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Market Data Collection and Analysis Challenges for Accurate Marketing Strategies

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ABSTRACT	
Keywords: market data analysis, marketing strategy, data-driven decision-making, advanced analytics, cross-functional collaboration. Conflict of Interest Statement: The author(s) declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest. Copyright © 2025 ABIM. All rights reserved.	Purpose: This study evaluates companies' constraints in market data collection and analysis for developing accurate marketing strategies. It explores how fragmented data sources, inconsistent data quality, technological limitations, and organizational challenges hinder effective data-driven decision-making. Research Design and Methodology: This research employs a qualitative approach through a systematic literature review (SLR), synthesizing insights from peer-reviewed journals, books, and credible databases. The analysis identifies common themes, challenges, and best practices in marketing strategy development related to market data management. Findings and Discussion: The study identifies key challenges, including fragmented data platforms, inconsistent data standards, limited adoption of advanced analytical technologies, and organizational silos. These constraints lead to ineffective marketing strategies due to poor data integration and limited insights. The findings emphasize the importance of adopting advanced technologies, such as artificial intelligence (AI), machine learning (ML), and cloud-based platforms, alongside strengthening cross-functional collaboration and data literacy within organizations. Implications: This study provides valuable insights for both academia and industry. For practitioners, it offers actionable strategies for overcoming data-related challenges, including investing in integrated data platforms, promoting cross-departmental collaboration, and enhancing employee analytical skills. Academically, it enriches existing literature by bridging theoretical frameworks with practical applications. Future research should focus on empirical validation and industry-specific case studies to further advance understanding in this field.

Introduction

In the contemporary business landscape, developing accurate and effective marketing strategies increasingly depends on the ability to collect and analyze market data comprehensively. The rapid evolution of digital technology, the widespread adoption of digital platforms, and the shifting dynamics of consumer behavior have transformed the traditional marketing paradigm into one driven by data-informed decision-making. The proliferation of digital touchpoints—from social media platforms and e-commerce websites to mobile applications and customer relationship management (CRM) systems—has created an ecosystem where vast volumes of data are continuously generated. (Dasgupta & Sahai, 2021). Companies must harness this data to identify emerging market trends, understand customer preferences, and tailor their marketing initiatives to meet evolving consumer demands (Rosário & Dias, 2023). This shift toward data-driven marketing reflects a fundamental

change in how businesses approach strategic planning, requiring an emphasis not only on creativity and innovation but also on empirical insights derived from robust data analysis. However, while technological advancements have facilitated more straightforward access to diverse datasets, they have simultaneously introduced complexities in data processing, integration, and interpretation. The sheer scale and heterogeneity of big data, characterized by its volume, velocity, and variety, present substantial challenges for businesses striving to transform raw information into actionable insights. (Shahnawaz & Kumar, 2025). Without a practical framework for managing this data, organizations risk overlooking critical trends, misinterpreting consumer needs, and ultimately implementing marketing strategies that fail to achieve desired outcomes.

Despite the transformative potential of data-driven marketing, many organizations encounter significant constraints in effectively harnessing the power of data analytics. These challenges often stem from limitations in technological infrastructure, shortages of skilled personnel, regulatory restrictions surrounding data privacy, and the inability to adopt advanced analytical tools such as artificial intelligence (AI) and machine learning (ML). The absence of sophisticated technological frameworks not only hinders efficient data processing but also limits the ability of organizations to generate precise insights from complex datasets (Mikalef *et al.*, 2018). Moreover, the increasing emphasis on consumer privacy and data protection—exemplified by regulations such as the General Data Protection Regulation (GDPR) in the European Union and the California Consumer Privacy Act (CCPA) in the United States—has further complicated the landscape of market data collection. While essential for protecting individual rights, these regulations impose stringent requirements on how businesses collect, store, and utilize consumer data, restricting access to comprehensive datasets. Data fragmentation across multiple platforms and formats presents another significant barrier to practical analysis. Data collected from various sources, including social media channels, website analytics, and customer feedback forms, often exist in silos, making it difficult for organizations to integrate and interpret the information cohesively (Leistner, 2012). Inaccurate, incomplete, or outdated data further exacerbates the problem, leading to flawed decision-making and ineffective marketing initiatives. As the competitive landscape evolves, the inability to leverage high-quality, real-time market data places businesses at a distinct disadvantage. This highlights the critical need to address these constraints and optimize the data-driven marketing process.

Recent studies have highlighted the critical role of data-driven approaches in enhancing marketing strategy effectiveness. Jlhua & Lin, (2024) Demonstrated that leveraging big data and machine learning significantly enhances market competitiveness through precision marketing, uncovering intricate patterns in consumer behavior, and enabling highly tailored campaigns. Similarly, Suhairi *et al.* (2024) *emphasized* how digitalization and big data analytics transform the understanding of consumer preferences, allowing businesses to develop responsive strategies that align with changing market conditions. Benslama & Jallouli, (2024) further supported this by demonstrating how Social Media Data Analytics (SMDA) significantly influences marketing effectiveness. Real-time insights from social platforms enable marketers to assess consumer sentiment and adjust campaigns accordingly. Fedorova *et al.* (2024) *reinforced* this view, stressing the importance of performance metrics and advanced analytical methods in evaluating marketing strategies. These methods enable companies to adapt to market shifts and maintain a competitive edge quickly. Liu *et al.*, (2023) further demonstrated that big data facilitates personalized marketing and precise market positioning, enhancing customer satisfaction and loyalty (Sugiana & Musty, 2023). These findings emphasize that effective marketing information systems enable targeted decision-making based on real-time, accurate data. Meanwhile, Nafi'Hasbi *et al.* (2021), *along* with the marketing mix, highlighted key marketing strategy components, including segmentation, targeting, and positioning (STP). Wang, (2021) and Fadli (2021). It is further noted that while data analytics improves strategy accuracy, businesses continue to face challenges, including collaboration issues, target achievement difficulties, and environmental constraints. Collectively, these studies emphasize the indispensable role of advanced data analytics and technological integration in developing practical, personalized marketing strategies.

While recent studies have demonstrated the transformative impact of big data analytics and digitalization on marketing strategies, significant gaps remain in empirical and theoretical domains.

Empirically, much of the existing research, such as that by Sun & Shi, (2024); Suhairi *et al.*, (2024), and Benslama & Jallouli, (2024) has focused primarily on the benefits of advanced data analytics in enhancing market competitiveness and precision marketing. However, these studies often overlook the practical challenges businesses face in implementing such strategies, particularly regarding the limitations in technological infrastructure, data integration, and the skill gaps required to manage complex analytical tools. While highlighting the effectiveness of data-driven approaches, they fail to address the organizational and operational barriers that impede seamless adoption. Theoretically, existing frameworks predominantly emphasize the potential of big data to refine marketing strategies but lack comprehensive models that account for the constraints associated with data collection, quality assurance, and ethical considerations. For instance, while Liu *et al.*, (2023) and Sugiana & Musty, (2023) stress the importance of real-time, accurate data for decision-making, they do not explore the complexities of data fragmentation across platforms or the inconsistencies in data reliability. Moreover, the current body of literature focuses on large enterprises with advanced technological capabilities, often overlooking the unique challenges small and medium-sized enterprises (SMEs) face. This research gap highlights the need for a more holistic approach that emphasizes the benefits of data-driven marketing and addresses the structural, technological, and regulatory constraints that hinder its effective implementation across diverse business contexts.

Building upon the identified gaps in existing literature, this study offers a novel contribution by conducting a systematic literature review (SLR) to evaluate the constraints associated with market data collection and analysis in developing accurate marketing strategies. While previous studies have primarily emphasized the benefits of big data analytics in enhancing marketing precision, they often overlook the practical challenges businesses face in harnessing data effectively. This research seeks to address that gap by examining the technological advancements in data analytics and the structural, operational, and regulatory barriers that impede effective data utilization. By synthesizing insights from recent empirical and theoretical studies, the study aims to provide a comprehensive understanding of how these constraints affect the formulation of data-driven marketing strategies and to propose evidence-based solutions for overcoming such challenges. The study is guided by three key research questions to achieve this: (1) What are the primary constraints businesses encounter in collecting and analyzing market data for marketing strategy development? (2) How do these constraints impact the accuracy and effectiveness of marketing strategies? (3) What best practices and technological advancements can address these challenges? The primary objective of this research is to identify and evaluate the key barriers that hinder effective market data utilization and offer actionable recommendations for enhancing data-driven marketing practices. This study seeks to bridge the gap between theoretical advancements and practical applications through a rigorous SLR approach, empowering businesses to leverage data more effectively in an increasingly complex and competitive marketplace.

Literature Review

Resource-Based View (RBV) Theory

The Resource-Based View (RBV) theory, introduced by Barney (1991), emphasizes that a firm's competitive advantage is derived from its internal resources rather than external factors. These resources must meet the VRIN criteria: valuable, rare, inimitable, and non-substitutable, ensuring that they contribute to long-term success (Vesterinen *et al.*, 2024). Highlight how advanced technological infrastructure and skilled personnel, when aligned with RBV principles, enable firms to transform raw data into actionable insights. This transformation allows businesses to identify market trends, understand customer needs, and design more accurate marketing strategies. Nwabekee *et al.*, (2024) argue that firms with robust data analytics capabilities can achieve superior marketing precision, as these resources facilitate real-time decision-making and targeted consumer engagement. They further emphasize that dynamic capabilities, derived from internal resources, mediate between considerable data utilization and firm performance. Similarly, Liu *et al.*, (2023) found that companies investing in big data platforms can efficiently collect, process, and interpret market data, enhancing their agility in responding to changing consumer behaviors. However, as Vesterinen *et al.*, (2024) suggest, achieving sustainable competitive advantage requires continuous investment in resource

development, including employee training and cross-functional collaboration. Even the most advanced technologies may fail to deliver their full potential without such investments. Thus, the RBV framework highlights the importance of resource ownership and underscores the need for strategic resource management to maintain competitiveness in an increasingly data-driven business environment.

The Resource-Based View (RBV) theory positions internal resources as the foundation for effective data-driven marketing. According to Chinta (2022), Companies investing in advanced analytical technologies, such as artificial intelligence (AI), machine learning, and cloud-based data management systems, can efficiently process large datasets and transform raw information into actionable insights. These insights empower businesses to conduct precise market segmentation, design personalized marketing campaigns, and respond rapidly to market shifts. Yulianti, (2019) further emphasizes that firms leveraging data-driven strategies improve their marketing accuracy and enhance customer experiences. For instance, e-commerce platforms that utilize real-time customer data can provide personalized product recommendations, fostering customer satisfaction and brand loyalty. However, as Rao & Brown, (2024) Highlight, competitive advantage is not solely derived from technology ownership but from the firm's ability to manage and continuously develop internal capabilities. This perspective aligns with Alqarni *et al.*, (2023). The argument is that sustainable competitive advantage requires continuous investment in resource enhancement, including employee training, cross-functional collaboration, and system integration. Even the most sophisticated technologies may fail to deliver their intended benefits without ongoing development. Therefore, RBV underscores that a company's true strength lies in acquiring resources and strategically managing and refining them to maintain competitiveness in an increasingly data-driven market landscape. Companies can ensure long-term success and resilience in dynamic business environments by aligning resources with organizational goals.

Market Data Collection

Market data collection is the cornerstone of developing accurate marketing strategies. It enables businesses to gain comprehensive insights into consumer behavior, market trends, and competitive dynamics. Theodorakopoulos & Theodoropoulou, (2024). Effective data collection involves gathering information from primary and secondary sources. Primary data, such as surveys, interviews, and focus group discussions, provides insights into consumer needs and preferences. In contrast, secondary data from industry reports, social media platforms, and transactional records offers broader market intelligence (Blasco-Arcas *et al.*, 2022). However, increasing data fragmentation across multiple platforms poses significant challenges for businesses. With consumer interactions across social media, e-commerce sites, and customer relationship management (CRM) systems, consolidating data into a unified framework becomes complex and often results in inconsistencies. This issue is further exacerbated by stringent data privacy regulations, such as the General Data Protection Regulation (GDPR) and the California Consumer Privacy Act (CCPA), which limit access to granular datasets necessary for precise analysis (Housden, 2013). Fleisher,, (2008) emphasized that overcoming these challenges requires adopting advanced technologies, including artificial intelligence (AI) and machine learning, which facilitate real-time data collection and enhance accuracy. Moreover, cloud-based data management systems streamline the integration of diverse data sources, allowing marketers to derive actionable insights efficiently. Robust market data collection practices ultimately empower businesses to develop more targeted marketing strategies, improve customer engagement, and maintain a competitive edge in an increasingly data-driven marketplace.

Despite advancements in digital technology, companies continue to face significant challenges in collecting accurate and relevant market data. One of the most prominent challenges is data fragmentation, where information is dispersed across multiple digital platforms, such as social media, e-commerce sites, and customer relationship management (CRM) systems. According to Dhayne *et al.* (2019), this fragmentation complicates data integration into a unified framework, resulting in inconsistencies and gaps that hinder comprehensive analysis. Without proper integration, businesses struggle to generate accurate insights, compromising the effectiveness of marketing strategies. Regulatory frameworks like the General Data Protection Regulation (GDPR) in Europe and the California Consumer Privacy Act (CCPA) in the United States further restrict access to granular datasets

essential for in-depth analysis (Khatam, 2022). While crucial for protecting consumer privacy, these regulations present operational challenges for businesses collecting detailed customer information. To address these challenges, Haque *et al.*, (2024) emphasize the importance of adopting advanced technologies, such as artificial intelligence (AI) and machine learning, which enable real-time data integration and improve the accuracy of insights derived from fragmented sources. Karunamurthy *et al.*, (2023) highlight how cloud-based data management systems facilitate seamless data consolidation from diverse platforms, ensuring consistency and accessibility across organizational departments. By leveraging these technological advancements, companies can overcome the limitations posed by data fragmentation and privacy regulations, ultimately enhancing their ability to develop precise, data-driven marketing strategies.

Market Data Analysis

Market data analysis transforms raw data into actionable insights that inform strategic marketing decisions. As Okeleke *et al.*, (2024) emphasized, practical data analysis allows businesses to identify patterns, forecast trends, and understand consumer preferences. Integrating primary data, such as surveys and interviews, and secondary data, like industry reports and social media interactions, helps create a comprehensive picture of the market landscape. However, as Alt & Reinhold, (2020) note one of the most significant challenges remains the lack of standardization across different data sources, such as social media platforms, e-commerce sites, and customer relationship management (CRM) systems. This fragmentation complicates data integration into a cohesive framework, often resulting in inconsistencies and gaps that hinder the accuracy of insights. This lack of integration can lead to significant errors in analysis, potentially undermining the effectiveness of marketing strategies. (Cokins, 2009). The increasing volume, velocity, and variety of data only add to the complexity, requiring companies to adopt advanced technologies to manage this influx. In response to these challenges, businesses must invest in real-time data analytics platforms and cloud-based systems that streamline data integration, reduce errors, and ensure that insights are accurate and timely (Ambasht, 2023). This approach enhances marketing precision and allows companies to adjust their strategies rapidly in response to evolving market conditions.

To overcome the challenges in market data analysis, businesses need to adopt advanced analytics technologies such as artificial intelligence (AI), machine learning, and predictive modeling. These technologies allow for real-time data processing and uncover hidden patterns that might go unnoticed. This capability enhances the ability to predict future trends more accurately, providing businesses with a competitive edge in the marketplace (Rothberg & Erickson, 2005). Furthermore, AI and machine learning can help improve decision-making by identifying correlations and insights that would be difficult for human analysts to detect. In addition to technological advancements, cloud-based analytics platforms play a crucial role in facilitating the integration of data from diverse sources into a centralized system. Gade, (2021) states that these platforms streamline data analysis, ensuring businesses can make data-driven decisions quickly and efficiently. However, as highlighted by Blacksmith & McCusker, (2024) the success of these technologies depends heavily on the employees' skill sets. Without well-trained personnel capable of interpreting the complex data outputs, businesses risk making decisions based on misinterpreted data. Companies must invest in continuous training and foster cross-functional collaboration between marketing, IT, and data analytics teams (Attah *et al.*, 2024). With this holistic approach, companies can maximize their data analysis potential and ensure that their marketing strategies are precise, responsive, and competitive.

Accurate Marketing Strategy Development

An accurate marketing strategy is essential for businesses seeking a competitive advantage in an ever-evolving market. Accurate strategies require a deep understanding of the target market, identifying appropriate opportunities, and crafting value propositions that align with consumer needs. (Osterwalder *et al.*, 2015). This process begins with collecting and analyzing market data from primary sources, such as surveys, interviews, and focus groups, as well as secondary sources, such as industry reports, social media platforms, and transactional records (Mitra & Singh, 2023). Precision marketing relies on accurate, up-to-date data that reflects current market trends and consumer preferences.

Without valid and relevant data, marketing strategies risk being misaligned with market realities, leading to ineffective campaigns and inefficient use of resources. Another major challenge is ensuring that the data used for decision-making is of high quality. Marketing effectiveness highly depends on the quality and accuracy of the data used. Inaccurate, outdated, or incomplete data can distort marketing strategies, making them ineffective. According to Jeleel-Ojuade, (2024) Organizational barriers, such as siloed departments, can hinder the integration of insights from various sources, reducing the effectiveness of marketing initiatives. To overcome these challenges, businesses must adopt an integrated approach to strategy development, emphasizing cross-functional collaboration, continuous data evaluation, and real-time decision-making. Implementing these practices helps companies create marketing strategies that are responsive to market shifts and aligned with consumer expectations.

Developing accurate marketing strategies is critical for companies seeking a competitive advantage in an ever-evolving market. To develop an effective strategy, companies must deeply understand their target audiences, identify market opportunities, and create value propositions that align with consumer needs. As emphasized by Chaffey *et al.*, (2009), the strategic development process starts with collecting and analyzing market data from primary sources, such as surveys, interviews, and focus groups, as well as secondary sources, including industry reports, social media platforms, and transactional records. These data sources help businesses identify consumer behavior patterns, market trends, and the strengths and weaknesses of competitors. However, as Kotler *et al.*, (2016) suggest the success of a marketing strategy hinges on ensuring the accuracy and relevance of the data used. Without reliable, up-to-date data, marketing decisions may become misaligned with market realities, leading to ineffective campaigns and wasted resources. Organizational barriers often complicate the strategy development process. Linden, (2003) explains that many organizations struggle to integrate insights from different departments due to a lack of collaboration across functions. This fragmentation limits the effectiveness of marketing initiatives and slows the company's ability to respond to fast-changing market conditions (Attah *et al.*, 2024). To overcome these challenges, companies should adopt a holistic approach emphasizing data integration, cross-functional collaboration, and continuous performance evaluation. By improving these areas, companies can enhance the precision and responsiveness of their marketing strategies, ensuring they remain competitive in a dynamic market.

Research Design and Methodology

Study Design

This study employs a qualitative approach using the Systematic Literature Review (SLR) method to evaluate and synthesize existing research on developing accurate marketing strategies. The SLR approach was chosen for its structured and transparent methodology, which enables a comprehensive understanding of current knowledge, identifies research gaps, and provides evidence-based insights. The study follows a well-defined protocol to ensure consistency, rigor, and replicability throughout the review process.

Sample Population or Subject of Research

This research comprises peer-reviewed journal articles, books, and conference proceedings published between 2015 and 2025. The inclusion criteria focus on studies on accurate marketing strategy development, data-driven decision-making, and precision marketing. Articles discussing challenges in marketing strategy formulation, such as organizational barriers, data fragmentation, and technological limitations, were also considered. The exclusion criteria included studies unrelated to marketing strategy, articles published before 2018, and non-peer-reviewed sources.

Data Collection Techniques and Instrument Development

Data was collected through an extensive search of electronic databases, including Elsevier, Emerald Insight, Wiley, and Springer. The search terms used were "accurate marketing strategy," "data-driven marketing," "precision marketing," and "marketing strategy challenges." Boolean operators (AND, OR) were applied to refine the search results. The collected articles were screened

based on their titles, abstracts, and full texts, ensuring relevance and adherence to the inclusion criteria. A standardized data extraction form was developed to collect key information from each selected article, including objectives, methodology, findings, and limitations.

Data Analysis Techniques

The extracted data were analyzed using thematic analysis, identifying common themes, patterns, and discrepancies across the selected studies. The data were categorized into key themes: data accuracy, organizational challenges, technological advancements, and strategic implications. The synthesis process involved comparing findings from different studies to generate comprehensive insights and highlight areas requiring further exploration. This systematic approach ensured that conclusions were drawn from a robust and evidence-based foundation.

Findings and Discussion

Findings

The quality and accuracy of market data are fundamental to developing effective marketing strategies. However, findings reveal significant challenges in ensuring high-quality data that aligns with strategic marketing needs. Inconsistent datasets, outdated information, incomplete records, and duplicate entries are common issues that undermine data integrity (Benslama & Jallouli, 2024). These problems lead to flawed insights, resulting in ineffective marketing campaigns and poor resource allocation. As Alqarni *et al.*, (2023) emphasized, the absence of robust data validation processes and real-time monitoring further exacerbates these challenges, leaving organizations vulnerable to inaccurate decision-making. Moreover, the lack of standardized formats across data platforms complicates the integration process, making it challenging to consolidate insights into a cohesive framework (Blasco-Arcas *et al.*, 2022). The reliance on disparate data sources without proper quality control mechanisms heightens the risk of misinterpretation and misguided strategic planning (Ambasht, 2023). Therefore, ensuring data quality requires the implementation of rigorous data governance frameworks, continuous monitoring, and the adoption of automated data-cleaning technologies. Organizations must also prioritize real-time data validation to ensure that insights remain relevant and actionable. Without high-quality data, marketing strategies become disconnected from actual market conditions, leading to missed opportunities and increased operational costs. This highlights the critical need for robust data quality management as a cornerstone of data-driven marketing strategies (Chinta, 2022).

Data fragmentation poses a significant barrier to the development of accurate marketing strategies. Market data often originates from multiple platforms, including social media, customer relationship management (CRM) systems, and e-commerce platforms, creating isolated data silos that hinder comprehensive analysis (Alt & Reinhold, 2020). This fragmentation prevents marketers from forming a holistic view of consumer behavior, resulting in disjointed insights and poorly informed decisions. As noted by Jeleel-Ojuade, (2024) information silos within organizations further complicate data integration, reducing the efficiency of cross-functional collaboration. Moreover, disparate data sources often have varying levels of granularity and inconsistent formatting, making it challenging to aggregate and analyze information effectively (Ambasht, 2023). According to Benslama & Jallouli, (2024), fragmented data environments delay decision-making and increase the risk of errors and inconsistencies. The absence of centralized data repositories limits the ability of organizations to conduct real-time analytics, compromising their responsiveness to dynamic market conditions. To address these challenges, companies should adopt integrated data platforms and cloud-based systems that facilitate seamless data exchange across departments. Implementing robust data governance policies and ensuring interoperability among data sources can further enhance data integration efforts (Karunamurthy *et al.*, 2023). Organizations can unlock valuable insights that drive more accurate and responsive marketing strategies by overcoming data fragmentation, ultimately improving business outcomes and enhancing competitive advantage (Rosário & Dias, 2023).

Technological limitations remain a significant obstacle in leveraging market data for strategic decision-making. Many organizations, tiny and medium enterprises (SMEs), lack the advanced infrastructure to manage big data effectively (Chinta, 2022). This includes data volume, velocity, and

various challenges that complicate data processing and analysis. Businesses struggle to extract actionable insights from large datasets without scalable technology solutions. According to Ambasht, (2023), the absence of cloud-based platforms and real-time analytics systems further hinders the ability to conduct timely and accurate data analysis. Moreover, limited adoption of artificial intelligence (AI) and machine learning (ML) technologies prevents organizations from uncovering hidden patterns and generating predictive insights (Haque *et al.*, 2024). As Dhayne *et al.*, (2019) highlighted, inadequate technological infrastructure also leads to inefficiencies in data storage, processing, and retrieval, reducing the overall effectiveness of marketing strategies. To overcome these challenges, organizations must invest in modern data analytics platforms that enable real-time data processing and advanced analytics. Cloud-based systems, in particular, offer scalable solutions that facilitate seamless data integration and improve analytical capabilities (Karunamurthy *et al.*, 2023). Additionally, incorporating AI-driven analytics tools can enhance the accuracy and relevance of insights, empowering marketers to develop more effective strategies (Vesterinen *et al.*, 2024).

Organizational silos and human resource constraints significantly impede effective market data utilization. Findings reveal that departmental silos hinder cross-functional collaboration, preventing the seamless flow of information across marketing, sales, and IT teams (Attah *et al.*, 2024). This fragmentation reduces the efficiency of data-driven decision-making and leads to disjointed marketing strategies. As Leistner, (2012) emphasized, the categorization of information into isolated silos limits organizational agility and responsiveness. Furthermore, the shortage of skilled professionals capable of managing and analyzing complex datasets exacerbates the problem. According to Blacksmith & McCusker, (2024) many organizations lack the expertise to interpret data accurately, resulting in flawed insights and ineffective marketing campaigns. The absence of continuous training programs further compounds this issue, as employees cannot keep pace with evolving data analytics technologies (Rosário & Dias, 2023). Organizations must prioritize cross-functional collaboration and establish integrated data-sharing frameworks to address these challenges. Implementing collaborative platforms and promoting interdisciplinary teamwork can enhance information flow and improve decision-making processes (Jeleel-Ojuade, 2024). Investing in workforce training and upskilling initiatives can equip employees with the technical competencies to effectively manage and analyze market data. By fostering a collaborative and data-literate organizational culture, companies can overcome human resource challenges and develop more accurate, data-driven marketing strategies (Alt & Reinhold, 2020).

The cumulative impact of data quality issues, fragmentation, technological constraints, and organizational challenges significantly affects the development of accurate marketing strategies. Findings indicate that inaccurate or incomplete data often leads to misguided decision-making, resulting in ineffective marketing campaigns and resource misallocation (Blasco-Arcas *et al.*, 2022). Without access to real-time, high-quality data, marketers struggle to identify emerging trends, understand consumer preferences, and develop targeted strategies. According to Liu *et al.*, (2023) the inability to integrate and analyze data effectively limits organizational agility, reducing the effectiveness of marketing initiatives. Moreover, fragmented insights and delayed decision-making processes hinder the development of personalized marketing campaigns, compromising customer engagement and retention (Benslama & Jallouli, 2024). The lack of predictive analytics capabilities further exacerbates these challenges, as organizations cannot anticipate market shifts and adapt their strategies accordingly (Ambasht, 2023). To mitigate these risks, companies must adopt a data-driven approach to marketing strategy development, leveraging advanced analytics technologies and integrated data platforms. Organizations can develop more precise and effective marketing strategies by ensuring data quality, enhancing technological infrastructure, and fostering cross-functional collaboration (Fedorova *et al.*, 2024). Overcoming these challenges will enable businesses to improve decision-making, optimize resource allocation, and achieve sustainable competitive advantage (Vesterinen *et al.*, 2024).

Several mitigation strategies and recommendations have emerged from the findings to address the challenges identified in market data collection and analysis. First, organizations should invest in advanced data analytics technologies, including AI, ML, and cloud-based platforms, to enhance their data processing and analytical capabilities (Haque *et al.*, 2024). These technologies enable real-time

data integration, ensuring marketing decisions are based on current and accurate insights. Second, implementing integrated marketing information systems can facilitate seamless data sharing across departments, breaking down organizational silos and promoting cross-functional collaboration (Attah *et al.*, 2024). Third, companies should establish robust data governance frameworks to ensure data quality, standardization, and compliance with privacy regulations (Khatam, 2022). Continuous workforce training and capacity-building initiatives are essential for developing the technical skills required for effective data management and analysis (Blacksmith & McCusker, 2024). Organizations should also prioritize adopting cloud-based platforms to improve data accessibility and scalability, enabling more efficient data integration and analysis (Karunamurthy *et al.*, 2023). Finally, promoting a data-driven organizational culture that emphasizes evidence-based decision-making can further enhance the accuracy and effectiveness of marketing strategies (Rosário & Dias, 2023). Companies can overcome existing constraints by implementing these strategies and developing more precise, responsive, and competitive marketing initiatives.

Discussion

The findings of this study reveal significant challenges companies face in collecting and analyzing market data to develop accurate marketing strategies. A critical issue identified is the quality and accuracy of the data collected, which plays a pivotal role in ensuring the success of marketing initiatives. Incomplete, outdated, or inconsistent data often leads to flawed decision-making, resulting in marketing campaigns that fail to achieve their intended goals. This finding aligns with the core principles of data-driven marketing, where the effectiveness of marketing strategies is fundamentally dependent on the validity and relevance of the information used. High-quality data empowers companies to identify customer needs, track market trends, and design campaigns that align with consumer preferences. Conversely, when the data is inaccurate or fragmented, the resulting marketing strategies will likely deviate from actual market conditions, undermining their effectiveness. According to Benslama & Jallouli, (2024) leveraging Social Media Data Analytics (SMDA) can significantly enhance the quality and relevance of market data, thereby improving the precision of marketing decisions. Therefore, organizations must implement robust data governance frameworks, including real-time validation systems, to ensure the accuracy and integrity of collected data. By addressing these issues, companies can develop more precise marketing strategies aligned with current market conditions, enhancing customer satisfaction and driving business growth.

In addition to data quality concerns, this study identifies data fragmentation across various digital platforms as a significant barrier to effective data integration. Market data is often dispersed across multiple channels, such as social media, customer relationship management (CRM) systems, e-commerce platforms, and third-party databases. This fragmentation creates information silos that hinder comprehensive data analysis and prevent businesses from gaining a holistic view of customer behavior. As Jeleel-Ojuade, (2024) highlighted fragmented data often results in ineffective cross-functional communication, reducing the quality of strategic decision-making and impairing the development of targeted marketing initiatives. This issue is further exacerbated by the lack of standardized data formats across platforms, complicating the integration of diverse datasets into a unified analytical framework. Consequently, companies struggle to derive actionable insights from scattered information, which ultimately undermines the precision of their marketing strategies. Organizations must adopt centralized data management systems powered by cloud-based technologies to overcome this challenge, facilitating seamless data integration across platforms. Real-time data integration ensures data consistency and enhances decision-making accuracy, enabling companies to respond swiftly to evolving market trends. Moreover, implementing advanced data analytics platforms can streamline integration, allowing businesses to leverage cross-channel insights for more effective marketing strategies.

This study also highlights technological and infrastructural limitations as key constraints in effectively processing and analyzing market data. Many companies, tiny and medium-sized enterprises (SMEs), lack the technological infrastructure to handle large data volumes efficiently. Without advanced analytics platforms, organizations often rely on outdated systems that are ill-equipped to process big data, resulting in slow analyses and increased susceptibility to errors. The absence of

interoperability between existing systems further complicates data integration efforts, creating bottlenecks in the analytical process. As China, (2022) emphasized, adopting cutting-edge technologies, such as artificial intelligence (AI), machine learning (ML), and cloud-based platforms, is essential for enhancing a company's analytical capabilities and overcoming technological limitations. These technologies enable real-time data processing, advanced predictive modeling, and more accurate trend analysis, ultimately supporting more precise marketing strategies. Moreover, cloud-based platforms facilitate seamless data sharing and collaboration across departments, reducing the risk of information silos. To address technological gaps, companies must invest in modern data analytics infrastructure and adopt flexible, scalable systems that can adapt to the dynamic nature of big data. Additionally, ongoing investment in employee training and capacity building is crucial to ensure that staff members possess the necessary skills to leverage advanced analytics tools effectively. By strengthening technological infrastructure and human capital, companies can significantly enhance their ability to collect, analyze, and utilize market data for accurate marketing strategy development.

The findings of this study can be further explained by connecting them to relevant theoretical frameworks that provide deeper insight into the underlying mechanisms of market data collection and analysis. One of the most applicable theories is the Resource-Based View (Barney, 1991). This theory posits that a company's competitive advantage relies heavily on its ability to manage internal resources that are valuable, rare, inimitable, and non-substitutable (VRIN). These market data collection and analysis resources include technological infrastructure, advanced analytical expertise, and well-established organizational processes that facilitate efficient data management. Firms that possess and effectively utilize such resources are more likely to develop accurate and adaptive marketing strategies, enabling them to respond swiftly to shifting market conditions and consumer demands. Leveraging internal capabilities for data-driven decision-making can significantly enhance a company's marketing precision and overall market positioning. The Diffusion of Innovation (DOI) theory proposed by Rogers (2003) further elucidates how adopting advanced analytical technologies can empower businesses to overcome challenges in data management. According to this theory, innovation adoption follows a specific pattern, where organizations that proactively embrace new technologies can gain a significant edge over competitors. In the context of market data, companies that integrate cutting-edge technologies, such as artificial intelligence (AI), machine learning (ML), and real-time analytics platforms, can streamline their data collection and analysis processes. This technological integration enhances the accuracy of insights generated, facilitating more precise marketing strategies tailored to specific consumer needs. Consequently, the combination of RBV and DOI theories provides a comprehensive framework for understanding how internal resources and technological adoption collectively drive marketing success through effective data utilization.

Compared to previous studies, the findings of this research demonstrate strong consistency with the conclusions drawn by several prior investigations. For instance, the survey conducted by Benslama & Jallouli (2024) highlights the critical role of Social Media Data Analytics (SMDA) in enhancing the effectiveness of marketing strategies through accurate and relevant data. Their research emphasizes how real-time insights derived from social media platforms can significantly improve the precision of marketing campaigns by aligning them more closely with consumer preferences and emerging market trends. Similarly, the findings of Liu *et al.*, (2023) further corroborate the current study's results by asserting that data-driven marketing strategies increase a company's competitiveness and provide a deeper understanding of customer preferences and market dynamics. This alignment underscores the importance of leveraging high-quality data to inform strategic decision-making and achieve superior marketing outcomes. The findings are consistent with the conclusions reached by Jeleel-Ojuade, (2024) who stressed that data fragmentation resulting from organizational silos could hinder effective data integration and compromise the quality of strategic decision-making. This study reinforces those findings by identifying fragmented data as a significant barrier to developing accurate marketing strategies. However, while previous research primarily focused on technological solutions, such as adopting advanced analytics platforms, the current study expands the scope of mitigation strategies. It emphasizes the importance of technological integration and highlights the need to strengthen cross-functional collaboration and enhance human resource capabilities. This broader approach suggests that successful data-driven marketing strategies require advanced technology and organizational

synergy, ensuring that insights are effectively shared and translated into actionable strategies across departments.

The practical implications of this study highlight the need for companies to adopt advanced analytical technologies, such as artificial intelligence (AI), machine learning (ML), and cloud-based platforms, to enhance the accuracy and efficiency of their marketing strategies. These technologies enable real-time data processing and seamless platform integration, ensuring that valid and relevant data support every marketing decision. As a result, companies can design more precise and targeted campaigns that align with current market trends and consumer preferences, ultimately improving campaign effectiveness and resource allocation. Beyond technological adoption, fostering cross-functional collaboration is equally important. Establishing interdisciplinary teams of marketing professionals, data analysts, and IT specialists can streamline data collection, analysis, and utilization. This collaborative approach helps break down organizational silos and ensures that insights are shared effectively across departments. Moreover, investing in employee training through data literacy programs can further strengthen analytical capabilities, empowering staff to interpret data accurately and make informed decisions that support strategic marketing initiatives. Finally, a robust data governance framework is crucial for maintaining data quality, security, and consistency throughout all business processes. Companies can develop more effective marketing strategies and enhance their competitiveness by systematically managing and integrating data. This holistic approach ensures that marketing efforts remain adaptive, data-driven, and aligned with dynamic market conditions.

Conclusion

This study has comprehensively evaluated the constraints associated with market data collection and analysis in developing accurate marketing strategies. The findings reveal that challenges such as fragmented data sources, inconsistent data quality, technological limitations, and organizational barriers significantly hinder the ability of companies to leverage data effectively for strategic decision-making. These constraints impede the development of targeted marketing campaigns and reduce overall business performance by limiting the capacity to respond to dynamic market conditions. This study shows that accurate, real-time data collection, seamless platform integration, and cross-functional collaboration are critical for overcoming these challenges and enhancing marketing precision.

The value of this research lies in its contribution to theoretical understanding and practical application. From an academic perspective, the study enriches existing literature by integrating the Resource-Based View (RBV) and Diffusion of Innovation (DOI) theories to explain how internal capabilities and technological adoption drive effective data utilization. Practically, the study offers actionable insights for organizations, emphasizing the importance of investing in advanced analytical technologies, promoting cross-functional teamwork, and developing data literacy among employees. These strategies improve marketing accuracy and enhance organizational agility and competitiveness. This study's originality lies in its holistic approach, combining technological, managerial, and human resource perspectives to address data-related constraints in marketing strategy development.

Despite its contributions, this study has certain limitations. It primarily relies on secondary data sources, which may not fully capture the contextual nuances of specific industries or regions. Moreover, while the study highlights key challenges and solutions, it does not conduct empirical testing to validate the proposed strategies. Future research should consider conducting empirical studies across different industries and regions to validate these findings further. Additionally, longitudinal studies could provide deeper insights into how the adoption of advanced technologies and organizational practices evolves. Researchers are also encouraged to explore the impact of emerging technologies, such as blockchain and predictive analytics, in overcoming data-related challenges and enhancing marketing strategies.

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