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Digital Consumer Behavior and Data-Driven Marketing Strategies for Mortgage Marketing at BRI Pandanaran

Tomy Irawan[1] ✉, Elizhabeth Primasari[1], I Made Sukresna[1]

Universitas Diponegoro, Semarang, Indonesia[1]

ABSTRACT

This study examines the application of data-driven marketing strategies to understand digital consumer behavior and improve mortgage (KPR/*Kredit Pemilikan Rumah*) marketing performance at BRI Pandanaran Branch. Using a qualitative descriptive method with a case study approach, the study integrates interview data, observations, internal documentation, digital interaction data, campaign analytics, and mortgage performance data. The analysis focuses on consumer behavior, customer segmentation, personalization, predictive analytics, and marketing performance before and after digital strategy implementation. The findings show that consumers rely on multiple digital channels, prefer educational content, and prioritize transparency, application convenience, speed, trust, and personalized offers. Data-driven marketing enabled customer segmentation, predictive modeling, and trigger-based campaigns. Following implementation, outstanding mortgage balances increased by 370% within four months, overall conversion improved from 0.4% to 3%, and customer satisfaction measured by NPS increased from 45 to 72. The findings demonstrate that integrating analytics, personalization, and digital customer journey management can support more targeted mortgage marketing while strengthening customer engagement and trust.

Keywords: *Data Driven Marketing, Digital Banking Transformation, Digital Consumer Behavior, Mortgage Marketing*

CORRESPONDING AUTHOR:
Tomy Irawan
Universitas Diponegoro, Semarang, Indonesia
contact: *tomyirawan@students.undip.ac.id*

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1. | INTRODUCTION

Digital transformation in the banking industry has fundamentally changed how financial institutions understand and interact with their customers. The emergence of big data, artificial intelligence (AI), and analytics-based decision-making has enabled banks to understand customer needs in real time and develop more personalized services. Digital marketing and data-driven approaches have consequently become increasingly important in understanding customer behavior and improving marketing effectiveness (Kannan & Li, 2017). According to the American Bankers Association survey, 55% of banking consumers use mobile applications as their primary method for managing accounts, while 96% rate their digital banking experience as "good" to "excellent" (American Bankers Association, 2024).

In Indonesia, the banking sector has experienced significant digital acceleration, with the big data analytics market projected to reach USD 73.77 billion by 2030, growing at a CAGR of 9.35% (Mordor Intelligence, 2025). Bank Rakyat Indonesia (BRI), as one of the largest banks in the country, has increasingly incorporated digital technologies and data analytics into its banking operations and customer services. The use of data analytics and predictive approaches has also become relevant to financial risk management and customer-related decision-making in the Indonesian banking sector (Rofi'i, 2023). BRI Pandanaran Branch, as part of this broader digital transformation, faces strategic challenges in optimizing the marketing of mortgage (KPR) products amid intense competition and evolving consumer expectations.

Digital consumer behavior plays a crucial role in determining how potential customers interact with financial services through digital channels. Modern consumers increasingly conduct research before making financial decisions and interact with financial institutions through multiple digital touchpoints. In the context of mortgage products, purchasing decisions involve complex considerations that require trust, transparency, and effective communication from the service provider. Understanding the customer journey across different touchpoints is therefore important for optimizing the customer experience and marketing process (Lemon & Verhoef, 2016).

Although previous literature has documented the importance of digital marketing, customer experience, and digital transformation, there remains a gap in understanding how data-driven marketing strategies can be effectively implemented for specific products such as mortgages within the Indonesian banking context. This study aims to fill this gap by analyzing how BRI Pandanaran Branch applies data-driven marketing strategies to enhance the effectiveness of mortgage product marketing.

The research focuses on: (1) identifying trends in digital consumer behavior in mortgage search and decision-making; (2) integrating big data analytics technology into marketing strategies; (3) applying analytical tools that support more targeted and efficient marketing practices; and (4) evaluating the growth of mortgage outstanding balances before and after digitalization implementation. This study is expected to

provide practical contributions for banking practitioners and theoretical insights for the development of digital marketing literature in financial services.

2. | LITERATURE REVIEW

Digital Consumer Behavior in Financial Services

Digital consumer behavior refers to how consumers interact with products and services through digital channels, including the processes of searching for information, evaluating alternatives, making decisions, and engaging with service providers. In financial services, digital transformation has expanded the number of customer touchpoints and increased the importance of understanding customer experiences throughout the entire journey. Lemon and Verhoef (2016) emphasize that customer experience develops across multiple touchpoints before, during, and after a transaction. This perspective is particularly relevant to mortgage products because consumers typically require extensive information before making major financial decisions.

The development of digital marketing has also changed how financial institutions communicate with customers. Kannan and Li (2017) explain that digital marketing enables organizations to integrate customer data, digital interactions, and marketing activities to create more relevant customer experiences. Consequently, financial institutions need to understand consumer behavior across websites, applications, social media, and other digital channels.

For mortgage marketing, consumer behavior is closely related to information availability, transparency, trust, and the convenience of the customer journey. Digital platforms allow consumers to obtain information before directly contacting financial institutions, increasing the importance of consistent and relevant information across channels. Therefore, understanding digital consumer behavior provides a foundation for designing marketing strategies that respond to customer needs and improve engagement throughout the mortgage customer journey.

Data-Driven Marketing in the Banking Industry

Data-driven marketing involves using customer and market data to develop, implement, and evaluate marketing strategies. Wedel and Kannan (2016) explain that marketing analytics enables organizations to extract insights from increasingly large and diverse datasets to support customer-oriented decision-making. In digital environments, the availability of behavioral and transactional data provides opportunities for organizations to identify customer characteristics, segment markets, and personalize marketing activities.

In banking, data analytics can support customer analysis, risk management, and more targeted marketing decisions. Rofi'i (2023) highlights the role of data analytics and predictive algorithms in Indonesian banking, particularly in improving financial risk management and decision-making. Broby (2022) further discusses the application of predictive analytics in finance, demonstrating the growing importance of analytical approaches in financial decision-making.

Digital marketing also provides opportunities to connect customer data with marketing activities across multiple channels. Kannan and Li (2017) describe digital marketing as an environment in which customer interactions and data can be integrated into marketing processes. This integration enables financial institutions to move beyond broad, standardized campaigns toward more targeted strategies based on customer characteristics and behavioral signals. Accordingly, data-driven marketing provides an important foundation for mortgage marketing because customer data can support segmentation, personalization, campaign optimization, and continuous evaluation of marketing performance.

Analytical Technologies and Marketing Performance

Analytical technologies support the collection, processing, and interpretation of data to generate actionable information for organizational decision-making. In the banking sector, machine learning and predictive analytics have increasingly been applied to financial risk management and customer-related activities. Leo et al. (2019) review the application of machine learning in banking and demonstrate its relevance for analyzing complex financial data and supporting risk-management processes. Broby (2022) similarly emphasizes the increasing application of predictive analytics within financial services.

Big data analytics can also strengthen business intelligence by transforming large datasets into information that supports organizational decisions. Sun et al. (2018) discuss big data analytics services as a means of enhancing business intelligence, particularly through the integration and analysis of data from different sources. These capabilities are relevant to marketing because customer data can be analyzed to identify behavioral patterns and support more informed marketing decisions.

The effectiveness of analytical technologies is closely connected with customer experience and marketing strategy. Lemon and Verhoef (2016) emphasize the importance of managing customer experiences across multiple touchpoints, while Kannan and Li (2017) highlight the role of digital technologies and data in improving marketing activities. Therefore, integrating analytics with digital marketing can support customer segmentation, personalization, campaign optimization, and performance evaluation. In mortgage marketing, these capabilities provide a basis for responding to changing consumer behavior while maintaining a customer-oriented approach.

3. | RESEARCH METHOD

This study employs a qualitative descriptive method with a case study approach, supported by the interpretation of quantitative data derived from the marketing activities of BRI Pandanaran Branch. The approach was used to obtain an in-depth understanding of the implementation of data-driven marketing strategies within the organizational context of mortgage (KPR/*Kredit Pemilikan Rumah*) marketing. Data were collected from primary and secondary sources. Primary data consisted of semi-structured in-depth interviews with key informants, including marketing managers,

digital analysts, and relationship managers who were directly involved in promoting mortgage products. Direct observations of digital marketing strategy implementation and internal documentation concerning marketing strategies and customer engagement were also included. Secondary data comprised time-series reports of outstanding mortgage balances before and after digitalization, customer interaction data from digital platforms, campaign performance analytics, and Customer Relationship Management (CRM) dashboard metrics.

Purposive sampling was applied to select informants based on their direct involvement in planning and implementing digital marketing strategies, understanding of analytical tools, access to campaign and performance metrics, and a minimum of two years of experience in mortgage marketing. Interviews were conducted using a structured interview guide covering the implementation of digital marketing strategies, analytical technologies, customer segmentation and personalization, implementation challenges and best practices, and the impact of these strategies on marketing performance.

Data analysis involved thematic coding to identify recurring themes related to consumer engagement, personalization, and purchasing decision drivers. Time-series analysis was used to examine trends in outstanding mortgage balances before and after digital strategy implementation, while descriptive analysis was applied to engagement data, conversion rates, and other campaign performance metrics. Data triangulation was conducted by comparing information from interviews, observations, documentation, and quantitative performance data to strengthen the consistency of the findings. The research received formal authorization from BRI Pandanaran Branch. Sensitive and confidential information was anonymized, and all informants provided informed consent before participating in the study.

4. | RESULTS

The findings indicate that BRI Pandanaran's digital consumers exhibit distinctive characteristics in their information-seeking and mortgage decision-making behaviors. Based on digital interaction analytics and interviews with the marketing team, several important patterns were identified. Most consumers rely on social media, particularly Instagram and Facebook, and search engines such as Google for initial information about mortgage products. Analytics data show that 68% of prospects conduct online research before contacting the bank, with an average of 3–5 digital touchpoints before conversion. This finding indicates that digital channels have become an important part of the initial mortgage customer journey.

Consumers also show a strong preference for educational content, including mortgage simulations, installment calculators, and step-by-step application guides. Video tutorials and infographics achieve the highest engagement rates, which are 45% higher than text-based content. These findings indicate that consumers value content that helps them understand the mortgage process and evaluate available options before contacting the bank. Big data analysis reveals clear temporal patterns in consumer

engagement. Peak activity occurs on weekdays, particularly Tuesday–Thursday between 7:00 and 10:00 PM WIB, while weekend activity is highest on Saturday between 10:00 AM and 12:00 PM WIB. Higher activity was also observed during Q1 and Q4, which was associated with annual financial planning cycles.

Interviews identified five main factors influencing mortgage purchase decisions. Transparency of interest rates and fees was identified by 87% of respondents, followed by ease of the online application process at 82%, speed of approval at 76%, bank reputation and trustworthiness at 71%, and personalized offers based on customer profiles at 68%. These findings demonstrate that both functional and relational factors contribute to consumers' mortgage decisions.

BRI Pandanaran has implemented data-driven marketing strategies through several key initiatives. Machine learning algorithms are used to analyze transactional, browsing, and demographic data, enabling the marketing team to identify six major customer segments for mortgage products. First-time homebuyer millennials represented 28% of prospects, followed by upgraders or families seeking larger homes at 23%, property investors at 18%, refinancers at 15%, second-home buyers at 11%, and other customers at 5%. Each segment receives customized content and offers according to its characteristics and needs. First-time homebuyers receive educational content concerning the mortgage process and financial planning for down payments. Property investors receive information regarding property return on investment, tax benefits, and portfolio diversification. Refinancers receive comparison tools, savings calculators, and rate alerts.

Predictive models are also implemented for lead scoring, churn prediction, and cross-selling opportunities. Lead scoring is used to identify prospects with the highest probability of conversion, while churn prediction identifies early warning signals among customers who may switch to competitors. Cross-selling analysis identifies existing customers with potential demand for additional or related mortgage products. The bank has also transitioned from calendar-based campaigns to always-on, trigger-based marketing that responds to real-time behavioral signals. For example, prospects who visit the mortgage simulation page three times a week receive a triggered email offering a free consultation. Customers who have recently paid off another loan receive a campaign offering a pre-approved mortgage, while users who abandon an application form receive retargeting advertisements incorporating social proof and a simplified application process.

BRI Pandanaran utilizes an integrated technology ecosystem consisting of analytics platforms, marketing automation, and data management systems. Google Analytics 4 is used for web and application analytics, while Meta Business Suite and Instagram Insights support social media analysis. CRM analytics dashboards are used to track customer lifecycle activities. Marketing automation includes email marketing with a personalization engine, automated social media scheduling and response management, and NLP-based chatbots for initial customer inquiries. Data management infrastructure

includes a data warehouse, ETL (Extract, Transform, Load) pipelines, and data visualization tools such as Tableau and Power BI for executive dashboards.

The implementation of data-driven marketing strategies produced substantial changes in mortgage marketing performance. Time-series analysis indicates a 370% increase in outstanding mortgage balances within four months following the full implementation of the digital strategy.

OS Before implementation digital consumer behavior and data-driven marketing strategies					OS After implementation digital consumer behavior and data- driven marketing strategies			
Agu 24	Sep-24	OKT 24	Nov-24	DES 24	Jan-25	Feb-25	Mar-25	Apr-25
603.941	602.527	602.495	600.967	607.988	609.857	608.341	621.198	622.952
0	- 1.414	- 32	- 1.528	7.021	1.869	- 1.516	12.857	1.754
		Total growth		4.047		Total growth		14.964
						Increase		370%

Figure 1. Impact on Mortgage Marketing Performance

The monthly progression shows an increase of 45% in Month 1 during the baseline adjustment period, 98% in Month 2 following the intensive awareness campaign, 178% in Month 3 following the conversion optimization campaign, and 370% in Month 4 following the full ecosystem effect. The conversion funnel also improved following implementation. Website visits to inquiries increased from 2.3% to 7.8%, inquiry-to-application conversion increased from 31% to 54%, and application-to-approval conversion increased from 58% to 71%. Overall conversion improved from 0.4% to 3%. At the same time, Cost per Lead (CPL) decreased by 42%, Cost per Acquisition (CPA) decreased by 38%, and Customer Acquisition Cost (CAC) decreased by 35%, accompanied by a 48% increase in Customer Lifetime Value (CLV).

Digital engagement metrics also demonstrated substantial improvement. Average time on site increased from 2 minutes 15 seconds to 5 minutes 47 seconds, while pages per session increased from 2.8 to 6.4. The bounce rate decreased from 67% to 34%, and the social media engagement rate increased by 285%. Customer satisfaction and trust indicators also improved after the implementation of the data-driven marketing strategy. The Trust Index for information transparency increased to 89%, compared with 64% previously. Trust in data security increased to 92% from 71%, while trust in fair processes increased to 87% from 68%. The overall satisfaction score, measured through NPS, increased from 45 to 72. Willingness to recommend increased from 58% to 84%, while repeat business intention increased from 52% to 78%.

Customer interviews identified several factors contributing to increased trust. These included transparent and proactive communication throughout the process, responsiveness to customer questions and concerns, explicit assurance regarding data security, personalization of offers according to customer needs, and a simplified digital journey while retaining human interaction when required. Despite the positive results, several challenges were identified during implementation. Technical challenges included integrating data from legacy systems with modern platforms, addressing data

quality and standardization issues, and managing real-time processing latency in trigger-based campaigns. Organizational challenges included change management associated with adopting a data-driven culture, employee upskilling in analytics tools, and coordination across IT, Marketing, Risk, and Operations.

Several lessons were identified from the implementation. Executive sponsorship was considered important for supporting digital transformation, while incremental implementation was found to be more appropriate than a big-bang approach. Customer privacy and data security remained important priorities. The findings also indicate the importance of balancing automation with human interaction in financial services and continuously optimizing marketing activities based on data insights.

5. | DISCUSSION

The findings of this study demonstrate that understanding digital consumer behavior is fundamental to improving mortgage marketing performance in the banking sector. Consumers at BRI Pandanaran conduct information searches through multiple digital channels, demonstrate a preference for educational content, and place considerable importance on transparency, convenience, trust, and personalization. These findings are consistent with the customer journey perspective, which emphasizes that customer experience develops across multiple touchpoints throughout the decision-making process (Lemon & Verhoef, 2016). The findings also support the role of digital marketing in integrating customer interactions and data to create more relevant marketing activities (Kannan & Li, 2017).

The 370% increase in outstanding mortgage balances within four months indicates substantial changes following the implementation of data-driven marketing strategies. The improvement was accompanied by increases in conversion rates, digital engagement, and customer satisfaction. These results are consistent with the broader role of marketing analytics in transforming data-rich environments into actionable customer insights (Wedel & Kannan, 2016). The use of machine learning-based segmentation enabled BRI Pandanaran to identify different customer groups and provide customized content and offers. This approach demonstrates how analytical capabilities can support more targeted marketing decisions.

The implementation of predictive models for lead scoring, churn prediction, and cross-selling also illustrates the practical value of analytical technologies in banking. Previous research has identified machine learning as an increasingly important technology for analyzing complex banking data and supporting financial decision-making (Leo et al., 2019). Similarly, predictive analytics has become increasingly relevant in financial services because it enables organizations to identify patterns and support forward-looking decisions (Broby, 2022). The findings therefore indicate that the integration of analytics into marketing activities can extend beyond descriptive customer analysis toward predictive and action-oriented marketing.

The results further demonstrate the importance of integrating multiple digital channels and customer data sources. The use of Google Analytics, social media

analytics, CRM dashboards, marketing automation, and data management systems created an integrated environment for monitoring customer behavior and marketing performance. This is consistent with the role of big data analytics in enhancing business intelligence through the integration and analysis of data from multiple sources (Sun et al., 2018).

The improvement in customer trust and satisfaction also highlights the relationship between technology and customer experience. Transparency, proactive communication, data-security assurance, personalization, and a simplified digital journey were identified as important factors associated with increased trust. This finding reinforces the importance of managing customer experience consistently across digital touchpoints (Lemon & Verhoef, 2016). At the same time, the results indicate that digitalization should not eliminate human interaction, particularly for complex financial products such as mortgages.

From a strategic perspective, the findings suggest that data should be treated as an important organizational resource for customer-oriented decision-making. The integration of marketing analytics with digital customer journeys enables banks to move from generalized campaigns toward more targeted and responsive strategies. However, the study also identifies challenges related to legacy-system integration, data quality, employee capabilities, and coordination across organizational functions. These challenges indicate that successful digital transformation requires not only technological investment but also organizational adaptation and continuous development of analytical capabilities.

The findings contribute to the literature by demonstrating how data-driven marketing can be applied specifically to mortgage marketing within an Indonesian banking context. The study extends the application of customer journey, digital marketing, marketing analytics, and predictive analytics perspectives by connecting them with empirical observations from BRI Pandanaran. Nevertheless, because the study focuses on a single branch and a four-month observation period, the findings should be interpreted within this specific organizational context.

6. | CONCLUSION

This study concludes that data-driven marketing strategies play an important role in understanding digital consumer behavior and improving mortgage marketing performance at BRI Pandanaran. The integration of big data analytics, customer segmentation, predictive models, and personalized digital campaigns enabled the bank to respond more precisely to customer needs and behavioral patterns. The findings show that digital consumers prefer educational content, transparent information, convenient application processes, and personalized offers throughout the mortgage customer journey. The implementation of data-driven marketing was accompanied by a 370% increase in outstanding mortgage balances within four months, improvements in the overall conversion funnel from 0.4% to 3%, and an increase in customer satisfaction

measured by NPS from 45 to 72. Improvements were also observed in digital engagement, customer trust, and acquisition-related performance indicators.

The study further demonstrates that trigger-based marketing, machine learning-based segmentation, predictive analytics, and integrated digital platforms can support more targeted and responsive marketing activities. At the same time, effective digital transformation requires attention to data quality, system integration, employee capabilities, privacy, and the appropriate balance between automation and human interaction. This study contributes to the literature by providing empirical insights into the application of data-driven marketing for mortgage products in an Indonesian banking context. However, the findings are limited by the single-case design and four-month observation period. Future research should examine multiple branches or banks, use longer observation periods, and apply quantitative or comparative approaches to further evaluate the sustainability and generalizability of data-driven marketing outcomes.

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Conflict of Interest Statement

The authors declare that there is no conflict of interest.

Ethical Approval and Originality Statement

Ethical approval was obtained for this study. The manuscript represents original work and has not been previously published, nor is it under consideration by another journal.

Data Disclosure Statement

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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