illustrating the relationships between organisational capability domains, new product development capability, and retail NPD performance and market access in buyer-dominated retail systems (*Source: Own Compilation*).

2.9 HYPOTHESIS DEVELOPMENT

Drawing on the reviewed literature and the conceptual framework, this section develops a set of testable hypotheses that guide the empirical investigation of how organisational capability domains influence SME new product development (NPD) capability and downstream retail outcomes.

2.9.1 Strategic Orientation and NPD Capability

Strategic orientation reflects the extent to which SMEs align NPD activities with market intelligence, competitive positioning, and long-term organisational objectives, thereby guiding opportunity recognition and innovation prioritisation (Salehe *et al.*, 2024; Carrasco-Carvajal *et al.*,

2023). Empirical evidence demonstrates that strategically oriented SMEs allocate scarce resources more effectively, exhibit stronger decision coherence, and achieve superior innovation performance by embedding development initiatives within explicit growth trajectories (Wach *et al.*, 2020; Otache & Usang, 2021). In buyer-dominated retail environments, a strategic orientation further enables SMEs to align product concepts with retailers' category strategies, procurement expectations, and compliance requirements, thereby enhancing product development relevance and market readiness (Reardon *et al.*, 2021; Peng *et al.*, 2022).

H1: Strategic orientation has a positive and significant relationship with SME new product development capability.

2.9.2 Internal Cross-Functional Collaboration and NPD Capability

Internal cross-functional collaboration facilitates the integration of diverse functional knowledge across marketing, operations, finance, and quality assurance, which is essential for effective NPD execution and learning integration (Huemer & Wang, 2021; Heimicke *et al.*, 2021). Empirical research indicates that SMEs exhibiting stronger internal collaboration achieve higher innovation performance, greater consistency in execution, and greater responsiveness to external feedback throughout the development lifecycle (Saunila, 2020; Otache & Usang, 2021). Within buyer-dominated retail systems, cross-functional collaboration additionally supports the timely generation of compliance documentation, validation evidence, and audit-ready outputs required for procurement approval and supplier legitimacy (Shevchenko *et al.*, 2020; Fraser *et al.*, 2020).

H2: Internal cross-functional collaboration has a positive and significant relationship with SME new product development capability

2.9.3 Research-Led Validation Capability and NPD Capability

Research-led validation capability enables SMEs to systematically generate, document, and apply market, consumer, and technical evidence throughout the NPD process, thereby reducing uncertainty and supporting evidence-based development decisions (Hossain, 2020; Carrasco-Carvajal *et al.*, 2023). Recent empirical studies highlight validation capability as a critical determinant of SME innovation success, particularly in governance-intensive market contexts where buyers demand formal verification of product feasibility, safety, and regulatory compliance

(Bafera & Kleinert, 2023; Schilling-Vacaflor, 2024). SMEs that institutionalise validation practices are therefore better positioned to reduce buyer uncertainty, signal organisational competence, and enhance acceptance within formal retail procurement systems (Ahmed and Shafiq, 2022; Peng *et al.*, 2022).

H3: Research-led validation capability has a positive and significant relationship with SME new product development capability

2.9.4 NPD Capability and Retail Outcomes

NPD capability captures the firm's ability to repeatedly transform strategic intent, internal coordination, and validation routines into market-ready offerings that satisfy both customer needs and buyer governance requirements (Žužek *et al.*, 2021; Carrasco-Carvajal *et al.*, 2023). Empirical research demonstrates that SMEs with stronger NPD capabilities achieve superior innovation performance, enhanced market responsiveness, and improved resilience under environmental uncertainty (Otache & Usang, 2021; Saunila, 2020). In buyer-dominated retail environments, strong NPD capability further increases SMEs' likelihood of securing and sustaining access to formal value chains by enabling compliance with procurement standards and generating credible legitimacy signals (Ahmed and Shafiq, 2022; Reardon *et al.*, 2021).

H4: SME new product development capability has a positive and significant relationship with retail NPD performance and market access.

2.10 CHAPTER SUMMARY

This chapter critically reviewed the literature on SME innovation, new product development processes, buyer-dominated retail systems, and organisational capability development. The review highlighted persistent gaps between SME innovation intent and retail market access, particularly in emerging-market contexts characterised by concentrated buyer power.

Drawing on the Resource-Based View, Dynamic Capabilities Theory, and institutional and signalling perspectives, the chapter conceptualised NPD as a strategic organisational capability shaped by underlying capability domains. A conceptual framework was developed to explain the relationships among strategic orientation, internal collaboration, research-led validation capability,

and retail-related outcomes, and to formulate testable hypotheses to guide the empirical investigation. The next chapter will detail the research methodology the study followed.

CHAPTER 3: RESEARCH METHODOLOGY

3.1 INTRODUCTION

This chapter presents the research methodology used to investigate new product development (NPD) capability among small and medium-sized enterprises (SMEs) operating in South Africa's highly concentrated retail sector. The chapter aims to provide a transparent, coherent, and rigorous account of the philosophical positioning, research design, sampling strategy, data collection procedures, analytical methods, and ethical safeguards underpinning the study.

Methodological clarity is fundamental to doctoral research, as it enables evaluation of the credibility, reliability, and interpretive validity of empirical findings and facilitates scholarly scrutiny and potential replication (Flick, 2022). In applied organisational research, rigorous methodological design is particularly critical given the complexity, contextual embeddedness, and multilayered nature of organisational behaviour and innovation processes (Hair *et al.*, 2022).

To address the study's research objectives, a sequential explanatory mixed-methods design was employed, integrating quantitative and qualitative approaches. Mixed-methods designs are increasingly recognised as particularly suitable for investigating complex organisational phenomena, where statistical relationships require contextual interpretation and deeper explanatory insight (Shan, 2022; Syed, 2025). In the present study, the quantitative phase examined relationships between internal SME capability dimensions (strategic orientation, research-led validation, and internal collaboration) and retailer relationship quality among unlisted SME suppliers. The subsequent qualitative phase explored how these capabilities are enacted, refined, and sustained in practice among the listed SME suppliers.

Integration was achieved through systematic triangulation and the development of meta-inference, thereby enabling the formulation of a comprehensive explanatory framework. This integrative approach strengthens theoretical contribution, enhances analytical depth, and supports practical relevance for SME managers, retailers, and policymakers (Peters & Fàbregues, 2024). The chapter is structured as follows. Section 3.2 outlines the study's philosophical and paradigmatic positioning. Section 3.3 presents the research design and methodological framework. Subsequent

sections detail the research context, sampling strategy, data collection procedures, measurement instruments, analytical techniques, quality assurance mechanisms, and ethical considerations.

3.2 PHILOSOPHICAL AND PARADIGMATIC POSITIONING

3.2.1 Pragmatism as the Philosophical Foundation

Research philosophy reflects a system of assumptions concerning the nature of reality, knowledge, and inquiry, shaping the researcher's methodological choices and interpretive logic. In organisational research, explicit philosophical positioning is essential to ensure conceptual coherence and methodological transparency (Shan, 2022). This study is grounded in pragmatism, a philosophical stance that prioritises problem-centred inquiry, methodological pluralism, and practical utility. Pragmatism rejects rigid ontological and epistemological dualisms, instead advocating the selection of research methods based on their capacity to address complex real-world problems effectively (Kaushik & Walsh, 2019; Gillespie, 2024).

Recent methodological scholarship positions pragmatism as the most appropriate philosophical foundation for mixed-methods research, given its emphasis on outcome-oriented inquiry, flexibility in methodological choice, and focus on the generation of actionable knowledge (Shan, 2022; Elgeddawy & Abouraia, 2024). Pragmatism enables researchers to combine quantitative measurement and qualitative interpretation within a single coherent framework, facilitating a comprehensive understanding of both patterns and processes.

In the context of SME innovation and retail market access, pragmatic inquiry allows for the simultaneous examination of statistically measurable organisational capabilities and socially constructed managerial practices. This positioning is particularly appropriate given the dynamic, relational, and institutionally embedded nature of buyer-supplier interactions in concentrated retail environments (Heeks & Renken, 2025).

3.2.2 Ontological and Epistemological Assumptions

Ontologically, this study adopts a pluralist stance, recognising that organisational phenomena can be approached as both materially consequential and socially mediated. In SME innovation contexts, capability development may be reflected in observable routines and performance outcomes, while simultaneously being shaped by managerial sensemaking, institutional pressures,

and relational governance processes. This position is consistent with recent philosophical work emphasising pragmatism's compatibility with multilayered social reality and its resistance to single-foundation ontological commitments (Shan, 2022; Elder-Vass, 2022).

Epistemologically, the study aligns with pragmatic fallibilism, acknowledging that knowledge claims are provisional, context-dependent, and strengthened through iterative inquiry rather than treated as final truths. This stance is particularly aligned with applied organisational research, where uncertainty, multiple stakeholder perspectives, and evolving contexts make single "truth" claims difficult to sustain. A fallibilist–pragmatist position supports sequential explanatory designs by enabling quantitative findings to guide purposive qualitative explanation and refinement, producing progressively more credible and context-sensitive understanding (Shan, 2022; Greenhalgh & Engebretsen, 2022; Skamagki *et al.*, 2024). This philosophical positioning therefore supports the study's objective of generating analytically rigorous and practically meaningful insights through methodological integration, rather than privileging either statistical regularities or interpretive accounts in isolation (Skamagki *et al.*, 2024).

3.2.3 Research Paradigm: Pragmatic Mixed-Methods Inquiry

The study is situated within a pragmatic mixed-methods research paradigm, which emphasises methodological integration, analytical complementarity, and problem-centred inquiry. This paradigm transcends traditional positivist–interpretivist binaries by prioritising research outcomes, explanatory coherence, and contextual relevance (Kaushik & Walsh, 2019; Shan, 2022). Mixed-methods research enables the integration of numerical data and narrative insight, facilitating a more comprehensive understanding of complex organisational phenomena. Recent methodological literature highlights the growing importance of mixed-methods designs in management, health, education, and social science research, particularly when investigating multidimensional and dynamic systems (Hongling, Yishu, Yang, Maoyi, Zhenhua, Lin, Nan, Yangfeng, Yiming, Chunhua, Yahong, and Siyan, 2025).

Within SME innovation research, mixed-methods inquiry is especially valuable, as it enables the identification of statistically significant capability predictors while simultaneously uncovering the organisational mechanisms through which these capabilities are developed, enacted, and sustained.

This integrative approach strengthens causal inference, enhances interpretive validity, and supports actionable managerial implications (Syed, 2025).

3.3 RESEARCH DESIGN AND METHODOLOGICAL FRAMEWORK

3.3.1 Sequential Explanatory Mixed-Methods Design

In alignment with the pragmatic philosophical stance and mixed-methods paradigm, the study adopts a sequential explanatory mixed-methods research design (Quantitative → Qualitative). This design comprises two analytically connected phases: an initial quantitative phase, followed by a qualitative phase designed to explain, contextualise, and extend the statistical findings.

Sequential explanatory designs are particularly appropriate when quantitative relationships require deeper interpretive understanding and when the research aims to generate both predictive and explanatory insight (Hongling, 2025; Syed, 2025). This approach is widely endorsed in contemporary mixed-methods scholarship due to its capacity to strengthen causal explanation, theoretical integration, and analytical depth (Shan, 2022; Peters & Fàbregues, 2024).

3.3.2 Structure of the Research Design

The research design comprises three interlinked analytical stages: quantitative inquiry, qualitative inquiry, and integrative synthesis.

3.3.2.1 Stage 1: Quantitative Inquiry

The quantitative phase employed a cross-sectional survey design to examine relationships between three internal SME capability dimensions—strategic orientation, research-led validation, and internal collaboration—and retailer relationship quality among unlisted SME suppliers. Data were collected using a structured questionnaire and analysed using descriptive statistics, correlation analysis, and multiple regression modelling. This phase enabled identification of statistically significant predictors of retail engagement, providing an empirical foundation for subsequent qualitative exploration (Hair *et al.*, 2022).

3.3.2.2 Stage 2: Qualitative Inquiry

The qualitative phase employed a semi-structured interview design targeting SME suppliers who had successfully achieved retail listings. This phase explored post-listing NPD routines, capability

renewal mechanisms, compliance adaptation strategies, and relational governance practices. Interview protocols were explicitly informed by quantitative findings, enabling targeted exploration of the mechanisms underlying observed statistical relationships. This sequential linkage strengthens explanatory depth and supports theory refinement (Braun & Clarke, 2021).

3.3.2.3 Stage 3: Integration and Meta-Inference

Integration was achieved through joint display analysis and meta-inference development, enabling systematic synthesis of quantitative and qualitative findings. Joint displays facilitated structured comparison between statistical results and qualitative themes, while meta-inference supported higher-order theoretical integration. This integrative process culminated in the formulation of the Retail-Ready NPD Capability Model, conceptualising research-led validation as a micro-foundation of dynamic capability within SME innovation systems (Nessle *et al.*, 2023).

3.3.3 Justification for Research Design

The selection of a sequential explanatory mixed-methods design is justified by the complex, multilayered nature of SME innovation within buyer-dominated retail environments. Quantitative methods alone are insufficient to capture the institutional, relational, and behavioural dynamics shaping organisational outcomes, while purely qualitative approaches lack predictive precision and generalisability. By integrating both approaches, the study achieves analytical completeness, combining statistical rigour with contextual depth. This design enhances theoretical contribution, strengthens interpretive validity, and ensures managerial relevance, positioning the study to make a substantive contribution to the literature on innovation management, SME development, and retail governance (Shan, 2022; Syed, 2025).

3.4 RESEARCH CONTEXT AND STUDY SETTING

The study is situated within the South African grocery and fast-moving consumer goods (FMCG) retail sector, an industry characterised by high market concentration, buyer dominance, and stringent supplier governance. A small number of supermarket groups dominate grocery retail in South Africa and, more broadly, across Southern Africa, reinforcing concentrated downstream market structures and strengthening retailers' bargaining leverage over upstream suppliers (Bowman, 2025). This concentrated structure tends to generate buyer-driven governance, where

retailers materially shape product specifications, pricing and trading terms, logistics requirements, and compliance expectations for suppliers seeking shelf access (das Nair & Landani, 2020).

For SMEs, access to these channels is therefore contingent not only on product novelty, but also on developing organisational capabilities that signal *operational readiness*, including process reliability, quality assurance, traceability, and the ability to comply with retailer onboarding routines and audit regimes (das Nair & Landani). South African SMEs operate within an institutional and infrastructural environment characterised by persistent constraints that increase transaction costs and operational risk, including electricity supply instability and interruptions that disrupt production continuity (Niehaus, Feiboth & Goedhals-Gerber, 2018).

Empirical work shows that power interruptions and energy insecurity can materially reduce firm productivity and increase operating costs, particularly for smaller firms with limited buffering capacity and capital for mitigation technologies (Niehaus, Feiboth & Goedhals-Gerber, 2018). In parallel, disruptions in supply networks (amplified since the COVID-19 period and by recurring shocks in logistics corridors) have increased the difficulty for SMEs of sustaining dependable delivery performance, inventory availability, and service levels demanded by large buyers (Tazvivinga & Poee, 2024).

In response to both buyer power and developmental policy imperatives, large retailers in the region have expanded supplier development approaches from narrow compliance-driven support toward more commercially oriented supplier capability-building models, often framed within enterprise and supplier development (ESD) logics (das Nair & Landani, 2020). These programmes commonly combine financial or market access support with operational mentoring, capability upgrading, and performance monitoring-mechanisms that are repeatedly emphasised as necessary building blocks for improving SME compliance and readiness within buyer-supplier relationships (Rasdien, Poee & Munyanyi, 2024).

However, evidence also indicates that supplier development participation is not sufficient on its own to secure or sustain retail listing outcomes, because onboarding and continued participation depend on firms meeting stringent performance thresholds (quality consistency, fulfilment reliability, governance discipline) that require internal routines and resources beyond programme membership (das Nair & Landani, 2020). Accordingly, the quantitative phase of this study focuses

on SMEs enrolled in a major retailer's supplier development program to examine how capability configurations relate to preparedness and market-entry outcomes, consistent with the argument that supplier development operates through the capability-upgrading channel rather than guaranteeing access.

The qualitative phase then targets SMEs that have achieved and sustained listing to generate deeper insight into post-entry adaptation, learning routines, and capability renewal under ongoing buyer governance pressures (das Nair & Landani). The FMCG setting is well-suited to examining NPD capability because FMCG markets are characterised by rapid inventory turnover, short shelf lives, high turnover, and heightened exposure to disruption and competitive intensity, which together amplify the value of sensing, validation, and rapid adjustment routines (Tazvivinga & Poore, 2024). This contextual positioning strengthens the study's ability to contribute, both theoretically and empirically, to research on SME innovation and capability upgrading within buyer-driven retail systems in emerging markets, while remaining anchored in the practical realities of supplier development and operational compliance (Bowman, 2025).

3.5 POPULATION, SAMPLING FRAME, AND SAMPLING STRATEGY

3.5.1 Target Population

The target population comprises small and medium enterprises (SMEs) engaged in product development and retail market access activities within South Africa's formal grocery retail sector. This focus reflects the recognised role of SMEs as key actors in innovation, supplier development, and inclusive participation within emerging-market value chains (Ndukaji, 2025). In the South African context, SME classification is guided by the National Small Enterprise Act, which employs sector-specific thresholds based on employment, turnover, and organisational independence rather than a single universal headcount criterion (Government Gazette, 2019).

To ensure methodological clarity and comparability with international research standards, this study operationalises SMEs primarily using employment size, consistent with widely adopted OECD definitions that classify small and medium enterprises as firms employing fewer than 250 employees (OECD, 2022). Accordingly, SMEs in this study are defined as independent firms employing fewer than 250 employees and operating with managerial autonomy, reflecting conventional thresholds used in contemporary organisational and innovation research to capture

firms that face resource constraints while retaining strategic decision-making discretion (OECD, 2022; Ndukaji, 2025).

Given the study's sequential mixed-methods design, two analytically connected populations were defined:

1. Unlisted SMEs participating in a major retailer's supplier development programme (quantitative phase), and
2. Listed SMEs actively supplying products to a national retail chain (qualitative phase).

This dual-population structure enables systematic investigation of both pre-listening capability development and post-listening capability enactment, providing a comprehensive view of the SME innovation-access continuum.

3.5.2 Quantitative Sampling Frame and Sample

The sampling frame for the quantitative phase comprised 92 SMEs formally registered in the retailer's supplier development programme database at the time of data collection. Given the bounded nature of this population and its strategic relevance to the study's market access focus, a purposive census approach was adopted, whereby all eligible firms were invited to participate. Of the 92 SMEs contacted, 74 valid responses were obtained after multiple follow-ups, yielding a response rate of approximately 80%. This response rate is high relative to typical online survey response rates reported in recent meta-analytic evidence, particularly in applied research contexts (Wu, Zhao & Fils-Aime, 2022). From a statistical perspective, the achieved sample size is consistent with methodological guidance that emphasises aligning regression sample adequacy with effect size assumptions, model complexity, and desired power, rather than relying on a single universal rule (Serdar *et al.*, 2021).

3.5.3 Qualitative Sampling Frame and Sample

The qualitative phase targeted SME suppliers that had successfully achieved and sustained product listings within a major South African retail chain. A purposive expert sampling strategy was employed, focusing on participants possessing deep experiential knowledge of NPD processes, retail compliance requirements, and relational governance mechanisms. Participants included

owner-managers, managing directors, and senior product or operations managers directly responsible for innovation and retail engagement. This approach aligns with qualitative best practice, which prioritises information-rich cases that generate deep contextual insight (Braun & Clarke, 2021; Wolff *et al.*, 2019).

A total of 20 semi-structured interviews were conducted. Data saturation was reached at approximately 17 interviews, with three additional interviews conducted to confirm thematic stability. This sample size is consistent with contemporary methodological benchmarks for achieving conceptual saturation in homogeneous professional populations (Hennink *et al.*, 2021; Wolff *et al.*, 2019).

3.5.4 Ethical and Practical Constraints

Participant recruitment was subject to ethical safeguards and institutional gatekeeping constraints. Several potential participants declined involvement due to commercial sensitivity and perceived conflicts of interest. These constraints were managed through transparent communication, voluntary participation, and strict confidentiality protocols, ensuring ethical compliance and analytical integrity.

3.6 DATA COLLECTION PROCEDURES

3.6.1 Overview of Data Collection Strategy

Data were collected using a sequential explanatory mixed-methods approach, comprising two analytically connected phases: a quantitative survey phase followed by a qualitative interview phase. This design enables systematic triangulation, whereby statistical findings inform qualitative inquiry, enhancing explanatory depth and interpretive coherence (Shan, 2022; Peters & Fàbregues, 2024). The data collection strategy was structured to ensure methodological rigour, ethical compliance, and analytical alignment with the study's research objectives. Integration across phases was achieved through explicit connection of instruments, sequential sampling logic, and meta-inference development (Shan, 2022; Peters & Fàbregues, 2024).

3.6.2 Quantitative Data Collection

3.6.2.1 Survey Instrument Development

The quantitative instrument comprised a structured questionnaire designed to operationalise four latent constructs (directly informed by the theoretical foundations discussed in Chapter 2): strategic orientation, research-led validation capability, internal collaboration, and retailer relationship quality. Section A of the questionnaire captures participants' demographic details, and Section B covers the four constructs. Instrument development followed contemporary construct-measurement guidance, including explicit construct definition, alignment between conceptual domains and items, and planned evidence for construct validity. (Lambert & Newman, 2022). Items were adapted from previously validated instruments reported in the relevant innovation and organisational literature and were contextually modified to improve cognitive/semantic fit within the South African retail setting, consistent with best practice guidance on scale adaptation and cognitive validity (Pillet *et al.*, 2023). All items were measured using a four-point Likert-type scale ranging from 1 (strongly disagree) to 4 (strongly agree).

The omission of a neutral midpoint constitutes an even-category response format, which can reduce “neutral-as-escape” responding in some contexts, although it may also shift response distributions depending on construct sensitivity and respondent tendencies; this trade-off is discussed and empirically examined in recent survey-experiment work on neutral categories. (Kankaraš & Capecchi, 2025). To strengthen measurement quality, the instrument was evaluated using standard psychometric checks (e.g., factor structure and reliability), consistent with contemporary recommendations that emphasise transparent evidence for internal structure and construct validity (Lambert & Newman, 2022).

3.6.2.2 Survey Administration

The questionnaire was administered electronically using a secure online platform. Digital administration was selected due to its efficiency, accessibility, and suitability for geographically dispersed SME populations (Wu, Zhao & Fils-Aime, 2022).

The survey protocol included:

1. Initial invitation email explaining research purpose and ethical safeguards

2. Provision of a participant information sheet
3. Two follow up reminders at fortnightly intervals
4. Final dataset verification and cleaning

This structured contact procedure is consistent with contemporary survey methodology guidance emphasising that follow-ups improve participation and that response rate should be interpreted alongside design features and nonresponse assessment practices (Holtom *et al.*, 2022).

3.6.2.3 Pilot Testing

Pilot testing strengthens content validity and measurement reliability by enabling researchers to identify ambiguous items, refine question wording, and assess response consistency before full-scale data collection (Ramu *et al.*, 2023). Prior to full deployment, the instrument underwent pilot testing with eight SME managers not included in the final sample. Feedback focused on item clarity, completion time, and semantic interpretation. Minor wording adjustments were implemented to enhance clarity and flow. The final questionnaire was also discussed with the NWU SCS, and minor amendments were made to the instrument prior to fieldwork.

3.6.3 Qualitative Data Collection

3.6.3.1 Interview Design

The qualitative phase employed semi-structured interviews, a widely used qualitative data collection method, to explore organisational practices, adaptive routines, and relational dynamics in depth. In semi-structured interviews, researchers use a thematic guide to ensure systematic coverage of key topics while retaining the flexibility to pursue follow up questions and emergent issues raised by participants, thereby facilitating rich, contextually grounded insights into complex social phenomena (George, 2023).

3.6.3.2 Interview Protocol Development

Interview guides were explicitly informed by the results of the quantitative phase. This ensured targeted exploration of:

- Research-led validation routines

- Capability development trajectories
- Internal coordination mechanisms
- Retail compliance adaptation
- Buyer-supplier relational governance

This sequential linkage strengthens explanatory coherence and supports causal inference (Peters & Fàbregues, 2024).

3.6.3.3 Data collection and duration

The interviews were recorded using a Philips DVT1160 Voice recorder for notes as the participants might have felt uncomfortable being recorded via a cellular phone audio (Strydom, 2024:193). The data collection process took place from 01 September 2023 to 30 September 2023. The semi-structured interviews were conducted at a venue convenient for the participants and each interview was approximately 40 minutes long. The contents of the interview are presented in the interview guide below in the appendix.

The structure of the interview guide was informed by the research objectives.

Section A focused on participants' biographical information. The relevant information extracted included participants' age, gender, work experience, and academic qualifications.

Section B: In this section, the questions focused on the research questions. The questions that were asked are presented in Appendix B.

One of the major challenges of the study was getting volunteers to participate in the study. There were many instances where the researcher had to approach a supplier multiple times before they had agreed to participate as discussed in the sampling section. Initial set of interviews took place between November 2023 to January 2024, as most of the participants were unavailable and the researcher had to follow up multiple times to schedule the meeting. Following the fact that only 12 volunteers had initially agreed to the interview, the researcher contacted the suppliers who had not responded the first few times again at the end of March and managed to schedule an additional eight interviews. The second batch of interviews took place between April

and June 2024. The duration of the interviews was on average 38 minutes and 25 Seconds. including the introduction, with the shot. Table 3.1 presents the exact duration of each participant's interview.

Table 3.1: Duration of interview

Participant	Duration
Participant 1	39 Minutes
Participant 2	46 Minutes
Participant 3	29 Minutes
Participant 4	55 Minutes
Participant 5	41 Minutes
Participant 6	30 Minutes
Participant 7	33 Minutes
Participant 8	39 Minutes
Participant 9	34 Minutes
Participant 10	1 Hour 06 Minutes
Participant 11	29 Minutes
Participant 12	37 Minutes
Participant 13	1 Hour 02 Minutes
Participant 14	28 Minutes
Participant 15	32 Minutes

Participant 16	36 Minutes
Participant 17	22 Minutes
Participant 18	39 Minutes
Participant 19	33 Minutes
Participant 20	35 Minutes

(Source: Compiled by Researcher)

All the participants were very helpful in answering each question in-depth. There were times when the researcher had to ask two participants to get back to the topic being discussed, as they were quite excited in giving information on various matters that they deviated into a different matter altogether. One participant (Participant 17) stated that he preferred to keep the interview brief and answered in a few words. The longest interview was one hour and six minutes long, and the shortest one was 22 minutes.

3.6.3.4 Establishing Rapport and Participant Comfort

Prior to each interview, time was intentionally allocated to establish rapport and create a psychologically safe interactional environment. The interviewer reintroduced herself, reiterated the study's purpose, confirmed informed consent, and expressed appreciation for participants' voluntary participation. These preliminary steps serve both ethical and methodological functions, reinforcing transparency while fostering trust between researcher and participant (Braun & Clarke, 2021). Qualitative interviewing literature emphasises that rapport building is foundational to eliciting rich, candid, and reflective accounts, particularly when exploring organisational routines and experiential knowledge. Participants are more likely to provide detailed and contextually nuanced responses when they perceive the interaction as respectful, non-threatening, and conversational rather than interrogative (Braun & Clarke, 2021).

To reduce formality and facilitate participant ease, each interview session commenced with a brief informal conversation (e.g., general contextual or workplace topics) before progressing to the formal interview schedule; such conversational entry points serve as de facto “ice-breakers” that

help participants acclimatise to the research setting and reduce performance anxiety that can constrain narrative depth (Swain & King, 2022). Informal conversational exchanges prior to formal questioning have been shown to facilitate communication and elicit more naturalistic responses in qualitative research interviews. The interview began with broad, descriptive questions concerning participants' roles, responsibilities, and organisational context. Starting with non-sensitive, experience-based questions is widely recommended as a strategy to encourage narrative flow and establish communicative confidence prior to addressing more complex or evaluative topics.

Once rapport had been established, participants were afforded space to articulate their experiences without interruption. The interviewer adopted an attentive listening stance, using minimal encouragers and allowing extended responses to unfold naturally. This approach prioritises participant-led meaning construction and enhances the authenticity and depth of qualitative data.

3.6.3.5 Probing and Depth Elicitation

Consistent with the semi-structured design, interviews combined a guiding protocol with flexibility to probe emergent issues in greater depth. Semi-structured interviewing is particularly suited to exploratory organisational research because it permits systematic coverage of predefined themes while enabling responsive follow up questions that clarify meaning, unpack processes, and surface tacit knowledge (Strydom & Van der Merwe, 2025).

Probing techniques were employed to deepen and clarify responses, including requests for elaboration (e.g., "Could you expand on that?"), prompts for examples, and invitations to reflect on underlying causes or implications. Such probing is widely recognised as a core feature of high-quality qualitative interviewing because it supports meaning clarification and moves data beyond surface description toward more explanatory insight (Demirci, 2024; Guest *et al.*, 2020). In addition, deliberate pauses and strategic silence were used to provide participants with cognitive space for reflection. Methodological scholarship recognises that silence in interviews can function productively—encouraging participants to continue, elaborate, and construct more considered accounts—rather than representing an absence of data (Müller *et al.*, 2024).

Avoiding rushed interactions further reduces interactional pressure and supports fuller disclosure, strengthening the credibility and completeness of interview accounts (Demirci, 2024). Together,

these techniques strengthened interpretive depth and supported the generation of thick, contextually grounded accounts aligned with the study's explanatory objectives (Müller *et al.*, 2024).

Date: 29 November 2023	Time: 15:00
Duration: 0.46h	
General notes:	
1. The interview took place at the retailer's office park 2. The participant wore business casual attire 3. The meeting took place in 2nd floor in meeting room after the participant met with the buyer for an update Meeting. 4. The participant made eye contact, smiled a few time before responding to questions and did not rush with any of the responses. Facial reaction was calm and composed throughout. 5. Male participant 6. Age group: Millennial 7. Occupation: Business owner of toiletries (non-food) manufacturing organization.	

Figure 3.1: General Notes Section of the transcribed interview (*Source: Own Compilation*)

3.6.4 Data Management and Storage

All quantitative and qualitative data were stored on encrypted, password-protected digital platforms accessible only to the researcher. Secure storage, restricted access, and controlled handling procedures were implemented to protect participant confidentiality and minimise risks of unauthorised disclosure (Tenopir *et al.*, 2020). These practices align with contemporary research data management standards that emphasise encryption, access control, documentation, and responsible stewardship of sensitive social science data throughout the research lifecycle (Tenopir *et al.*, 2020). In addition, procedures were designed to comply with institutional governance requirements and internationally recognised principles of data protection and ethical research

conduct, including secure retention, anonymisation, and restricted dissemination protocols consistent with GDPR-informed research data frameworks.

3.7 MEASUREMENT INSTRUMENTS AND VARIABLES

3.7.1 Overview of Measurement Strategy

Measurement is the systematic translation of theoretical constructs into observable indicators that can be reliably and validly analysed (Hair, Howard & Nitzl, 2020). In organisational and SME research, measurement quality is not a technical afterthought; it directly conditions the credibility of inference by shaping construct clarity, interpretability, and the replicability of empirical claims (Flake & Fried, 2020). Contemporary methodological scholarship cautions that weakly specified measures and underreported measurement decisions undermine cumulative knowledge, and therefore recommends transparent construct definition, principled item selection/adaptation, and explicit reporting of reliability and validity evidence (Flake & Fried, 2020).

In this study, the focal theoretical variables were modelled as latent constructs, operationalised through multi-item reflective indicators that capture shared variance consistent with the underlying capability/relational domains. Measurement evaluation followed established contemporary guidance for assessing reflective models, including internal consistency, convergent validity, and discriminant validity (Hair *et al.*, 2020).

3.7.2 Operationalisation of Key Constructs

3.7.2.1 Strategic Orientation (SO)

Strategic orientation reflects the extent to which SMEs adopt an intentional, forward-looking posture that aligns decision-making with market intelligence, competitive positioning, and longer-horizon objectives (Al Mamun *et al.*, 2022). In innovation settings, strategic orientation is expressed through deliberate prioritisation of opportunity identification, proactive market engagement, and disciplined resource focus toward innovation-relevant goals. This construct is widely treated as a behavioural-organisational posture that conditions innovation effort and performance by shaping attention allocation, learning focus, and strategic coherence (Al Mamun *et al.*, 2022). Items captured: (i) innovation planning aligned to strategic goals, (ii) active

monitoring of market/customer signals, and (iii) proactive competitive positioning through new offerings.

3.7.2.2 Research-Led Validation Capability (RLV)

Research-led validation capability represents an SME's capacity to systematically generate and use evidence (market, technical, regulatory, and commercial) to validate products prior to submission to powerful downstream gatekeepers (e.g., retail buyers). It comprises structured routines for acquiring information, testing assumptions, documenting product readiness, and converting knowledge into decision-useful artefacts (test results, specifications, certifications, and compliance-ready documentation) (Ma, Augustijn, De Esch & Bossink, 2023). Such routines can be understood as micro-foundations of capability development, enabling firms to reduce uncertainty, strengthen signalling credibility, and iteratively refine offerings before high-stakes market entry. Indicators included: (i) structured market/customer research, (ii) prototyping and product testing, (iii) benchmarking and competitive comparison, and (iv) systematic documentation for quality/compliance purposes (Ma *et al.*, 2023).

3.7.2.3 Internal Collaboration (IC)

Internal collaboration reflects the extent of cross-functional integration, coordination, and knowledge sharing among the roles involved in new product development (e.g., production/operations, marketing/sales, finance, quality/compliance). Collaboration is treated as an enabling organisational mechanism that improves NPD execution by reducing internal frictions, accelerating problem-solving, and strengthening alignment between product specifications, operational feasibility, and market requirements (Wu, Lin, Liu & Li, 2024). Recent evidence indicates that cross-functional integration directly supports NPD outcomes and indirectly by enabling effective external involvement and coordination across the broader value creation network (Wu *et al.*, 2024). Items measured: (i) cross-functional communication quality, (ii) joint decision-making during product development, and (iii) integrated problem-solving across internal functions.

3.7.2.4 Retailer Relationship Quality (RRQ)

Retailer relationship quality captures the SME's perceived quality of the dyadic relationship with retail buyers and relevant boundary-spanning personnel, typically expressed through trust,

communication effectiveness, responsiveness, and relational commitment. In asymmetric buyer-supplier structures, relationship quality is not merely “soft” context; it can shape information exchange, coordination costs, dispute resolution, and the stability of ongoing exchange—especially where compliance demands and performance monitoring are intensive (Aslam, Blome, Roscoe & Azhar, 2022). Contemporary supply chain research shows that relational quality mechanisms (trust/commitment and cooperative orientation) materially affect coordination and supplier-side outcomes under conditions of dependence and governance pressure. Items measured: (i) trust in the retailer interface, (ii) communication clarity and timeliness, (iii) responsiveness to issues, and (iv) perceived commitment to sustaining exchange (Aslam *et al.*, 2022).

3.7.3 Control Variables

Two controls were included to account for structural differences that may influence capability development and market outcomes:

- Firm size (number of employees) as a proxy for resource capacity and operational scale.
- Firm age (years in operation) as a proxy for experiential learning, organisational imprinting, and maturity effects.

Both variables are widely used in SME and innovation research because size and age can condition the availability of slack resources and routines and can shape innovation patterns and performance relationships (Bouncken *et al.*, 2021).

3.7.4 Scale Reliability and Validity

Internal consistency reliability was examined using established criteria for reflective constructs (e.g., Cronbach’s alpha and composite reliability), interpreted alongside indicator loadings and construct-level assessment. Contemporary measurement guidance emphasises reporting multiple indices and interpreting them in combination rather than relying on any single statistic (Hair *et al.*, 2020).

Construct validity was assessed through complementary evidence:

- Content validity supported through careful construct definition and principled item selection/adaptation consistent with best practice recommendations to avoid questionable measurement decisions (Flake & Fried, 2020).
- Convergent validity assessed using criteria such as AVE and related diagnostics consistent with current reporting guidance (Cheung, Cooper-Thomas, Lau & Wang, 2024).
- Discriminant validity evaluated using updated methodological recommendations that refine and strengthen discriminant validity assessment beyond older heuristic-only approaches (Rönkkö & Cho, 2020).

3.8 DATA ANALYSIS PROCEDURES

3.8.1 Overview of Analytical Strategy

Data analysis followed the logic of the sequential explanatory mixed-methods design, comprising three analytically integrated stages: quantitative statistical analysis, qualitative thematic analysis, and mixed-methods integration. This staged analytical framework enables robust hypothesis testing, deep contextual interpretation, and higher-order theoretical synthesis (Shan, 2022; Peters & Fàbregues, 2024). The analytical strategy was designed to ensure methodological rigour, interpretive coherence, and alignment with the study's research objectives.

3.8.2 Quantitative Data Analysis

3.8.2.1 Data Screening and Preparation

Quantitative data were analysed using IBM SPSS Statistics (Version 28) by the SCS of NWU. Prior to inferential analysis, the dataset underwent systematic screening, including assessment of missing data, outlier detection, normality testing, and diagnostics for multicollinearity. Missing data were minimal (<3%) and were addressed using mean substitution. Outliers were examined using standardised residuals and Mahalanobis distance measures, ensuring analytical robustness (Hair *et al.*, 2022).

3.8.2.2 Descriptive and Inferential Analysis

Descriptive statistics were employed to summarise sample characteristics and examine the distributional properties of study variables. Descriptive analysis provides an essential preliminary step in quantitative research, enabling identification of central tendencies, dispersion patterns, and potential anomalies prior to inferential testing (James *et al.*, 2021). Pearson product–moment correlation analysis was subsequently conducted to assess bivariate associations between variables. Correlation analysis is appropriate for evaluating the strength and direction of linear relationships among continuous measures and serves as a diagnostic precursor to multivariate modelling (Hair *et al.*, 2022).

Multiple linear regression analysis served as the principal inferential technique, examining the predictive relationships between strategic orientation, research-led validation capability, and internal collaboration, and the dependent variable, retailer relationship quality. Multiple regression is widely used in organisational and behavioural research to estimate the unique contribution of each predictor while controlling for competing influences (James *et al.*, 2021). Firm size and firm age were incorporated as control variables to account for structural differences in organisational resources and maturity that may confound observed relationships.

Model adequacy was assessed using established regression diagnostics, including variance inflation factors (VIFs) to assess multicollinearity, inspection of residual distributions to assess normality, tests of homoscedasticity, and Durbin–Watson statistics to detect autocorrelation. These diagnostics align with contemporary recommendations for evaluating the validity of linear regression assumptions and ensuring stable parameter estimation (Hair *et al.*, 2022; Shmueli *et al.*, 2019). Statistical significance was assessed at $p < 0.05$, and standardised beta coefficients and adjusted R^2 values were examined to evaluate practical and predictive significance. Reporting both statistical and substantive effect sizes is recommended to avoid over-reliance on p-values and to enhance interpretive robustness (Shmueli *et al.*, 2019)

3.8.3 Qualitative Data Analysis

3.8.3.1 Analytical Framework

Qualitative data were analysed using reflexive thematic analysis (RTA). Reflexive thematic analysis is a theoretically flexible yet systematic approach to identifying patterned meanings within qualitative datasets and is particularly suited to exploratory organisational research where the aim is to understand processes, interpretations, and contextualised experiences rather than to quantify frequency of responses. The method emphasises researcher reflexivity, interpretive depth, and the generation of theoretically informed themes grounded in participants' accounts (Braun & Clarke, 2021). This approach was selected because it enables rigorous pattern identification while preserving sensitivity to context and the construction of meaning which is an essential consideration when examining organisational capabilities, routines, and relational dynamics.

3.8.3.2 Analytical Procedures

Analysis followed the iterative six-phase process proposed for reflexive thematic analysis:

1. data familiarisation
2. initial coding
3. development of candidate themes
4. theme refinement
5. theme definition and naming
6. analytic narrative construction

These phases are not linear but recursive, requiring repeated movement between data, codes, and emerging interpretations to ensure conceptual coherence and depth (Braun & Clarke, 2021). Coding employed a hybrid inductive–deductive strategy. Initial coding remained inductive, allowing insights to emerge directly from participants' narratives, while subsequent stages incorporated theoretically informed lenses derived from the study's conceptual framework. Combining inductive and deductive logics is widely recommended in applied organisational research, as it facilitates both theory development and theory refinement while maintaining openness to unanticipated findings (Saunders *et al.*, 2018).

To enhance analytic depth and credibility, analysis was conducted iteratively, with ongoing memoing and constant comparison across transcripts to refine interpretations and ensure themes captured meaning-rich patterns rather than superficial topic labels (Yadav, 2022). Considerations of analytical adequacy were guided by contemporary empirical work showing that saturation is conceptually and operationally dependent on study purpose and the type of saturation sought (e.g., code vs meaning), reinforcing the need for iterative engagement with the dataset (Hennink & Kaiser, 2022). Qualitative data management and retrieval were supported using Atlas.ti 22, which served as an organisational aid to support systematic handling of transcripts, codes, and memos; interpretation and theme development remained the responsibility of the researcher.

3.8.4 Mixed-Methods Integration and Meta-Inference

Integration was achieved through joint display analysis and the development of meta-inferences, enabling a transparent synthesis of quantitative and qualitative results. Joint displays were used to align statistical patterns with qualitative explanations, supporting systematic interpretation of where findings converged, complemented one another, or diverged across strands (McCrudden, Marchand & Schutz, 2021). Interpretive integration proceeded through meta-inference development, whereby strand-specific claims were iteratively compared and progressively integrated into higher-order explanatory conclusions (Schoonenboom, 2022).

The coherence and credibility of integration were strengthened by evaluating the quality of integration (e.g., the clarity of linkage between strands and the interpretive justification for convergence/divergence), consistent with contemporary mixed-methods integration appraisal guidance (Fàbregues *et al.*, 2024). This integrative process culminated in the development of the Retail-Ready NPD Capability Model, which conceptualises research-led validation capability as a central mechanism within the capability configuration associated with retail readiness and sustained listing.

3.9 RESEARCH QUALITY, VALIDITY AND TRUSTWORTHINESS

3.9.1 Quantitative Rigour

Quantitative rigour was ensured through systematic assessment of reliability, validity, and analytical robustness (Hair *et al.*, 2022). Internal consistency reliability was evaluated using

Cronbach's alpha and composite reliability, with all constructs exceeding the 0.70 threshold. Construct validity was assessed through content validity (literature grounding and pilot testing), convergent validity (average variance extracted > 0.50), and discriminant validity (inter-construct correlations), confirming psychometric soundness (Hair *et al.*, 2022).

3.9.2 Qualitative Trustworthiness

Qualitative rigour was established using the criteria of credibility, dependability, confirmability, and transferability (Braun & Clarke, 2021). Credibility was enhanced through prolonged engagement, iterative questioning, and analytical reflexivity. Dependability was ensured via systematic documentation of analytical procedures. Confirmability was supported through audit trails and reflexive memoing, while transferability was enhanced through rich contextual description and analytical generalisation.

3.9.3 Mixed-Methods Integration Rigour

Integration rigour was ensured through explicit linkage across design, methods, analysis, and interpretation. Joint displays and meta-inference enabled analytical coherence, strengthened causal explanation, and enhanced theoretical contribution (Nessle *et al.*, 2023; Peters & Fàbregues, 2024).

3.10 ETHICAL CONSIDERATIONS

Ethical approval was obtained from the NWU's Faculty of Economic and Management Sciences' ethics committee prior to data collection. All procedures were conducted in accordance with internationally recognised principles for research involving human participants, including respect for autonomy, beneficence, non-maleficence, and justice, as outlined in contemporary professional ethical standards (American Psychological Association, 2020). Informed consent was obtained from all participants prior to participation. Individuals received detailed information regarding the study's purpose, voluntary nature, right to withdraw without penalty, and the measures implemented to protect confidentiality and anonymity. Written consent was formally documented.

To ensure data protection, identifying information was removed during transcription and replaced with pseudonyms. Digital data were stored on encrypted, password-protected devices and secure institutional servers. Given the commercially sensitive nature of retail operations, additional safeguards were implemented to minimise risks of organisational or deductive disclosure (Pascale

et al., 2022). The researcher's professional role within the retail sector necessitated ongoing reflexive awareness of potential conflicts of interest, insider–outsider dynamics, and power asymmetries. These were mitigated through transparency, voluntary participation, clear separation of professional and research responsibilities, and continuous reflexive practice (Taquette & Souza, 2022; Bukamal, 2022).

3.11 CHAPTER SUMMARY

This chapter has presented a comprehensive account of the research methodology employed to investigate SME new product development capability within South Africa's concentrated retail environment. Grounded in a pragmatic philosophical paradigm, the study employed a sequential explanatory mixed-methods design that integrated quantitative and qualitative inquiry. The chapter detailed the philosophical positioning, research design, context, sampling strategy, data collection procedures, measurement instruments, analytical methods, quality assurance mechanisms, and ethical safeguards underpinning the study. This rigorous methodological framework provides a robust foundation for the empirical findings and theoretical contributions presented in subsequent chapters.

CHAPTER 4: ARTICLE 1

EVALUATING FACTORS THAT IMPACT SME'S NPD SUCCESS IN THE SOUTH AFRICAN RETAIL INDUSTRY

Abstract

This study investigates the determinants of new product development (NPD) performance and retailer engagement among small and medium-sized enterprises (SMEs) in South Africa, examining how strategic orientation, NPD research intensity, team collaboration, and retailer-supplier relationship quality influence innovation outcomes within resource-constrained environments. Adopting a positivist quantitative research design, data were collected from 74 SME owner-managers via a structured online questionnaire and analysed using descriptive statistics, correlation analysis, and multiple regression in SPSS (v28.0) to assess relationships between key NPD capability dimensions and retailer engagement. The findings indicate that NPD research is the only statistically significant predictor of retailer engagement ($\beta = 0.61$, $p < 0.05$), highlighting the critical role of structured market intelligence and systematic customer validation in strengthening SME-retailer relationships. While strategic alignment and team collaboration are positively associated with NPD outcomes, these effects are not statistically significant, and weak retailer-supplier communication remains a persistent barrier to market access. The study concludes that SMEs can enhance credibility and innovation performance by institutionalising research-driven NPD routines and learning processes, while policymakers and industry stakeholders should prioritise shared market intelligence systems and inclusive supplier development initiatives. Theoretically, the research extends the Resource-Based View and Dynamic Capabilities Theory by demonstrating how research intensity and organisational learning capabilities convert internal innovation resources into external market legitimacy within asymmetric retail structures.

Keywords: New product development (NPD); SMEs; South Africa; Innovation; Retailer-supplier relationships; Strategic alignment; Market intelligence; Resource-Based View.

4.1 INTRODUCTION

In developing economies such as South Africa, the contribution of small and medium-sized enterprises (SMEs) to economic growth, employment creation, and poverty reduction is well established (Fajarika *et al.*, 2024). Despite sustained policy attention and developmental finance, many SMEs still struggle to access mainstream retail value chains dominated by powerful national retailers. In these buyer-driven chains, smaller suppliers often depend heavily on large buyers, resulting in “captive” relationships that restrict supplier autonomy (Glavee-Geo *et al.*, 2022).

Within South Africa’s grocery retail sector, exclusive lease agreements and related practices have been widely used to entrench incumbent dominance and raise entry barriers for potential challengers (Chisoro-Dube & das Nair, 2020). Such exclusivity arrangements have been highlighted by the Competition Commission of South Africa (2019) as a key factor limiting new entry and shaping unequal bargaining relationships with suppliers. Listing protocols at major retailers are particularly challenging, requiring SMEs to upgrade their capabilities to meet rigorous standards before their products can be listed (das Nair & Landani, 2021).

Although leading retailers operate supplier development programmes intended to support SMEs, not all participating firms succeed in securing product listings. At the same time, new product development (NPD) has been repeatedly recognised as critical for SME differentiation and competitive advantage, as the creation of novel and meaningful products strengthens both market positioning and firm performance (Yi *et al.*, 2021). However, despite extensive research on SME innovation in South Africa, few empirical studies have directly linked NPD activities to successful product listings in major retail chains. This limited evidence suggests a significant research gap that this study seeks to address (Matekenya & Moyo, 2022).

The present research explores the relationship between SMEs’ internal NPD capabilities and their experiences of the product-listing process at a dominant South African retail group. It is guided by the perspectives of SME suppliers who have developed new products but continue to face difficulties securing listings despite considerable investment in innovation. The study therefore shifts the analytical focus away from post-listing financial performance and instead examines the disconnect between NPD investment and retailer acceptance - a pressing issue within South Africa’s SME ecosystem (das Nair & Landani, 2021). Within this framework, NPD failure is

defined as a product not being selected for listing by the major retailer, rather than poor post-listing sales performance.

4.2. BACKGROUND

4.2.1 Introduction

Achieving excellence in New Product Development (NPD) is a strategic necessity for SMEs striving for competitive advantage and sustainable growth in resource-constrained economies such as South Africa. For SMEs seeking to enter dominant retail supply chains, the interaction between internal innovation capabilities and external buyer relationships is crucial for navigating power imbalances and achieving product acceptance (Purmonen *et al.*, 2023; Glavee-Geo *et al.*, 2022). This review synthesises theoretical and empirical advances in NPD, strategy, collaboration, and digitalisation to build the conceptual framework that informed the study's survey design.

4.2.2 New Product Development in Emerging Markets

In emerging markets such as South Africa, NPD operates within institutional voids and resource constraints that drive firms toward frugal or lean innovation, prioritising cost efficiency and affordability (Edacherian *et al.*, 2024:6). Integrating indigenous knowledge with modern technologies enhances innovation relevance and cultural resonance, particularly in sustainable-enterprise sectors (Manyaga *et al.*, 2024).

Community-based innovation engaging local stakeholders improves product launch outcomes in underserved areas (Schaumann & Tarnovskaya, 2023). Firms increasingly run dual product-and-business-model tracks, serving formal retailers while tailoring offerings for informal markets, to reach heterogeneous consumers (Rajaguru, Matanda and Siaw, 2024; Onsongo, Knorringa and van Beers, 2023). The COVID-19 pandemic accelerated the adoption of digital prototyping and virtual engagement tools, enabling manufacturing SMEs to iterate and launch products faster (Dzogbewu, Afrifa Jnr, Amoah, Fianco and De Beer, 2022). Many firms employ frugal and reverse innovation strategies, adapting products to local constraints to achieve viable innovation outcomes (Sharmelly & Ray, 2021).

4.2.3 SMEs in the South African Retail Industry

South African SMEs face entrenched structural barriers limiting growth and market integration. Misaligned government policies, financing gaps, and weak managerial capacity continue to constrain development (Ogujiuba *et al.*, 2023). The grocery retail market is concentrated- Shoprite, Pick 'n Pay and SPAR together hold over 50%, making them pivotal gatekeepers for SME suppliers (Bowman, 2025). While access to these chains offers scale and visibility, exclusionary practices and stringent listing standards reinforce unequal power dynamics (Competition Commission, 2019). At the township level, SMEs compete with migrant-owned retailers that exploit collective buying networks to secure price advantages (Malgas & Zondi, 2020). Aligning SME product development and market strategies with retailer requirements is therefore vital, yet no reliable statistics exist on average rejection rates for new product listings-an evident research gap (Bowman, 2025).

4.2.4 Key NPD Models

NPD models provide structured guidance from idea to launch, helping firms balance speed, collaboration, and risk (Rehder, Souza, Marx, and Salerno, 2023). Models were benchmarked against literature and practitioner inputs, using flexibility, speed, risk management, and adaptability as evaluation criteria (Panizzon *et al.*, 2022). They are grouped as Linear and Structured, Iterative and Adaptive, and Collaborative and Integrated.

Linear and Structured: Sequential Stage-Gate approaches offer control and predictability, suiting regulated or high-risk contexts. Projects advance through formal evaluation gates to optimise resources and terminate weak concepts early (Edwards, Cooper, Vedsmand and Nardelli, 2019). South African retailers such as Shoprite and Pick 'n Pay combine Stage-Gate with Agile sprints for faster responses to supply-and-demand shifts (Rehder *et al.*, 2023; García-Sánchez, Vargas-Martínez & Candia-García, 2024).

Iterative and Adaptive: Agile and Spiral models emphasise iteration, rapid feedback, and flexibility-critical in dynamic markets. Agile, originating in software, now drives physical product innovation for responsiveness and early customer validation (Gerdes, Phaal and Lynch, 2021). The Spiral model blends structured planning with continuous iteration under uncertainty (Patterson *et al.*, 2024).

Collaborative and Integrated: Concurrent Engineering (CE), Integrated NPD (iNPD), and Open Innovation (OI) stress teamwork and shared learning. CE promotes parallel workflows, thereby shortening development cycles (Park *et al.*, 2021; Rihar & Kušar, 2021). iNPD synchronises internal and external actors to align design with market needs (Nguyen & Lee, 2023). OI allows SMEs to leverage outside expertise and share risk, an approach that strengthened SME resilience during the COVID-19 period (McGahan, Bogers, Chesbrough and Holgersson, 2021; Jabeen, Belas, Santoro and Alam, 2023).

Hybrid models that blend structure and agility are particularly relevant in emerging economies, where volatility and resource constraints demand both flexibility and control.

4.2.5 The Agile-Stage-Gate Hybrid Model: A Critical Analysis

The Agile-Stage-Gate hybrid integrates Stage-Gate discipline with Agile flexibility to offset each method's limitations (Cooper & Sommer, 2018). Gates serve as decision checkpoints, while Agile sprints between gates allow iterative development and validation. Empirical studies report roughly 30% faster time-to-market and 40% higher success rates under this hybrid system (Cooper & Sommer, 2018).

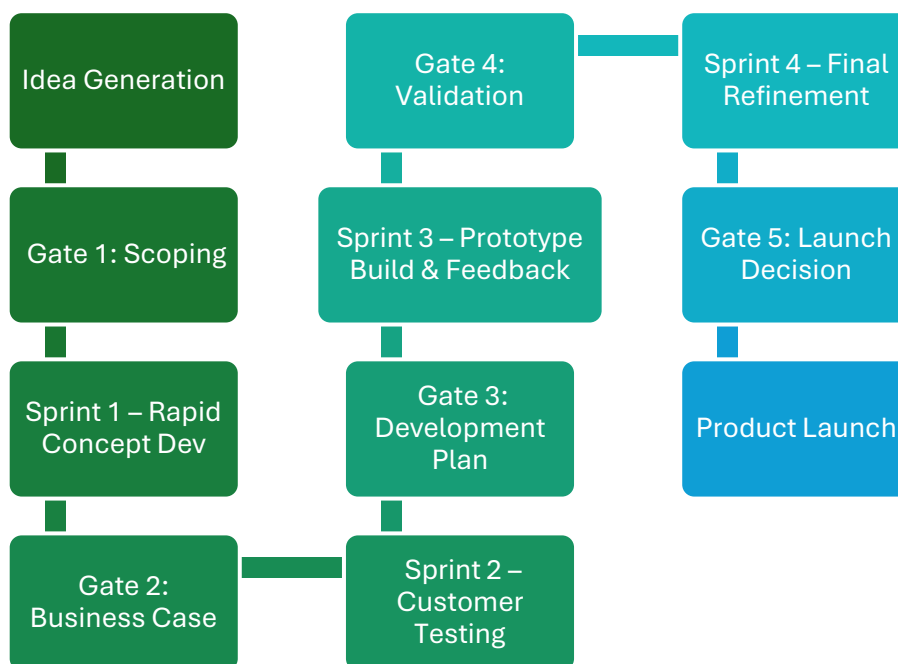


Figure 4.1: Agile-Stage-Gate Hybrid Flow (*Adapted from Cooper and Sommer, 2018*)

This model is particularly suited to volatile, resource-constrained contexts, such as South Africa, where SMEs face limitations in capital, skills, and infrastructure (DTIC, 2023; Owoseni & Ahwireng-Obeng, 2024). Although adoption challenges persist (culture change, empowerment balance, and training), the hybrid improves efficiency, speed, and customer alignment (Gerdes *et al.*, 2021; Pretorius & Booysen, 2023). Its balance of structure and adaptability makes it a pragmatic framework for SMEs facing uncertainty.

4.2.6 NPD Failure and Success Strategies

In South Africa's grocery value chain, buyer dominance and opaque onboarding continue to restrict SME market access (Competition Commission of South Africa, 2019), increasing rejection risk at early gatekeeping stages. The constructs discussed below were empirically tested using a structured survey of SMEs and suppliers.

4.5.6.1 Resource Constraints.

Limited time, data, and skills often weaken market-insight work and delay customer feedback loops, undermining innovation performance (Sancho-Zamora *et al.*, 2021). Digital-readiness gaps further slow learning, whereas firms that use virtual testing tools achieve shorter iteration cycles (Nguyen *et al.*, 2023). Formal process governance and clear decision rights improve NPD-portfolio discipline (Competition Commission, 2019).

4.5.6.2 Strategic Orientation in NPD

Clear alignment between strategy and NPD execution enhances innovation outcomes (Miroshnychenko *et al.*, 2021). Firms that translate strategic intent into portfolio rules, deciding which projects to start, continue, or end, achieve faster learning and better resource reallocation (Competition Commission, 2019). Digital and customer orientation jointly improve sensing of external signals and reduce feedback lag (Pan *et al.*, 2021; Sancho-Zamora *et al.*, 2022).

4.5.6.3 Absorptive Capacity and NPD Research

Absorptive capacity (ACAP)-the ability to acquire, assimilate, transform, and exploit external knowledge-positively influences innovation capability and firm performance (Sancho-Zamora *et al.*, 2021). In volatile sectors, premature release of under-tested products leads to incremental "patching" rather than robust design; formal evaluation and pre-launch learning are therefore

critical (Nguyen *et al.*, 2023). Building ACAP through networks and scanning reduces SME misinterpretation of retailer requirements (Sancho-Zamora *et al.*, 2021).

4.5.6.4 Organisational Collaboration

Cross-functional integration across R&D, marketing, and operations enhances NPD quality by aligning feasibility with customer needs and reducing rework (Sancho-Zamora *et al.*, 2021). Collaboration with external partners-customers, suppliers, or support agencies-lowers information asymmetry and shortens iteration cycles (Competition Commission, 2019). Effective collaboration relies on dedicated teams with clear roles, shared metrics, and frequent portfolio reviews.

4.5.6.5 Digitalisation and its Transformative Role in NPD

Digitalisation enables faster prototyping, co-creation, and iteration. AI tools accelerate idea screening, concept testing, and design refinement, improving time-to-market and innovation quality (Cooper, 2024). Digital twin technologies enable firms to virtually design and validate products prior to production, thereby enhancing reliability (Soori, Arezoo, and Dastres, 2023). For South African retail SMEs, digital maturity is strongly correlated with organisational resilience, whereas low maturity heightens exposure to shocks (Robertson, Smit, Botha, and Bruwer, 2022). Suppliers lacking baseline digital capabilities-shared data, workflows, remote collaboration-risk exclusion from digitalised retail chains (Robertson *et al.*, 2022).

4.5.6.6 Retailer-Supplier Relationships in Asymmetric Markets

South Africa's concentrated grocery sector gives large retailers significant buyer power, which shapes suppliers' access (Competition Commission, 2019). International evidence shows dependence asymmetry increases perceived risk and discourages supplier innovation unless governance and feedback are transparent (Ma *et al.*, 2021). SMEs countervail through specialisation and diversification, but these strategies succeed only when retailers provide clear criteria and structured feedback (Talay, Oxborrow and Brindley, 2020; Competition Commission, 2019).

4.2.7 Conceptual Framework of the Empirical Study

Synthesising these insights, the study adopts a multi-dimensional framework capturing four interrelated constructs that influence SME NPD performance and retail integration in developing economies such as South Africa:

- **Strategic Orientation** - directs innovation priorities and resource investment aligned with long-term goals.
- **NPD Research** - reduces uncertainty, validates demand, and strengthens buyer confidence.
- **Team Collaboration Dynamics** - facilitates internal and external knowledge flow, ensuring coordinated delivery.
- **Retailer-Supplier Relationships** - define access to dominant supply chains, shaped by power and information asymmetries.

This integrative model (Figure 4.2) reflects current thinking on innovation under constraint and power imbalance and forms the empirical foundation for testing within South Africa's retail ecosystem.

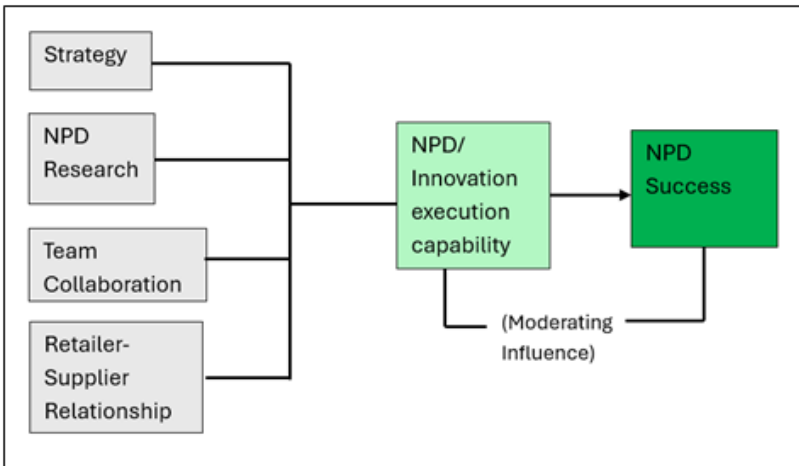


Figure 4.2: A Multilayered Conceptual Model for SME NPD Success (Source: Own Compilation)

4.2.8 Hypotheses Development

This study examines how key NPD dimensions influence retailer-supplier relationships and, ultimately, product-listing success.

1. Aligning NPD projects with overall strategy focuses resources and clarifies priorities, strengthening communication and trust with retailers.

H1: NPD Strategy is positively related to the retailer-supplier relationship.

2. Conducting rigorous market and customer research during NPD reduces uncertainty and enhances product fit, improving collaboration with retail buyers.

H2: NPD Research is positively related to the retailer-supplier relationship.

3. Strong cross-departmental collaboration fosters innovation and responsiveness, enhancing retailer engagement and partnership quality.

H3: Team Collaboration in NPD is positively related to the retailer-supplier relationship.

The following section outlines the study's research methodology.

4.2 PROBLEM STATEMENT

Although innovation and NPD are increasingly emphasised within South African SME policy, many enterprises remain excluded from formal retail distribution channels (das Nair & Landani, 2021). Government initiatives - including the Department of Trade, Industry and Competition's (DTIC) localisation drive and Enterprise Supplier Development (ESD) programmes - aim to integrate small producers into large value chains, yet only a small proportion of SME products advance beyond the initial buyer-screening stage (HSRC, 2024). This outcome underscores persistent capability and structural barriers that prevent innovative SMEs from translating product development efforts into market access.

Empirical evidence points to high SME failure rates and low levels of innovation despite these interventions. More than 70% of South African SMEs close within their first five to seven years (Bushe, 2019; Matekenya & Moyo, 2022), and fewer than half report any form of innovation activity (HSRC, 2024). Such findings reflect systemic weaknesses in the transition of SMEs from product ideation and development to formal buyer evaluation and retail integration. Existing

studies tend to focus on firms that have already succeeded in achieving NPD or are embedded within established supply chains. As a result, limited attention has been paid to SMEs that have engaged in structured NPD processes yet fail to secure retail listings. This gap raises an important question: do internal NPD structures and execution influence listing outcomes, or are broader relational and systemic barriers within buyer–supplier dynamics more decisive? Addressing this question is crucial for understanding how SMEs can translate innovative effort into tangible market opportunities and sustainable growth.

4.3 RESEARCH QUESTIONS & OBJECTIVES

4.3.1 Research Questions

The study has addressed the research questions:

1. How do small and medium-sized enterprises design and implement internal new product development (NPD) strategies and practices when preparing products for listing with national retailers?
2. How does cross-functional collaboration shape the effectiveness of new product development processes within SMEs seeking retail market entry?
3. How do retailer-supplier relationship dynamics influence SME success during the product-listing process?
4. Which dimensions of SME new product development are statistically associated with perceived barriers to, or progress in, achieving retail product listings?

4.3.2 Research Objectives

The primary objective is to assess the current state of NPD strategies in South Africa’s retail sector and to develop an evidence-based policy framework to improve the success rate of SME new product listings.

The following secondary objectives serve the primary objective:

- Examine the internal NPD strategies and practices used by SMEs attempting to list new products with a national retailer.

- Explore the extent of cross-functional collaboration and team dynamics within SME NPD processes.
- Investigate retailer-supplier relationship dynamics, focusing on communication, support, and feedback mechanisms during the listing process.
- Determine which NPD dimensions, if any, are statistically associated with perceived barriers or progress in the product-listing journey.

4.3.3 Research Aim

The primary aim of this study is to examine how SMEs' new product development strategies, collaboration processes, and engagement with retail buyers affect their ability to secure product listings with a major South African retailer. Rather than assuming that NPD automatically results in success, the study investigates how the quality, structure, and perception of NPD processes intersect with retailer-supplier relationships and listing outcomes. The emphasis is on understanding the mechanisms linking internal SME capabilities to external buyer evaluations in South Africa's concentrated retail sector.

4.4 SCOPE OF THE STUDY

The construct of new product development (NPD) is broad and encompasses multiple dimensions, including strategic orientation, market research, team collaboration, and stakeholder relationships. Similarly, the retail industry constitutes a complex ecosystem characterised by diverse actors and power dynamics. To enhance relevance, this study focuses on the determinants of NPD performance and retailer engagement among small and medium-sized enterprises (SMEs) in South Africa's concentrated grocery retail sector. The research specifically examines SMEs with 1-250 permanent employees that have developed new products but failed to secure retail listings at a major South African retail group, exploring how internal capabilities and external relationships shape market access outcomes within buyer-dominated retail systems. The study draws on the principles of the Resource-Based View (RBV) and Dynamic Capabilities Theory (DCT) to examine both food and non-food product categories across the South African retail landscape.

4.5 RESEARCH METHODOLOGY

4.5.1 Data Collection and Sampling

This study employed a quantitative research design grounded in a positivist epistemological stance, which assumes that reality can be objectively measured through empirical investigation (Creswell & Creswell, 2018). Data were gathered via a semi-structured online questionnaire distributed through Google Forms over ten weeks. The sampling frame included SME owner-managers and senior executives engaged in NPD and external retail partnerships. From a population of 92, 74 valid responses were obtained-an 80% response rate, consistent with recommended thresholds for quantitative surveys (Saunders *et al.*, 2019).

A purposive sampling approach targeted firms that had actively pursued retail listing but were yet to secure onboarding, ensuring participants possessed operational and strategic oversight of NPD and buyer engagement. Within the sample, 59.46% were owner-directors, 24.32% senior managers, and 16.22% middle managers or technical heads. Most respondents (83.78%) held tertiary qualifications, which supported their analytical ability in process-oriented questions.

The questionnaire comprised two sections:

- **Part A** collected demographic and organisational data (firm size, sector, respondent position, qualification).
- **Part B** captured NPD practices and retailer engagement, subdivided into four constructs: strategic alignment, NPD research intensity, internal collaboration, and retailer-supplier relationship quality.

Prior to rollout, the instrument underwent pilot testing with seven SMEs, consistent with recommendations for questionnaire validation (Taherdoost, 2021). The Statistical Consulting Services (SCS) at North-West University reviewed the tool and advised refinements. Minor wording and sequencing changes improved clarity and internal consistency before full distribution. Participation was voluntary, and informed consent was secured in accordance with the Protection of Personal Information (POPI) Act. Reminder emails were sent in weeks 6 and 8 to increase

response rates. Ethical approval was obtained from the North-West University Ethics Committee (Approval No. NWU-00574-20-A4), and confidentiality was strictly maintained.

4.5.2 Data Analysis

Quantitative data were analysed using SPSS Statistics v28.0 by the Statistical Consulting Services of North-West University. Initial descriptive statistics summarised central tendencies, variability, and distribution patterns for all variables (Somasundaran, 2022). Bivariate correlation analysis was then used to explore relationships between the independent constructs and NPD performance outcomes. Correlation coefficients were interpreted following Akoglu (2021), where $r > 0.7 = \text{strong}$, $0.4-0.6 = \text{moderate}$, and $< 0.3 = \text{weak}$. This step provided preliminary evidence of construct interdependence and guided checks for potential multicollinearity.

To assess the influence of NPD dimensions on retailer-supplier relationships, multiple linear regression analysis was applied. The dependent variable, *ease of securing appointments with retail buyers (E3)*, served as an indicator of relationship quality. Independent variables included:

- NPD_Strategy - strategic alignment of innovation initiatives;
- NPD_Research - market and customer research intensity; and
- Team_Collab - cross-functional collaboration effectiveness.

Firm size and years in operation were incorporated as control variables to account for organisational scale and experience effects. The model quantified linear relationships between these predictors and retailer accessibility, allowing hypothesis testing of their relative significance. Two models were estimated: one with the three primary predictors and a second incorporating the controls.

Model assumptions-linearity, normality, and homoscedasticity were examined to ensure statistical validity. Significance was evaluated at the 5% level, offering empirical insight into how specific NPD practices influence relationship outcomes within South African retail SMEs.

Before regression, sampling adequacy and inter-item correlation were verified using the Kaiser-Meyer-Olkin (KMO) test and Bartlett's Test of Sphericity, confirming data suitability for factor

analysis. Subsequently, exploratory factor analysis (EFA) identified latent constructs underlying NPD and retailer relationship variables (Dalawi *et al.*, 2025). Items with factor loadings below 0.5 or exhibiting cross-loadings were removed to enhance construct purity and discriminant validity.

To ensure measurement reliability, Cronbach's alpha coefficients were computed for each construct, with $\alpha \geq 0.70$ indicating acceptable internal consistency (Shrestha, 2021). The resulting scales demonstrated strong reliability across all four constructs: strategic orientation, NPD research, team collaboration, and retailer-supplier relationship quality.

4.6 RESULTS AND DISCUSSION

4.6.1 Biographical questionnaire

Table 1 summarises the sample profile. In the participating major retailer's universe, suppliers are ~53% food and 47% non-food; our realised sample is 65% food and 35% non-food. Given voluntary participation (self-selection, non-probability), this discrepancy is expected and is commonly addressed via fit-for-purpose evaluation and, where needed, post-survey adjustment (Wiśniowski, Sakshaug, Perez Ruiz, and Blom, 2020; Haddad, Sacre, Zeenny, Hajj, Akel, Iskandar, and Salameh, 2022).

Table 4.1: Biographical profile of respondents

Item	Category	Frequency	Percentage
Gender	Male	42	56.76
	Female	30	40.54
	Prefer not to say	2	2.7
Age Group	Younger than 20	0	0
	21 - 35	9	12.16
	36 - 45	32	43.24
	46 - 60	32	43.24
	Older than 60	1	1.35
Educational Qualification	Grade 12 or lower	10	13.51
	Qualified artisan	2	2.70

	Diploma	21	28.38
	Graduate	20	27.03
	Postgraduate	21	28.38
Dedicated NPD address	Yes	61	82.43
	No	13	17.57
Type of designated/ dedicated NPD address	Person	31	46.97
	Department/ Business Unit/ Branch	17	25.76
	Head Office/ Parent	3	4.55
	Outsourced	15	22.73
Job Level	Entry level	1	1.35
	Supervisor	5	6.76
	Middle Management	6	8.11
	Senior Management	18	24.32
	Director/ Owner	44	59.46
Direct Reports	None	31	44.29
	1 – 5	22	31.43
	6 – 10	6	8.57
	11 – 15	11	15.71
	More than 15	0	0
No. of Permanent employees	1-5	12	16.22
	6 – 20	26	35.14
	21 – 50	24	32.43
	51 – 250	8	10.81
	More than 250	4	5.41
Legal Status	Sole Proprietor	13	17.57

	Partnership	10	13.51
	Close Corporation	12	16.22
	Company (Pty Ltd)	39	52.70
	Franchise	0	0

(Source: Own Compilation)

Respondents were predominantly male (56.76%), with females at 40.54% and 2.7% preferring not to disclose. Age clustered between 36-45 (43.24%) and 46-60 (43.24%), indicating mid-career representation in retailer engagement. Qualifications were broadly distributed: Diploma (28.38%), Graduate (27.03%), Postgraduate (28.38%), and Artisan (2.70%). Seniority was high: 59.46% directors/owners and 24.32% senior managers, supporting suitability for strategy/process questions. Most firms had <50 employees (67.57%); legal forms were mainly (Pty) Ltd (52.70%) and sole proprietors (17.57%). Overall, the profile aligns with SME characteristics relevant to NPD and retail listing.

4.6.2 Descriptive Statistics and Construct Profiles

Descriptive statistics for the study's constructs are presented in Table 4.2, which reports mean scores, standard deviations, and internal consistency coefficients. Overall, the results reveal strong strategic intent among South African SMEs but persistent weaknesses in execution, process formalisation, and retail access.

Table 4.2: Descriptive Statistics and Reliability Scores

Construct	N	Mean	SD	Min	Max	Items	Cronbach's α
Strategic Planning Culture	74	3.32	0.58	1.17	4.00	6	0.90
Goal Visibility and Internal Alignment	74	2.94	0.75	1.00	4.00	3	0.84
Structured Evaluation and Prioritisation	74	2.70	0.86	1.00	4.00	2	0.63
Customer-Centric Discovery	74	2.78	0.76	1.00	4.00	4	0.88

Evidence-Based Validation	74	3.19	0.58	1.20	4.00	5	0.85
Structured R&D Investment	74	2.67	0.79	1.00	4.00	3	0.79
Inclusive Collaboration	74	2.86	0.72	1.14	4.00	7	0.89
Strategic-Operational Alignment	74	3.32	0.52	1.67	4.00	3	0.78
Retailer Relationship Climate	74	2.65	0.74	1.00	4.00	5	0.85
Accessibility and Onboarding Barriers	74	2.31	0.81	1.00	4.00	3	0.84
Supplier Initiative and Coping Tactics †	74	3.20	0.79	1.00	4.00	-	Removed ($\alpha = 0.36$)

(Source: Own Compilation)

4.6.2.1 Frequency Patterns of Responses

4.6.2.1.1 Strategic Orientation

The descriptive frequencies show a generally positive strategic posture. Most SMEs (95%) reported that their new product development (NPD) activities align with company mission statements, and 84% indicated the presence of formal NPD goals. These results confirm that innovation intent and strategic awareness are embedded within SME cultures (Mogashoa & Kalitanyi, 2023: 271-282). However, the translation of this intent into operational clarity remains uneven: only 68% considered NPD goals clearly defined, and 57% perceived them as visible across employees. Such gaps reflect common implementation frictions in smaller firms, where communication channels and participation mechanisms are limited (Mousa, Ali & Gürler, 2024).

Prioritisation emerges as a notable weakness: although 92% of respondents addressed resource requirements, only 58% reported formal project ranking or selection routines. This under-prioritisation aligns with findings that many SMEs rely on informal, centralised decision-making that treats concurrent initiatives equally (Ghezzi & Cavallo, 2020; Iqbal & Suzianti, 2021). Nonetheless, strategic foresight remains evident: 95% of firms view NPD as a long-term

commitment, and roughly 85% conduct periodic project reviews, indicating that while planning exists, formalisation and goal visibility lag behind intent.

4.6.2.1.2 NPD Research

The results reveal a pattern of high awareness but partial institutionalisation of research practices. While 88% conduct some form of market research, only 51% perform systematic customer needs assessments. Similarly, 58% test ideas prior to development and 59% conduct structured market tests, suggesting resource-driven constraints in pre-launch validation (Falahat *et al.*, 2023). Only 36% maintain dedicated research or testing budget, although 66% employ personnel responsible for R&D - a gap reflecting the tension between intent and resourcing. This shortfall is critical because consistent R&D spending is empirically linked to pipeline sustainability and competitiveness (Labeaga *et al.*, 2021; Darfo-Oduro *et al.*, 2024).

Positively, 93% of SMEs value customer feedback and 92% benchmark competitors, reflecting adoption of lean, iterative learning practices typical of agile SME contexts (Agag *et al.*, 2023). In addition, 81% consider socio-economic conditions when developing products. Collectively, these figures illustrate that SMEs aspire to be data-driven; however, formal budgeting and structured validation remain underdeveloped.

4.6.2.1.3 Team Collaboration

Team collaboration indicators highlight moderate integration across functions. Only 57% of respondents reported active multi-departmental input in NPD and 53% indicated that employees at all levels contribute ideas. These findings underscore limited diffusion of participation despite 93% agreeing that strategy guides product development and 68% confirming product -objective alignment. Cross-functional meetings occur for 62% of firms, 75% encourage the identification of innovation opportunities, and 84% have adopted new working methods. A high proportion document their NPD processes (91%) and designate an NPD process owner (81%), yet structured, cross-team coordination mechanisms remain sporadic. Such patterns are consistent with SME characteristics - lean hierarchies, informal procedures, and flexible teams - that foster responsiveness but limit institutionalised collaboration (Harney *et al.*, 2022; Atkinson *et al.*, 2022).

4.6.2.1.4 Retailer-Supplier Relationships

The results reveal pronounced asymmetries in supplier-buyer interactions. Fewer than half (45%) receive adequate feedback from retail buyers, and only 31% find it easy to secure appointments. This mirrors broader evidence that weak communication and opaque supplier requirements hinder SME integration into formal value chains (Mahmud *et al.*, 2021; Haywood *et al.*, 2021). As documented in the South African grocery sector, dominant buyer practices frequently disadvantage smaller suppliers (Goolam Nabee & Swanepoel, 2021), particularly when power asymmetries are high (Glavee-Geo *et al.*, 2022; Johnsen *et al.*, 2020).

Nevertheless, SMEs show resilience and persistence: 87% seek alternative retailers after rejection, 69% report learning from buyer interactions, and 84% would re-engage with the retailer for future listings. Yet only 41% feel they are treated equally to large suppliers, 63% describe the environment as supportive, and only 54% state that procedures are clearly explained. Most (89%) believe retailers could offer stronger NPD support. These findings indicate a relationship climate in which engagement exists, but transparency and procedural clarity are weak (Grant, 2024).

4.6.2.2 Construct Means and Interpretation

Mean scores (see Table 4.2) allow comparison of the relative strengths and weaknesses of SME innovation capabilities prior to modelling (Hair, Howard & Nitzl, 2020). The highest mean values are observed for Strategic Planning Culture ($M = 3.32$; $SD = 0.58$) and Strategic-Operational Alignment ($M = 3.32$; $SD = 0.52$), followed by Supplier Initiative and Coping Tactics ($M = 3.20$; $SD = 0.79$) and Evidence-Based Validation ($M = 3.19$; $SD = 0.58$). The lowest means belong to Accessibility and Onboarding Barriers (reverse-coded; $M = 2.31$; $SD = 0.81$) and Retailer Relationship Climate ($M = 2.65$; $SD = 0.74$).

4.6.2.2.1 Strategic Orientation

The high scores for strategic orientation and innovation culture confirm that SMEs conceptually link innovation to their overall business vision, supporting claims that strategic clarity enhances innovation maturity (Muskat *et al.*, 2021). However, lower ratings for Structured Evaluation and Prioritisation ($M = 2.70$; $SD = 0.86$) and Goal Visibility and Internal Alignment ($M = 2.94$; $SD = 0.75$) indicate that strategic execution often falters during implementation, where weaknesses in communication and delegation hinder consistency (Őri & Szabó, 2024).

4.6.2.2.2 NPD Research

Evidence-Based Validation ranks high ($M = 3.19$; $SD = 0.58$), underscoring SMEs' efforts to test concepts, benchmark competitors, and integrate learning loops (Carrasco-Carvajal *et al.*, 2023). In contrast, Structured R&D Investment ($M = 2.67$; $SD = 0.79$) and Customer-Centric Discovery ($M = 2.78$; $SD = 0.76$) score below the midpoint, highlighting limited capacity for sustained research and customer immersion - an issue typical of resource-constrained environments (Ćirović, Dabić & Melović, 2025; Van de Vrande *et al.*, 2018).

4.6.2.2.3 Team Collaboration

Inclusive Collaboration ($M = 2.86$; $SD = 0.72$) reflects aspiration toward cross-functional work that remains hampered by informal structures and operational overload (Zahoor & Al-Tabbaa, 2020; Costa *et al.*, 2023). High Strategic - Operational Alignment again signals coherence between goals and daily execution but sustaining this alignment amid competing demands remains a challenge (Garcia-Vidal *et al.*, 2024; Ngo, 2023).

4.6.2.2.4 Retailer-Supplier Relationship

Retailer Relationship Climate ($M = 2.65$; $SD = 0.74$) and Accessibility and Onboarding Barriers ($M = 2.31$; $SD = 0.81$) record the lowest scores, corroborating evidence of asymmetric information and procedural opacity (Ateş & Bititci, 2021; Matekenya & Moyo, 2022). In contrast, Supplier Initiative and Coping Tactics ($M = 3.20$; $SD = 0.79$) suggest adaptive resilience through strategic re-targeting and perseverance following rejection (Puumalainen *et al.*, 2023; Eggers, 2020).

4.6.2.2.5 Synthesis

Taken together, the descriptive statistics reveal that while South African SMEs exhibit strong strategic intent and learning orientation, they remain constrained by limited formalisation of research and collaboration processes, and by opaque retailer gatekeeping mechanisms. The pattern underscores an “innovation intent-execution gap” that weakens market access despite demonstrated resilience. These findings justify the subsequent factor and regression analyses examining how internal capabilities interact with retailer-supplier dynamics to influence listing success.

4.6.3 Correlation Analysis

Table 4.3: Construct-level correlation matrix (section-based panels; N = 7)

Panel	Constructs	1	2	3
A. Strategic Orientation	1. Strategic Planning Culture 2. Goal Visibility & Internal Alignment 3. Structured Evaluation & Prioritisation	-	0.46	0.41
B. NPD Research	1. Customer-Centric Discovery 2. Evidence-Based Validation 3. Structured R&D Investment	-	0.43	0.43
C. Team Collaboration	1. Inclusive Collaboration 2. Strategic-Operational Synchronisation	-	0.42	
D. Retailer-Supplier Relationship	1. Retailer Relationship Climate 2. Accessibility & Onboarding Barriers (rev.) 3. Supplier Initiative & Coping Tactics	-	0.51	0.39

(Source: Own compilation)

Note: Correlations are construct-level mean Pearson r values computed from item-level matrices (B1-B11, C1-C12, D1-D10, E1-E10). “rev.” = reverse-coded barrier construct. Dashes (-) denote identity or non-computable values within panels.

Correlation gauges the direction and strength of associations (Schober, Boer & Schwarte, 2020) and supports exploratory pattern detection (Karch *et al.*, 2024; Jacobucci, 2022). Coefficients $\geq |0.30|$ were considered meaningful (Akoglu, 2021; Hair *et al.*, 2020). Construct-level correlations are reported in Table 4.3.

Section B: Strategic Orientation: Strategic constructs display cohesive alignment. Strategic Planning Culture correlates moderately with Goal Visibility & Internal Alignment ($r = 0.46$) and Structured Evaluation & Prioritisation ($r = 0.41$). This indicates that SMEs with deliberate planning cultures tend to maintain higher levels of goal transparency and systematic evaluation. Such

coherence mirrors findings that strategic alignment strengthens NPD execution (Peljhan & Marc, 2023).

Section C: NPD Research: Within the NPD domain, Customer-Centric Discovery is strongly associated with both Evidence-Based Validation ($r = 0.43$) and Structured R&D Investment ($r = 0.43$), indicating that market-sensing SMEs formalise testing and resource allocation. Evidence-Based Validation also associates with R&D Investment ($r = 0.41$), supporting the link between evidence-driven design and innovation learning (Feng *et al.*, 2022).

Section D: Team Collaboration: Inclusive Collaboration and Strategic-Operational Synchronisation show a moderate positive link ($r = 0.42$), suggesting that participative cultures partially translate into operational coordination. However, weaker associations overall imply that informal structures constrain systematic teamwork (Bento, Tagliabue & Lorenzo, 2020; Zahoor & Al-Tabbaa, 2020).

Section E: Retailer-Supplier Relationship: Retailer Relationship Climate correlates positively with both Accessibility & Onboarding Barriers (rev.) ($r = 0.51$) and Supplier Initiative & Coping Tactics ($r = 0.39$). SMEs perceiving supportive, transparent climates report fewer procedural obstacles and greater adaptive initiative. Nevertheless, informational opacity persists, reflecting asymmetries typical of South African buyer-driven chains (Mahmud, Paul, Azeem & Chowdhury, 2021; Matinheikki, Ghobadi, Laine & Artto, 2022).

Strategic and research constructs show stronger internal cohesion than collaboration and relationship constructs, implying that SMEs possess conceptual planning strength but limited cross-functional integration and relational leverage. These findings point to a capability gap between internal innovation routines and external retail engagement.

4.6.4 Regression Analysis

Multiple linear regression was used to examine whether NPD Strategy, NPD Research, and Team Collaboration predict the ease of securing retailer appointments (E3). Two models were estimated: Model 1 with the core predictors, and Model 2 adding firm size and years in company as controls. The general model takes the form $Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$, where Y denotes retailer appointment ease and X_1 - X_3 denote the predictor variables.

Table 4.4 presents the OLS results. Model 1 explains 23.4% of the variance in retailer appointment ease ($R^2 = 0.234$, $adj. R^2 = 0.202$). After adding controls, Model 2 explains 27.0% ($R^2 = 0.270$, $adj. R^2 = 0.216$; $F(5,68) = 5.027$, $p = 0.001$). These values indicate moderate explanatory power, consistent with comparable SME studies (Ozili, 2022).

Table 4.4: The OLS regression results for both models.

Variable	Model 1 Coef.	Std. Err.	t- value	p- value	Model 2 Coef.	Std. Err.	t- value	p- value
Constant	0.0772	0.577	0.134	0.894	-0.2910	0.614	- 0.474	0.637
NPD_Strategy	-0.1684	0.229	- 0.734	0.465	-0.1243	0.235	- 0.528	0.599
NPD_Research	0.6243	0.286	2.186	0.032*	0.6129	0.283	2.164	0.034*
Team_Collab	0.2619	0.240	1.092	0.279	0.1974	0.241	0.820	0.415
Firm_Size	-	-	-	-	0.1394	0.105	1.332	0.187
Years_in_Company	-	-	-	-	0.0505	0.105	0.481	0.632

*Significant at $p < 0.05$

(Source: Own Compilation)

Only NPD Research significantly predicts retailer accessibility ($\beta \approx 0.61$; $p < 0.05$), supporting H₂. This implies that SMEs conducting systematic market and customer research gain improved access to retail buyers. NPD Strategy ($\beta \approx -0.12$; $p > 0.40$) and Team Collaboration ($\beta \approx 0.20$; $p > 0.40$) show non-significant effects, leading to rejection of H₁ and H₃. Control variables are also not statistically significant, indicating that firm size and tenure do not materially influence retailer accessibility.

Findings emphasise NPD Research as the key driver of retailer-supplier engagement. SMEs that invest in customer insight, market testing, and validation demonstrate stronger retailer appeal - echoing evidence that knowledge-management and market-learning capabilities reduce uncertainty in retail listing (Hock-Doepgen *et al.*, 2021; Dwivedi & Pawsey, 2023).

By contrast, strategic orientation and team collaboration appear insufficient in isolation; without external validation, internal readiness rarely translates into buyer confidence (Asad *et al.*, 2023; Hock-Doepgen *et al.*, 2021). Thus, developing SMEs' research and market testing infrastructure - through shared labs, subsidised trials, or innovation training - could strengthen their ability to overcome retailer gatekeeping barriers (Olaleye *et al.*, 2024).

4.6.5 Exploratory Factor Analysis (EFA)

Exploratory Factor Analysis (EFA) was conducted to identify latent patterns among variables measuring SME innovation capabilities and retailer-supplier relationships. The method identifies how observed indicators cluster into coherent constructs without assuming a pre-specified model (Goretzko *et al.*, 2019). EFA was chosen because there is limited prior validation of these constructs in unlisted South African SMEs, making data-driven identification essential (Hock-Doepgen *et al.*, 2021).

4.6.5.1 Data Adequacy and Procedure

Sampling adequacy was confirmed with Kaiser-Meyer-Olkin (KMO) values between 0.81-0.84, exceeding the 0.6 threshold (Sigudla & Mavundla, 2023). Bartlett's Test of Sphericity was significant across all sections ($p < 0.001$), supporting factorability. Principal Axis Factoring with Varimax rotation was used, retaining items with eigenvalues > 1 and communalities > 0.40 . Four domains were analysed in alignment with the study framework:

- **Section B:** Strategic Orientation
- **Section C:** NPD Research
- **Section D:** Internal Collaboration
- **Section E:** Retailer-Supplier Relationship

4.6.5.2 Strategic Orientation (Section B)

Analysis of eleven items (B1-B11) yielded three interpretable factors, explaining 75.45% of total variance ($KMO = 0.82$).

- **Strategic Planning Culture** (B1, B5-B8, B10) captures structured goal alignment, resource allocation, and project review. Respondents value these principles but show partial implementation due to weak formal processes.
- **Goal Visibility and Internal Alignment** (B2-B4) measures communication and goal clarity; low scores reveal that unclear dissemination of innovation objectives limits execution.
- **Structured Evaluation and Prioritisation** (B9, B11) concerns ranking and formal assessment of NPD projects - practices often missing in smaller firms.

These results suggest that SMEs often articulate strategic aspirations but struggle with consistent operationalisation, leaving a gap between intent and implementation (Morgan & Anokhin, 2020; Fakhreddin & Foroudi, 2022).

4.6.5.3 NPD Research (Section C)

Twelve items (C1-C12) loaded onto three factors, explaining 70.17% of variance ($KMO = 0.81$).

- **Customer-Centric Discovery** (C1, C2, C5, C11) captures customer involvement and contextual insight generation; feedback loops are recognised but remain informal.
- **Evidence-Based Validation** (C3, C4, C9, C10, C12) represents testing, competitor analysis, and learning from previous projects. SMEs acknowledge its importance but face methodological and financial constraints.
- **Structured R&D Investment** (C6-C8) reflects budgeting and dedicated personnel; results indicate aspirational awareness rather than institutionalised practice.

Collectively, these factors depict SMEs that understand the value of systematic research but lack the resources to formalise it. The regression findings corroborate this - NPD Research was the only significant predictor of retailer access ($\beta \approx 0.61$, $p < 0.05$), affirming that research-driven validation enhances SMEs' market credibility (Lee and Jung, 2024; Bertello *et al.*, 2022).

4.6.5.4 Internal Collaboration (Section D)

Ten items (D1-D10) produced two factors, explaining 65.27% of variance ($KMO = 0.83$).

- **Inclusive Collaboration** (D1, D3, D4, D6-D9) reflects broad participation in NPD and openness to new working methods. Respondents value collaboration but note centralised decision-making as a limitation (Fasth and Tengblad, 2023; Harney *et al.*, 2022).
- **Strategic-Operational Synchronisation** (D2, D5, D10) captures the integration of strategy with execution and procedural planning. Some SMEs align well; others struggle with operational overload.

These results reveal that collaboration is appreciated but inconsistently institutionalised, explaining its non-significance in regression outcomes. Without structured systems and digital support, collaboration fails to translate into measurable market readiness (Agyapong, Ayentimi and Sandow, 2024; Knudsen *et al.*, 2023).

4.6.5.5 Retailer-Supplier Relationship (Section E)

Analysis of ten items (E1-E10) identified three factors, explaining 70.91% of variance ($KMO = 0.81$).

- **Retailer Relationship Climate** (E1, E6, E8-E10) captures perceptions of fairness, feedback, and transparency. SMEs commonly reported limited communication and unequal treatment, consistent with evidence of power asymmetries in retailer-dominated channels (Glavee-Geo *et al.*, 2022; Johnsen *et al.*, 2020:65-67).
- **Accessibility and Onboarding Barriers** (E3-E5) reflect procedural obstacles - unclear listing criteria and difficulty securing meetings - aligning with prior findings on information opacity (Glavee-Geo *et al.*, 2022).
- **Supplier Initiative and Coping Tactics** (E2, E7) captures adaptive behaviours post-rejection. Although some SMEs re-target new buyers, these responses remain reactive and individualised.

Overall, these relational patterns highlight systemic asymmetry: SMEs face restricted feedback and procedural opacity, undermining innovation diffusion despite internal readiness.

4.6.5.6 Theoretical Integration

Across all sections, extracted factors align with the conceptual domains of Strategic Orientation, NPD Research, Internal Collaboration, and Retailer-Supplier Relationship. The patterns indicate that SMEs recognise key innovation capabilities but display aspirational rather than embedded practices. Customer inclusion, research validation, and collaboration are valued, yet inconsistently enacted; relational asymmetries further inhibit translation of these capabilities into tangible retail access (Glavee-Geo *et al.*, 2022). The findings extend SME innovation theory by showing that the gap between perceived and institutionalised capability - rather than the absence of capability itself - defines the commercialisation challenge in resource-constrained environments.

4.6.6 Validity and Reliability

Instrument validity and reliability were verified through pilot testing, expert review, and statistical analysis. A pilot with seven SMEs confirmed clarity and structure. Expert evaluation by the Statistical Consultation Services at North-West University ensured the adequacy of the content. Exploratory factor analysis retained items with loadings ≥ 0.50 , confirming construct validity (Howard, 2022), while AVE ≥ 0.50 and low inter-construct correlations supported discriminant validity (Stensen, 2022:3). Cronbach's α values ranged from 0.63 to 0.90, indicating acceptable to excellent reliability (Shrestha, 2021). The *Supplier Initiative and Coping Tactics* subscale (E2, E7) was removed owing to a low $\alpha = 0.36$. Overall, the retained constructs exhibited strong psychometric adequacy for exploratory analysis.

4.6.7 Discussion

This study examined how SMEs' internal new product development (NPD) capabilities influence engagement with national retailers in South Africa. Descriptive, factor, and regression analyses reveal a consistent but uneven capability structure: SMEs display strong intent and learning orientation, yet weak institutionalisation and relational asymmetries limit impact.

4.6.7.1 Strategic Orientation

SMEs recognise the importance of structured planning and prioritisation - captured in *Strategic Planning Culture*, *Goal Visibility and Internal Alignment*, and *Structured Evaluation and Prioritisation*. However, regression results show no significant relationship with retailer engagement ($\beta = -0.12$, $p = 0.599$), suggesting that strategy remains largely aspirational. Informal decision-making and limited managerial depth constrain the translation from intent to execution, consistent with prior findings that planning improves legitimacy but not outcomes in the absence of embedded routines (Asa *et al.*, 2023).

4.6.7.2 NPD Research

Among all predictors, NPD Research was the only significant determinant of retailer access ($\beta \approx 0.61$, $p < 0.05$). Factors of *Customer-Centric Discovery* and *Evidence-Based Validation* highlight that systematic market scanning, customer input, and pre-launch testing underpin credibility with buyers. SMEs demonstrating organised intelligence use and validation are viewed as reliable partners (Gligor *et al.*, 2021; Kotcharin *et al.*, 2024). Even partial adoption of structured research routines therefore yields tangible engagement benefits, underscoring the strategic value of market-driven learning in constrained contexts.

4.6.7.3 Internal Collaboration

Inclusive Collaboration and *Strategic-Operational Synchronisation* showed moderate coherence but no significant relationship with retailer engagement ($\beta = 0.20$, $p = 0.415$). While respondents value teamwork, collaboration remains informal and poorly documented. Without process or digital integration, its impact on external legitimacy is limited. Effective collaboration must be coupled with cross-functional coordination mechanisms (Zhong *et al.*, 2023; Molinaro *et al.*, 2022).

4.6.7.4 Retailer-Supplier Relationship

Relational asymmetries persist - opaque onboarding procedures and limited feedback constrain SME access (Glavee-Geo *et al.*, 2022). Some SMEs demonstrate adaptive coping - approaching alternative buyers - indicating emerging agility, but structural barriers endure. Sustained

engagement requires transparency and supplier development initiatives to institutionalise fairer participation (das Nair and Landani, 2021).

4.6.7.5 Synthesis

Across analyses, knowledge capability - not strategic rhetoric - drives retailer engagement. Strategy and collaboration matter only when operationalised through research and validation that reduce buyer risk. For SMEs in resource-constrained environments, institutionalising evidence-based learning is pivotal to overcoming relational disadvantages and securing sustainable market access.

4.7 CONCLUSION & RECOMMENDATION

This study examined how unlisted South African SMEs conceptualise and enact innovation capabilities and how these influence engagement with national retailers. Using descriptive, factor, correlation, and regression analyses, the study found that SMEs demonstrate strong strategic intent but limited operational institutionalisation. Strategic orientation - while valued as a signal of legitimacy-did not significantly predict retailer access ($\beta = -0.12$, $p = 0.599$), revealing a persistent gap between intent and implementation. In contrast, NPD research emerged as the only significant predictor of retailer engagement ($\beta \approx 0.61$, $p < 0.05$), confirming that evidence-based practices such as customer feedback integration, competitor benchmarking, and validation testing-most enhance SME credibility with buyers. Internal collaboration, though positively viewed, had no significant direct effect ($\beta = 0.20$, $p = 0.415$) without supporting coordination mechanisms. These results highlight a paradox: SMEs aspire to emulate structured innovation processes of larger firms, yet retailer engagement depends less on aspirational strategy and more on verifiable, research-driven readiness. Persistent relational asymmetries-opaque onboarding, limited feedback, and buyer dominance - further constrain SMEs' ability to signal preparedness, echoing findings on power imbalances in supplier networks (Glavee-Geo *et al.*, 2022; das Nair and Landani, 2021).

To strengthen market access, a dual agenda is needed. SMEs must institutionalise NPD research routines through formal budgets, dedicated personnel, and structured testing to demonstrate validated demand and product fit. Strategic planning should be operationalised via prioritisation tools and stage-gate processes to ensure strategy informs daily practice. Retailers, in turn, should increase transparency through clear listing criteria, feedback mechanisms, and supplier

development initiatives that reward validated innovation. Policymakers can reinforce this ecosystem by prioritising funding for SMEs demonstrating strong research capability, establishing inclusive matchmaking platforms, and integrating sustainability targets into Enterprise Supplier Development (ESD) frameworks.

Future research should extend across multiple retail chains and product categories to test generalisability, employ longitudinal designs to trace the evolution of capability, and include buyer perspectives to clarify evaluative criteria. Despite limitations-such as a modest sample ($n=74$), focus on one retail group, and reliance on self-reported data-the findings provide a robust foundation for theory and practice. They emphasise that institutionalised knowledge capability, rather than strategic rhetoric, drives relational success. Building research-driven, transparent, and mutually accountable SME-retailer systems is thus key to unlocking inclusive innovation and sustainable competitiveness in emerging markets.

CHAPTER 5: ARTICLE 2

ASSESSING THE STATE OF NPD STRATEGIES IN THE SOUTH AFRICAN RETAIL INDUSTRY

Abstract

This study examines New Product Development (NPD) strategies among Small and Medium Enterprises (SMEs) in South Africa's retail sector, a market characterised by intense competition and rapidly changing consumer preferences. Employing a qualitative design, semi-structured interviews were conducted with 20 SME suppliers associated with a major South African retailer, with the sample size determined by thematic saturation. Anonymity and ethical guidelines were strictly maintained. Thematic analysis revealed key internal and external factors influencing NPD success and failure, including competitive pressures, resource limitations, regulatory challenges, shelf space constraints, and infrastructure issues such as power outages. Importantly, SMEs have adopted adaptive strategies, including benchmarking, leveraging global trends, forming private-label partnerships, and integrating hybrid Agile-Stage-Gate models, to accelerate innovation while maintaining control. These findings provide valuable insights into overcoming challenges in emerging-market supply chains and offer practical guidance for SMEs seeking to enhance their product development processes in dynamic retail environments.

Keywords: New Product Development; SMEs; South African Retail Sector; Innovation; Supplier-Retailer Collaboration; Agile-Stage-Gate; Product Lifecycle; Emerging-Market; Qualitative Research.

5.1 INTRODUCTION

Small and Medium Enterprises (SMEs) play a crucial role in South Africa's economy, contributing to approximately 87% of employment (UNDP, 2024:1), and constitute a significant share of the formal sector's turnover- estimated at over R2 trillion in recent years (StatsSA, 2019:1). While many SMEs are sole-operated or create limited jobs, their collective economic and social contribution, particularly in rural and underdeveloped areas, is significant (Keelson *et al.*, 2024:1). Despite this, around 70% of South African SMEs fail within five to seven years of starting up (UNDP, 2024:4). To counter these high failure rates, the government has established support mechanisms through agencies such as the Small Enterprise Development Agency (SEDA), Small Enterprise Finance Agency (SEFA), and Local Economic Development (LED), offering financial assistance, business strategy advice, and mentorship (Majadibodu *et al.*, 2023:381-382). These efforts also aim to foster innovation, which is a key differentiator for SMEs facing competition from larger, more resource-rich firms (Keelson *et al.*, 2024:5). Given that consumer preferences are constantly evolving, product innovation is essential to sustain market relevance. Every product follows a lifecycle- introduction, growth, maturity, and decline (Prasad *et al.*, 2019:62). New Product Development (NPD) is the gateway to product lifecycle management and is especially critical for SMEs seeking to remain competitive and meet customer needs (Udokporo, 2021:2; Iqbal & Suzianti, 2021:1). However, NPD is inherently risky: one in four new consumer-packaged goods fails within a year, and nearly 40% do not survive beyond two years (Victory *et al.*, 2021:1). In food and non-food categories, NPD failure rates range between 12.5% and 45% (Rutkowski, 2022:58). Research shows that NPD in SMEs is often characterised by informal processes, limited resources, centralised decision-making (typically by owners), flexible operations, and strong reliance on external partnerships and customer relationships (Iqbal & Suzianti, 2021:9). While these features can enable agility and closeness to the market, they also create vulnerabilities in planning, execution, and innovation capacity. This study explores how successful SMEs in the South African retail supply chain navigate these challenges. Through qualitative interviews with selected suppliers to a major national retailer, the research uncovers how NPD is practised, the constraints faced, and the strategies adopted to mitigate failure and enhance innovation.

5.2 BACKGROUND

5.2.1 The South African Retail Industry

South African retailers are vital contributors to GDP (accounting for nearly 20%) and are the second-largest employers after government (Ward and Pillay, 2023:4). Due to similar product offerings, major retailers like Shoprite, Pick ‘n Pay, SPAR and Woolworths- who together account for around 64% of market share-primarily compete on price and promotions (Competition Commission, 2019:66; Madubela, 2021: 1). Most new products are developed with the goal of being listed by these dominant retailers, who offer greater market reach and advertising power (Makhitha *et al.*, 2019: 417).

While suppliers traditionally relied on retailers for insights into brand performance (Pantano, Venuti and Di Pietro, 2021:4), this relationship is evolving. Loyalty programmes, such as Shoprite’s Xtra Savings and Pick ‘n Pay’s Smart Shopper generate rich datasets on purchasing behaviour that retailers use to understand consumption patterns and inform marketing decisions (Rains and Longley, 2021: 2-3). Retailers can leverage advanced analytics- especially AI-powered predictive tools- to detect shifts in consumer needs and guide NPD (Haque, 2024:74). However, this intelligence must be systematically shared with suppliers to enable customer-centric innovation (Stremersch *et al.*, 2024:38-40). While, digital maturity varies, even basic loyalty data can support suppliers in refining product offerings (Rains & Longley, 2021:1).

Retailers depend on suppliers to stock stores, just as suppliers depend on retailers for access to end-users (Das Nair & Landani, 2021:6). Disruptions in supply can arise from manufacturing delays, financial distress, or non-compliance with standards, leading to reputational damage and lost sales (Das Nair & Landani, 2021:6). Consequently, retailers actively screen suppliers and may offer support to those facing difficulties. Enterprise Supplier Development (ESD) programmes - such as Spar’s Supplier Development, Woolworths’ initiative for black-owned SMEs, Pick ‘n Pay’s BoostYourBiz, and Shoprite’s Homemade programme-help SMEs meet quality, certification, and sustainability standards (SME South Africa, 2020:1; SPAR Supplier Development, 2023:1).

These ESD initiatives increasingly emphasise environmental sustainability- retailers are partnering with suppliers to ensure sustainable production methods, reduce packaging waste, and source locally to align with growing consumer demand for green products (Naidoo & Gasparatos, 2023:6)

Category Management (CM) further supports retailer-supplier collaboration in NPD- especially for private-label launches- by enabling shared category insights, coordinated assortment and shelf placement strategies, and collaborative product design to strengthen exclusivity and loyalty (Wu, Yang and Wu, 2021: 370–371).

Due to their scale and negotiating power, major retailers can offer lower prices than independent retailers (Smith & Ocampo, 2023:32, 73). However, competition for shelf space remains intense, with limited slots available and constant NPD in the FMCG sector (Hübner & Kuhn, 2024:1-2). While collaboration and support structures exist, the supplier-retailer relationship is often characterised by asymmetrical power dynamics, particularly affecting SMEs, whereby retailers wield significantly greater negotiating leverage and control over market access. Such imbalanced dependence increases suppliers' psychological uncertainty, manifesting as perceived ambiguity and risk, which can reduce their trust, commitment, and willingness to engage in NPD partnerships (Ma *et al.*, 2021:4-5). A significant gap in research exists regarding the CM team's role in NPD and supplier-retailer collaboration-an oversight that could influence NPD success (Hübner & Kuhn, 2024:2).

5.2.2 Strategies Affecting NPD

New Product Development (NPD) is a critical driver of organisational competitiveness and survival, especially in emerging economies like South Africa where failure rates are notably high (Azigbo, 2019:1). The complexity of NPD arises from the integration of multiple departments- such as Research and Development (R&D), marketing, manufacturing, and finance and requires effective coordination to launch profitable products on time and at the right price (Gürbüz, 2018:58-59). Globally, 35% of new products fail, with failure rates reaching 50% in emerging markets, underscoring the high-risk nature of NPD (Azigbo, 2019:1).

5.2.2.1 Strategic and Organisational Enablers of NPD

Key factors influencing NPD success include interdisciplinary teamwork, timely and accurate information sharing, and speed to market, all of which enhance product performance and profitability (Gürbüz, 2018:72). Strategic practices such as Category Management- where retailers and suppliers collaborate using shared shopper data and joint assortment strategy- enhance NPD outcomes by aligning product development with consumer needs (Pascucci *et al.*, 2022:2;

Timoumi *et al.*, 2023:1). Supplier involvement contributes technical expertise crucial for developing viable products and strengthening retailer - supplier partnerships through collaborative R&D (Delgado-Verde & Diez-Vial, 2024:523). SRM frameworks promote a culture of collaboration, trust, and continuous improvement - critical for innovation in NPD (Yang & Jiang, 2024:1). Digital transformation fosters supply chain collaborative innovation- enabling more effective product innovation and improved market performance (Yu *et al.*, 2024:2-3).

5.2.2.2 Challenges Specific to SMEs

Despite these enablers, SMEs face distinct NPD challenges-including limited access to capital, skilled personnel, and innovation infrastructure- which disrupt innovation timelines and incur elevated project risks (Omari *et al.*, 2024:839). Limited access to raw materials and specialised machinery can stall development timelines (Kanyepe *et al.*, 2025: 116). Volatile input prices and complex supply chains further complicate NPD execution and reduce product viability (Ateş *et al.*, 2021:5).

5.2.2.3 Retailer-Driven Barriers in NPD

Retailer dynamics introduce another layer of complexity. Changes in buyer personnel and product requirements can disrupt projects and increase costs (Lasso *et al.*, 2020:536). Moreover, retailer buyers may lack the necessary technical and analytical capabilities to effectively evaluate and manage private-label innovations- particularly in areas like R&D sourcing, data-informed decision-making, and strategic clarity- which can result in suboptimal choices and weaker product performance (EY-Parthenon, 2024: n.p).

5.2.2.4 The Importance of Front-End Activities

The front-end of innovation - spanning idea generation to formal project approval - is widely acknowledged as pivotal to NPD success; failure to clearly define product concepts or involve key stakeholders early increases downstream risks (Park *et al.*, 2021:378). Effective NPD requires comprehensive market research, feasibility studies, and strong leadership to minimise risk and optimise resource allocation (Kruachottikul *et al.*, 2023:2).

In sum, NPD in emerging markets such as South Africa requires an integrated approach that balances strategic alignment, supplier collaboration, and technical feasibility with the resource

constraints typical of SMEs, supported by structured Supplier Relationship Management (SRM) frameworks and collaborative practices (Falahat, 2024:5-6). Emphasising digital transformation and integrated project collaboration improves responsiveness to market shifts and strengthens innovation outcomes. Moreover, cross-functional coordination and early stakeholder engagement play a central role in reducing risks and enhancing time-to-market performance, particularly when digital tools are embedded across innovation processes (Yu *et al.*, 2024:3).

5.2.3 New Product Development

Organisations develop new products to meet evolving market demands and remain competitive through technological advancement (Qu & Mardani, 2023:418). A product is essentially a bundle of attributes that delivers value to solve customer problems (Kitagawa *et al.*, 2020:7). Like living organisms, products go through a life cycle, from introduction and growth to maturity and eventual decline (Gürbüz, 2018:70). The introduction stage often involves high costs and low profitability, while the growth phase brings higher margins and new competition. Maturity is marked by peak profits and saturated markets, after which decline sets in as customer preferences shift (Gürbüz, 2018:70). To remain relevant, firms must engage in continuous NPD before current offerings lose relevance. Gürbüz (2018:60) classifies NPD into four categories:

- Major innovations - new-to-market products based on emerging technologies.
- Product improvements - enhancements to existing offerings to compete more effectively.
- Additions/imitations - lower-cost alternatives or replications with new claims.
- Repositioning - marketing the same product to a new audience.

NPD timelines vary significantly across industries, often from under one year for simpler products to several years for more complex innovations (Marzi *et al.*, 2021:334). To manage this complexity, structured NPD models such as Stage-Gate or Agile hybrids- help organisations coordinate cross-functional efforts and improve process outcomes (Pienaar *et al.*, 2019:200). High-performing firms excel by tailoring these models, learning from others, and embedding continuous improvement practices (Pienaar, Van der Lingen and Preis, 2019:201).

5.2.4 New Product Development in South Africa

South Africa, classified as an emerging-market (Azigbo, 2019:31), has a growing population of approximately 60.6 million, projected to increase by 15% by 2050 (Stats SA, 2022; UNEP, 2020). This demographic expansion creates substantial opportunities for businesses to serve previously underserved markets. At a global level, emerging markets are expected to account for nearly half of all global consumption, around USD 30 trillion, and - by 2025, contributing an estimated 36% to global GDP (Azigbo, 2019:1). Within this context, the ability to introduce new products and services becomes an essential avenue for sustained business growth and competitiveness. Innovation, particularly through NPD, is a critical strategic necessity in emerging markets (Azigbo, 2019:9). It not only enhances an organisation's responsiveness to local market needs but also contributes to financial performance by addressing gaps that established products may overlook (Azigbo, 2019:9). While South Africa continues to face systemic limitations in innovation capacity and R&D investment, particularly when compared with developed economies, the pressure to innovate remains high for businesses seeking to remain viable (Azigbo, 2019:1). This makes NPD not merely a competitive advantage but a survival imperative in the local economic landscape.

As discussed in the background, SMEs significantly contribute to South Africa's economy and are key players in innovation. Despite resource constraints, SMEs show potential for innovation: the same study found that 71% of South African SMEs are capable of developing and launching innovative products to market. NPD offers these firms a strategic tool to enhance market share, remain competitive, and maintain relevance in dynamic retail environments (Makhitha *et al*, 2019:266). However, realising this potential is fraught with significant challenges. SMEs often face resource limitations, restricted access to finance and advanced technologies, limited marketing capabilities, and insufficient market intelligence, all of which constrain their ability to execute effective NPD strategies (Makhitha *et al.*, 2019:266; Iqbal & Suzianti, 2021:9). These barriers are compounded by regulatory burdens and weak external networks, which reduce agility and increase time-to-market for new products. In contrast, large firms dominate NPD in South Africa's formal retail sector, benefiting from superior R&D capabilities, well-established supply chains, and stronger access to capital (Deloitte, Menon and Banda, 2022:1086). While SMEs have demonstrated success introducing innovations for niche or underserved consumer segments, their

contribution to the overall market share of new product offerings remains limited (Keelson *et al.*, 2024:13).

5.2.5 Process Model Approaches in New Product Development

Numerous NPD process models have been developed to meet the evolving needs of industries and organisational contexts (Phongthiya, 2024:1). These models aim to streamline the journey from ideation to launch, improving time-to-market, collaboration, and risk management. For this study, a benchmarking process was undertaken through an extensive literature review, supported by insights from interviews. Specifically, one interview question asked participants to describe their NPD process in a stepwise manner, enabling practical comparison with theoretical frameworks. Evaluation criteria - flexibility, speed, risk management, and adaptability- were derived from established literature (Panizzon *et al.*, 2022:7) to identify the most context-appropriate model. To improve readability and emphasise thematic distinctions, the models are grouped into three categories: Linear and Structured, Iterative and Adaptive, and Collaborative and Integrated.

5.2.5.1 Linear and Structured Models

These models follow sequential or gated workflows, offering high control and predictability. They are commonly applied in regulated or high-risk sectors such as pharmaceuticals, automotive, and defence.

a) Sequential Approach

The Sequential approach involves strict phase-by-phase progression, where each stage is completed and approved before the next begins (Rehder *et al.*, 2023:47). In many risk-averse manufacturing sectors, stringent documentation and traceability practices - while essential for compliance - can slow down product development and hinder inter-team collaboration (Katsaliaki & Mustafee, 2021:12).

b) Stage-Gate Model

The Stage-Gate model is one of the most widely used NPD frameworks due to its rigorous evaluation structure and ability to reduce uncertainty at each phase (Edwards, Cooper, Vedsmand, and Nardelli, 2019:7). Projects must meet predetermined criteria to advance through successive

gates, aligning with the needs of high compliance sectors (Kruachottikul *et al.*, 2023:9). Its structured design allows early termination of underperforming concepts, optimising resource allocation.

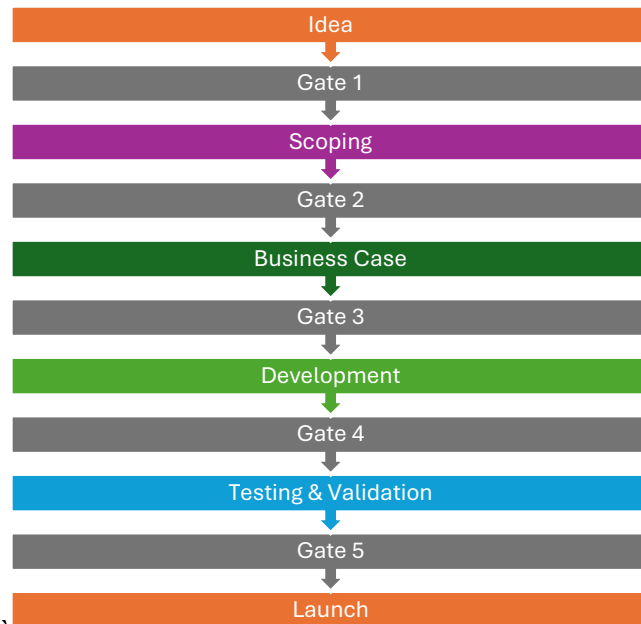


Figure 5.1. Traditional Stage-Gate Process (*Adapted from Edwards et al., 2019:7*)

c) South African Retail Application

In South Africa, retailers often adopt adapted Stage-Gate models with tighter feedback loops, cross-functional gate reviews, and shortened iterations, using Agile-Stage-Gate hybrids to respond quickly to supply-and-demand volatility (García-Sánchez, Vargas-Martínez and Candia-García, 2024:1-2). Examples include Shoprite and Pick ‘n Pay, which combine traditional gates with Agile sprints to develop market-responsive offerings (Rehder *et al.*, 2023:47).

5.2.5.2 Iterative and Adaptive Models

These models enable flexibility, rapid iteration, and continuous customer involvement, key in fast-paced or uncertain environments.

a) Agile Approach

Agile emphasises adaptability, iterative development, and user feedback, often through Scrum or similar frameworks (Gerdes *et al.*, 2021:5). Initially rooted in software development, it is increasingly used in modular physical product sectors such as automotive and electronics (Sommer & Dukovska-Popovska, 2022:304). Its structure enables rapid responses to change and continuous customer validation (Alami, 2022: 3; Lee *et al.*, 2022: 6).

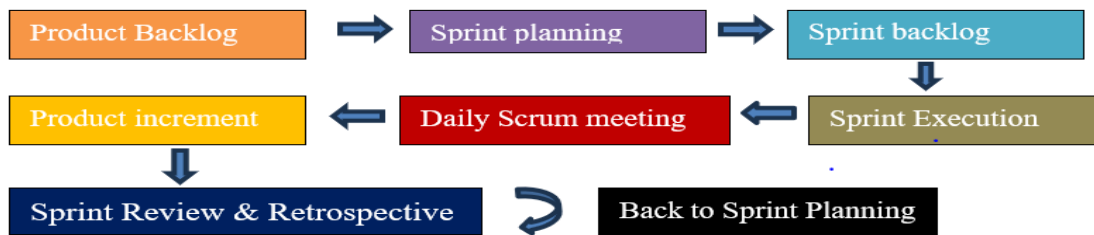


Figure 5.2: Agile NPD Process Diagram (Scrum-Based) (*Adopted from Alami, 2022:3; and Conforto, Salum, Amaral, da Silva, and de Almeida, 2016:288*)

b) Spiral Approach

The Spiral model cycles through four recurring phases (formulation (planning), evolution, evaluation, and stakeholder feedback integration), facilitating progressive refinement and feedback-based iteration (Patterson *et al.*, 2024:112). Ideal for high-uncertainty environments, it integrates structured planning with iterative learning, enabling real-time course correction without restarting development.

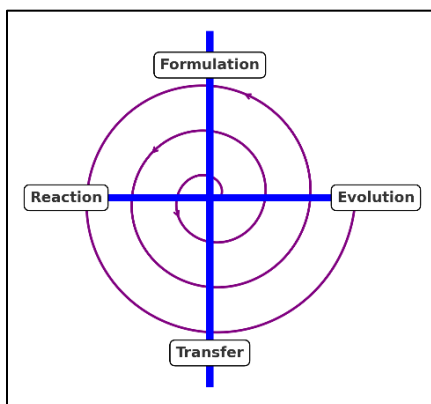


Figure 5.3: Spiral NPD model (*Adapted from: Patterson et al., 2024:112*)

5.2.5.3 Collaborative and Integrated Models

These approaches stress cross-functional coordination and open innovation, leveraging both internal and external capabilities.

a) Concurrent Engineering (CE)

CE emphasises parallel task execution across departments such as design, engineering, and marketing (Park *et al.*, 2023:278). By overlapping stages and encouraging early collaboration, CE reduces time-to-market and miscommunication, which is especially important in high-cost error-prone industries such as aerospace and automotive (Rihar & Kušar, 2021:6; Donelli *et al.*, 2023:1).



Figure 5.4. Concurrent Engineering Process Flow (*Adapted from Park et al., 2023:280*)

b) Integrated NPD (iNPD)

The iNPD model fosters simultaneous collaboration between internal departments and external stakeholders such as suppliers or customers. It improves product quality, customer alignment, and strategic cohesion across functions (Huang, Chen, and Wang, 2022:2608; Nguyen and Lee, 2023:12). Though resource-intensive, iNPD is associated with shorter development cycles and higher customer satisfaction (Rihar & Kušar, 2021:5).

c) Open Innovation (OI)

OI encourages collaboration beyond organisational boundaries, drawing on ideas and capabilities from startups, universities, and suppliers (McGahan *et al.*, 2021:52). It is particularly effective for SMEs and research-driven firms that benefit from shared risk and faster knowledge cycles. Consistent with Jabeen, Belas, Santoro, and Alam (2023:1562), who show that during the COVID-

19 pandemic open innovation enabled SMEs to drive business model innovation, share risk, and adapt more quickly, our findings confirm this strategic dynamic.

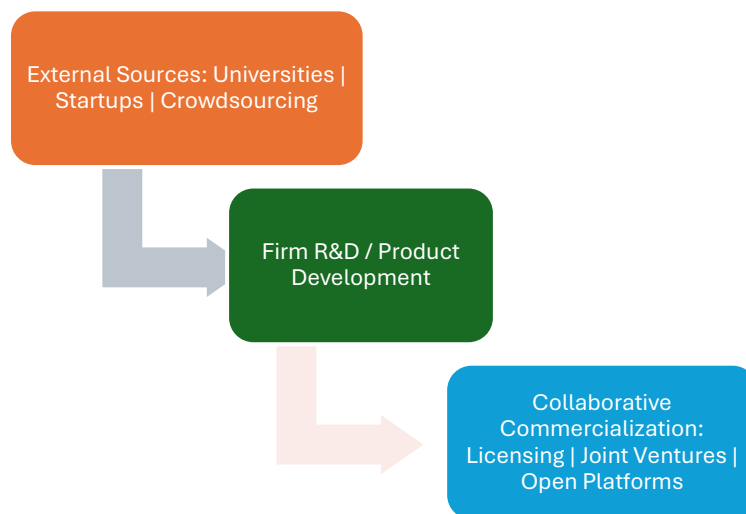


Figure 5.5. Open Innovation Framework (*Adapted from McGahan, et al., 2021:50*)

Each model offers distinct advantages depending on organisational capabilities, risk appetite, and market dynamics. Linear models provide structure; iterative models offer speed and adaptability; and integrated approaches enable cross-boundary collaboration. In emerging markets such as South Africa, where volatility and resource constraints intersect, hybrid models that combine structure with flexibility (e.g., the Agile-Stage-Gate hybrid) are gaining prominence. The following section explores this hybrid model as a promising framework for innovation-driven retailers in this context.

5.2.6 The Rise of Agile-Stage-Gate Hybrid Models

The Agile-Stage-Gate hybrid model has emerged as a leading trend in New Product Development (NPD), particularly in sectors that demand speed, flexibility, and customer-centricity - such as fast-moving consumer goods (FMCG), retail, and tech (Cooper and Sommer, 2018:20). Traditional Stage-Gate models, while effective for risk management and strategic alignment, have been criticised for being too rigid. Conversely, Agile methods provide flexibility and customer iteration but often lack the strategic oversight found in gated processes (Matzler *et al.*, 2023:190). This hybrid model merges the discipline and structure of Stage-Gate with the iterative speed and customer feedback loops of Agile. In practice, the gates remain checkpoints, but rather than

progressing through static deliverables, Agile sprints (short development cycles) operate within and between gates. This allows teams to continuously develop, test, and refine ideas before each decision point, based on evolving customer insights (Cooper & Sommer: 2018:26).

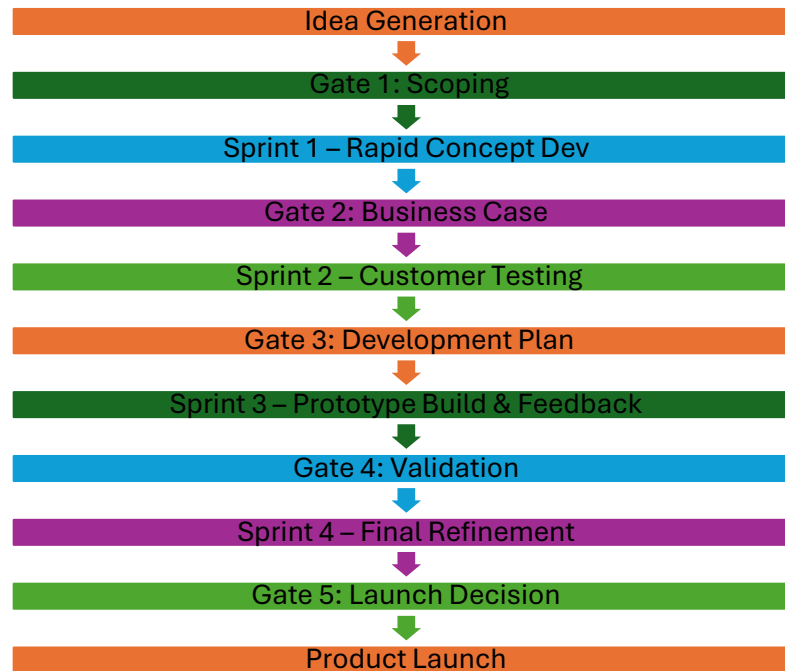


Figure 5.6: Agile-Stage-Gate Hybrid Flow (Adapted from Cooper and Sommer, 2023:112)

5.2.7 Recent Trends in NPD Models

Recent literature notes that more than 50% of innovation-driven firms are now experimenting with hybrid NPD models globally, and adoption is also increasing among South African retailers and manufacturers (Oke V, 2020:884). The model's flexibility is particularly useful in environments marked by rapid consumer shifts, digitisation, and supply chain volatility - challenges commonly faced in emerging markets like South Africa (Chinomona & Sandada, 2020:5). Moreover, some firms integrate cross-functional teams from marketing, engineering, and analytics early in the sprint cycles to ensure real-time responsiveness and market fit validation (Sanyaolu, 2022:814). This strategic alignment with agile sprints has led to improved time-to-market, better customer satisfaction, and reduced late-stage failures.

5.2.8 Evidence from a South African context

In the South African retail supply landscape, the adoption of structured NPD models- such as Stage-Gate or hybrid Agile-Stage-Gate- is shaped by a unique set of challenges and opportunities. Most suppliers in this context are small to medium-sized enterprises (SMEs), which often operate under resource constraints, including limited capital, insufficient technological infrastructure, and skills shortages (DTIC, 2023:7; Nkosi & Makhitha, 2022:5). These conditions can inhibit the adoption of highly formalised and resource-intensive NPD models typically used by larger corporates (Owoseni & Ahwireng-Obeng, 2024:31). However, literature suggests that hybrid models, such as Agile-Stage-Gate, offer an adaptable alternative that aligns with the entrepreneurial and fast-paced nature of South African retail environments. These models allow for iterative development and customer feedback, while still maintaining checkpoints for project evaluation- thus balancing flexibility with accountability (Gerdes *et al.*, 2021:5; Cooper and Sommer, 2020:849). This dual structure is particularly valuable for SMEs and mid-sized suppliers who must innovate rapidly and cost-effectively to remain competitive (Pretorius & Booysen, 2023:18).

Furthermore, operating in a volatile market with shifting consumer expectations and economic pressures makes it imperative for South African suppliers to adopt lean, responsive, and customer-centric models. Agile-Stage-Gate's ability to accommodate ongoing feedback and to pivot helps address the unpredictability inherent in such markets (Cocchi *et al.*, 2023:6436). As a result, this hybrid approach can contribute to a more efficient use of limited resources, reduce time-to-market, and enhance the likelihood of successful product launches for smaller players in the supply chain (Gomes *et al.*, 2021:12). While this study did not empirically assess the strategic fit of hybrid NPD models within SME suppliers, the literature supports their growing relevance as a best-fit approach for resource-constrained, innovation-driven environments like South Africa.

5.2 PROBLEM STATEMENT

Despite its importance for market survival, New Product Development (NPD) and innovation remain limited in South Africa, with only 47.8% of businesses launching any innovation between 2019 and 2021, and just 10% of these being new-to-world products (HSRC, 2024:8-9). Many firms are reluctant to invest in NPD due to uncertainty about returns (Pienaar *et al.*, 2019:200), yet

product life cycles necessitate continuous development to avoid sales decline (Murakami, 2024: 873–890). Alarming, only 53.2% of NPD projects meet cost targets, and just 44.4% meet timelines (Pienaar *et al.*, 2019:200), making failure especially costly for SMEs - over 70% of which collapse within their first 5 -7 years in South Africa (Bushe, 2019:1; Matekenya & Moyo, 2022:2). This study thus focuses on NPD strategies among SMEs in the retail sector (excluding micro-enterprises), where academic literature remains scarce despite their economic significance (Cubric & Li, 2024:2), underscoring the urgent need for further research to reduce NPD failure rates and enhance strategic alignment

5.3 RESEARCH QUESTIONS & OBJECTIVES

5.3.1 Research Question

The study attempts to answer the research questions:

1. What is the current state of NPD practices and processes among SME suppliers in the South African retail industry?
2. What financial, operational, infrastructural, and retailer-related factors contribute to NPD failure or underperformance among these SMEs?
3. How do retailer-supplier relationships influence the success or failure of SME-led NPD initiatives?
4. What strategies, tools, and adaptive practices do SMEs employ to mitigate risk and improve the success of new product launches?
5. How can NPD processes and supplier-retailer collaboration be improved to enhance innovation outcomes for SMEs in the South African retail ecosystem?

5.3.2 Research Objectives

Based on the research questions, the objectives of the study are:

1. To examine existing NPD processes used by SME retail suppliers
2. To identify key barriers contributing to NPD failure

3. To explore the influence of retailer-supplier dynamics on innovation outcomes
4. To analyse strategies used by SMEs to overcome constraints
5. To propose recommendations for improving SME innovation performance

5.3.2 Research Aim

The aim of this study is to critically assess the current state of New Product Development (NPD) strategies among small and medium enterprise (SME) suppliers in the South African retail industry, by examining the barriers that contribute to NPD failure and identifying the practices and strategic approaches that enable successful innovation within resource-constrained and retailer-dominated supply chains.

5.4 SCOPE OF STUDY

This study examines New Product Development (NPD) strategies among Small and Medium Enterprises (SMEs) operating in the South African retail sector. The research specifically investigates suppliers that provide products to a major national retailer and are actively involved in the development and launch of private-label and national brand products. The study explores how these SMEs design, implement, and manage their NPD processes, the barriers to product success, and the strategies employed to enhance innovation outcomes in a resource-constrained, highly competitive retail environment.

Geographically, the study is limited to suppliers operating in Gauteng, South Africa, and to those supplying to a single major retailer in South Africa. Methodologically, it employs a qualitative, exploratory design using semi-structured interviews with decision-makers directly involved in product development. The analysis is restricted to participants' experiences, perceptions, and organisational practices and does not include quantitative performance measurement or large-scale generalisation. The scope excludes micro-enterprises, large corporations, retailers' internal innovation processes, and sectors outside the retail supply chain. While the findings offer insights applicable to similar emerging-market contexts, they are primarily intended to inform SME suppliers and retailer-supplier collaboration within South Africa's retail ecosystem.

5.5 RESEARCH METHODOLOGY

Research methodology involves a structured approach to carrying out scientific inquiry (Busetto, Wick and Gumbinger, 2020: 1 -3). It encompasses the stages typically followed in exploring a research problem, with explicit justification for each choice, such as sampling, data collection, and analysis, to ensure alignment with the research objectives (Stenfors *et al.*, 2020:596–597; Renjith *et al.*, 2021:2).

5.5.1 Research Philosophy

This study adopts an interpretivist research philosophy, which aligns with the qualitative methodology used to explore in-depth the factors contributing to new product failure among South African retail SMEs. Interpretivism enables researchers to understand complex social realities through the subjective meanings participants assign to their experiences, making it particularly suitable for studies involving rich, contextual data from semi-structured interviews (Pulla & Carter, 2018:12). The goal was not to generalise findings statistically but to derive meaningful insights into how new product development processes unfold in practice, based on participants' perspectives.

5.5.2 Research Approach

To explore the current New Product Development (NPD) strategies employed by suppliers to the selected major South African retailer, this study adopted a qualitative approach using semi-structured interviews. Qualitative research excels in capturing the depth and complexity of human experiences, providing rich insights into participants' thoughts, feelings, and motivations (Oranga & Matere, 2023:2).

5.5.3 Research Design

Exploratory designs are used when investigating new or poorly understood issues, providing initial insights and laying the groundwork for further research (Saka *et al.*, 2023:1386). Given the objectives of an exploratory research design, this study identified a significant lack of information on new product development (NPD) in South Africa's retail sector. As a result, an exploratory approach was deemed suitable for generating new insights into this area.

5.5.4 Target Population

The population of a study refers to the broader group of individuals or entities to whom the research findings are intended to apply or be generalised (Shukla, 2020:1). The study population comprised supplier organisations classified as Small and Medium Enterprises (SMEs) based in Gauteng, South Africa, defined per national standards. The criteria for inclusion were:

- SME status: Organisations employing between 10 and 50 full-time employees (small enterprises) or 50 to 200 full-time employees (medium enterprises) (Madzimure, 2020:3).
- Geographic location: Operational offices or manufacturing facilities located within Gauteng province.
- Representative qualifications: Each participating organisation was represented by an individual with at least one year of experience in the company and demonstrable involvement in product development decision-making, such as Product Developers, Key Account Managers, Heads of Product, or senior executives.

Since various categories and product types are manufactured by different suppliers, the target population was classified as food or non-food for the purposes of the study. Figure 5.7 below shows all the categories supplied (in orange) by the target population for the retail group.

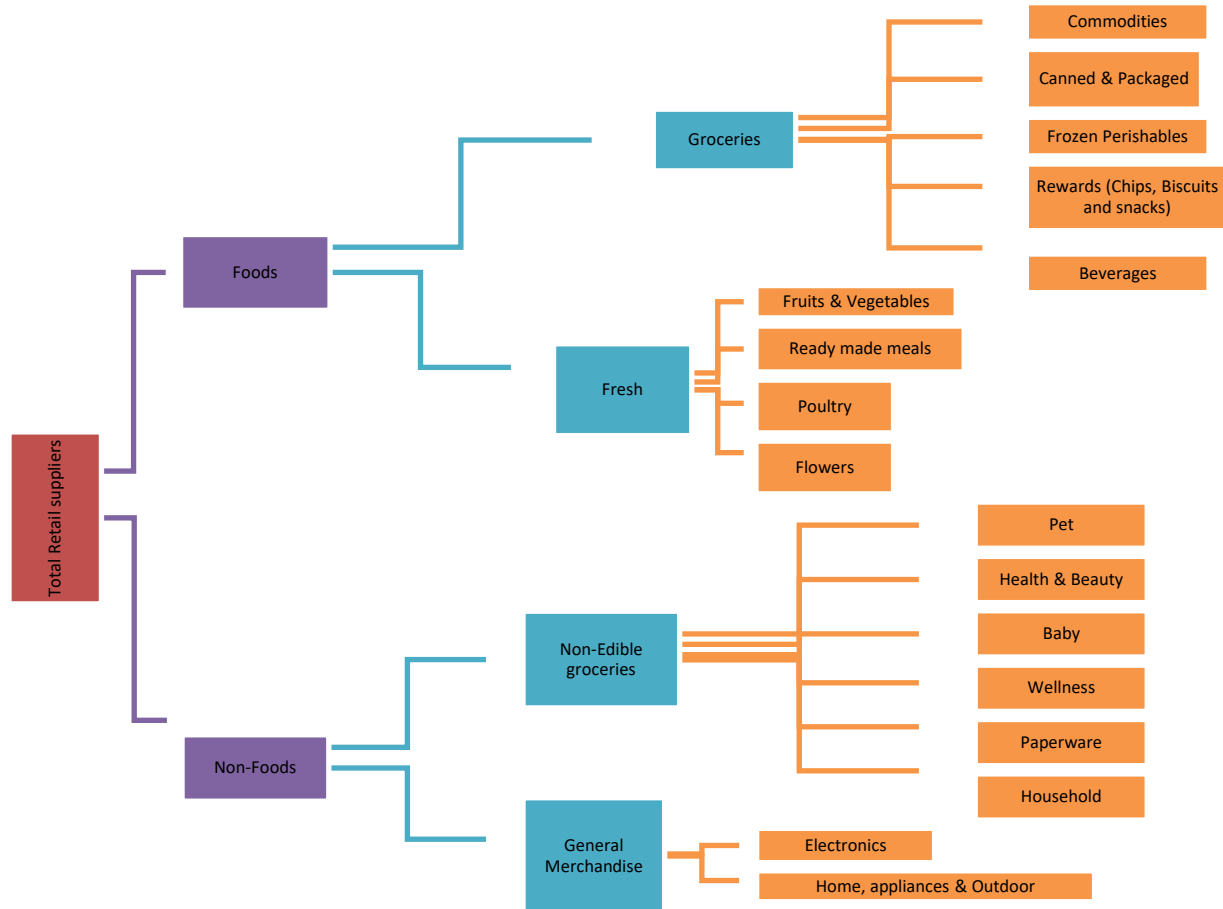


Figure 5.7: Overview of Categories Supplied by the Population (Source: Own compilation)

The categories are classified as either “Food” or “Non-foods”. As it was difficult to get participants in every category in Figure 5.7, the researcher aimed to have almost fair representation (at least 60%-40% split) in terms of participants between the Food and Non-foods groups.

5.5.5 Sampling

Participants represented a broad range of food and non-food suppliers, as shown in Figure 5.7. Although all category suppliers were invited, participation was voluntary, and many declined. Of the 74 initially targeted suppliers, 31 declined, 5 were uninterested, and 18 were unavailable. 20 interviews were conducted; thematic saturation was achieved by the 17th interview. Efforts were made to ensure diversity in gender, product categories, and job roles.

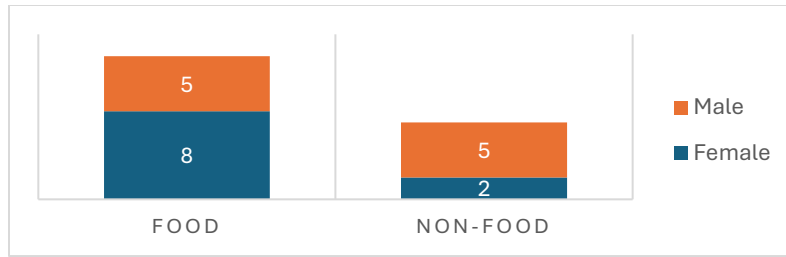


Figure 5.8: Gender and category split of the participants (*Source: Own compilation*)

Table 5.1: Job title of participants

Role	No. of participants
Director	1
Executive manager	1
Founder/ Owner	1
Head of Product	1
Key accounts Manager	1
Managing director	2
Owner	6
Product developer	4
Product development head	1
Product Development Manager	2

(*Source: Own compilation*)

Figure 5.8 shows a gender balance among participants, with women predominantly representing food-related categories. Table 5.1 outlines the variety of roles held by participants, including Product Developers, Key Account Managers, Heads of Product, and senior executives such as Managing Directors and Founders. These individuals were purposively selected for their strategic and operational involvement in new product development (NPD), thereby ensuring depth of insight across diverse organisational levels. Although the retailer's supplier base is split approximately 53% food to 47% non-food, the final sample skewed 65% food and 35% non-food. All participants reported involvement in both private-label and national brand development. While the study focuses on suppliers to a single major South African retailer, its relevance extends to the broader

retail sector, as comparable onboarding practices, listing protocols, and NPD governance are reported across major retail chains such as Pick ‘n Pay, Shoprite, Woolworths, and SPAR (Labour Research Service, 2023:17; Madubela, 2021:1). Food suppliers highlighted regulatory pressures and tight launch timelines, whereas non-food suppliers noted manufacturing constraints and raw material shortages. A purposive sampling strategy was employed to ensure participants had demonstrable expertise in NPD and a working knowledge of retail supply dynamics (Palinkas *et al.*, 2015:534).

5.5.6 Ethical considerations

Ethical considerations are vital in qualitative research to ensure participant protection and research integrity. Prior to conducting interviews, ethical clearance was obtained from North-West University (Approval Number: NWU-00574-20-A4). Informed consent was secured from all participants after they were fully briefed on the study’s purpose, procedures, and their rights- including voluntary participation and the freedom to withdraw (Xu *et al.*, 2020:3).

5.5.7 Data Collection

Data collection is a crucial stage in qualitative research, especially when exploring complex "how" and "why" questions that require contextual understanding rather than numerical responses (Hamed, 2021:11). For this study, semi-structured face-to-face interviews were chosen to enable flexibility and in-depth exploration of participant perspectives. The first round of interviews was conducted between November 2023 and January 2024, during which only 12 participants participated- mainly due to challenges in scheduling during the peak trading season. The researcher conducted a second round between April and June 2024, securing an additional 8 interviews, bringing the total to 20.

5.5.8 Data Analysis

This study used inductive thematic analysis to interpret qualitative interview data. Thematic analysis is a flexible method that identifies, organises, and interprets patterns or themes across data (Nowell *et al.*, 2017:3). The inductive approach was chosen to allow themes to emerge directly from the participants’ responses, without being restricted by pre-existing theoretical frameworks (Nowell *et al.*, 2017:5). The analysis followed a structured six-step thematic analysis process- familiarisation, coding, generating themes, reviewing, defining, and writing up - consistent with

the model proposed by Naeem *et al.* (2023:2). Although software like ATLAS.ti was used to manage and organise data, key analytical steps- such as interpreting context and deriving meaning- were performed manually outside the tool to preserve depth of insight (Sharma, 2024:114-115) or ensure interpretive depth wasn't lost to automated coding (Mattimoe *et al.*, 2021:4).

5.5.9 Coding

Following the thematic analysis steps outlined above, the data analysis was conducted on 20 transcripts using Atlas.ti. In total, 393 unique codes were recorded from the participants. The new code distribution per participant is shown in Figure 5.9.

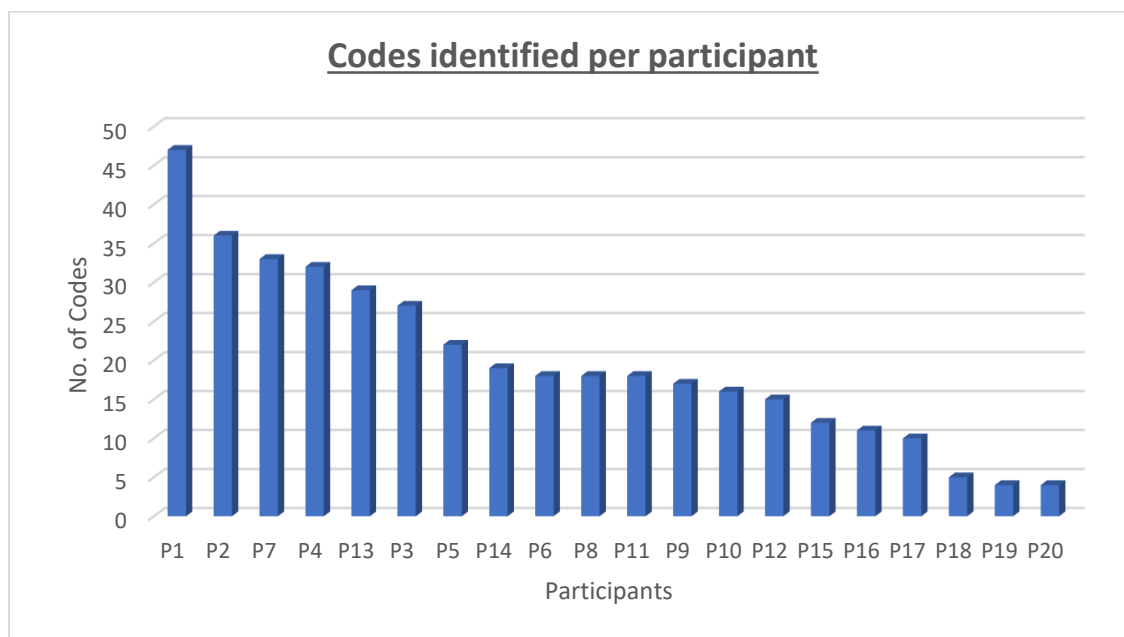


Figure 5.9: Number of Codes identified per participant (Source: Own Compilation)

Figure 5.9 shows a decline in the number of codes from Participant 1 to Participant 20, suggesting that data saturation was reached. The software supported visual organisation through colour-coded labels, as illustrated in Figure 5.10, enabling efficient comparison and pattern recognition across interviews.

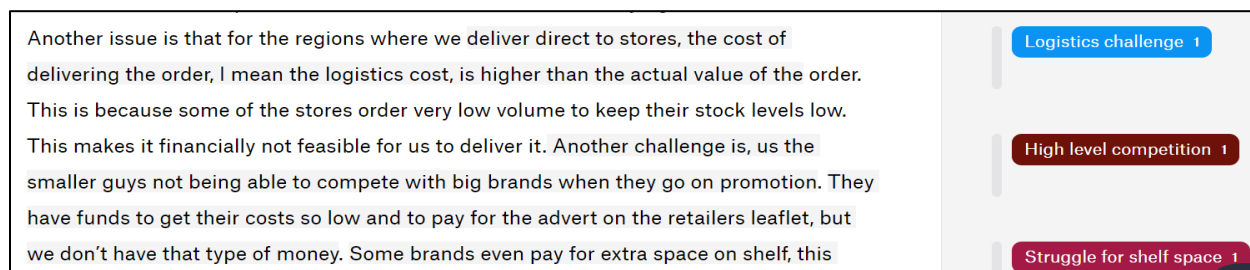


Figure 5.10: Example of identifying key codes & colour coding in transcripts (Source: Own Compilation)

Coding in qualitative research systematically organises data into thematic groups, enabling meaningful analysis to address research questions (Mattimoe *et al.*, 2021: 4). The quotation manager in Atlas.ti supports this by enhancing interpretation. After coding, the researcher grouped codes by research questions to develop themes, as shown in Figure 5.11, facilitating effective management of large datasets.

Name	Color	Groups
4P analysis	Blue	Strategies to overcome failure
Advice and opinions	Red	Current state of NPD
analysing failure reasons	Green	Strategies to overcome failure
Benchmarking	Yellow	Strategies to overcome failure
Choice of familiarity	Blue	Current state of NPD
Comparing against established brands	Grey	Current state of NPD
create brandawareness	Blue	Strategies to overcome failure
Cross business collaboration	Orange	Linking NPD to Org Strategy

Figure 5.11. Example of grouping the codes formed (Source: Own Compilation)

A total of 393 codes were analysed and grouped into 31 themes aligned with the research questions. Key themes identified include:

- Current state of NPD in South Africa - High competition, economic weakness, logistic challenges, high costs, international fairs, social media use, mandatory certifications, limited shelf space, and power struggles.
- **Causes of new product failure among SMEs.** Limited buyer product knowledge, raw material shortages, conflicting requests, strikes and looting, harsh retailer terms, feedback delays, loadshedding, and local manufacturing limits.
- **Strategies to overcome failures.** Benchmarking, 4P planning, effective communication, learning from past mistakes, product testing, global perspectives for local innovation, and private brand opportunities.

Using Atlas.ti's quotation manager, codes, memos, and quotations were linked and analysed in relation to the research objectives and theoretical framework (Mattimoe *et al.*, 2021:4). These were then further condensed and grouped into five main themes, namely financial barriers, Operational barriers, Retailer- Supplier Dynamics, market access constraints and innovation enablers.

5.6 Results & Discussion

The word cloud below highlights the key themes emerging from the data, which are then explored and interpreted.



Figure 5.12: Word cloud on key themes identified from the study (*Source: Own compilation*)

5.6.1 Financial Barriers

Financial constraints emerged as the most widely reported challenge, cited by 85% of participants. These were concentrated in two closely related subthemes: the macroeconomic context (40%) and the increasing trading terms imposed by major retailers (45%). Both have a profound impact on the viability of product innovation for SMEs, exerting downward pressure on margins, pricing, and product complexity.

5.6.1.1 Economic Constraints (40%)

Some 40% of participants described the weakened national economy as a substantial inhibitor to both consumer demand and supplier innovation. The compounded effects of post-COVID recovery, high unemployment, and inflation have led to a prioritisation of low-cost essentials over discretionary spending. As a result, SMEs are forced to develop lower-priced, simplified products, but often without the necessary margin to support innovation. Participant 18 contextualised the shift in consumer spending:

“I would say the economy is biggest downfall. People don’t have money to buy snacks... Even when they do, people in South Africa are so used to buying things on promotion.”

This quote illustrates how innovation is limited not only by affordability but also by shifting consumer habits that now prioritise deals over novelty. Participant 11 emphasised how these external conditions restrict design ambition: *“...the price points that you need to stick to for this product to sell in a difficult economy that we are sitting with, it's a massive challenge. We rather develop simple cheaper products or simple innovations.”* Here, the pursuit of simplicity is not necessarily strategic, but imposed by affordability thresholds. The result is often incremental or derivative innovation, rather than breakthrough concepts. Participant 13 pointed to the influence of global macroeconomic forces: *“With weak economy and high dollar prices makes it hard for us to keep the cost low.”*

This underscores the dual pressures of domestic stagnation and currency depreciation, which raise the cost of imported inputs - a particularly salient issue in South Africa’s import-reliant manufacturing landscape. The economic context forces SMEs into a narrow corridor in which innovation must be low-cost, fast-moving, and highly efficient, despite structural resource

constraints. Consistent with Mishrif and Khan (2023:4), who document that SMEs during the COVID-19 downturn largely deferred investments and focused on cost-reduction and efficiency measures, our findings confirm that economic shocks drive firms toward survivalist innovation strategies centred on cost leadership rather than differentiation.

5.6.1.2 Increasing Trading Terms (45%)

Alongside economic volatility, 45% of participants highlighted the increasingly complex and onerous trading terms required by major retailers as a major inhibitor to NPD. These terms often include rising front-end and back-end margin requirements, promotional contributions, and allowances for distribution centre (DC) handling, damages, and returns. These conditions compress margins to unsustainable levels for small suppliers already facing high production costs. Participant 1 reported that these terms directly cause project discontinuation: *“We had to cancel a few NPD projects as we could not get to the target cost and selling price with the increased trading terms. Retailers often demand both high front-end and back-end margins, including allowances for DC terms, damage and swell, and advertising.”*

This quote reflects how innovation decisions are not only market-driven but also shaped by the commercial environment created by dominant buyers. Participant 15 provided further evidence: *“To keep price low is also a struggle because the retailers list lines that are profitable to them... This is a problem because we don’t have a large profit margin for our products because the cost of importing raw material is high with an ever-increasing dollar to Rand exchange rate.”* Here, we observe the compounding effect of input inflation and buyer power: retailers seek high-margin products but do not provide pricing flexibility to reflect upstream cost changes. Participant 14 added: *“As part of the trading terms, they charge advertising as a percentage, but every time they promote the product, they want the suppliers to fund it... Sometimes they even ask for margin support funds where we give them a deal cost, but they maintain the selling price for a period of time.”*

This practice of deal costing without price adjustment highlights the imbalance in supplier-retailer dynamics. Retailers extract value from suppliers under the guise of promotional partnerships while protecting their own bottom line, leaving SMEs with little room to absorb financial risk or invest in long-term NPD cycles. The financial burden of these asymmetric trading terms is particularly

pronounced for SMEs, who often lack both capital and economies of scale (Bojja, 2025:2118–2129).

Taken together, these findings reveal a mutually reinforcing dynamic: economic contraction limits consumers' purchasing power, while trade terms reduce SMEs' capacity to deliver. Suppliers are caught between constrained demand and uncompromising buyer expectations. The data indicates that this dual financial pressure is a primary reason why even well-conceived NPD projects are cancelled, delayed, or radically simplified. The result is a retail innovation ecosystem that favours low-cost, low-risk, and low-margin products - often to the detriment of originality and long-term brand development.

5.6.2 Operational Barriers

Operational inefficiencies emerged as a prominent constraint on NPD, particularly for SMEs navigating distribution and production challenges within South Africa's fragmented infrastructure. Some 35% of participants identified logistics-related issues, while 25% cited loadshedding and energy instability as serious obstacles. These two subthemes reflect structural and infrastructural challenges that often lie outside supplier control but have direct consequences for NPD timelines, costs, and feasibility.

5.6.2.1 Logistics Challenges (35%)

Just over a third of participants raised concerns about the structure and efficiency of the logistics systems connected to their major retail partners. The issues cited included overloaded distribution centres (DCs), high fuel prices, small order sizes, direct-to-store delivery requirements, and penalties for failed deliveries. Participant 15 described the mismatch between order value and delivery costs: *“Sometimes their order value is even smaller than the cost of the delivery... when we get to their stores, [they] turn the stock back for one reason or the other... they bill us for non-deliveries during their financial year end.”* This quote highlights how operational friction and rigid retail performance metrics can create punitive conditions for suppliers, especially when order volumes are inconsistent. The problem is exacerbated by the retailer's lean inventory model, which results in high-frequency, low volume orders that are logistically costly. Participant 9 shared: *“The logistics cost is higher than the actual value of the order... some stores order very low volume to keep their stock levels low. This makes it financially not feasible for us to deliver.”*

This business model places cost burdens on suppliers, who often lack control over routing or order batching. Participant 14 further observed: *“The retailer’s increasing rebates and logistics cost to deliver to the retailer’s distribution centres as well as direct store deliveries in regions where they don’t have a distribution centre also an issue here.”* Here, logistics cost is revealed not as a fixed operational line item, but a moving target influenced by retailer policies, supply chain capacity, and geographical coverage gaps. These findings align with Yu *et al.* (2024:1), who highlight that fragmented supply chain structures and weak collaborative integration in emerging markets contribute to operational inefficiencies and limit the scalability of innovation.

5.6.2.2 Loadshedding (25%)

Some 25% of participants explicitly cited South Africa’s electricity supply issues as a significant threat to both ongoing operations and new product development activities. Loadshedding - scheduled electricity outages due to insufficient national supply - disrupts production cycles, increases operational costs, and adds uncertainty to manufacturing schedules. Participant 17 detailed the knock-on effects: *“Operational costs increase with loadshedding as we’ve moved over to a generator during loadshedding to continue with production and with the current increase in fuel prices, that increases the cost of products.”* The use of backup power sources like diesel generators may preserve continuity, but it does so at a substantial cost. For SMEs, these additional expenses directly erode profit margins, particularly when price points are set by retail buyers. Participant 16 explained the consequence of not having backup infrastructure: *“We do not have generator to continue operations during loadshedding therefore they have to delay production which translates to missed deliveries that major retailers penalise the vendors for.”*

This insight highlights how infrastructural disadvantage compounds the risks of SME-supplier participation in national retail supply chains. Penalties for missed deliveries, while aligned with service level enforcement policies, do not consider the external factors inhibiting fulfilment. Participant 18 shared a broader implication: *“Constant cable theft and loadshedding not only affect our production but also affect stores and retailer’s costs which they somehow try to recoup from us through additional funds especially during their financial year ends.”* In this case, supply-side instability cascades through the value chain, with SMEs absorbing much of the volatility due to their weaker bargaining power. These findings align with Mabunda *et al.* (2023: n.p.), who report that load-shedding slashes SME revenue by an average of 61%, with 59% of firms forced to lay

off staff, underscoring how infrastructural instability disproportionately burdens small-scale businesses with limited flexibility.

The operational barriers identified here go beyond mere inefficiencies. They represent structural constraints that distort the innovation capacity of small suppliers. Logistics challenges raise costs and reduce delivery reliability, while loadshedding introduces production delays and cost unpredictability. Together, these issues erode the internal consistency required for successful NPD execution. Most critically, they occur in a context where suppliers are simultaneously penalised for failing to meet service agreements, even when those failures are driven by national infrastructure collapse. Innovation in this space, therefore, is not just a matter of creativity, but of resilience under conditions of precarity.

5.6.3 Retailer-Supplier Dynamics

A recurring concern among participants was the instability and complexity of retail buyer engagement, which was reported by 35% of respondents. These concerns manifested in two main forms: conflicting requirements arising from internal buyer turnover (15%) and delays in feedback due to extended, multi-level approval structures (20%). While distinct, both subthemes point to a lack of procedural continuity within retail organisations that directly undermines suppliers' ability to plan and execute new product development (NPD).

5.6.3.1 Conflicting Requirements (15%)

Some 15% of participants raised the issue of internal discontinuity within retail buying teams - particularly the frequent reshuffling of buyers across product categories. These changes disrupt NPD momentum, with incoming buyers often disregarding or reversing prior product development decisions made by their predecessors. Such changes have immediate implications for private-label development, in which suppliers are heavily reliant on retailer briefs and on decision-making alignment. Participant 5 explained the direct consequence of this dynamic: *"Few buyers are likely to follow through and allow for the product launch, but there are instances when the new person completely disagrees with the previous person's strategy. This leads to NPD being stopped and a new brief being sent with a slightly different to completely different product types."*

This discontinuity introduces unplanned costs and schedule extensions, undermining the return on investment for projects already underway. It also creates emotional and relational fatigue for SMEs who must continuously re-engage new decision-makers. Participant 1 offered additional context: *“Often suppliers of private brands receive a product brief detailing the type of product to develop... when the buyers change, there is not a 100% alignment or agreement of product decisions.”* Participant 13 echoed this challenge and highlighted a further concern: *“There’s always a change in buyers or movement within the buying team where the buyers are changed from one category into another... what the one buyer has requested or signed off as a new product, the next buyer doesn’t necessarily agree with.”* This suggests that buyer decision-making may be partially subjective and lack in continuity of institutional knowledge or data-driven strategy. The impact on NPD is twofold: viable concepts are dropped midstream, and suppliers are left financially and logistically vulnerable to corporate-level personnel changes beyond their control.

5.6.3.2 Delayed Feedback (20%)

Some 25% of participants described lengthy feedback cycles from retailers, often attributed to internal bureaucracy and the multi-tiered nature of retail approval processes. These delays were identified as a major contributor to missed product launch windows, disrupted planning cycles, and diminished first-mover advantage. Participant 8 provided a clear breakdown of the approval bottleneck: *“We are required to get approval from both the retailer’s product development team who in turn get feedback from the buying team. Due to this multi-level approval process at the retailer, their feedback is delayed by several weeks at times. These delays are not factored into the project timelines, which leads to delayed product launches.”*

This highlights a systemic misalignment between supplier-side planning and retailer side governance structures. The issue is especially acute for private and exclusive brand development, where feedback is critical at multiple stages of product refinement. Participant 3 reinforced the broader pattern: *“We often give samples of our new products to retail buyers and wait for them to confirm if they are happy to list the product. The meeting timelines between one meeting to the next is lengthy, delaying the feedback timeline and further delaying product launch timeline.”* Delays in feedback not only waste time but also threaten the relevance of new products in fast-moving consumer markets. Participant 13 added that these delays can erode internal team alignment as well: *“It sometimes causes frustration internally because the teams have planned for*

launch on a certain date, but it keeps shifting based on retail buyer feedback.” The implications are significant: missed seasonal trends, expired retail slots, and eventual project fatigue. These inefficiencies erode trust between suppliers and retailers, reinforcing perceptions of opacity and inflexibility in the retail procurement process.

This theme highlights a significant disconnect between SME suppliers and retail partners - not in vision or intent, but in the executional and relational infrastructure of NPD. Frequent buyer changes lead to fragmented decision-making and abandoned development pipelines, whereas slow feedback loops impede the timely advancement of promising concepts. In both subthemes, the supplier is rendered reactive and forced to wait, adjust, or rework based on inconsistent and unpredictable inputs. These institutional dynamics not only impose costs on SMEs in time and money but also ultimately disincentivise sustained investment in innovation for the retail channel.

5.6.4 Market Access Constraints

Thirty percent of participants identified limited shelf space within major retailers as a significant structural barrier to successful new product development (NPD). The challenge is not only physical but also procedural, involving high-performance expectations, brand visibility issues, and merchandising inequities - all of which combine to skew the playing field in favour of larger, more established suppliers.

5.6.4.1 Limited Shelf Space (30%)

Unlike digital marketplaces, physical retailers operate within fixed square footage, which limits shelf listings. According to participants, this scarcity results in heightened competition, in which new products must quickly demonstrate commercial viability or risk discontinuation, often prematurely. Participant 3 captured the pressure this creates: *“Limited shelf space puts pressure for newly launched products to perform well within a shorter timeframe... large retailers start closely monitoring sales of new products as early as 6 months.”* This timeline, while perhaps justified from a retailer’s performance lens, does not align with typical return on investment horizons for SMEs, particularly when products require market education or brand-building. Participant 18 expanded on the consequence: *“The limited shelf space causes pressure... products will not be listed at the major retailers if there is no differentiation or value for money.”*

This reflects a catch-22 for SMEs: without volume-driven pricing or existing consumer loyalty, they are expected to offer differentiated innovation under highly constrained economic and spatial conditions. Participant 3 further noted: *“Even though the current economy forces suppliers to develop regular, low-cost products, the products will not be listed... if there is no value for money.”* Beyond mere access, product visibility within the shelf environment emerged as another critical determinant of success. Participant 18 shared: *“Products at eye level on shelves have a greater chance of sales... the higher number of facings implies that the more chances that a product will catch the eyes of customers.”* In many cases, participants reported that shelf visibility was directly tied to the supplier’s ability to pay for premium placement - a practice that systematically disadvantages smaller suppliers with limited promotional budgets. Participant 16 highlighted a subtler, yet equally damaging practice: *“Store merchandisers that are hired by larger brands don’t always comply with the merchandising plan... They may place their products in gaps left by out-of-stock items or even in front of competitors.”*

This manipulation of planograms - often outside the control of retailers’ central teams - was seen to undermine supplier trust in the fairness of listing agreements. Participant 15 added: *“There’s a disconnect between the head office and stores... in-store merchandisers are often sneaky when it comes to taking over additional space.”* In response, some SMEs are trying to compensate through packaging strategies. Participant 2 stated: *“Even if they get one facing per item, [our packaging] has positively impacted the sales of their new products.”* These findings reinforce Johnson, Torrens and Storer’s (2019:12) argument that packaging, shelf position, and in-store execution are decisive in early product adoption - particularly in cluttered environments where consumers face choice overload.

The constraints of physical shelf space do more than limit market access; they fundamentally shape the types of innovation that can succeed. For SMEs, shelf access is not just about quality or creativity; it’s also about performance velocity, merchandising power, and brand visibility. The result is a commercial landscape in which product success is not always determined by consumer appeal but by a supplier’s capacity to navigate a complex matrix of costs, compliance, visibility, and execution. Without systemic adjustments to shelf allocation and planogram enforcement, SME-driven innovation will continue to be constrained not by demand but by access.

5.6.5 Innovation Enablers

While the study uncovered a range of structural and financial constraints to NPD, it also identified a set of strategic practices that SMEs employ to increase the likelihood of successful product innovation. These enablers were cited by most participants and fell into three core areas: benchmarking (60%), multiple-stage testing (45%), and social media intelligence (65%). These strategies reflect how SMEs actively manage risk, respond to consumer demand, and seek competitive advantage within a high-pressure retail environment.

5.6.5.1 Benchmarking (60%)

Benchmarking was reported by 60% of participants as a standard pre-development activity. This involves analysing existing market offers - including taste, packaging, ingredients, brand positioning, and price - to inform both product ideation and differentiation strategies. It functions as a mechanism to narrow innovation risk by ensuring that proposed NPDs are relevant, competitive, and aligned with market expectations. Participant 8 described the process: *“It starts with a brief or a gap, then we start with benchmarking exercise to see what the similar lines in the market are.”* This indicates that benchmarking serves as both a creative and strategic gatekeeping process. Participant 10 added: *“We will buy the product and benchmark it to see the taste profile and we will see if there's a gap in our retailer to put the product.”*

The process is not limited to product mimicry but also encompasses market mapping and white-space identification. Participant 15 explained: *“Once we analyse all the information and confirm it will be a profitable venture for us, then we go into a 4P document, where we add the target price, target promotion, target placement... and how we want to position ourselves and the target product.”* These practices reflect the use of structured marketing tools- the marketing mix (4Ps)- to anchor decision-making in market data rather than instinct. Recent evidence shows that market intelligence significantly improves decisions across product, price, place, and promotion (Shita & Sewdass, 2023: 35).

5.6.5.2 Multiple Product Testing (45%)

Almost half of the participants (45%) reported that their NPD process includes multiple rounds of testing, each serving a distinct purpose: validating technical feasibility, assessing consumer response, and evaluating full-scale production performance. This multi-stage testing is especially

critical for SMEs, who cannot afford high rates of product failure or late-stage rework. Participant 7 detailed the benefits of early validation: *“The testing at various stages is intended at ensuring that the product is in line with the plan and the quality is up to standard so that the product will not fail.”* This insight demonstrates that product testing is closely linked to project de-risking. Participant 3 provided a more operational perspective: *“The products are tested at the concept level, in the lab creation or sample creation stage, the products are tested with the retailer and again finally tested during factory trials.”* These multiple checkpoints - internal and external - reflect an understanding that alignment with retailer expectations is just as important as technical readiness. Participant 18 described the dual-track testing model used for private labels: *“We go into sampling and testing internally, then we send samples to the buyers and developers at the retailer who will then test them there.”* These practices indicate a sophisticated, risk-aware innovation model that challenges the notion that SMEs operate informally or with limited rigour.

5.6.5.3 Social Media Intelligence (65%)

Social media was the most frequently cited strategic tool (65%), used not only for marketing but also for trend monitoring, idea generation, and post-launch feedback. Participant 16 noted its role in ideation: *“New product ideas often come from what they see trending on social media.”* Participant 5 highlighted its value in consumer engagement: *“End customers often ask questions relating to their product via social media...”* Post-launch feedback was also common, as Participant 14 shared, *“We often get product feedback both positive and negative from social media.”* These examples align with recent findings: social media has become a deliberate and structured channel for NPD across all stages, from trend sensing to launch feedback (Han *et al.*, 2024:112-113), and SMEs increasingly use social media-facilitated crowdsourcing to capture ideas and integrate consumer knowledge (Nasution *et al.*, 2023: 7).

Together, these enablers demonstrate that even in the face of structural disadvantage, SMEs can embed discipline, strategy, and responsiveness into their NPD processes. Benchmarking provides market anchoring, multi-stage testing ensures product robustness, and social media creates a feedback-rich environment that supports both ideation and iteration. These insights affirm the notion that innovation resilience among SMEs is not simply a function of creativity, but of deliberate systematisation and agile adaptation.

5.7. CONCLUSION, RECOMMENDATION & FUTURE RESEARCH

5.7.1. Conclusion and Recommendation

This study explored the systemic, operational, and contextual challenges facing South African SMEs engaged in new product development (NPD) for private-label retail. The research revealed that while SMEs demonstrate strong adaptive capabilities - including the use of benchmarking, global trend tracking, and iterative development methodologies - they remain structurally disadvantaged in a retail environment that continues to prioritise cost efficiency over innovation inclusivity. The findings highlight the disconnect between supplier innovation capability and the institutional structures governing supplier-retailer relationships. The dominant position held by major retailers often limits supplier input in strategic decision-making, creates opaque NPD evaluation mechanisms, and perpetuates a risk-averse culture that constrains SME-driven product innovation. This disconnect is exacerbated by poor communication channels, minimal post-launch feedback, and a lack of practical support during product development cycles. Suppliers also cited financial strain caused by long payment cycles, upfront development costs, and lack of shared investment in innovation outcomes.

Despite these challenges, the study also revealed a critical opportunity: repositioning SRM from a transactional procurement framework to a platform for innovation co-creation. If properly reimagined, SRM can unlock the value SMEs offer in enriching product portfolios, serving niche markets, and driving local economic growth. To translate these insights into actionable strategies, the following recommendations are made:

- **Retailer-Supplier Innovation Partnerships:** Retailers should institutionalise formal collaboration mechanisms with SME suppliers. This could include quarterly innovation planning workshops in which retailers and suppliers jointly identify emerging category trends, co-develop promotional timelines, and align their innovation pipelines. Such forums can help ensure that retailer strategy is informed by supplier capability and consumer insights from the ground up.
- **Category Management Reform:** Category managers need to be trained and incentivised not only on margin delivery but also on innovation contributions and supplier engagement

quality. KPIs should include qualitative metrics such as supplier inclusion, NPD feedback quality, and successful SME-led launches, particularly in underrepresented categories.

- **Shared Digital Infrastructure:** A shared supplier-retailer digital platform should be developed to facilitate real-time communication, transparent tracking of NPD submissions, and access to trend data. Such infrastructure can also automate parts of the evaluation process, ensure consistency and traceability, and reduce manual bottlenecks.
- **Innovation Development Support:** Retailers can provide structured support to SMEs through co-funding arrangements for packaging, lab testing, shelf life trials, and initial marketing. Such an investment would reduce suppliers' financial burden and improve product quality, thereby reducing failure rates and enhancing consumer trust.
- **Transparent Delisting and Feedback Loops:** To enable iterative learning and improvement, product delistings should be accompanied by structured feedback and sales data. This would replace current opaque practices that leave suppliers uninformed and demoralised, limiting their ability to adapt and succeed.
- **Ethical Merchandising Oversight:** Ensuring planogram compliance and preventing in-store bias against SMEs - such as unplanned range cuts or unequal share-of-shelf allocation - would level the playing field and reflect true category performance.

These recommendations carry significant implications for practice. Retailers that embed SME engagement into their innovation strategy not only broaden consumer choice and improve product relevance but also contribute to inclusive economic development. For suppliers, clearer expectations, shared risk, and access to support mechanisms could improve product success rates and long-term viability. Finally, the fact that many SMEs were hesitant to participate in this study underscores a more profound issue: the fear of commercial reprisal for speaking critically about retailer practices. This signals an urgent need for systemic reform - not just in process, but in culture. If South Africa's retail ecosystem is to be a true engine for inclusive growth and sustainable innovation, the integration of supplier voice into strategic decision-making must move from symbolic gestures to embedded operational norms. In summary, innovation must be enabled, not

obstructed. For SMEs to thrive and evolve in step with a fast-changing consumer landscape, supplier creativity must not be resistance, but met with readiness, partnership, and purpose.

5.7.2 Limitations of the study

This research is limited by its focus on a single major retail chain, which may constrain the generalizability of the findings to the broader South African retail ecosystem. The sample size, while sufficient for qualitative exploration, was relatively small and skewed towards suppliers in the food category, which may limit insights from other sectors such as non-food FMCG or general merchandise. An additional limitation was the reluctance of several potential participants to engage with the study, despite confidentiality measures. This hesitation may reflect underlying tensions, fear of reprisal, or a lack of psychological safety in the supplier-retailer relationship, which not only limits data richness but also serves as a signal of broader systemic issues within the industry.

5.7.3 Future Research

Future studies should expand beyond a single retailer to include multiple sectors, enabling broader comparisons and quantitative validation. The accelerating shift toward digitalisation- including AI, predictive analytics, and e-commerce platforms- offers a critical area for exploration, particularly in how it may enhance supply chain resilience and support NPD in South Africa, where adoption is still emerging (Yu *et al.* 2024). A longitudinal design could help track NPD outcomes and uncover success factors over time. Additionally, future research could investigate how structured SRM models contribute to more collaborative and innovation-driven supplier-retailer partnerships in emerging markets.

CHAPTER 6: ARTICLE 3

TOWARD AN INTEGRATED MODEL OF SME NEW PRODUCT DEVELOPMENT CAPABILITY IN SOUTH AFRICA'S RETAIL SECTOR: A SYNTHESIS OF QUALITATIVE AND QUANTITATIVE FINDINGS

Abstract

This study investigates how small and medium-sized enterprise (SME) suppliers in South Africa's buyer-dominated retail sector build and sustain new product development (NPD) capability. Drawing on dynamic capabilities and signalling theory, the research employs a sequential mixed-methods design that integrates quantitative survey data from 74 SME manufacturers with qualitative interviews from 20 listed suppliers. Quantitative results show that research-led validation -structured testing, documentation, and certification - was the only significant predictor of retailer listing success, indicating its central role in reducing information asymmetry and signalling reliability to dominant buyers. The qualitative findings extend these results by revealing that, after listing, SMEs face ongoing capability renewal pressures, including high compliance costs, compressed innovation cycles, and operational disruptions such as load shedding and logistics constraints. Firms that embedded benchmarking, 4P documentation, and post-launch learning routines converted these challenges into adaptive feedback systems. The study conceptualises research-led validation as a micro-foundation of dynamic capability that transforms experiential learning into credible market signals. In practice, it proposes the Retail-Ready NPD Capability Model to guide managers and policymakers in strengthening SME innovation capabilities and sustainable inclusion within formal retail value chains.

Keywords: SME suppliers; dynamic capabilities; signalling theory; research-led validation; new product development; emerging markets; South Africa

6.1 INTRODUCTION

South Africa's grocery retail sector remains one of the most structurally concentrated industries in the national economy, dominated by a small number of vertically integrated supermarket chains that exercise substantial buyer power and control over supplier access (Competition Commission South Africa, 2019). Structural consolidation has been reinforced through exclusive lease agreements and category management practices, which often extend beyond ten-year terms and constrain smaller suppliers' ability to obtain shelf space (Competition Commission South Africa, 2019). Small and medium-sized enterprises (SMEs) operating in this environment face systemic capability and financing constraints, including informality, limited record-keeping, and working-capital shortages, that restrict their ability to comply with retailer procurement standards and participate effectively in modern value chains (OECD, 2022). Within these buyer-dominated supply chains, governance mechanisms and asymmetric power relations determine whether firm-level innovation capabilities translate into actual market access, thereby creating a persistent innovation-access gap (Mondliwa *et al.*, 2021).

Recent evidence highlights that structured, research-driven innovation routines and cross-functional collaboration yield more consistent new product outcomes than ad hoc experimentation, particularly under institutional and market uncertainty (Audretsch *et al.*, 2023; Žužek *et al.*, 2021). Moreover, strengthening SMEs' dynamic capabilities through formalised NPD and validation processes improves their capacity to meet retailer expectations and sustain competitive advantage (Garrido-Prada *et al.*, 2024). South Africa's industrial policy continues to prioritise inclusive value chain participation and supplier upgrading as mechanisms for structural transformation and employment growth (DTIC, 2023). Against this backdrop, the present study investigates the continuum between NPD capability and retail access by comparing non-listed SMEs seeking market entry with listed SMEs managing post-listing NPD within South Africa's grocery retail sector. This comparative design enables the identification of capability configurations and institutional factors that facilitate or hinder SME integration into formal retail networks.

Accordingly, the study aims to compare and synthesise the NPD strategies of listed and non-listed SMEs in South Africa's grocery retail sector to uncover organisational and institutional enablers of successful market entry. It further develops a Retail-Ready NPD Capability Framework that connects internal innovation routines with external retailer acceptance mechanisms, thereby

advancing theoretical understanding of SME competitiveness in buyer-dominated markets and offering policy-relevant insights for inclusive industrialisation. The study pursues four objectives:

1. To examine the strategic, research, and collaborative practices underpinning NPD among listed and non-listed SME suppliers.
2. To identify capability gaps, structural barriers, and alignment challenges influencing retailer acceptance of SME-developed products.
3. To integrate qualitative and quantitative findings into a unified Retail-Ready NPD Capability framework tailored to emerging-market retail ecosystems.
4. To propose theoretical and policy recommendations for enhancing SME innovation readiness, retailer engagement, and inclusive value chain participation.

6.2 BACKGROUND

6.2.1 SME innovation and capability formation

SMEs contribute disproportionately to innovation in emerging markets, yet their ability to commercialise new products depends on both internal capability configurations and external relational legitimacy (Sengura *et al.*, 2024). In buyer-dominated industries such as grocery retail, these firms face dual challenges: limited resource endowments and restricted visibility within procurement systems (Phongthiya *et al.*, 2024). Consequently, innovation effectiveness rests not only on creative ideation but also on a firm's capacity to validate its products through credible evidence of quality, market demand, and regulatory compliance. Empirical studies emphasise that SMEs which institutionalise structured NPD routines, such as idea screening, testing, and documentation, to achieve superior innovation outcomes (Oliveira *et al.*, 2022). Conversely, informality in research and collaboration leads to fragmented learning and weak market translation (Anning-Dorson, 2024). Within the context of dominant retail buyers, validation mechanisms function as capability-based bridges linking innovation potential to supplier legitimacy and market access.

6.2.2 Theoretical foundations

This research draws primarily on the Resource-Based View (RBV) and Dynamic Capabilities Theory (DCT) as its theoretical anchors. The RBV posits that sustained competitive advantage

arises from resources that are valuable, rare, inimitable, and non-substitutable (VRIN) (Barney, Ketchen & Wright 2021). Within SMEs, such resources typically include technical expertise, market intelligence, and organisational routines that enable effective new product decisions and responsiveness to environmental shifts. The DCT extends the RBV by explaining how firms reconfigure resources through sensing, seizing, and transforming activities in turbulent markets (Teece 2020). In concentrated retail ecosystems, where dominant buyers control access and impose stringent listing requirements, these dynamic capabilities must take the form of documented and auditable processes that convey reliability and compliance (Kohtamäki *et al.* 2022; Gorton *et al.* 2024). Accordingly, this study conceptualises research-led validation as a micro-foundation of dynamic capability. It represents a structured approach to product and market testing that generates verifiable artefacts - benchmark reports, consumer feedback syntheses, and technical documentation - which act as credible signals under information asymmetry and establish legitimacy with retailers (Bafera & Kleinert 2023; Thomas *et al.* 2021). While Dynamic Capabilities Theory (DCT) explains how firms' sense and seize opportunities through reconfiguration of resources, this study conceptualises research-led validation not as a dynamic capability itself, but as one of its micro-foundations (Xie, Zhao, Liu, and Lu, 2023). These micro-foundations- structured testing, documentation, and certification- translate tacit learning into auditable evidence that signal's reliability to powerful buyers (Cautela, Simoni & Moran, 2021). Under the institutional constraints of South Africa's concentrated retail market, these validation routines operate simultaneously as capability enactments and legitimacy signals. This integration extends DCT by linking it to Signalling Theory and Institutional Theory, illustrating how firms in buyer-dominated markets translate internal learning processes into credible evidence of compliance and trustworthiness.

6.2.3 Capability domains and relationships

Prior SME innovation research consistently identifies three internal capability domains that underpin new product development success and relational legitimacy:

1. Strategic orientation - the extent to which an entrepreneurial and market-driven posture guides NPD decisions. A proactive strategic orientation aligns product development with market intelligence and enhances buyer confidence (Pan *et al.*, 2021).

2. Internal collaboration - cross-functional coordination and information sharing that integrate insights across production, marketing, and supply functions. Collaborative cultures accelerate learning and ensure consistency in quality and delivery (Idrees *et al.* 2023).
3. NPD research capability (research-led validation) - the SME's ability to systematically collect, interpret, and codify market, consumer, and technical data. This capability transforms intangible learning into tangible, auditable evidence of competence (Chen *et al.*, 2023; Ruiz-Ortega *et al.*, 2024).

In South Africa's retail supply chains, where buyer dominance amplifies information asymmetry, these three domains interact to shape relationship quality and subsequent retailer access. Strategic orientation and collaboration provide the strategic and relational foundation, while research-led validation serves as the evidentiary mechanism through which SMEs demonstrate readiness and reliability (Competition Commission South Africa 2019; Lu, Qi & Yu 2024).

6.2.4. Hypothesis development

Building on RBV and DCT, the study proposes that SMEs with integrated configurations of strategic orientation, internal collaboration, and research-led validation will achieve higher retailer relationship quality.

H₁: SMEs that govern NPD strategically report higher retailer relationship quality.

H₂: The extent of research-led validation within SME NPD processes positively influences retailer relationship quality.

H₃: The strength of cross-functional collaboration in SME NPD positively influences retailer relationship quality.

Collectively, these hypotheses constitute the Retail-Ready NPD Capability Model, which posits that aligning these three internal capabilities strengthens SMEs' ability to establish legitimacy and secure retail access within concentrated market structures.

6.2.5 Conceptual framework

Drawing from the Resource-Based View (RBV), Dynamic Capabilities Theory (DCT), and Institutional perspectives, this study proposes a conceptual model (Figure 6.1) that links internal SME capabilities to retailer engagement outcomes within South Africa's grocery retail ecosystem. The model posits that Strategic Orientation, NPD Research Capability, Internal Collaboration, and Retailer Relationship Quality collectively determine SMEs' ability to secure and sustain retail access under asymmetric market conditions.

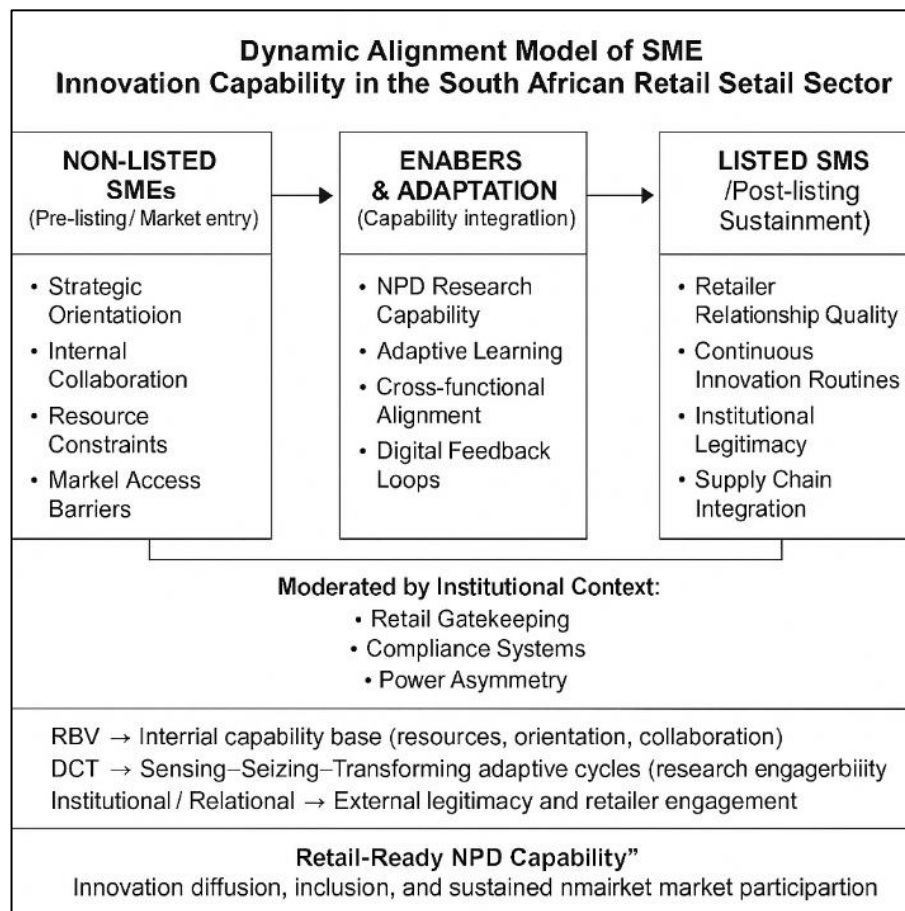


Figure 6.1: Conceptual Framework: Dynamic Alignment Model of SME Innovation Capability in the South African Retail Sector (*Source: Own compilation*)

6.3 RESEARCH QUESTIONS & OBJECTIVES

6.3.1 Research question

How do SME suppliers develop and configure NPD capabilities that enable successful entry into, and sustained participation within, South Africa's formal grocery retail sector?

6.3.2 Research Objective

To investigate the relationship between SME NPD capabilities and retailer market access in South Africa's grocery retail sector and to develop an integrated capability framework for improving SME innovation success.

6.3.3 Research Aim

The aim of this study is to examine how small and medium enterprise (SME) suppliers in South Africa's buyer-dominated grocery retail sector build, validate, and sustain new product development (NPD) capabilities that enable successful retailer access and post-listing performance, and to develop an integrated Retail-Ready NPD Capability Model that explains how internal capability configurations translate into market legitimacy and inclusion within formal retail value chains.

6.4 SCOPE OF THE STUDY

This study examines how small and medium-sized enterprise (SME) suppliers operating in South Africa's grocery retail sector develop and configure new product development (NPD) capabilities that enable successful access to and sustained participation in formal retail value chains. The research focuses on capability formation rather than individual product outcomes, specifically analysing how strategic orientation, research-led validation, and internal collaboration influence retailer relationship quality and listing success in buyer-dominated markets.

The study adopts a sequential explanatory mixed-methods design. The quantitative phase investigates capability and access relationships among 74 non-listed SME manufacturers seeking retail entry, while the qualitative phase explores post-listing adaptation and capability renewal among 20 listed suppliers. This comparative approach enables analysis across both pre-listing

(market entry) and post-listing (sustainability and compliance) stages of SME participation in formal retail channels.

The scope is limited to SME suppliers within the grocery retail supply chain and exclude micro-enterprises, large corporations, or retailers' internal innovation systems. The research concentrates on organisational capabilities and retailer engagement processes rather than financial performance or consumer outcomes. Although the findings may inform other emerging-market contexts, the conclusions are primarily applicable to concentrated, buyer-dominated retail environments similar to those in South Africa.

6.5 RESEARCH METHODOLOGY

6.5.1 Research design

This study employed a sequential explanatory mixed-methods design, integrating quantitative and qualitative strands to examine how SMEs' internal capabilities influence their access to formal grocery retail channels in South Africa. The quantitative phase identified predictors of successful retailer appointments among unlisted SMEs, whereas the qualitative phase explored how already-listed SMEs sustain new product development (NPD) and manage relational dynamics under post-listing conditions (Shiyanbola, 2021). Integration occurred at two stages. First, quantitative results guided the design of the qualitative interview protocol, enabling the second phase to probe mechanisms underlying the observed statistical relationships. Second, meta-inference was achieved through joint display logic, which aligned quantitative findings and thematic patterns to identify convergence, complementarity, and divergence (Haynes-Brown & Fетters, 2021; Peters & Fàbregues, 2024). This approach ensured methodological triangulation and enhanced explanatory power, consistent with best practice in explanatory mixed-methods research (Guetterman *et al.*, 2021; Arias Valencia, 2022).

6.5.2 Population and sampling

6.5.2.1 Quantitative phase

The quantitative phase targeted unlisted SME suppliers operating within South Africa's food and grocery sectors. The sampling frame comprised 92 enterprises registered with a major retailer's

enterprise development programme (June 2022-November 2023). These SMEs had expressed interest in formal listing but had not yet secured supply contracts.

Using purposive sampling, all 92 firms were invited; 74 valid responses were received after repeated follow-ups. This represented approximately 80% coverage of the accessible population, with a 5% margin of error at a 95% confidence level (Rao's sample calculator). Respondents met two inclusion criteria:

- (i) Compliance with the South African SME definition (≤ 500 employees) (Enaifoghe & Ramsuraj, 2023), and
- (ii) A managerial or operational role linked to NPD or retail engagement.

The demographic profile indicated that most respondents were male (56.8 %), aged 36-60 years (86.5%) and held tertiary qualifications (83 %). More than 83% held senior management, director, or ownership roles, indicating informed perspectives on strategic decisions. A majority operated as private companies (52.7 %), followed by sole proprietorships (17.6 %) and close corporations (16.2%).

6.5.2.2 Qualitative phase

The qualitative phase examined listed SME suppliers to the same retailer to understand post-listing capability routines and relational practices. Twenty semi-structured interviews were conducted with owner-managers, managing directors, product developers, key account managers, and executive managers across food (65%) and non-food (35 %) categories. Data saturation occurred around the 17th interview, but three additional sessions were included to ensure thematic completeness. Recruitment was voluntary. Several candidates declined participation owing to perceived conflict of interest, given the researcher's employment at the focal retailer - acknowledged as a limitation. Confidentiality assurances and institutional ethics clearance mitigated potential bias. Purposive expert sampling was employed to ensure that participants possessed advanced knowledge of NPD processes and retail operations, consistent with contemporary guidance on participant selection in explanatory mixed-methods designs (Ahmad & Wilkins, 2024).

Ethical approval was granted by the North-West University Business School Research Ethics Committee, and all participants provided written informed consent.

6.5.3 Instrumentation and variables

The survey instrument operationalised four latent constructs on a 4-point Likert scale (1 = strongly disagree; 4 = strongly agree):

1. Strategic orientation (SO) - Clarifies goals and channels resources toward NPD while preserving flexibility (Aloulou, 2019).
2. NPD research capability (NR) - entails formal market/competitor/customer inquiry plus documented technical and consumer testing (Iqbal & Suzianti 2021).
3. Internal collaboration (IC) - reflects purposeful cross-functional knowledge sharing that converts insights into viable products (Lindblom & Martins, 2022).
4. Retailer relationship quality (RR) - trust, communication, and commitment - are standard buyer - supplier quality metrics (Agarwal & Narayana 2020).

The dependent variable was ease of securing a retailer appointment, measured by respondents' self-reported rating of access success. Control variables included firm size and years in operation. The interview protocol for the listed SMEs comprised semi-structured questions on post-listing adaptation, capability development in the NPD process, and retailer-supplier interaction dynamics. The average duration of the interview was 38 minutes and 25 Seconds. The interviews were audio-recorded and transcribed verbatim.

6.5.4 Data collection procedures

Survey data were gathered online via Google Forms between November 2023 and April 2024. Interview data were collected from April to June 2024 during in-person sessions. Participation was voluntary, with the right to withdraw at any time.

6.5.5 Data analysis

Quantitative analyses were performed in SPSS v28. Exploratory factor analysis (EFA) using principal axis factoring with varimax rotation validated construct dimensionality (KMO = 0.83; Bartlett's χ^2 $p < 0.001$). Items with communalities < 0.40 were removed. Cronbach's α ranged

0.63-0.90 (majority > 0.80). Multiple regression tested H1-H3 while controlling for firm size and age. Model adequacy was assessed via R^2 and F-statistics. Qualitative data were analysed thematically using ATLAS.ti, following the six-step framework of Naeem *et al.* (2023): open coding, axial grouping, and pattern matching. Quantitative and qualitative findings were integrated using a side-by-side comparison and data transformation approach, mapping qualitative themes onto quantitative constructs to identify convergence and expansion (Guetterman *et al.*, 2021).

6.5.6 Validity and reliability

Instrument quality was supported through multiple checks. Content validity was established through expert review and a small pilot study, which refined item wording and sequencing. Construct validity was examined with exploratory factor analysis (EFA): sampling adequacy (KMO), Bartlett's test, factor retention (eigenvalues > 1 and parallel reasoning), and loading thresholds (≥ 0.50), followed by current recommendations (Goretzko *et al.*, 2021). Convergent and discriminant validity were judged via AVE (≥ 0.50) and inter-construct correlations, respectively (Goretzko *et al.*, 2021). Reliability was assessed with Cronbach's α (≥ 0.70 acceptable; ≥ 0.80 good), noting that α can be attenuated for two-item subscales and should be interpreted alongside item diagnostics (Goretzko *et al.*, 2021). For the qualitative strand, transparency of thematic analysis procedures (six-step coding, audit trail, peer debriefing) and thick description were used to enhance credibility, dependability, and confirmability (Kiger & Varpio, 2020).

6.5.7 Ethical considerations

Ethical clearance was obtained from the North-West University Research Ethics Committee (Ref: NWU-00574-20-A4). All participants provided informed consent, and data were anonymised and stored securely in accordance with institutional and GDPR-aligned protocols.

6.6. RESULTS AND ANALYSIS

6.6.1. Descriptive statistics and sample profile

The quantitative dataset comprised 74 unlisted SMEs from South Africa's food, beverage, and personal care subsectors. Most firms were micro- to small-sized: 84% employed ≤ 50 workers, and 86% of respondents were aged 36-60 years. Over four-fifths of owner-managers held

tertiary qualifications and were directly involved in NPD decisions. The qualitative sample of 20 listed SME suppliers exhibited comparable sectoral representation but higher levels of formalisation, including in-house quality assurance and R&D functions. Preliminary correlation analysis showed strong positive associations between Strategic Orientation (SO) and NPD Research Capability (NR) ($r \geq 0.50$), suggesting alignment between entrepreneurial posture and evidence-based learning. In contrast, the Internal Collaboration (IC) and Retailer Relationship (RR) constructs showed weaker or more variable correlations ($r < 0.30$), indicating that, although SMEs exhibit structured planning and research practices, cross-functional coordination and sustained retailer integration remain inconsistent.

These descriptive results suggest that strategic and analytical readiness are comparatively mature capabilities, whereas relational and integrative routines lag; this is consistent with evidence that SMEs in emerging markets face constraints implementing supply chain integration and relationship routines, and shows that such integration is critical to performance. (Setyaningsih & Kelle, 2021; Das Nair, 2021; Wang *et al.*, 2024; Zahoor *et al.*, 2024).

6.6.2. Factor analysis and reliability

Exploratory factor analysis confirmed the multidimensional structure of the study constructs. Sampling adequacy was satisfactory (KMO values ranges between 0.81 and 0.83; Bartlett's Sphericity Test: $p < 0.001$), and all communalities exceeded 0.40, indicating factorability (see Table 6.1).

Table 6.1: Exploratory Factor Analysis and Reliability Summary (n = 74)

Construct	Items Retained	Eigenvalue	Variance Explained (%)	Cronbach's α	KMO	Communality Range	Retained Sub-Factors (Conceptual Dimensions)
Strategic Orientation	11	4.12, 2.01, 1.17	75.45	0.82	0.82	0.62-0.86	(1) Strategic Planning Culture (2) Goal Visibility &

							Internal Alignment (3) Structured Evaluation & Prioritisation
NPD Research Capability	12	3.96, 2.18, 1.22	70.17	0.81	0.81	0.45-0.89	(1) Customer-Centric Discovery (2) Evidence-Based Validation (3) Structured R&D Investment
Internal Collaboration Dynamics	10	3.41, 1.11	65.27	0.83	0.83	0.49-0.75	(1) Inclusive Collaboration (2) Strategic-Operational Synchronisation
Retailer-SME Relationship Barriers	10	3.82, 2.10, 1.12	70.91	0.81	0.81	0.51-0.84	(1) Retailer Relationship Climate (2) Accessibility & Onboarding Barriers (3) Supplier Initiative & Coping Tactics
Cumulative Variance Explained	-	-	71.38	-	-	-	-

Note. Extraction = Principal Axis Factoring; Rotation = Varimax with Kaiser Normalisation; Retention Criteria = Eigenvalues > 1, Communalities > 0.40. All loadings $\geq .50$.

(Source: Own Compilation)

Using Principal Axis Factoring with Varimax rotation, four clean constructs emerged, explaining 71.38% of total variance. Each construct exhibited high internal consistency (Cronbach's $\alpha = 0.81$ -0.83). SO and NR Capability displayed the strongest structural coherence (variance explained = 75.45% and 70.17%, respectively), while IC and RR factors

showed more moderate cohesion (65.27% and 70.91%). The four constructs jointly explained 71.4 % of total variance with high reliability ($\alpha = 0.81-0.83$). These validated factors provided the foundation for regression and subsequent mixed-methods integration.

6.6.3 Hypothesis testing

Multiple regression analysis examined the joint influence of NPD Strategy, NPD Research, and Team Collaboration on SMEs' ease of securing retailer appointments.

Table 6.2: Regression analysis summary

Model	Predictors Entered	R ²	Adjusted R ²	F	P
1	NPD Strategy, NPD Research, Team Collaboration	0.234	0.202	7.17	0.001
2	+ Firm Size, Years in Business	0.270	0.216	5.03	0.001

Note. Dependent variable = Ease of Securing Retailer Appointment; n = 74. (Source: Own compilation)

Model 1 (without controls) explained 23.4 % of the variance ($R^2 = 0.234$, Adj. $R^2 = 0.202$), while Model 2 (including firm size and years in company) improved explanatory power to 27.0 % ($R^2 = 0.270$, Adj. $R^2 = 0.216$; $F(5, 68) = 5.03$, $p = 0.001$). Among predictors, NPD Research showed a significant positive effect ($\beta = 0.61$, $p < 0.05$), indicating that firms that engage in systematic market and customer research gain greater retailer access (see Table 6.2). NPD Strategy ($\beta = -0.12$, $p > 0.4$) and Team Collaboration ($\beta = 0.20$, $p > 0.4$) were not significant, suggesting that strategic alignment and cross-functional coordination alone do not directly improve retailer engagement outcomes. Control variables were non-significant, indicating that evidence-based product validation - rather than scale or tenure - drives retailer access. This aligns with research showing that formalised evaluations and third-party certifications function as credible signals that mitigate buyer risk in concentrated retail supply chains (Hawkins *et al.*, 2020; Tong *et al.*, 2022).

6.6.4. Qualitative insights: Post-listing adaptation and capability institutionalisation

Across the interviews, the SME suppliers described opportunity within constraint: retailer listing confers visibility but also intensifies scrutiny and cost pressures; enterprise/supplier development checks establish entry legitimacy yet rarely guarantee sustained access (see Table 6.3). This pattern is consistent with evidence that retailers use third-party evaluations to legitimise selective gatekeeping in concentrated grocery chains (Gorton *et al.*, 2024). Suppliers also highlighted structural barriers to innovation - high NPD costs, compressed evaluation windows, opaque buyer processes, and rising trading terms -echoing documented “dark-side” effects of buyer power and information asymmetry that depress small-supplier outcomes (Glavee-Geo, Engelseth & Buvik, 2021).

Table 6.3. Summary of Thematic Findings among Listed SME Suppliers

Theme	Subthemes	Direct quotes	Interpretation / Theoretical Link
1. Opportunity within Constraint	- Listing enhances visibility but amplifies cost and competition. - Retailer ESD grants access but not sustainability.	<i>“We made sure we are legally compliant, had our factory audited and had all the necessary documentations ready” (P11)</i> <i>“We send the samples to labs for testing and apply them with SAPHRA” (P15)</i> <i>“Food safety certification is needed” (P2)</i>	This reflects positional legitimacy: listing functions serve as symbolic capital within buyer-dominated supply chains, where structural power asymmetries prevail (Zomorodi & Fayezi, 2022).
2. Structural Barriers to Innovation	- High NPD cost and compliance overheads. - Limited shelf space and short product evaluation cycles. - Opaque buyer relations and rising trading terms.	<i>“sending them to labs for Nutri and shelf life. Same time we test stability..” “very high NPD costs” (P20)</i> <i>“thousands of small suppliers knocking on their doors and they have limited shelf space” (P18)</i>	Demonstrates <i>coercive institutional pressures</i> and <i>relational dependency</i> (Glavee-Geo <i>et al.</i>, 2022).

		<i>“They also keep increasing their trading terms every year and they expect us to keep prices down” (P1)</i>	
3. Environmental and Operational Disruptions	- Load shedding, transport costs, and raw material shortages. - Dependence on imported machinery and expertise.	<i>“We also have loadshedding affecting production time and cost. From the retailer side, we have many issues like cost of transportation is very high, and retailer orders in small batches many times a week because they don’t want to keep high levels of stock but this affects our logistics costs” (P4)</i> <i>“we didn’t find get the needed machinery parts to continue with development and importing it was too expensive” (P14)</i>	These disruptions illustrate the systemic fragility of emerging-market innovation ecosystems, shaped by infrastructural instability and institutional voids (Temouri, 2022).
4. Organisational Adaptation and Learning	- Benchmarking and vicarious global learning. - 4P documentation and process discipline. - Communication, collaboration, and failure-learning.	<i>“We do benchmark of our factory sample against the market” (P17)</i> <i>“Once we analyse...we go into 4P document” (P15)</i> <i>“we basically take learnings from the launch” (P11)</i>	Shows <i>micro-foundations of dynamic capability</i> through procedural learning (Teece, 2020, p. 7; Bertello <i>et al.</i> , 2022).
5. Relational Leverage and Private Brand Learning	- Networking for access and legitimacy. - Private-label contracts as stability anchors.	<i>“Having network of people. helped us with retailer” (P20)</i> <i>“the retail people are helpful with... with their private brand products” (P19)</i>	Represents <i>borrowed legitimacy and relational learning loops</i> (Glavee-Geo <i>et al.</i> , 2022).

(Source: Own compilation)

Environmental and operational disruptions - notably load shedding, transport costs, and input shortages - further erode feasibility, matching recent South African evidence on energy and

logistics shocks to SME performance (Muridzi & Dhliwayo, 2023). In response, firms rely on organisational adaptation and learning (benchmarking, 4P documentation, staged testing, “learning from failures”): these are precisely the disciplined feedback loops that convert ad hoc creativity into reliable routines (Wynn & Maier, 2022). Finally, relational leverage -networking to secure meetings and working on private-label briefs - serves as “borrowed legitimacy,” giving smaller suppliers procedural guidance and credible signals to buyers, a dynamic consistent with recent accounts of retailer-controlled social evaluations and supplier signalling (Gorton *et al.*, 2024; Glavee-Geo *et al.*, 2021).

6.6.5 Integrated analysis and conceptual model development

The integration of quantitative and qualitative strands followed a *sequential explanatory logic*. Statistical results defined significant predictors, while qualitative insights illuminated underlying mechanisms. Integration was achieved through side-by-side comparison and data transformation, mapping qualitative codes to quantitative constructs to detect convergence and complementarity (Guetterman & Feters, 2021; Peters & Fàbregues, 2024).

Quantitatively, NPD Research Capability emerged as the dominant predictor of retailer access; qualitatively, suppliers emphasised testing, certification, and compliance documentation as prerequisites for legitimacy. Together, these findings confirm that SME competitiveness in concentrated retail markets depends less on innovation intent and more on verifiable capability routines. This pattern refines Dynamic Capabilities Theory by identifying research-led validation as the operative micro-foundation that transforms tacit learning into external credibility. It also aligns with signalling theory, where certification and documentation reduce buyer uncertainty (Bafera & Kleinert, 2022).

The resulting Retail-Ready NPD Capability Model (Figure 6.2) depicts a feedback cycle:

- Strategic orientation and internal collaboration enhance research capability.
- Research-led validation generates relational credibility that drives retailer access.
- Retailer feedback reinforces capability learning, institutionalising innovation routines over time.

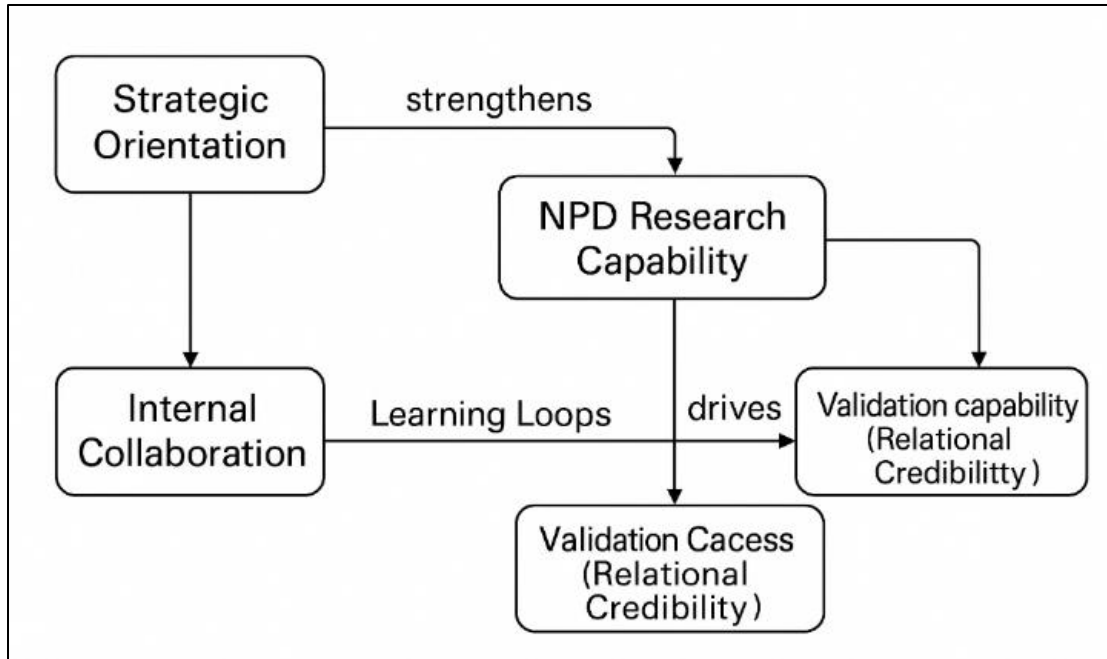


Figure 6.2: Conceptual Framework: Dynamic Alignment Model of SME Innovation Capability in the South African Retail Sector (Source: Own compilation)

6.7 DISCUSSION AND CONCLUSION

6.7.1 Theoretical interpretation

The results show that research-led validation- not strategic orientation or collaboration alone- distinguishes SMEs that secure retailer access from those that do not. Although the quantitative findings reveal significant associations, the cross-sectional design limits causal inference. The observed relationships should therefore be interpreted as indicative patterns rather than definitive cause-effect dynamics. In highly institutionalised, buyer-dominated markets, competitive advantage depends on the auditable demonstration of internal capabilities. This refines RBV and DCT by focusing on observable micro-routines such as testing, certification, and documentation that reduce perceived buyer risk (Barney *et al.*, 2021; Teece, 2020). These structured validation mechanisms operationalise sensing and seizing into externally verified learning (Wynn & Maier, 2022), reinforcing legitimacy through credible signals (Bafera & Kleinert, 2022).

The qualitative phase revealed that the listed SMEs face persistent constraints on innovation despite having formal retail access. Themes such as Opportunity within Constraint and Structural Barriers to Innovation show that listing confers symbolic legitimacy but amplifies compliance intensity, cost exposure, and dependence on retailer processes (Flanckegård *et al.*, 2021). From a dynamic capabilities' perspective, this indicates a transition from capability acquisition to capability renewal: firms must continuously sense and adapt to shifting buyer requirements while absorbing shocks from power asymmetries and operational disruptions (Flanckegård, Granlund, and Johansson, 2021). The Organisational Adaptation and Learning theme demonstrates that benchmarking, documentation, and post-launch reviews serve as vital feedback loops through which these suppliers attempt to stabilise performance amid ongoing institutional pressure.

6.7.2 Empirical contribution

The sequential integration of quantitative and qualitative strands offers a multilayered understanding of SME new product capability formation. The quantitative analysis established that research-led validation was the only statistically significant predictor of retailer access, while strategic orientation and internal collaboration, though correlated, were not direct drivers of appointment success. The subsequent qualitative phase clarified the reasons for the emergence of this pattern.

Interview themes such as Opportunity within Constraint and Structural Barriers to Innovation revealed that formal testing, certification, and documentation function as credibility signals that reduce buyer uncertainty, thereby explaining the statistical strength of the validation variable. At the same time, qualitative evidence from Organisational Adaptation and Learning and Relational Leverage indicated that, once listed, SMEs struggle to sustain these validation routines amid escalating compliance and cost pressures. This extends the quantitative insight from a static correlation into a dynamic capability cycle, in which validation enables access but must evolve into continuous learning to preserve legitimacy.

Together, the two strands demonstrate that SME competitiveness unfolds across two capability stages:

1. Access capability, where structured research and documentation transform innovation intent into credible proof; and
2. Sustainment capability, where iterative feedback, benchmarking, and collaborative learning allow firms to maintain retailer confidence under power asymmetry.

By integrating numerical relationships with contextual mechanisms, the study advances evidence on how micro-level validation routines mediate the broader link between innovation capacity and market inclusion. This joint interpretation exemplifies the explanatory power of mixed-methods design in uncovering both statistical regularities and the institutional processes that produce them.

6.7.3 Managerial implications

The findings indicate that structured validation- market tests, sensory trials, certification, and documentation - functions as a strategic legitimacy asset rather than an administrative burden. SME owner-managers should institutionalise evidence-based NPD routines and treat compliance data as dynamic learning inputs. Building internal audit trails and third-party certifications enhances credibility with dominant retailers and signals risk reduction capability. Retailers, in turn, should adopt tiered onboarding frameworks that recognise SMEs at different stages of validation maturity, providing mentoring and feedback loops rather than one-time audits. Entrepreneurship support and enterprise development programmes should shift their focus from generic training to competencies in applied research design, consumer validation, and data documentation.

For already-listed suppliers, the findings underscore the importance of converting ad hoc compliance into institutionalised capability systems. The use of 4P documentation, internal benchmarking, and failure-learning routines observed in the qualitative phase should be formalised as part of periodic NPD audits. Managers should negotiate longer evaluation windows and joint innovation reviews with retail buyers to ease the compression of development cycles. Investing in collaborative product trials and shared data access can transform dependency into co-learning, improving both NPD agility and relational trust.

6.7.4 Policy Recommendation

The findings align with South Africa's National Development Plan goal of inclusive industrialisation by advocating capability-based interventions. Policy should prioritise shared

research infrastructure (such as the accredited labs, certification assistance, and consumer panels) and track capability formation metrics - number of validated tests, certification milestones, or documented quality assurance cycles- rather than financial outputs alone (Barney *et al.*, 2021; Wynn & Maier, 2022). Policy frameworks should also address the post-listing capability fatigue evident among small suppliers. Support mechanisms such as renewal grants for certification costs, subsidised lab access, or co-funded retailer-SME innovation pilots would help sustain the compliance and testing routines required to remain listed.

6.7.5 Research Agenda and Theoretical Contribution

The study extends Dynamic Capabilities Theory by identifying *research-led validation* as a micro-foundation that transforms experiential learning into externally credible proof of reliability. By linking DCT to Signalling Theory, this study demonstrates how observable validation routines mitigate buyers' risk perceptions in concentrated markets. This contributes to the emerging literature on *capability signalling* in institutional voids. Future research could adopt longitudinal or dyadic designs to examine how validation investments influence relational trust and market outcomes over time. Comparative studies across sectors- such as apparel, pharmaceuticals, and agriculture - could test the generalisability of the Retail-Ready NPD Capability Model across different institutional logics.

6.7.5. Limitations and future research

Generalisability is limited to grocery retail, with a particular focus on a single major retailer. Cross-sector replication (e.g., apparel, pharmaceuticals) could test whether validation-as-capability generalises to other buyer-dominated systems. Longitudinal work could track pre- and post-listing evolution to capture feedback between legitimacy and capability investment. Incorporating retailer perspectives could measure how supplier validation signals alter perceived risk (Bafera & Kleinert, 2022).

6.7.6. Conclusion

This study sought to explain how South African SME suppliers build and sustain new product development (NPD) capability within a highly concentrated retail environment. Through the integration of quantitative and qualitative evidence, the research demonstrates that research-led validation - the structured generation of technical, customer, and compliance evidence - functions

as the decisive bridge between innovation intent and retailer access. Quantitatively, this capability emerged as the only significant predictor of retailer appointment success, underscoring that in buyer-dominated systems, market entry depends less on entrepreneurial orientation or teamwork alone, and more on the verifiable credibility of NPD processes.

Qualitative insights extended these findings by revealing that even after achieving listing, SMEs continue to face capability renewal challenges. The interviews with listed suppliers exposed enduring barriers such as high validation and compliance costs, restricted shelf space, load shedding disruptions, and retailer-driven development timelines. These pressures transform listing from a milestone into an ongoing test of resilience. Firms that institutionalise documentation, benchmarking, and failure-learning routines - such as the 4P reviews observed in this study - convert these constraints into dynamic learning systems. Those that do not, experience “innovation fatigue,” struggling to sustain new product pipelines under intensified buyer scrutiny and operational volatility.

Synthesising both strands, the study identifies a two-stage capability pathway:

- Access Capability - where evidence-based validation routines enable SMEs to demonstrate reliability and overcome information asymmetry to secure retail listing; and
- Sustainment Capability - where continuous adaptation, cost management, and relational learning allow listed SMEs to retain legitimacy and maintain innovation momentum post-listing.

Theoretically, these findings refine the Dynamic Capabilities Theory by grounding it in observable micro-foundations - testing, certification, and documentation - that not only reconfigure resources but also operate as signals of trustworthiness under institutional constraints. The research also bridges Signalling Theory and Institutional Theory by illustrating how structured validation routines reduce perceived buyer risk and legitimate SME participation in formal value chains.

Practically, the results imply that sustainable SME inclusion requires capability support that extends beyond initial onboarding. Retailers and policymakers should co-develop mechanisms that offset the compliance burden of small suppliers - through shared testing facilities, tiered onboarding frameworks, and post-listing innovation audits. For SME managers, the lesson is clear: in modern

retail ecosystems, competitiveness rests not merely on creativity or intent but on the evidence of capability- on proof, not promise.

In sum, the study contributes a Retail-Ready NPD Capability Model that integrates dynamic capabilities, signalling, and inclusive industrialisation perspectives to explain how SMEs convert learning into legitimacy and legitimacy into sustained market access. It redefines success in emerging-market retail not as the achievement of listing, but as the continuous renewal of capability and credibility within complex, buyer-dominated systems.

CHAPTER 7: SUMMARY & PROPOSED MODEL

7.1 INTRODUCTION

This chapter synthesises the empirical evidence generated across the three interrelated studies of this thesis:

- (1) the quantitative investigation of unlisted SMEs attempting to secure retail listings (Article 1),
- (2) the qualitative exploration of already-listed SME suppliers navigating retailer-driven pressures (Article 2), and
- (3) the mixed-methods integration and development of the Retail-Ready NPD Capability Model (Article 3).

Collectively, these articles map the progression of capability development **across the NPD–retail listing lifecycle**, from early-stage efforts to build credibility, through to the capability renewal pressures experienced after gaining access to a major South African retailer. This integrated chapter, therefore, not only presents the findings from each methodological strand but also **interprets them against one another**, identifying points of convergence, complementarity, divergence, and refinement. South Africa’s grocery retail sector is structurally concentrated, with a small number of chains exerting significant influence over supplier access and product visibility. This concentration amplifies informational asymmetry and raises the minimum capability threshold required for SME suppliers to be perceived as credible, compliant and low-risk partners (Competition Commission South Africa, 2019). As a result, SMEs face substantial barriers both before and after listing, including unclear buyer expectations, stringent compliance requirements, and private-label competition, as well as external pressures in the operating environment, such as rising logistics costs and unreliable energy infrastructure (das Nair & Landani, 2021; Keelson *et al.*, 2024).

This chapter follows the structure outlined for the thesis. Section 7.2 presents the quantitative results and their interpretation. Section 7.3 follows with qualitative findings from listed SMEs. Section 7.4 synthesises the two strands through mixed-methods meta-inference, identifying how quantitative patterns and qualitative themes reinforce or explain one another. Section 7.5 presents the integrated Retail-Ready NPD Capability Model. Section 7.6 provides evidence-based recommendations. Section 7.7 outlines a proposed NPD process derived from the empirical findings and validated through literature referenced in the articles. Finally, Section 7.8 concludes the chapter.

7.2 QUANTITATIVE FINDINGS AND DISCUSSION (ARTICLE 1)

The quantitative study examined the capability foundations influencing unlisted SMEs' ability to secure an appointment with a national retail buyer. Three internal capability variables - strategic orientation, NPD research capability, and team collaboration - were tested for their predictive effect on retailer engagement success. The analysis provides an empirical baseline for understanding early-stage capability formation among SMEs prior to retail integration.

7.2.1 Sample Characteristics and Baseline Capability

Survey respondents were primarily senior executives or owner-managers with direct oversight of NPD and customer engagement. Most had tertiary qualifications, indicating relatively high managerial competence despite firm size. Most firms were micro or small enterprises operating under resource constraints, a common feature of South African SMEs (Bushe, 2019). Descriptive results revealed relatively high ratings for strategic orientation and NPD research, suggesting that unlisted SMEs value planning and market investigation. These capabilities align with research highlighting that SMEs often compensate for resource limitations through informal but proactive strategic behaviours and market scanning (Iqbal & Suzianti, 2021). In contrast, team collaboration scored lower, consistent with evidence that small firms frequently centralise decision-making around the founder, limiting cross-functional integration. Overall, the descriptive patterns suggest SMEs possess goal clarity and a willingness to engage in research, but their internal processes remain thinly structured and reliant on individual decision-makers.

7.2.2 Correlation Structures

Correlation analysis showed a strong positive relationship between strategic orientation and NPD research, indicating that firms with stronger strategic planning tendencies are also more likely to perform market investigations and concept validation. This link reflects established arguments that strategic positioning and market intelligence co-evolve as complementary capabilities (Sancho-Zamora *et al.*, 2021).

However, the correlation between team collaboration and retailer relationship variables was weak. Limited cross-functional knowledge flows reduce an SME's ability to develop coordinated responses to retailer expectations. This aligns with the broader literature, which notes that SMEs often rely on informal communication and ad hoc collaboration, thereby hindering the consistent execution of complex processes such as NPD or compliance documentation (Sancho-Zamora *et al.*, 2021). The correlation structure, therefore, reveals an early signal that while SMEs value planning and information gathering, their intra-organisational routines are not sufficiently mature to support consistent capability enactment.

7.2.3 Regression Results: Research as the Only Significant Predictor

Multiple regression analysis yielded a pivotal finding: NPD research was the only statistically significant predictor of retailer engagement success ($\beta = 0.61$, $p < .05$). Strategic orientation and team collaboration were not significant predictors. This result demonstrates that research-led validation - rather than strategic clarity or collaboration - is the primary mechanism through which SMEs convert intent into perceivable legitimacy in the eyes of retail buyers. Grocery retailers in South Africa operate under high uncertainty due to category congestion, shelf space scarcity, and risks associated with integrating new or untested suppliers. Retailers demand credible evidence of market fit, compliance, product performance, and operational feasibility before considering a meeting (Competition Commission South Africa, 2019).

The significant influence of NPD research aligns with empirical studies showing that detailed market data, prototype evaluations, and competitive analyses serve as “capability signals” that reduce perceived supplier risk (Ma *et al.*, 2021). Thus, research does not merely support internal learning; it serves as an external validation instrument that substitutes for retailers' knowledge, especially in environments characterised by information asymmetry.

7.2.4 Interpreting the Non-Significance of Strategic Orientation and Collaboration

The lack of significance of strategic orientation and team collaboration warrants further interpretation. First, strategic orientation may lack influence because it occurs internally and is not directly observable by retailers. Unlisted SMEs may articulate ambitious strategic intentions, but without tangible market evidence, retailers cannot distinguish genuine capability from rhetoric. This supports arguments that early-stage strategic behaviour in SMEs often remains decoupled from externally verifiable indicators (Ogujiuba *et al.*, 2023).

Second, team collaboration may not significantly shape early listing outcomes because SMEs often have limited functional specialisation. Collaboration becomes critical only after the firm has entered the retail environment and must execute complex activities such as product updates, packaging revisions, cost modelling, and compliance submissions (Cooper & Sommer, 2018; Rehder *et al.*, 2023). In the pre-listing phase, what matters most is the SME's ability to show evidence, not its internal dynamics. These findings reinforce the premise that retailers' base acceptance decisions on what SMEs can prove, not what they plan or how they internally organise.

7.2.5 Structural and Systemic Barriers Highlighted by the Data

Survey responses also highlighted structural barriers that shape the pre-listing environment:

- Weak or inconsistent communication from buyers
- Opaque and shifting listing criteria
- Limited feedback mechanisms
- High dependence on category gatekeepers

Such barriers reflect power asymmetries documented in South African agri-food and FMCG supply chains, in which retailers exert disproportionate influence over suppliers' decisions and access (Glavee-Geo *et al.*, 2022). These structural conditions make the path to listing highly uncertain for SMEs and reinforce the finding that only research-based evidence has enough weight to break through retailer opacity. In short, the quantitative phase demonstrates that although SMEs possess foundational capabilities such as strategic planning and willingness to collaborate, only research-led validation materially improves their odds of securing access to South Africa's concentrated grocery retail value chain.

7.3 QUALITATIVE FINDINGS AND DISCUSSION (ARTICLE 2)

The qualitative inquiry examined the lived experiences of 20 listed SME suppliers in the same concentrated grocery retail environment. Whereas Article 1 captured the pre-listing capability challenge, Article 2 illuminates the post-listing capability maintenance problem. The interviews reveal an operational reality in which initial access to the retailer does not guarantee continued stability; instead, suppliers face ongoing pressures to renew capabilities as they attempt to sustain their shelf presence. The following themes reflect how SMEs adapt to, negotiate, and internalise the complexity of the retailer-driven environment.

7.3.1 External Environmental Pressures

Listed SMEs described a turbulent operating landscape shaped by structurally embedded constraints. A pervasive theme was the disruptive impact of load shedding, which undermined production continuity, led to delays and spoilage risks, and inflated operational costs. Interviewees viewed this instability not as episodic but as a persistent infrastructural constraint that compressed development timelines and necessitated constant contingency planning.

Similarly, logistics bottlenecks - intensified by rising fuel prices and transport delays - reduced SMEs' capacity to meet delivery schedules, further complicating their ability to meet retailer performance metrics. These pressures echo broader evidence that South African SMEs face system-wide vulnerabilities that heighten cost structures and reduce developmental flexibility (Keelson *et al.*, 2024; StatsSA, 2019). Participants also emphasised the heightened competitive density in FMCG categories, driven by established brands and the growing dominance of private-label alternatives.

Buyers frequently rationalise categories, reducing the number of SKUs, which disproportionately disadvantages SMEs. Many interviewees cited shelf space scarcity as a direct threat to product continuity, noting that minor declines in sales velocity or changes in category strategy could result in delisting. These environmental pressures create an ecosystem where SMEs must not only innovate under cost constraints but also do so in a way that ensures consistent performance across volatile operating cycles. The conditions described by interviewees reinforce the argument that external shocks and systemic unpredictability fundamentally shape the trajectories of SME NPD capabilities.

7.3.2 Retailer-Driven Pressures and Capability Demands

Beyond environmental constraints, suppliers reported a set of retailer-driven pressures that impose additional demands on their internal capabilities. A key theme was the fluidity of retailer expectations. Interviewees frequently described abrupt shifts in requirements for packaging, formulation, product positioning, pricing architecture, or compliance documentation. These shifting demands required SMEs to engage in ongoing reformulation, repackaging, or strategic repositioning to maintain shelf relevance. Another prominent pressure emerged from private-label proliferation, which intensifies price-based competition and shortens product lifecycles. Some SMEs found that their branded products were increasingly benchmarked against private-label alternatives, compelling them to adopt cost-reduction strategies or value-added differentiation to remain viable (das Nair & Landani, 2021).

Participants also discussed the stringent nature of relisting cycles, during which retailers re-evaluate product performance. These cycles create heightened scrutiny and require SMEs to repeatedly justify their relevance and viability through sales performance, compliance, and alignment with evolving category strategies. This combination of shifting expectations, private-label competition, and heightened performance monitoring creates a dynamic where the cost of maintaining a listing may be as intensive as - or even more intensive than - gaining it. Thus, retailer-driven pressures shape not only what SMEs must achieve, but also how they must configure their capabilities.

7.3.3 Adaptive NPD Strategies of Successful SMEs

Although constrained, SMEs demonstrate notable adaptability. Interviews revealed several strategies used by successful suppliers to navigate the demanding retail ecosystem.

7.3.3.1 Market Benchmarking and Trend Scanning

Respondents consistently described benchmarking against local and international competitors as a core mechanism for identifying gaps, spotting emerging consumer preferences, and ensuring relevance. This aligns with Pascucci *et al.* (2022), who highlight benchmarking as essential for aligning NPD trajectories with market expectations.

7.3.3.2 Hybrid Agile–Stage-Gate Approaches to Execution

A striking pattern across participants was the use of hybridised NPD processes that combined rapid iteration (Agile) with structured evaluation points (Stage-Gate). SMEs adopted short cycles of prototype development, consumer testing, or package refinement between gate points, thereby maintaining momentum while ensuring compliance with retailer requirements. This dual structure mirrors practices described by Cooper and Sommer (2018) and Rehder *et al.* (2023), where Agile accelerates creativity and responsiveness, while Stage-Gate ensures discipline and documentation.

7.3.3.3 Engagement in Private-Label Partnerships

A subset of SMEs described private-label manufacturing as a stabilising strategy. These partnerships reduce risk by guaranteeing volume commitments from the retailer while offering SMEs opportunities to learn more about category-specific performance metrics (Wu *et al.*, 2021). Suppliers viewed private-label integration as a capability-building mechanism rather than a threat to their own brands.

7.3.3.4 External Expert Collaboration

Interviewees also discussed the value of external collaborations with food technologists, designers, compliance consultants, or co-packers to compensate for internal skill gaps. These collaborations align with Nguyen and Lee (2023), who found that SMEs expand their NPD capability frontier by accessing distributed knowledge resources.

7.3.3.5 Embedded Post-Launch Learning Routines

Successful SMEs emphasised structured post-launch learning through sales tracking, consumer feedback, returns analysis, and store-level performance assessments. These feedback loops inform product refinement and improve future NPD iterations, echoing findings by Park *et al.* (2021) that ongoing learning strengthens innovation resilience. Taken together, these adaptive strategies demonstrate that listed SMEs respond to environmental and retailer-driven pressures through flexible, evidence-driven, learning-oriented routines.

7.3.4 Capability Gaps and Underlying Constraints

Despite their adaptability, SMEs acknowledged several persistent constraints. Firms cited inadequate in-house R&D, limited data analytics capacity, and over-centralised decision authority concentrated at the owner-manager level. These constraints reflect structural weaknesses described in the quantitative phase and in the literature on SME capability development (Iqbal & Suzianti, 2021).

Another critical gap was weak documentation systems, which hindered SMEs' ability to present robust evidence packs to retailers. Participants acknowledged that while they engaged in benchmarking and iterative reformulation, their documentation practices lagged the expectations required for retailer compliance reviews. This reinforces findings from Article 1 that internal behaviours, such as collaboration or informal planning, do not translate into retailer-visible outcomes unless they are codified through research-led validation.

Overall, qualitative evidence highlights a paradox: SMEs demonstrate creativity, resilience, and responsiveness, but their execution capabilities are stretched by systemic constraints and retailer-driven volatility, leading to capability gaps that widen over time unless addressed through structured processes.

7.4 MIXED-METHODS INTEGRATION AND META-INFERENCE (ARTICLE 3)

Article 3 synthesised the quantitative and qualitative evidence through a structured mixed-methods integration. This approach allowed for a meta-level interpretation of how capabilities develop, interact, and evolve across the pre- and post-listing continuum. The integration clarified not only the consistency across strands but also the mechanisms that account for the observed differences.

7.4.1 Convergence: Research-Led Validation as Central Capability

Both datasets converge unequivocally on one finding: research-led validation is the foundational capability for SME success in retail environments.

- Quantitatively, it was the only variable predicting buyer appointment success.
- Qualitatively, listed SMEs rely heavily on testing, documentation, benchmarking, and formal evidence packs to sustain legitimacy.

The convergence supports arguments that validation routines - such as market testing, prototype evaluation, compliance documentation, and benchmarking - constitute micro-foundations of dynamic capability by transforming experiential learning into codified, auditable artefacts (Cautela *et al.*, 2021). In the South African retail context, where retailer communication is limited and listing criteria are opaque, research-led validation functions as a substitute for retailer guidance, reducing the uncertainty generated by poor information flows.

7.4.2 Complementarity: Explaining Why Research Matters Most

The qualitative evidence complements the quantitative findings by explaining why research dominates as a capability. Interviews reveal that retailers expect suppliers to arrive at the table with:

- product test data,
- sensory evaluation outcomes,
- compliance proofs,
- benchmarking reports,
- margin analyses, and
- packaging feasibility documentation.

Because buyers are time-pressed and categories are heavily contested, retailers often lack the bandwidth to guide SMEs through iterative development cycles. As a result, SMEs must independently assemble a compelling evidence pack that demonstrates retail readiness. This qualitative insight explains the quantitative pattern: strategic orientation and collaboration are insufficient unless converted into verifiable outputs. Research thus plays a dual role - supporting internal learning and serving as an external legitimacy mechanism.

7.4.3 Divergence: Internal Collaboration and Strategic Orientation

Mixed-methods integration revealed an important divergence: the timing of capability relevance.

- In the pre-listing phase, collaboration and strategy have limited impact because retailers cannot observe them directly.

- In the post-listing phase, these capabilities become critical for responding to retailer changes, managing complexity, and sustaining performance.

For example:

- Collaboration is crucial for navigating repackaging cycles, cost negotiations, and quality assurance - tasks only activated after listing (Cooper & Sommer, 2018; Rehder *et al.*, 2023).
- Strategic orientation guides category positioning and portfolio renewal, but without an evidence base, it has no bearing on the retailer's decision to grant an appointment.

Thus, divergence arises not from contradictions between findings but from differing capability requirements across stages of the SME-retailer relationship.

7.4.4 Structural Pressures and Capability Renewal

Article 3 showed that listed SMEs face capability-renewal pressures, necessitating repeated cycles of research, validation, documentation, and refinement to remain listed. Every packaging refresh, cost review, promotional cycle, or category shift requires new data, new evidence, and new alignment. This dynamic reflects Teece's (2020) conceptualisation of dynamic capabilities as ongoing sensing, seizing, and transforming activities. In practice:

- SMEs sense through trend scanning and benchmarking,
- seize through iterative prototyping and testing, and
- transform through post-launch learning and capability reinforcement.

The mixed-methods integration reveals that retail participation is not a one-off milestone; it is a continuous capability race in which firms that fail to institutionalise research-led validation gradually fall behind.

7.5 INTEGRATED RETAIL-READY NPD CAPABILITY MODEL

The mixed-methods synthesis presented in Article 3 culminated in the Retail-Ready NPD Capability Model, a conceptual framework that integrates the empirical patterns observed across all studies. The model identifies four interdependent capability domains that collectively determine SME competitiveness in South Africa's concentrated grocery retail landscape: strategic

orientation, internal collaboration, research-led validation, and retailer relationship quality. Although each capability contributes to performance, the empirical findings reveal a distinct hierarchy in which research-led validation functions as the *central micro-foundation* that enables the other capabilities to translate into retailer-recognisable value

7.5.1 Research-Led Validation as Micro-Foundation

Across the three studies, research-led validation emerged as the capability that most strongly influences retailer engagement and sustained participation. In Article 1, research was the only statistically significant predictor of buyer appointment success, indicating that retailers rely on verifiable evidence rather than strategic claims or internal collaboration signals. Article 2 reinforced this pattern, with listed SMEs consistently emphasising the role of benchmarking, prototype testing, packaging trials, sensory data, and compliance documentation in securing ongoing retailer confidence.

From a theoretical stance, this aligns with arguments that dynamic capabilities are grounded in micro-foundations that enable firms to transform experiential learning into codified artefacts (Cautela *et al.*, 2021). These artefacts - testing reports, regulatory certificates, performance dashboards - reduce informational asymmetry and signal operational reliability. In South Africa's retail context, where buyers face high category congestion and limited visibility into supplier processes, such validation becomes indispensable. Thus, research-led validation is the mechanism through which SMEs demonstrate readiness, mitigate retailer risk, and maintain legitimacy within structurally asymmetric supply chains.

7.5.2 Interdependence of Capabilities

Although research-led validation is foundational, it does not operate in isolation. Instead, it interacts with strategic orientation, internal collaboration, and relational quality in mutually reinforcing ways:

7.5.2.1 Strategic Orientation

Strategic clarity provides direction for NPD initiatives. However, without research evidence, strategy remains aspirational rather than actionable. Article 1 demonstrates this by showing that

strategic orientation is not significant for retailer engagement, whereas Article 2 shows that listed SMEs use strategy more effectively once their research systems are mature.

7.5.2.2 Internal Collaboration

Collaboration enables the coordinated execution of design, testing, costing, packaging, and compliance activities. In the pre-listing phase, limited collaboration reflects immature internal structures, while in the post-listing phase, hybrid Agile–Stage-Gate practices illustrate how collaboration becomes crucial for iterative responses to retailer demands (Cooper & Sommer, 2018; Rehder *et al.*, 2023).

7.5.2.3 Retailer Relationship Quality

Supplier-buyer interactions shape the frequency and clarity of feedback flows. In Article 1, SMEs reported weak communication from buyers, indicating a relational constraint in the pre-listing stage. Article 2 shows that listed SMEs develop more stable relationships over time, enabling them to leverage buyer insights and better anticipate category changes (Glavee-Geo *et al.*, 2022).

These domains collectively form a capability ecosystem in which research-led validation operationalises strategy, guides collaborative routines, and facilitates stronger relational engagements.

7.5.3 Implications for SME Competitiveness

The Retail-Ready NPD Capability Model offers several implications:

1. **Retail access is evidence-driven, not intent-driven.** SMEs must prioritise capabilities that produce verifiable artefacts to compensate for weak communication and opaque buyer criteria.
2. **Capability maturity is staged.** Strategy and collaboration matter more *after* listing, when the firm must sustain performance and align with retailer evolution, whereas research dominates in the *pre-listing* phase.

3. **SMEs must institutionalise continuous validation cycles.** Because retailer demands shift regularly, static capability investments are insufficient; firms must embed ongoing testing, benchmarking, and performance monitoring.
4. **Capability development is inseparable from structural context.** External pressures - logistics, load shedding, competition - shape how SMEs allocate resources and prioritise activities.

Together, these implications show that SME competitiveness in retail supply chains depends on the alignment of internal routines with the structural and relational dynamics of the South African grocery retail sector.

7.6. RECOMMENDATION

Grounded in empirical findings, the following recommendations provide guidance to SMEs, retailers, and policymakers on strengthening NPD capabilities and enhancing SME participation in the grocery retail value chain.

7.6.1 Recommendations for SMEs

1. **Strengthening Research-Led Validation Systems.** Given that NPD research is the strongest predictor of retailer engagement, SMEs should institutionalise market testing, prototype evaluation, sensory trials, cost modelling, and competitor benchmarking. Evidence packs should be standardised for each NPD iteration.
2. **Formalise Internal Collaboration Routines.** Although collaboration was not significant in the pre-listing phase, qualitative insights show it becomes critical post-listing. SMEs should adopt structured cross-functional routines, such as Agile–Stage-Gate hybrids, to coordinate technical, commercial, and compliance tasks.
3. **Develop Documentation Capability.** Weak documentation undermines credibility. SMEs should invest in digital or manual systems for storing and updating testing results, specifications, certificates, and performance dashboards.
4. **Build Resilience Against External Shocks.** Load shedding, logistics issues, and inflationary pressures disrupt NPD. SMEs should diversify suppliers, adopt small-scale renewable energy options where feasible, and create buffer inventories for key inputs.

7.6.2 Recommendations for Retailers

1. **Improve Feedback Loops.** Quantitative findings highlight weak buyer communication. Retailers can reduce supplier uncertainty by providing structured feedback on submissions, product trials, and relisting criteria.
2. **Support Capability Development.** Retailers can create shared compliance toolkits or NPD templates to help SMEs meet documentation requirements, aligning with supplier development initiatives discussed by das Nair and Landani (2021).
3. **Adopt Partnership-Based Listing Approaches.** Private-label collaborations offer SMEs opportunities for capability development; retailers can expand such partnerships to reduce barriers for emerging suppliers.

7.6.3 Recommendations for Policymakers and Support Institutions

1. **Incentivise Research and Testing Infrastructure.** Government and support agencies (e.g., SEDA) could subsidise laboratory testing, prototype development facilities, or product validation services to reduce SME cost burdens.
2. **Address Systemic Infrastructure Gaps.** Policy interventions targeting load shedding, logistics, and regulatory burdens can significantly enhance SME NPD resilience.

7.7 PROPOSED NPD PROCESS FOR SMES

Drawing on the empirical evidence across Articles 1–3, supported by NPD literature cited within those articles (Cooper & Sommer, 2018; Rehder *et al.*, 2023; Pascucci *et al.*, 2022; Cautela *et al.*, 2021), this section proposes a Retail-Ready NPD Process tailored for South African SMEs supplying the grocery retail sector. The process reflects the iterative, evidence-driven, capability-building behaviours observed among successful listed SMEs and addresses the capability gaps observed among unlisted SMEs.

7.7.1 Front-End (Discover & Scope)

The front-end phase emphasises broad environmental scanning, competitor benchmarking, and customer-centric exploration - all practices that appeared consistently in the qualitative interviews. SMEs should identify category gaps, assess emerging trends, and screen concepts based on retailer-aligned criteria. This phase aligns with the sensing dimension of dynamic capability and mirrors

the benchmarking behaviours observed by Pascucci *et al.* (2022). Concept screening should incorporate basic feasibility analysis and early compliance considerations.

7.7.2 Agile–Stage-Gate Hybrid Execution

The execution phase should blend Agile iteration with Stage-Gate review. As reported in Article 2, SMEs often use short “sprints” to rapidly advance prototypes, enabling flexible responses to retailer feedback. Each gate should require an evidence pack that includes prototype test data, early cost estimates, product specifications, 4P documentation, and compliance checklists. This phase draws directly on practices described by Cooper and Sommer (2018) and Rehder *et al.* (2023), reflecting the need for creative agility supported by formal evaluation.

7.7.3 Pre-Listing Pack (“Retail-Ready Dossier”)

The dossier represents the culmination of the research-led validation capability highlighted across all empirical strands. It must codify:

- Market test results
- Sensory evaluations
- Regulatory certificates
- Operational feasibility assessments
- Packaging specifications
- Margin structures
- Benchmarking outcomes

This dossier functions as the empirical artefact that anchors buyer decision-making and resolves informational asymmetries, as evidenced by both quantitative and qualitative data. It is the clearest operationalisation of the micro-foundations (Cautela *et al.*, 2021).

7.7.4 Post-Launch Learning Loop

Once listed, SMEs must conduct structured performance reviews, benchmark against category norms, and hold feedback sessions with retailers. Article 2 revealed that high-performing SMEs rely on returns analysis, sales dashboards, and customer feedback to drive continuous improvement. This loop corresponds to the transforming function of dynamic capabilities and helps SMEs remain aligned with category evolution.

7.8 THEORETICAL CONTRIBUTIONS

This thesis contributes to capability-based theory by clarifying how *observable evidence* functions as the translation mechanism that converts internal NPD activity into retailer-recognisable legitimacy within concentrated retail structures. By theorising research-led validation as a micro-foundation that produces codified artefacts (e.g., test results, compliance proofs, and performance dashboards), the study extends micro-foundations scholarship in innovation and dynamic design capabilities by specifying how learning routines become externally legible signals under conditions of information asymmetry and buyer risk management (Cautela *et al.*, 2022). The staged capability logic advanced in this chapter further aligns with contemporary developments in Dynamic Capabilities Theory, which emphasise that firm performance outcomes depend on ongoing sensing, seizing, and transforming activities unfolding over time rather than static capability endowments (Teece, 2020). Accordingly, cross-sectional capability–performance relationships should be interpreted cautiously unless temporality and lifecycle position are explicitly theorised. Research-led validation is therefore conceptualised not as a one-off asset but as a recurring organisational routine that supports continuous adaptation (Cautela *et al.*, 2022). Finally, the model developed provides an integrative explanation of how capability ecosystems operate in structurally asymmetric markets, connecting internal routines to relational and institutional outcomes rather than treating NPD performance as purely firm-internal.

7.9 METHODOLOGICAL CONTRIBUTION

Methodologically, the study advances mixed-methods practice by explicitly integrating the interpretation phase and employing structured meta-inference to explain convergence, complementarity, and divergence across quantitative and qualitative strands. Contemporary mixed-methods scholarship emphasises that rigorous integration requires the deliberate linking of datasets rather than parallel reporting, often operationalised through joint displays and systematic comparison of findings (Fetters & Molina-Azorin, 2020; Guetterman & Fetters, 2021). By making integration procedures transparent and auditable, the chapter strengthens the credibility and explanatory power of the proposed model. The chapter also illustrates how joint displays and structured integration logic can strengthen transparency and traceability of mixed-method conclusions—particularly when synthesising strand-specific findings into a single conceptual model (Fetters, 2022; Guetterman *et al.*, 2021). This positioning strengthens the contribution of

the mixed-methods design by making the integration steps auditable, rather than leaving synthesis implicit.

7.10 STUDY LIMITATIONS

Several limitations should be considered when interpreting the findings. First, the quantitative strand uses a relatively small sample for regression-based inference; small samples can increase instability in estimates and sensitivity to variance structure, which constrains the confidence with which coefficients can be generalised beyond the study context (Jenkins & Quintana-Ascencio, 2020). Second, as the survey measures are self-reported and collected at a single point in time, there is potential for common method bias and other same-source measurement artefacts. While such risks are common in organisational survey research, they remain relevant when interpreting relationships among perceptual constructs (Kock *et al.*, 2021). Third, the cross-sectional nature of the quantitative evidence limits causal claims and temporal ordering; therefore, conclusions should be framed primarily as associations consistent with the proposed theoretical mechanism rather than definitive causal effects (Maier *et al.*, 2023). Finally, contextual specificity matters: the proposed model is developed within the environment of a single, structurally concentrated South African grocery retailer, and transferability to other countries or less concentrated retail systems should be treated as a proposition for further testing rather than assumed. The empirical findings were generated within the formal grocery retail environment and are influenced by the structural dynamics associated with dominant South African retailers

7.11 FUTURE RESEARCH DIRECTIONS

Future research can extend this thesis in four ways. First, longitudinal designs could test capability sequencing more directly by tracking SMEs across listing attempts and post-listing renewal cycles, enabling stronger temporal claims than cross-sectional designs allow (Maier *et al.*, 2023). Second, future mixed-methods work could strengthen integration transparency by deploying joint displays explicitly at the analysis and interpretation stages, allowing readers to see how qualitative themes and quantitative effects align (Fetters, 2022; Guetterman *et al.*, 2021). Third, comparative studies across retail formats (e.g., independent chains, wholesale networks, e-commerce grocery) could test whether research-led validation remains the dominant mechanism under different buyer-governance and category-congestion conditions. Fourth, policy-evaluation studies could assess

whether shared testing infrastructure and supplier development interventions measurably reduce information asymmetry and improve SME progression through the NPD-to-retail pipeline, using mixed-method meta-inference approaches for explanation-oriented evaluation (Younas *et al.*, 2023).

7.12 CHAPTER SUMMARY

This chapter synthesised the empirical evidence generated across the quantitative, qualitative, and mixed-methods strands of the thesis to provide an integrated explanation of how small and medium-sized enterprises develop and deploy new product development capabilities to gain and sustain participation within South Africa's concentrated grocery retail sector. Rather than treating innovation performance as a function of isolated internal resources, the findings demonstrate that retail success depends on translating organisational learning into externally verifiable evidence that reduces buyer uncertainty and signals operational legitimacy. Across all strands, research-led validation emerged as the central capability enabling this translation, functioning as the mechanism through which strategy, collaboration, and relational engagement become observable and credible to retailers.

By consolidating these insights into the Retail-Ready NPD Capability Model, the study advances a staged and context-sensitive understanding of capability development in which different capabilities assume varying importance across the pre- and post-listing lifecycle. This perspective extends capability-based theory by showing that competitiveness in asymmetric supply chains is not determined solely by resource possession, but by the ability to codify, document, and communicate capability through structured validation routines. Methodologically, integrating quantitative and qualitative evidence through meta-inference strengthens the robustness of these conclusions and demonstrates the value of mixed-methods designs for explaining complex organisational phenomena.

Taken together, the thesis offers a theoretically grounded, empirically validated framework that clarifies how SMEs can transform constrained resources into credible market participation. In doing so, it offers both a conceptual model for future scholarship and a practical roadmap for firms, retailers, and policymakers seeking to foster more inclusive and sustainable innovation ecosystems. The Retail-Ready NPD Capability Model, therefore, provides not only an explanation

of observed outcomes but also a foundation for continued research and capability development in emerging-market retail contexts.

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APPENDIX A: INFORMED CONSENT FORM



NWU Business School
North-West University
Private Bag x6001
Potchefstroom, 2520
<http://commerce.nwu.ac.za/business-school>

TITLE OF THE RESEARCH PROJECT: Assessing New Product Development strategies in the
South African retail industry

ETHICS NUMBERS: NWU-00574-20-A4

PRINCIPAL INVESTIGATOR: Devapriya Kailash Nath Sharma

ADDRESS: 48 Celtis street, Palmridge, Germiston, 1458

CONTACT NUMBER: 076 600 0121

EMAIL ADDRESS: sarmapriyahotmail.com

Dear Participant,

This Informed Consent Form serves to confirm the following information as it relates to the Business management PhD thesis: Assessing the state of NPD strategies in South African retail industry. This thesis is an academic study and the participant, and their contribution to the study will be kept anonymous and confidential. Please ask the researcher any questions about any part of this project that you do not fully understand. It is very important that you are fully satisfied that you clearly understand what this research entails and how you could be involved. Also, your participation is entirely voluntary, and you are free to decline to participate. If you say no, this will not affect you negatively in any way whatsoever. You are also free to withdraw from the study at any point, even if you do agree to take part.

❖ What is this research study all about?

This study will be conducted at the retail group's head offices and will involve a structured, closed-ended questionnaire administered to a potential supplier (SME). The objectives of the study are:

1. To assess the current state of new product development (NPD) practices among SMEs in South Africa's retail sector, with particular attention to the use of structured, research-based, and collaborative approaches.
2. To identify the key factors contributing to new product failure among South African SMEs in the retail industry, including internal capability constraints and external market barriers.
3. To examine the NPD strategies and dynamic capability dimensions that enable SMEs to mitigate product failure risks and meet retailer listing and compliance requirements.
4. To synthesise theoretical and empirical insights from global and South African literature to contextualise NPD capability development within emerging-market retail supply chains.
5. To develop an integrated conceptual model—the Retail-Ready NPD Capability Model—that links internal NPD competencies to buyer legitimacy and SME competitiveness in South Africa's retail environment.

❖ **Why have you been invited to participate?**

You have been invited to participate because you are the subject matter expert within your respective organisation

You have also complied with the following inclusion criteria: experience of trying to get a product listed at one or more of retail groups.

You will be excluded if you have provided any false or irrelevant information that do not add value to the study, also if any offensive/ abusive language is used during the study.

❖ **What will your responsibilities be?**

You will be expected to provide facts and opinions for questions in the questionnaire.

❖ **Will you benefit from taking part in this research?**

The direct benefit for you as a participant is that the study results will be shared with you on request, which may or may not be useful in your role within your organisation.

The indirect benefit is that the study may refresh your memory and prompt you to reflect more on your role and your organisation.

❖ **Are there risks involved in your taking part in this research?**

There are no risks involved in taking part in this research. All information provided will be kept anonymous.

❖ **What will happen in the unlikely event of some form of discomfort occurring as a direct result of your taking part in this research study?**

Should you have the need for further discussions before/after filling in the questionnaire, an opportunity will be arranged for you to contact the researcher to discuss.

❖ **Who will have access to the data?**

Anonymity of participant details will be completely preserved. Confidentiality will be ensured by the researcher. Reporting of findings will be anonymous by referring to the participant as an acronym order of the questionnaire and never by Name of the individual nor the Organisation to which the individual is employed to. Only the researchers and the university will have the details of who has participated in the questionnaire. Data will be kept safe and secure by locking hard copies in locked cupboards in the researcher's office and for electronic data it will be password-protected. Data from the questionnaire will be stored for approximately 10 years from date of result publication. Thereafter the data will be securely destroyed.

❖ **What will happen with the data/samples?**

This is a once off collection and data will stored securely for records. Data will be used for data analysis using descriptive statistics. The data will be analysed using various descriptive statistical tools including mean, median, mode and standard deviation, and the results will be presented in tables and charts.

❖ **Is there anything else that you should know or do?**

You can contact the researcher, Devapriya Sharma, on 076 600 0121 if you have any further queries or encounter any problems. You can contact Prof Ronnie Lotriet (supervisor) at the North-West University Business School by dialling (018) 299-1419 if you have any concerns or complaints that have not been adequately addressed by the researcher.

You will receive a copy of this information and consent form for your own records.

Declaration by participant

By signing below, I (Name and Surname), hereby declare that I have read and understood the content of the Informed Consent form and give my full consent to Mrs. D. Kailash Nath Sharma to progress with the questionnaire on(date) and use the information communicated by myself to her in her PhD Thesis.

Name & Designation	Signature	Date
Prof. R. Lotriet – Supervisor		
Mrs.D. Kailash Nath Sharma – Researcher		
Participant		

APPENDIX B: QUESTIONNAIRE



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NEW PRODUCT DEVELOPMENT & LISTING RELATIONSHIP SURVEY

This Questionnaire will only take a few minutes to complete. Mark the applicable block with a cross (X). Please complete all the questions.

Section A: Demographical Information

A1. Gender

☐ a) Male ☐ b) Female ☐ c) Prefer not to say

A2. Age

☐ a) Younger than 20 ☐ b) 21 – 35 ☐ c) 36 – 45 ☐ d) 46 – 60 ☐ e) Older than 60

A3. What is your highest qualification in New Product Development (NPD)?

☐ a) Grade 12 or lower ☐ b) Qualified artisan ☐ c) Diploma ☐ d) Graduate ☐ e) Postgraduate

A4.1. Do you have a dedicated or designated address for NPD?

☐ a) Yes ☐ b) No

A4.2. If “Yes”, is it a

☐ a) Person ☐ b) Department/ Business Unit/ Branch ☐ Head Office/ Parent

A5. Years working for this company?

☐ a) 1 – 4 ☐ b) 5 – 10 ☐ c) 11 – 20 ☐ d) 21 – 30 ☐ >30

A6. What is your current job level?

☐ a) Supervisor ☐ b) Middle management ☐ c) Senior Management ☐ d) Director/Owner

☐ e) Other

A7. Number of persons that report directly to you?

☐ a) 1 – 5 ☐ b) 6 – 10 ☐ c) 11 – 15 ☐ d) More than 15

A8. How many permanent employees working (on average) for the business?

☐ a) 1 – 5 ☐ b) 6 – 20 ☐ c) 21 – 50 ☐ d) 51 – 200 ☐ e) >200

A9. What is the estimated total annual turnover of the business? (millions)

a) ☐ <R0.2M ☐ b) R0.2M – R5M ☐ c) R5M – R13M ☐ d) R13M – R51M ☐ e) >R51M

A10. Are you self-employed?

☐ a) Yes ☐ b) No

A11. What is the legal status of the business?

☐ a) Sole Proprietor ☐ b) Partnership ☐ c) Close Corporation ☐ d) Company Pty Ltd ☐ d)

Franchise

Section B: New Product Development (NPD) Dimensions

Indicate the degree to which you agree with each NPD statement by using the following 5-point scale:

Strategy

B1	Do most NPD projects fit with the company mission?	1	2	3	4	5
B2	Does your company have NPD goals?	1	2	3	4	5
B3	Are NPD goals clearly defined and visible within the company?	1	2	3	4	5
B4	Does your company consider NPD as a long-term strategy?	1	2	3	4	5
B5	Do mission and the strategic plan help define strategic arenas for new opportunities?	1	2	3	4	5
B6	Are NPD projects and programs reviewed on a regular basis?	1	2	3	4	5
B7	Does the company carefully consider resource requirements necessary to support NPD projects?	1	2	3	4	5
B8	Is there ranking or prioritisation of NPD projects?	1	2	3	4	5
B9	Is NPD opportunity identification ongoing?	1	2	3	4	5
B10	Does your company use a predetermined method for every NPD?	1	2	3	4	5

NPD Research

C1	Does the customer study your company conduct include both current and future customer's requirements and problems?	1	2	3	4	5
C2	Is market research a significant part of all your NPD projects?	1	2	3	4	5
C3	Does your company test concepts before proceeding with NPD projects?	1	2	3	4	5

C4	Does your company include market testing as an important part of the NPD process?	1	2	3	4	5
C5	Are the NPD testing formally evaluated?	1	2	3	4	5
C6	Does your company have a dedicated research and development (R&D) team/personnel?	1	2	3	4	5
C7	Does your company have a dedicated budget towards NPD research?	1	2	3	4	5
C8	Are customers an important part of the NPD process?	1	2	3	4	5
C9	Is competitor-evaluation an important part of the NPD process?	1	2	3	4	5
C10	Are socio-economic factors considered when developing new products?	1	2	3	4	5
C11	Are the results of previous NPD projects used to improve new products being developed?	1	2	3	4	5

Team Collaboration

D1	Are cross-functional team members all involved in NPD in the company?	1	2	3	4	5
D2	Are the company strategy considered when developing a new product?	1	2	3	4	5
D3	Does every product selected to be developed aligned with the objectives of the business?	1	2	3	4	5

D4	Does employees of different levels, departments and grades contribute to NPD discussions and ideas?	1	2	3	4	5
D5	Does supply chain/ logistics play a role in price positioning?	1	2	3	4	5
D6	Does team members highlight innovation opportunities in the market place?	1	2	3	4	5
D7	Are the employees of the company flexible to adapt to different processes and ways of working?	1	2	3	4	5
D8	Is NPD and innovation opportunities discussed in the cross-functional team meetings?	1	2	3	4	5
D9	Does NPD process in the company have a process owner or process champion?	1	2	3	4	5
D10	Is the NPD process for each project well documented?	1	2	3	4	5

Retailer-Supplier relationship

E1	Did the buyer provided enough information on why your product was/ was not selected to be listed?	1	2	3	4	5
E2	Have you approached or planning on approaching another retailer to list the same product?	1	2	3	4	5
E3	Did you manage to get an appointment to meet with the buyer easily?	1	2	3	4	5
E4	Did the buyer help you understand the procedures of getting your product listed with the retailer?	1	2	3	4	5

E5	Are the buyer's behaviour at other retailer groups different from this retailer?	1	2	3	4	5
E6	If you developed a different product, would you present that to this retail group again?	1	2	3	4	5
E7	Can the retail group could assist you better in the NPD process?	1	2	3	4	5
E8	Have you learnt anything new from the interaction with the buyer?	1	2	3	4	5
E9	Is there a pro innovation/NPD atmosphere in the retail group?	1	2	3	4	5
E10	Are the smaller suppliers treated equally to bigger suppliers at retail groups?	1	2	3	4	5

APPENDIX C: INTERVIEW GUIDE



NWU Business School
North-West University
Private Bag x6001
Potchefstroom, 2520
<http://commerce.nwu.ac.za/business-school>

1.1 New product development

- 1.1.1. How long does it take for you (the organisation) to develop a new product from research until launch?
- 1.1.2. Elaborate on the new product development process in your organisation in steps
- 1.1.3. Who initiates the new product development opportunity or an innovation opportunity?
- 1.1.4. Are you using a standard method for developing new products or is it tailor made for each project?
- 1.1.5. Before introducing a product into the market, how does your company know that there are no further final tweaks required before launching?

1.2 Success and Failure of NPD

- 1.2.1 What checklists are in place to ensure that the new product being developed does not fail?
- 1.2.2 How would you measure the success of a new product?
- 1.2.3 If a new product you launch fails, what action points are in place to ensure it does not occur again?
- 1.2.4 What are some of the challenges in developing new products in the South African retail market?
- 1.2.5 Did any of the product that was being developed ever stopped at a stage of development?
If yes, what caused the project to be stopped?

1.3. Relationship

- 1.3.1 Elaborate on your relationship with the retail groups and your suppliers in terms of in terms of their helpfulness in product development?
- 1.3.2 How often do you interact with your consumers, suppliers and retail groups?

- 1.3.3 Do you get any insights or assistance from any of the stakeholders in identifying the type of New products or innovations to pursue development in? If so, please elaborate on the type of information shared.
- 1.3.4 Which designated teams or members in your organisation are involved in making new product or development process decisions?

1.4. Strategy

- 1.4.1. Do you perform competitor and/or market analysis when starting any new developments?
- 1.4.2. What other type of information is looked at when considering developing a specific product?
- 1.4.3. How do you perform market analysis to establish future products or new needs?
- 1.4.4. How do you ensure that the new products being developed are in line with the organisation's overall strategy?

1.5. Research & Development

- 1.5.1. What type of databases and sources of information are available to you for research on new product development?
- 1.5.2. When trying to develop "first of its kind" type of products (where very little information is available), how do you conduct preliminary assessment to check if it will be successful?

APPENDIX D: LANGUAGE EDITOR'S LETTER



Dynamic Language &
Translation Specialists

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Friday, 06 February 2026

CERTIFICATION OF LANGUAGE EDIT, TYPOGRAPHY AND TECHNICAL PRECISION

Thesis/dissertation	Masters	Doctoral X	Other
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Student number	29518458		
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Direct quotations (Qualitative responses)	Spelling only X		Not applicable
Citations & reference list	Yes X		No
Style used	Harvard	APA7	NWU X
Typographic editing	Yes X		No

Final, last-minute corrections remain the responsibility of the author.

Precision ... to the last letter