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From Data to Strategy: Contextualising the Strategic Big Data Analytics Model in Marketing

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Abstract

This paper aims to address the strategic gap between data availability and its utilisation in marketing strategy within the South African context. Despite global advancements in Big Data Analytics (BDA), many firms in emerging markets remain entrenched in operational analytics with limited strategic integration. The research develops the Strategic BDA Marketing Model, a contextually grounded framework to guide South African firms in embedding BDA into marketing design, decision-making, and execution. Adopting a qualitative, constructivist grounded theory (CGT) methodology, the research engaged 32 senior professionals across marketing, analytics, and IT roles in South African firms spanning the retail, finance, telecommunications (telecoms), and technology sectors. Semi-structured interviews and axial coding techniques were used to extract empirical themes. The model is theoretically underpinned by the Resource-Based View (RBV), Dynamic Capabilities Theory, and the Marketing 5.0 paradigm, and integrates six core constructs: Strategic Alignment, Data Readiness, Marketing Intelligence, Organisational Capability, Ethical Data Governance, and Technology Infrastructure. The study finds that although firms have access to vast volumes of data, several critical barriers impede the strategic use of that data. These include misalignment between data and marketing teams, fragmented data systems, limited data literacy, and ethical concerns related to compliance with South Africa's Protection of Personal Information Act (POPIA) of 2013. To overcome these challenges, the research proposes six core constructs that enable the strategic integration of Big Data Analytics into marketing: Strategic Alignment, Data Readiness, Marketing Intelligence, Organisational Capability, Ethical Data Governance, and Technology Infrastructure.

The research provides a roadmap for firms to evolve from data-aware to data-strategic marketing organisations. It recommends capability maturity models, cross-functional teams, embedded ethical governance, and martech rationalisation as implementation pathways. These findings hold relevance for business leaders, policymakers, and educators aiming to drive digital transformation ethically and strategically. This article extends the author's doctoral research (February, 2025) by translating the Strategic BDA Marketing Model into a peer-reviewed academic framework that integrates empirical insights with contemporary literature. In doing so, it contextualises the model for practical application and theoretical refinement within emerging-market environments. The contribution lies not in replication but in the articulation of new, evidence-based perspectives on strategic alignment, ethical governance, and marketing analytics capability in South Africa's data economy. This study contributes a novel and empirically validated model tailored for emerging markets. Its value lies in integrating ethical, technological, and strategic dimensions into a unified marketing analytics framework, advancing theory and offering actionable insights for practitioners.

Keywords: Big Data Analytics; Marketing 5.0; Strategic alignment; Emerging markets; South Africa; Contextual model

1. Introduction

In the digital age, data has emerged as a new strategic currency for organisations across all sectors. Nowhere is this more pronounced than in the field of marketing, where insights derived from data increasingly inform decisions on customer targeting, campaign design, content personalisation, and market positioning. The rapid proliferation of digital platforms, the Internet of Things (IoT), social media, and mobile applications has generated an unprecedented volume of consumer data, structured, semi-structured, and unstructured. However, while data generation is ubiquitous, the strategic utilisation of data remains highly uneven across global and national contexts.

Big Data Analytics (BDA) refers to the process of examining large and complex datasets using advanced statistical, computational, and algorithmic methods to uncover patterns, trends, and actionable insights (Chen, Chiang & Storey, 2012). In the context of marketing, BDA enables firms to identify micro-segments, predict consumer behaviour, and deploy resources more efficiently. Scholars such as Erevelles et al. (2016) argue that the integration of BDA into marketing practices marks a fundamental shift from intuition-based to evidence-based decision-making.

However, this transformation is not automatic or universal. In South Africa, for example, the strategic use of BDA remains emergent. While large organisations may possess the infrastructure for data capture and storage, they often lack the organisational capability, alignment, or governance frameworks to turn data into competitive advantage. February (2025) addresses this critical gap through the development of the Strategic BDA Marketing Model, a framework designed to guide South African firms in leveraging BDA not merely as a technical function, but also as a strategic asset in marketing.

1.1 Background and Context

Globally, the field of marketing has undergone significant evolution over the past few decades. From the product-centric approaches of Marketing 1.0 to the consumer-centric models of Marketing 2.0 and 3.0, and now to the digitally integrated, AI-enhanced ecosystem of Marketing 5.0, the function of marketing has expanded in both scope and sophistication (Kotler, Kartajaya & Setiawan, 2021). Marketing 5.0, as defined by Kotler et al. (2021), emphasises the integration of advanced technologies, including artificial intelligence (AI), natural language processing (NLP), machine learning (ML), and BDA with human values such as empathy, inclusivity, and social impact. In this paradigm, marketing is not only about product promotion, but also about delivering purpose-driven experiences tailored to individual preferences and behaviours. It is here that BDA becomes indispensable: it enables marketers to decode complex consumer journeys, test hypotheses in real time, and dynamically adjust their strategies.

Within South Africa, the stakes are particularly high. The country faces a dual reality: on the one hand, it has a rapidly digitising population and robust data-generating platforms (e.g. mobile apps, fintech, e-commerce); on the other hand, it grapples with infrastructure limitations, digital inequality, and low data literacy among many professionals (February, 2025; Naicker & Pillay, 2021). This context creates both a need and an opportunity for a structured framework to harness BDA in strategic marketing. Moreover, regulatory frameworks such as POPIA (Protection of Personal Information Act) compel South African firms to adopt responsible data governance practices. This adds a layer of complexity: firms must not only be innovative and agile, but also ethical and compliant in their use of data. In such a climate, the need for an integrated strategic model becomes essential. February's research, conducted through a grounded theory lens and involving professionals across the banking, telecoms, retail, and insurance sectors, seeks to fill this void by proposing a model that aligns BDA capability with strategic marketing imperatives.

1.2 Problem Statement

Despite the global momentum towards data-driven marketing, many South African firms remain stuck in an operational or tactical use of analytics. BDA tools are often underutilised, deployed in silos, or relegated to reporting functions rather than being integrated into strategic planning, market segmentation, or brand development (February, 2025).

Key challenges contributing to the limited strategic use of Big Data Analytics (BDA) in marketing include the lack of organisational alignment between data functions and marketing teams, which often operate in silos with differing priorities and languages. Data fragmentation across multiple platforms and channels further complicates efforts, as firms struggle to develop a unified, consistent view of the customer. Compounding this issue is the absence of marketing-relevant dashboards and tools that can deliver real-time insights in ways that marketers find actionable and intuitive. In addition, many marketing professionals lack sufficient data literacy, leaving them unable to interpret or apply analytics outputs effectively. Ethical and compliance concerns, particularly around customer privacy and consent under South Africa's Protection of Personal Information Act (POPIA), also weigh heavily on firms, limiting experimentation and data-sharing.

Finally, cultural resistance to change among departments that are unaccustomed to data-led decision-making slows adoption and prevents firms from fully realising the value of analytics in driving strategic marketing outcomes. Existing literature offers several models for BDA adoption (Wamba et al., 2015; Gupta et al., 2021), yet most of these are designed for global North contexts, where digital infrastructure and analytics maturity are far more advanced. There is a lack of context-sensitive frameworks tailored to the unique constraints and opportunities within the South African business environment. Therefore, the problem is not the absence of data, but rather the absence of strategic models that translate data into marketing value within an ethical, collaborative, and contextually grounded ecosystem. This is the precise gap that the Strategic BDA Marketing Model aims to address.

1.3 Aim and Scope

This article seeks to provide a comprehensive examination and critical analysis of the Strategic BDA Marketing Model proposed by February (2025). Its objectives are fourfold: first, to deconstruct the model's six core constructs – Strategic Alignment, Data Readiness, Marketing Intelligence, Organisational Capability, Ethical Data Governance, and Technology Infrastructure – highlighting their individual roles in enabling data-driven marketing strategy; second, to interpret the interrelationships among these constructs, which depicts their cyclical and interdependent nature; third, to synthesise insights from empirical research with existing theoretical literature in order to validate and contextualise the model within broader academic debates; and, finally, to offer strategic and ethical recommendations for firms aiming to adopt or optimise BDA in their marketing functions, ensuring that analytics not only enhance performance, but also support accountability, transparency, and consumer trust. The scope of this article encompasses both the theoretical foundations and practical implications of the model, drawing primarily from February's doctoral thesis and supporting academic literature. The analysis is focused on the South African context, while recognising its potential relevance to other emerging economies facing similar constraints and opportunities.

This study therefore differs from the original doctoral submission in both orientation and scope. While the thesis developed the foundational model, the present paper advances the discourse by re-conceptualising the model for academic and professional audiences through updated literature, comparative industry evidence, and theoretical expansion. The result is a refined contextual framework positioned at the intersection of strategic marketing, analytics capability, and ethical governance.

2. Literature Review

The evolution of marketing into a data-driven, strategically embedded function is one of the most profound shifts in modern business. This section reviews the key developments in marketing thought, culminating in Marketing 5.0, and explores how Big Data Analytics (BDA) has reshaped strategic marketing. It also critiques existing BDA-marketing integration models, identifying their limitations and positioning the Strategic BDA Marketing Model within this evolving theoretical landscape.

2.1 The Evolution of Marketing in the Data Age

The field of marketing has transitioned from a transactional orientation to one focused on customer-centric value co-creation, supported by data and digital technologies. Kotler and Keller (2016) outline five evolutionary stages of marketing, commonly summarised as Marketing 1.0 to 5.0:

Table 1: Stages of the marketing evolution

Stage	Orientation	Key Characteristics
Marketing 1.0	Product-centric	Focused on mass production and standardisation, with minimal consumer input.
Marketing 2.0	Customer-centric	Introduced segmentation, targeting, and positioning (STP) strategies using basic data systems like customer relationship management (CRM).
Marketing 3.0	Values-driven	Incorporated emotional branding, sustainability, and corporate citizenship.
Marketing 4.0	Digital & Connected	Emphasised online engagement, mobile-first strategies, and omnichannel presence.
Marketing 5.0	Technology for Humanity	Combines AI, BDA, and automation with empathy, inclusivity, and ethical practice.

In the Marketing 5.0 paradigm, the marketer's role has become more analytical, experimental, and data-driven. It is here that BDA becomes central, powering personalisation, real-time responsiveness, and predictive campaign design.

2.2 Big Data Analytics and Strategic Marketing

BDA refers to advanced methods for processing vast, complex, and rapidly changing datasets to uncover patterns and support decision-making (Chen et al., 2012). In marketing, BDA facilitates:

- **Predictive Modelling**: Estimating customer lifetime value, churn, and purchase probability.
- **Sentiment Analysis**: Understanding customer perceptions from social media and reviews (Zhang et al., 2020).
- **Market Basket Analysis**: Informing cross-selling and up-selling strategies.
- **Attribution Modelling**: Assessing the contribution of different marketing channels.

As Sathi (2014) notes, BDA allows marketers to shift from reactive to proactive decision-making. It supports the movement from mass marketing to segment-of-one marketing, where hyper-personalised experiences are delivered in real time. Research by Wamba et al. (2017) confirms that firms that leverage BDA not only achieve better customer insight, but also enjoy enhanced marketing agility, customer satisfaction, and firm performance. However, translating BDA insights into action requires strong alignment between data infrastructure, analytics capability, and strategic objectives, a recurring challenge in many organisations (George et al., 2014).

Recent reviews continue to highlight the strategic potential of BDA in decision-making across industries. Jabir and Falih (2022) emphasise its dual impact on strategic and operational decisions, while Liu, Wan and Yu (2023) identify direct links between big-data application and marketing-strategy outcomes. There is a further demonstration in the role of BDA capability in achieving sustainable business performance, underscoring the importance of contextualised analytics frameworks for emerging markets.

2.3 Strategic Integration of BDA: Existing Models

Several theoretical models have sought to explain the integration of Big Data Analytics (BDA) into organisational strategy, particularly within marketing contexts. The Resource-Based View (RBV) framework suggests that firms can gain a competitive advantage by acquiring and deploying valuable, rare, inimitable, and non-substitutable resources (Barney, 1991). In this view, BDA capabilities are considered strategic resources (Wamba et al., 2015), but their true value only emerges when these capabilities are strategically aligned with business goals and embedded within organisational routines. Complementing this, the Dynamic Capabilities Framework (Gupta et al., 2021) positions BDA as a driver of organisational agility, enabling firms to sense, seize, and transform opportunities in volatile environments, a critical function in marketing where rapid responsiveness to customer feedback and competitive shifts is essential. The 4Cs Framework by Erevelles et al. (2016) highlights content, context, connectivity, and continuity as pillars for transforming raw data into marketing intelligence, but its focus remains primarily on customer insight rather than broader strategic or governance integration. Finally, the Data-Driven Marketing Capability (DDMC) model by Wang and Wang (2020) identifies key organisational competencies such as data acquisition, analytical talent, decision integration, and cultural readiness as foundational to marketing innovation. However, this model, like many others, overlooks the increasing importance of ethical and regulatory considerations, particularly in environments governed by data protection laws. Additional frameworks have advanced this debate. Brewis, Dibb and Meadows (2023) propose a dynamic-capabilities model illustrating how incumbent firms leverage data for strategic agility, providing an exemplary research design. Jenkinson et al. (2024) quantify the mediating role of business-model innovation in the relationship between BDA and competitive performance, while Masenya (2023) extends this logic to South African SMEs, showing how data-driven innovation redefines business models in resource-constrained settings.

Together, these models provide valuable but partial perspectives, underscoring the need for a more integrated and context-sensitive framework.

2.4 Gaps in the Literature

While the aforementioned models contribute valuable insights into the integration of Big Data Analytics (BDA) in marketing, several important limitations persist. First, there is a problem of contextual generalisation, as most existing frameworks are derived from studies conducted in large firms within developed markets, with limited applicability to emerging economies where infrastructure, skills, and regulatory environments differ significantly. Second, ethical oversight remains largely underexplored; few models address the ethical and legal dimensions associated with data use, particularly those related to compliance with data protection regulations such as South Africa's Protection of Personal Information Act (POPIA) or the European Union's General Data Protection Regulation (GDPR). Third, many frameworks maintain an operational rather than strategic focus, emphasising tactical analytics applications, such as customer churn prediction or A/B testing, while neglecting how BDA can be integrated into broader strategic marketing formulation and brand development. Lastly, siloed thinking continues to undermine effective BDA integration, as data teams and marketing departments often operate in isolation, resulting in misaligned goals, underutilised insights, and missed opportunities for competitive advantage (February, 2025). These gaps highlight the need for a more holistic, ethically grounded, and context-sensitive model of strategic BDA integration.

Scholars have also drawn attention to the ethical and regulatory frontiers of data use. Li (2024) and Rosário and Dias (2023) note that compliance with frameworks such as South Africa's POPIA and the European Union's GDPR are reshaping marketing strategy. Yet, these regulatory dimensions are seldom integrated into conceptual models, leaving a gap that the Strategic BDA Marketing Model seeks to address through its dedicated *Ethical Governance* construct.

2.5 Positioning the Strategic BDA Marketing Model

The Strategic BDA Marketing Model proposed by February (2025) responds directly to the limitations of existing frameworks by providing a holistic, integrative, and context-sensitive approach to embedding Big Data Analytics (BDA) into marketing strategy. Developed through qualitative research and guided by grounded theory methodology, the model brings together six interconnected constructs: strategic alignment, data readiness, intelligence generation, organisational capability, ethical

governance, and technology infrastructure. In doing so, it ensures that BDA is not restricted to post-hoc analysis, but actively informs brand positioning, segmentation, and customer engagement, thereby integrating strategy with day-to-day operations. At the same time, the model foregrounds ethics and governance, aligning with South Africa's Protection of Personal Information Act (POPIA) and preparing firms for evolving global compliance standards. Importantly, it is tailored to South African realities, drawing on insights from marketing and data professionals across diverse sectors to reflect the contextual challenges of emerging markets. Finally, by incorporating feedback loops, the model supports adaptive learning and continuous improvement, enabling firms to enhance marketing performance over time while maintaining trust, accountability, and competitiveness.

As such, the model represents an important theoretical advancement and offers a practical toolkit for firms seeking to align BDA with marketing strategy in complex, regulated, and digitally evolving environments.

3. The Strategic BDA Marketing Model

3.1 Overview and Conceptual Foundation

The Strategic BDA Marketing Model developed by February (2025) offers a novel, practitioner-informed framework for the strategic integration of Big Data Analytics (BDA) within the marketing function. Unlike prior models that treat BDA as a siloed technical function or an add-on to customer analytics, this model emphasises the centrality of BDA in shaping strategic marketing decisions, especially in digitally evolving, resource-constrained environments like South Africa. Grounded in constructivist grounded theory (CGT) and based on empirical insights from 32 professionals across marketing and data analytics roles, the model comprises six interlinked constructs that collectively drive marketing performance. These constructs are not isolated capabilities, but dynamic, interacting components that enable continuous learning, market responsiveness, and ethical value creation. The model aligns closely with the Marketing 5.0 paradigm (Kotler et al., 2021) in that it positions BDA as both an enabler of automation and personalisation, and a safeguard for ethical and inclusive marketing practices.

3.2 The Six Core Constructs of the Strategic BDA Marketing Model

Each construct in the model addresses a fundamental capability or domain necessary for the strategic adoption of Big Data Analytics (BDA) in marketing design and execution.

- **Strategic Alignment** refers to the congruence between BDA initiatives and the broader marketing objectives and corporate vision of the firm. Without clear alignment, BDA projects often fail to impact decision-making or deliver return on investment. Instead, analytics risk producing isolated insights that never feed into strategic planning cycles or customer value propositions. February (2025) found that high-performing firms successfully embedded analytics into customer journey planning, brand strategy, and segmentation frameworks. For example, one South African telecoms company achieved alignment by co-developing dashboards with both data scientists and brand managers, ensuring that the metrics generated reflected actual marketing goals.
- **Data Readiness and Quality** encapsulate the accessibility, completeness, cleanliness, and interoperability of data sources relevant to marketing activities. Even the most advanced analytics tools are ineffective without trustworthy and timely data. February's interviews revealed widespread issues such as data silos, inconsistent naming conventions, missing customer fields, and limited integration across platforms like customer relationship management (CRM), social media, and e-commerce. In support of this, Wamba et al. (2015) classify data quality as a foundational enabler of analytics capability within the Resource-Based View (RBV), underscoring its central role in determining BDA effectiveness.
- **Marketing Intelligence** represents the transformation of raw data into actionable insights that inform customer acquisition, retention, and loyalty strategies. This is the core value-extraction process of BDA, and includes applications such as churn prediction models, clustering for micro-segmentation, and text mining for sentiment analysis. However, February (2025) stresses that intelligence is only valuable when it actively informs marketing decision-making, which requires

clarity, visualisation, and trust between data teams and marketers. As one data scientist in the financial sector noted, "Marketing can't use insights they don't understand or don't trust. Data must be presented in their language" (February, 2025, p. 182).

- **Organisational Capability** refers to the leadership, culture, cross-functional structures, and human talent that support the integration of BDA into marketing. The empirical findings revealed that while many firms possessed the technology, they often lacked the skills or collaborative structures necessary to apply analytics strategically. Skill shortages in data storytelling, dashboard interpretation, and experimental design were particularly evident. This aligns with the Dynamic Capabilities View (Teece, 2007), which emphasises that competitive advantage stems from the ability to continuously adapt and reconfigure competencies in dynamic environments.
- **Ethical Data Governance** encompasses the policies, values, and procedures that ensure data is collected, managed, and deployed ethically and transparently. In today's regulatory landscape shaped by POPIA and GDPR, firms must regard data as a sensitive asset rather than a mere commodity. Interviewees pointed to challenges such as customer consent, algorithmic bias, and opaque third-party data-sharing practices. February (2025) argues that ethical governance should not be reduced to a compliance exercise, but reframed as a source of trust and competitive differentiation. For instance, a bank that introduced a "data ethics checklist" into its campaign planning process achieved not only regulatory compliance, but also measurable improvements in customer trust (February, 2025, p. 183).
- **Technology Infrastructure** refers to the systems, tools, APIs, cloud platforms, and analytics environments that enable the use of BDA in marketing. The research found that legacy systems and disparate tools were major obstacles to effective BDA implementation, while scalable, integrated, and user-friendly infrastructures proved more successful. Firms that adopted modular technology stacks, cloud-first architecture, and Customer Data Platforms (CDPs) reported stronger marketing outcomes. February (2025) observed that firms investing in middleware APIs and real-time processing capabilities were especially well positioned to deliver responsive and integrated marketing insights across business functions.

3.3 Contributions of the Six Constructs

Table 2: Model constructs

Construct	Overall Contribution to Strategic BDA Marketing
1. Strategic Alignment	Ensures that BDA initiatives directly support the organisation's marketing objectives and brand strategy, turning analytics into strategic decision-making tools rather than isolated reports.
2. Data Readiness & Quality	Provides a reliable foundation for analytics by ensuring that data is clean, integrated, and accessible, thereby eliminating silos and inconsistencies that hinder effective marketing insights.
3. Marketing Intelligence	Transforms raw data into actionable insights that drive customer acquisition, retention, personalisation, and campaign optimisation, making marketing evidence-based and predictive.
4. Organisational Capability	Builds the human, cultural, and leadership capacity required for cross-functional collaboration and the effective application of analytics, ensuring technology investments translate into real marketing impact.
5. Ethical Data Governance	Embeds responsible, transparent, and compliant data practices that enhance consumer trust, reduce regulatory risk, and turn ethics into a source of competitive advantage.
6. Technology Infrastructure	Provides scalable, integrated, and user-friendly platforms and systems that enable real-time analytics and seamless marketing execution across channels and functions.

4. Research Design and Methodology

This study adopted an exploratory qualitative research design within an interpretivist paradigm, reflecting the ontological position that reality is socially constructed and context-specific.The interpretivist approach enabled the researcher to foreground the lived experiences of marketing and data professionals, and to capture the organisational, cultural, and technological complexities shaping Big Data Analytics (BDA) adoption in South African firms. The research was inductive in nature and underpinned by grounded theory principles (Glaser & Strauss, 1967; Charmaz, 2006, which provided the flexibility to generate conceptual insights directly from participant narratives. This was complemented by thematic analysis ,enabling systematic identification and development of recurring themes across cases.

4.1 Research Philosophy and Methodological Approach

This study adopted a qualitative design anchored in a constructivist-interpretivist paradigm, recognising that knowledge is co-constructed through social interaction and context. The research followed the principles of grounded theory (Glaser & Strauss, 1967; Charmaz, 2006 combined with thematic analysis (Braun & Clarke, 2006) to generate conceptual insights directly from participants' lived experience.

Data analysis followed the Gioia methodology (Gioia, Corley & Hamilton, 2012; Gioia, 2021; Magnani & Gioia, 2023), which structures qualitative findings through three progressive coding levels: first-order informant terms, second-order theoretical categories, and aggregate dimensions. This systematic process enhanced transparency, theoretical rigour, and replicability.

Sampling followed a purposive logic. Thirty-two senior professionals were drawn from firms listed in the 2023 Kantar BrandZ Top 10 South African ranking, supplemented by comparable digitally mature organisations in banking, telecommunications (telecoms), retail, insurance, education, and media. Some firms were represented by multiple participants to capture both strategic and technical perspectives. Digital maturity was established through publicly available digital-transformation indices and internal references from industry partners.

4.2 Population and Sampling

The study employed a purposive sampling strategy, selecting 32 senior professionals across marketing (n=17) and data functions (n=15) from firms ranked in the Top 10 Kantar BrandZ South African list. Where access to these firms was limited, participants were recruited from comparable firms with equivalent digital maturity. This ensured the sample retained relevance and credibility while also incorporating diversity across sectors, including financial services, telecoms, retail, insurance, education, and media. Participants included CMOs, Heads of Brand, Data Scientists, BI Analysts, and Chief Data Officers, ensuring that both the strategic and technical perspectives were represented.

4.3 Data Collection

Primary data was collected through semi-structured interviews, conducted virtually via Zoom and Microsoft Teams. Each interview lasted 45 to 60 minutes and was guided by a structured protocol aligned with six research objectives. Questions for marketing professionals focused on campaign design, customer segmentation, and customer experience planning, while data professionals were asked about system architecture, analytical practices, and collaboration with marketing teams. This mirrored structure ensured comparability across groups while maintaining contextual richness.

A pilot study was conducted to refine the interview schedule, ensuring clarity, logical flow, and adaptability to participant responses. Interviews were recorded with informed consent, fully transcribed, and anonymised. Secondary data from academic journals, industry reports, and organisational documents was also used for triangulation, strengthening contextual interpretation.

4.4 Data Analysis

Data analysis combined thematic analysis with grounded theory coding (Glaser & Strauss, 1967). Initial coding was performed separately for marketing and data professionals to preserve intra-group

coherence, before cross-case analysis identified shared and divergent patterns. The software ATLAS.ti was used to manage coding, support transparency, and facilitate cross-case comparisons. This hybrid approach enabled both systematic theme development and theory generation rooted in empirical practice.

4.5 Trustworthiness and Rigour

To ensure credibility, transferability, dependability, and confirmability, several techniques were applied: prolonged engagement during interviews, member checking (returning transcripts and findings to participants), maintenance of a detailed audit trail, peer debriefing, and reflexivity memos to mitigate researcher bias. Rich, contextual descriptions of the South African environment (organisational structures, technological maturity, data culture, and regulatory influences) enhanced transferability.

4.6 Ethical Considerations

The research complied with ethical standards for qualitative inquiry. Ethical clearance was obtained from Nelson Mandela University. Participants received full disclosure of the study's aims, scope, and voluntary nature, and signed informed consent forms. Organisational approval was secured, and participants were anonymised with coded identifiers. Data was stored securely in encrypted, password-protected folders, in compliance with South Africa's POPIA regulations. Ethical principles of beneficence, confidentiality, and integrity were rigorously upheld to ensure participant trust and welfare.

5. Practice-Based Insights from the Strategic BDA Marketing Model

The empirical investigation revealed several recurring challenges and responses that collectively inform the practical relevance of the Strategic BDA Marketing Model. Firms across sectors acknowledged that while the potential of Big Data Analytics (BDA) is widely recognised, its strategic integration into marketing remains constrained by organisational silos, data fragmentation, skills gaps, and regulatory pressures. Similar concerns have been noted globally, where the effective use of analytics often depends less on technology itself and more on organisational alignment, culture, and governance (Davenport & Harris, 2017; Wamba et al., 2015). The analysis demonstrated that firms able to overcome these barriers typically relied on cross-functional collaboration, investment in interoperable infrastructure, and the development of marketing-specific ethical governance frameworks. These findings reinforce existing scholarship that highlights the role of dynamic capabilities (Gupta et al., 2021; Teece, 2007) and the rising importance of ethical, consumer-centric practices in digital marketing (Kotler et al., 2021; Naicker & Pillay, 2021).

The consolidated insights, summarised in Table 3 below, highlight not only the barriers and enabling mechanisms, but also the tangible outcomes achieved by firms that successfully aligned BDA with marketing strategy. For example, embedding data analysts within marketing teams accelerated campaign agility and fostered trust between functions, while the use of Customer Data Platforms (CDPs) and middleware integration improved data quality and real-time responsiveness. Furthermore, the findings underscore that ethical governance is evolving from a compliance necessity to a strategic differentiator, with firms adopting transparency and accountability measures reporting improved consumer trust. Sectoral nuances were also evident, as telecoms and financial services advanced in predictive analytics, while retail focused on personalisation but struggled with systemic integration. Finally, the emergence of new expectations around artificial intelligence (AI), sustainability metrics, and consumer trust measures reflects the evolving frontier of BDA-driven marketing (Erevelles et al., 2016; Zhang et al., 2020). Together, these practice-based insights provide an applied dimension to the Strategic BDA Marketing Model, ensuring that it remains grounded in the realities of South African firms while contributing to broader debates on the role of analytics in marketing transformation.

Table 3: Practised Based Insights

Challenge	Practical Response Observed in Firms	Outcome	Supporting References
Cross-functional misalignment between marketing and data teams	Creation of cross-functional teams, shared KPIs, and "data translator" roles; embedding analysts within marketing units.	Faster turnaround of insights, stronger collaboration, improved trust between departments.	Davenport & Harris (2017); February (2025)
Data fragmentation and poor quality across platforms (CRM, e-commerce, social, legacy systems)	Investment in CDPs, cloud-first architecture, and middleware APIs for integration.	Higher data interoperability, improved real-time responsiveness, reduced silos.	Wamba et al. (2015); February (2025)
Limited data literacy and skills gaps in marketing teams	Training in data storytelling, dashboard use, and A/B testing; leadership buy-in for collaborative learning culture.	Enhanced decision-making, greater use of analytics in campaigns, better adoption of tools.	McKinsey (2019); Gupta et al. (2021); February (2025)
Ethical and regulatory pressures (e.g. POPIA compliance, consumer trust)	Embedding of data ethics checklists, transparency mechanisms, and bias audits into marketing processes.	Strengthened consumer trust, improved compliance, differentiation through ethical brand positioning.	Kotler et al. (2021); Naicker & Pillay (2021); February (2025)
Sector-specific constraints (e.g. retail struggling with omnichannel, insurance strong on governance but weak on real-time)	Sectoral adaptation of analytics strategies – telecoms/finance advanced in predictive models; retail improving integration efforts.	Industry-tailored progress; telecoms and financial services excel in agility, retail strong in personalisation.	Erevelles et al. (2016); February (2025)
Emerging expectations (AI, sustainability, trust metrics)	Early adoption of AI tools for content generation; ESG and trust metrics integrated into performance dashboards.	Future-oriented innovation, enhanced brand credibility, alignment with evolving consumer and societal expectations.	Kotler et al. (2021); Zhang et al. (2020); February (2025)

The empirical validation of the Strategic BDA Marketing Model across 32 South African firms highlighted several practice-based insights that shape its real-world applicability.

5.1 Strategic Alignment

First, the research revealed cross-functional misalignment as a persistent challenge, with marketing and data teams often working in silos. *"Our analytics team now sits in weekly brand meetings; that changed everything for how insights are applied" (Participant 7, Telecoms).* Cross-functional integration transformed analytics from a reporting tool into a planning driver. Marketing executives emphasised the need for co-created dashboards and shared key performance indicators (KPIs), while data professionals pointed to misunderstandings around model limitations and inconsistent data quality. Firms that embedded analysts directly within marketing teams or created "data translator" roles reported faster turnaround times, improved campaign agility, and greater trust across departments.

5.2 Data Readiness and Quality

Second, data readiness and quality emerged as a foundational issue. Many firms struggled with fragmented data lakes, legacy systems, and inconsistent data fields across platforms, which slowed insight generation and weakened campaign execution. *"We discovered 15 versions of the same customer record; only after the CDP integration did marketing trust the data" (Participant 3, Retail).* Retail firms, in particular, cited omnichannel integration as a significant hurdle. By contrast, firms investing in Customer Data Platforms (CDPs) or cloud-based infrastructure achieved higher interoperability and real-time responsiveness.

5.3 Marketing Intelligence

Third, the study highlighted the importance of ethical governance in practice. POPIA compliance was broadly acknowledged, but firms often lacked marketing-specific guidelines for ethical data use. *"The dashboards only make sense when they speak the language of campaigns" (Participant 10, Financial Services*). Banks and insurance providers, however, demonstrated that embedding data ethics checklists and consumer transparency mechanisms could enhance both compliance and customer trust. This points to governance not only as a legal safeguard, but also as a competitive differentiator.

5.4 Organisational Capability

Fourth, organisational capability and culture were consistently identified as critical enablers of success. *"We stopped hiring 'data people' and started hiring strategic partners who understand consumers and platforms."(Participant 12, Retail).* Despite access to advanced technologies, many firms lacked the necessary skills in areas such as data storytelling and dashboard interpretation. Companies that invested in cross-functional training and leadership buy-in created a culture of collaborative learning that significantly improved the integration of BDA into strategic decision-making.

5.5 Ethical Governance

Finally, the findings pointed to sectoral variation and emergent trends. *"We walk a tightrope. Personalisation is powerful, but one step too far and trust evaporates." (Participant 9, Insurance).* Telecoms and financial services led in predictive analytics and real-time campaign management, while retail excelled at personalisation but struggled with systemic integration. Emerging themes included interest in AI-driven content generation, sustainability metrics, and customer trust measures as future extensions of BDA-driven marketing. Compliance alone was insufficient. Leading firms moved toward ethical marketing frameworks, balancing commercial outcomes with fairness, transparency, and responsible use of customer data under POPIA and GDPR principles.

5.6 Technology Infrastructure

Participants highlighted technology infrastructure as a core enabler of data-driven marketing execution. *"You cannot run modern campaigns off legacy systems. Speed matters, integration matters, automation matters." (Participant 4, Telecommunications).* Cloud-based platforms, real-time data flows, and integrated martech stacks were viewed as essential for agility. Automation supported rapid experimentation and continuous optimisation across channels. These insights reinforce that scalable, interoperable technology ecosystems underpin effective strategic analytics deployment.

6. Theoretical Contributions and Advancement

The Strategic BDA Marketing Model makes several important contributions to theory by synthesising and extending existing perspectives on data-driven marketing. Traditional frameworks, such as the Resource-Based View (RBV) (Barney, 1991; Wamba et al., 2015), emphasise the strategic value of resources, including analytics capabilities, yet they often neglect the organisational and ethical dimensions of leveraging these resources effectively. Similarly, the Dynamic Capabilities Theory highlights the ability of firms to sense, seize, and reconfigure opportunities in dynamic environments (Teece, 2007; Gupta et al., 2021), but does not fully capture how BDA can be systematically integrated into marketing strategy. Other models, such as the 4Cs of Big Data in Marketing (Erevelles et al., 2016)

and Data-Driven Marketing Capability (DDMC) (Wang & Wang, 2020), provide valuable insights into customer analytics and organisational competencies but remain narrowly operational and underplay the ethical and contextual factors increasingly central to data use.

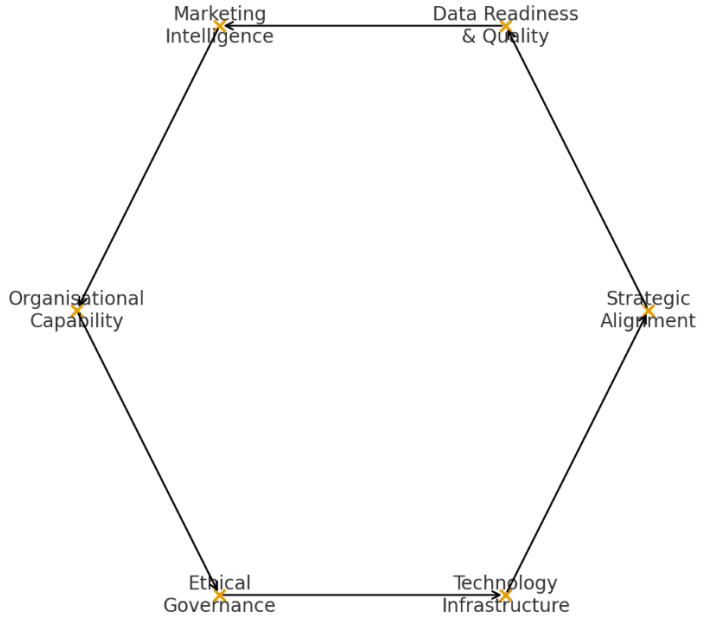

Figure 1: Strategic BDA Marketing Capabilities

This study advances the literature by addressing these limitations and positioning the six constructs of the Strategic BDA Marketing Model: Strategic Alignment, Data Readiness, Marketing Intelligence, Organisational Capability, Ethical Data Governance, and Technology Infrastructure, as interdependent components of a holistic framework. The model's integration of ethical governance is particularly significant, as it elevates compliance and transparency from an operational safeguard to a source of consumer trust and competitive advantage (Kotler et al., 2021; Naicker & Pillay, 2021). Furthermore, by grounding the model in empirical insights from South African firms, the research responds to critiques of contextual generalisation in prior models, which are often derived from large firms in developed markets (George et al., 2014; Wamba et al., 2017). This contributes to the growing recognition of the need for emerging-market perspectives in BDA and marketing scholarship.

Taken together, the model offers a multi-dimensional theoretical contribution: it advances RBV by conceptualising BDA as both a resource and a dynamic capability; it extends marketing analytics literature by embedding ethical governance as a strategic construct; and it grounds these advances in an emerging economy context, thereby expanding the applicability of BDA theory beyond developed markets. Table 4 summarises these theoretical contributions and demonstrates how the Strategic BDA Marketing Model enriches both conceptual understanding and practical relevance.

Table 4: Theoretical Contributions

Dimension	Contribution of the Strategic BDA Marketing Model	Supporting References
Resource-Based View (RBV)	Extends RBV by positioning BDA capabilities not only as strategic resources, but also as value-creating assets when embedded within marketing strategy and organisational routines.	Barney (1991); Wamba et al. (2015)
Dynamic Capabilities	Advances the dynamic capabilities perspective by showing how BDA enhances firms' ability to sense, seize, and	Teece (2007); Gupta et al. (2021)

	reconfigure opportunities in volatile markets through adaptive marketing strategies.	
Marketing Analytics Literature	Moves beyond operational and tactical uses of analytics (e.g. churn models) to demonstrate how BDA can shape brand positioning, customer engagement, and innovation.	Erevelles et al. (2016); Wang & Wang (2020)
Ethical Governance	Introduces ethical data governance as a core construct, reframing compliance (POPIA/GDPR) as a source of consumer trust, legitimacy, and competitive differentiation.	Kotler et al. (2021); Naicker & Pillay (2021)
Contextual Contribution	Provides an empirically grounded model tailored to South African firms, addressing critiques of generalisation in prior models derived from developed markets.	George et al. (2014); Wamba et al. (2017); February (2025)
Holistic Integration	Synthesises RBV, dynamic capabilities, and Marketing 5.0 into a single circular framework of six interdependent constructs, offering a comprehensive view of BDA-driven marketing strategy.	Kotler et al. (2021); February (2025)

7. Limitations and Future Research

The study's interpretivist scope and purposive sample of 32 participants limit the generalisability of the findings. Sectoral representation, though diverse, remains concentrated in firms with relatively high digital maturity. Future research could broaden the sample to include small- and medium-sized enterprises, or extend comparative analysis to other emerging economies. Quantitative validation of the six-construct model through structural-equation modelling would further test the relationships proposed here. Additionally, as artificial intelligence and automation reshape marketing, longitudinal studies could explore how ethical governance and data-trust mechanisms evolve over time. Integrating sustainability and social-impact metrics into BDA frameworks offers another promising research direction.

8. Conclusion

The Strategic BDA Marketing Model represents a critical leap forward in bridging the theory-practice divide in data-driven marketing strategy, especially for emerging market contexts like South Africa. Developed through rigorous empirical inquiry and grounded in multi-disciplinary theory, the model offers a comprehensive, actionable, and ethical framework for aligning Big Data Analytics (BDA) with marketing performance.

By conceptualising six interconnected constructs – Strategic Alignment, Data Readiness, Marketing Intelligence, Organisational Capability, Ethical Data Governance, and Technology Infrastructure – the model moves beyond tactical analytics to enable strategic, long-term value creation. It reflects the realities and constraints of South African firms while drawing on global thought leadership from Marketing 5.0, dynamic capabilities, and resource-based theory.

The empirical validation across sectors confirms that successful BDA integration requires not just technology, but also people, ethics, and culture. Firms must overcome silos, invest in cross-functional collaboration, and embed ethical data practices into the DNA of their marketing operations.

This model offers a roadmap for firms not just to *cope* with the complexity of digital transformation, but to *lead* it. In doing so, it positions marketing as a strategic architect of value, trust, and innovation in the data age, not as a downstream function of analytics.

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Competing Interests

The author declares no competing interests. There are no financial, personal, or professional relationships that could have influenced the conduct, analysis, or outcomes of this study. All procedures were conducted in line with ethical research standards, and no institutional affiliations compromised the objectivity or integrity of the research.

Author Contributions

Dr Sam A. F. February was responsible for the conceptualisation of the study, research design, data collection, data analysis, and the writing of the article.

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Data Availability

The data that support the findings of this study are available from the corresponding author upon reasonable request. Due to the confidentiality agreements with participants, interview transcripts are not publicly available.

Disclaimer

The views expressed in this article are those of the author and do not necessarily reflect the official position of the Nelson Mandela University, the Da Vinci Institute for Technology Management, or any other affiliated institution.

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