



Digital transformation and banking sustainability: the case of BNP Paribas El Djazaïr facing new models of digital marketing and financial inclusion

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Abstract:

This research looks at how digital changes are affecting bank marketing strategies, especially how they help make financial access more sustainable. By studying BNP Paribas El Djazaïr, it explores how going digital changes marketing value, customer connections, and long-term success for banks. The findings show that using tech (like AI and online banking) is a key way for banks to innovate responsibly and use sustainable digital marketing.

The bank in the study shows a good mix of new tech, better customer experiences, and social responsibility. This proves that going digital can boost marketing results while supporting sustainability and making finance more accessible. The research provides insights for understanding "Marketing 5.0" and offers tips for banks in developing countries that want to balance digital transformation with social responsibility.

Keywords: Digital transformation; Digital marketing; Banking sustainability; Financial inclusion; Corporate social responsibility.

Jel Classification Codes: M31, M15, G21, O33, Q01.

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1. Introduction

Over the past ten years, digital transformation has become a crucial strategic tool within the global banking industry. Facing a landscape defined by significant ambiguity, heightened customer expectations, and a shift towards a sustainable economy, banking institutions are restructuring their operational frameworks by prioritizing technology, data analytics, and corporate social responsibility (Bharadwaj et al., 2013; Verhoef et al., 2021). This evolution extends beyond the mere digitalization of services; it profoundly reshapes customer engagement, marketing procedures, and the perceived value delivered through innovative digital and sustainable interactions (Lemon & Verhoef, 2016).

In developing nations, particularly Algeria, this evolution exhibits unique characteristics. The banking industry occupies a pivotal position in modernizing the economy and fostering financial incorporation among citizens. The 2024 annual report from BNP Paribas El Djazaïr serves as a compelling example of this trend. The institution is implementing a technological modernization strategy, encompassing automation, artificial intelligence, and the comprehensive digitization of its banking offerings, with the objective of strengthening operational productivity and enhancing customer experience. This procedure is complemented by a marketing approach focused on sustainability, demonstrated through programs like the GreenTech Challenge and the introduction of ecologically sound financing instruments. These endeavors reflect the rise of a digital and sustainable banking marketing paradigm, situated at the intersection of technology and ecological accountability.

From a theoretical standpoint, this shift challenges established frameworks within banking marketing. Specifically, the move towards digital platforms and self-service options aligns with a service-dominant logic (Vargo & Lusch, 2004), where value is collaboratively produced by both the financial institution and the customer through

digital interactions. This framework is now intertwined with the perspective of Marketing 5.0, which concurrently incorporates sophisticated technologies (AI, large datasets, automation) and the essential elements of human connection and sustainability (Kotler, Kartajaya, & Setiawan, 2021). Consequently, digital transformation is not merely a technological procedure, but rather a mechanism for generating responsible value, capable of combining economic achievement with a beneficial societal influence (Porter & Kramer, 2019).

The case of BNP Paribas El Djazaïr offers a compelling illustration of how a financial institution operating within a developing market successfully integrates digital advancements with a commitment to long-term sustainability. Their 2024 report highlights the growth of electronic banking services, the modernization of their branch network, the implementation of self-service banking technologies, and the training of employees on environmental and social issues. These strategic directions demonstrate the confluence of technological efficiency, customer relationship management, and corporate social responsibility, all of which are cornerstones of modern banking marketing practices.

Contemporary research indicates that the successful digital transformation of banking institutions is contingent upon their proficiency in cultivating seamless customer interactions, fostering robust relationships built on trust, and effectively communicating their dedication to Environmental, Social, and Governance (ESG) principles (Kane et al., 2019; Pousttchi & Dehnert, 2018). Within this framework, digitization evolves beyond a mere strategic instrument for competitive advantage, transforming into a vehicle for fostering sustained and inclusive financial access (Ozili, 2020).

This study investigates the core question:

How does the digital evolution within Algerian banks, exemplified by the case of BNP Paribas El Djazaïr, reshape marketing approaches and promote long-term financial accessibility?

The research pursues two primary aims:

To examine the processes through which digitalization impacts marketing tactics in the banking industry, and to determine the extent to which this evolution supports the development of an inclusive and sustainable banking paradigm.

Building upon this central issue, the investigation is organized around the subsequent inquiries:

- In what manner does the digital transition reshape the marketing approaches employed by Algerian banking institutions, specifically concerning consumer interaction and value articulation?
- To what extent do the digital undertakings implemented by BNP Paribas El Djazaïr facilitate enhanced financial accessibility and marketing effectiveness?
- How is the concept of sustainability and corporate responsibility (ESG) incorporated within the framework of digital marketing strategies in the banking sector?

Building upon the established theoretical framework and empirical observations, the following hypotheses are proposed:

H1: The digitization process positively influences perceived marketing effectiveness in banks by enhancing the customer journey.

H2: Incorporating Environmental, Social, and Governance (ESG) principles into digital strategy strengthens customer trust, brand reputation, and customer loyalty.

H3: Digital marketing instruments, such as online banking platforms, automation systems, and artificial intelligence applications, act as substantial enablers of long-term financial inclusion.

H4: Harmonizing the digitization process with a sustainability-focused strategy enhances competitiveness and the generation of shared value within the banking industry.

Employing a qualitative, exploratory methodology, this research utilizes an in-depth single case study of BNP Paribas El Djazaïr. Data sources include the organization's 2024 annual report, complemented by semi-structured interviews and relevant scholarly literature. The study aims to develop a conceptual framework that connects aspects of digital transformation, customer experience, and sustainable marketing practices within the Algerian banking environment.

2. Literature review

2.1. Digital transformation in the banking sector: fundamentals and challenges

2.1.1. Definition and strategic scope of digital transformation

Digital transformation signifies the comprehensive incorporation of digital technologies across all organizational operations, fundamentally reshaping structures, business paradigms, and customer relationships (Bharadwaj et al., 2013; Vial, 2019). Building on this, Kane et al. (2019) posit that this evolution extends beyond a purely technological undertaking, encompassing a cultural and strategic realignment with the objective of enhancing adaptability, responsiveness, and value generation.

Digital transformation represents a deep and extensive integration of technological advancements into every facet of an organization's work. This fundamentally alters its internal framework,

approaches to conducting business, and connections with its clientele (Bharadwaj et al., 2013; Vial, 2019). Expanding on this understanding, Kane and colleagues (2019) argue that this process is more than just the implementation of technology; it necessitates a cultural and strategic shift aimed at improving an organization's capacity to adjust to change, react efficiently to evolving circumstances, and ultimately create greater value.

2.1.2. The technological drivers of banking transformation

Several key drivers are propelling this transformation, including artificial intelligence (AI), robotics, distributed ledger technology, cloud-based computing, and the mechanization of marketing activities. These technological advancements facilitate enhanced operational performance, more granular audience classification, and an improved consumer journey (Parviainen et al., 2017; Pousttchi & Dehnert, 2018).

The instance of BNP Paribas El Djazaïr effectively demonstrates this prevailing trend. The institution has channeled significant resources into the automation and digital transformation of its operational infrastructure. This investment has both augmented data security protocols and streamlined the customer experience. The establishment of self-service zones, coupled with the implementation of sophisticated electronic banking platforms, reflects a strategic objective to optimize operational efficacy while simultaneously enhancing accessibility and bolstering client satisfaction.

2.1.3. Digital transformation and organisational reconfiguration

The digital revolution is prompting a significant reshaping of organizational structures and the development of novel managerial approaches that emphasize cross-functional collaboration and ongoing learning (Susanti et al., 2023). Within the banking sector, this transformation necessitates a reimagining of marketing functions, which are increasingly focused on data analytics, customer experience

optimization, and personalized engagement strategies (Kotler et al., 2021).

BNP Paribas El Djazaïr has prioritized employee training in the areas of sustainable development and digital advancements, positioning learning initiatives as a strategic instrument for internal restructuring. This interrelation between technological innovation and organizational learning strengthens robustness and adaptive capacity, recognized as essential components of competitive advantage within the banking sector (Kane et al., 2019).

2.2. Digital marketing and customer experience in banks in the digital age

2.2.1. From the digitalization of marketing to an enhanced customer experience

The increasing integration of digital technologies into banking marketing is fundamentally reshaping the relationship between financial institutions and their clientele. As highlighted by Lemon and Verhoef (2016), a key aspect of the digital customer experience lies in ensuring a seamless, personalized, and consistent journey for clients across various channels, an approach often referred to as omnichannel banking.

Within this framework, digital marketing emerges as a pivotal mechanism for customer retention and competitive distinction (Chaffey & Ellis-Chadwick, 2022). BNP Paribas El Djazaïr's E-banking platforms facilitate independent and uninterrupted management of financial activities, thereby enhancing user accessibility, clarity, and overall consumer contentment.

These trends suggest a shift from a primarily transactional model towards an experiential one, where the value recognized by

consumers is increasingly derived from the quality of their digital engagements (Lemon & Verhoef, 2016).

2.2.2. Data, automation and marketing personalisation

Leveraging advancements in big data analytics and automation, financial institutions are enhancing their understanding of customer requirements and forecasting purchasing patterns (Wedel & Kannan, 2016). Artificial intelligence systems facilitate the construction of tailored customer experiences, optimization of promotional activities, and improvement in the accuracy of personalized suggestions.

BNP Paribas El Djazaïr, through its technological investments, aims to deliver a customer-centric experience grounded in data-driven insights, effectively transforming the institution into a more intelligent and proactive entity in its client engagements. This strategy aligns with the principles of Service-Dominant Logic (Vargo & Lusch, 2004), wherein value co-creation is predicated on the digital interactions between the financial service provider and its clientele.

2.2.3. New marketing performance indicators in the digital age

Contemporary assessments of marketing effectiveness transcend conventional metrics such as sales volumes and market share, increasingly incorporating qualitative indicators like customer satisfaction, digital loyalty, and perceived value (Lemon & Verhoef, 2016; Verhoef et al., 2021).

In the instance of BNP Paribas El Djazaïr, the 5.2% expansion of the Net Banking Product in 2024 can be attributed, in part, to the enhanced utilization of digital channels and online services.

2.3. Sustainability and financial inclusion in the era of digital transformation

2.3.1. From responsible finance to ESG strategy

The intersection of technological advancement and environmental responsibility represents a significant shift within the modern banking industry. Sustainable finance leverages Environmental, Social, and Governance (ESG) principles to guide investment decisions and the creation of financial instruments (Porter & Kramer, 2019).

BNP Paribas El Djazaïr actively participates in this trend through its responsible investment funding programs, its sustainable finance training program, and the organization of events such as the GreenTech Challenge. These endeavors demonstrate an integrated approach where digital transformation supports ecological and societal progress.

This direction aligns with the perspective of Kotler et al. (2021), who propose that Marketing 5.0 combines technology with a focus on human values, employing digital tools to promote communal welfare.

2.3.2. Digitalization as a driver of financial inclusion

One of the most significant contributions of digital transformation in developing nations is its function in fostering financial inclusion. Mobile services and digital platforms allow financial institutions to reach populations previously excluded from the formal financial system (Ozili, 2020).

E-banking solutions and self-service areas offered by BNP Paribas El Djazaïr promote this enhanced accessibility by diminishing geographical and socioeconomic obstacles. Digitalization, therefore,

emerges as a tool for economic equity and sustainable advancement, contributing to the modernization of the national economic structure.

2.3.3. Towards an integrated model of sustainable digital marketing

The convergence of technological advancements, marketing strategies, and sustainability considerations is giving rise to a novel framework: sustainable digital marketing (Peattie & Belz, 2010; Kotler et al., 2021). Within this framework, the value generated by a banking institution extends beyond purely financial gains to encompass social and ecological advantages.

BNP Paribas El Djazaïr provides a case study of this integration. Its digital strategy simultaneously enhances marketing effectiveness, customer loyalty, and social responsibility, thereby embodying the synergy between technological innovation, customer value, and enduring impact.

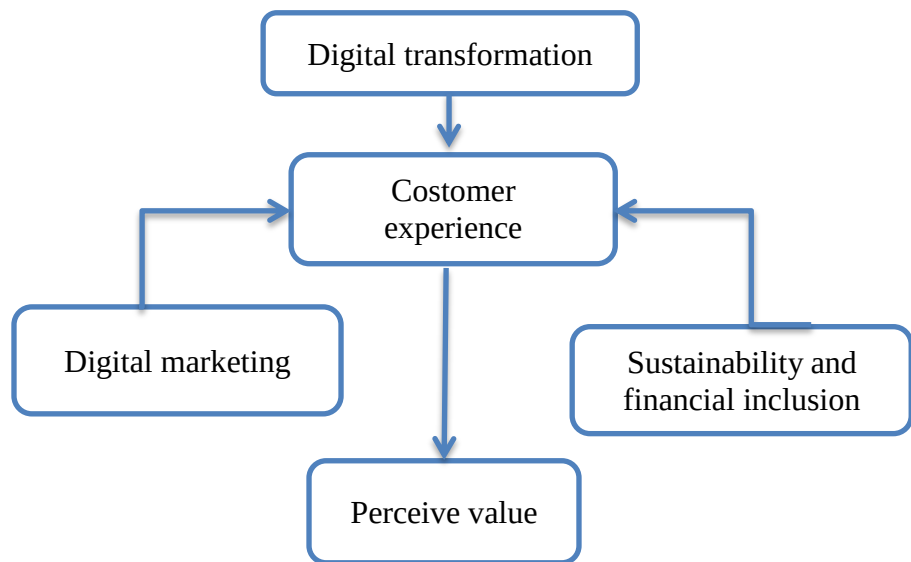
2.3. Conceptual framework

This literature review identifies a coherent progression across three significant forces:

- Digital Transformation → serving as a key driver of technological advancement and organizational effectiveness.
- Digital Marketing → functioning as a catalyst for enhancing customer experience and marketing performance.
- Sustainability → representing a strategic objective that guides digitalization towards inclusiveness and societal responsibility.

These elements are interconnected within a cyclical framework, wherein digitalization fuels marketing innovation, which, in turn, bolsters sustainability and customer trust. The case of BNP Paribas El Djazaïr provides an empirical example of this interrelationship within the context of a developing nation.

Fig.1. Representation of the conceptual framework



Source: authors' creation.

The digital transformation (DT) serves as a foundational driver, instigating shifts in both organizational and marketing procedures. This evolution leads to a digital marketing (DM) approach that is more focused on customer experience and customized interactions.

Digital marketing, through the incorporation of principles related to social responsibility, contributes to the long-term viability of the banking sector (BS), manifested in environmental, social, and governance (ESG) initiatives and green finance practices.

In combination, these three elements promote sustainable financial inclusion (SFI), defined as equitable and responsible access to banking services.

This framework operates within a systemic logic: DT → DM → BS → SFI, with feedback loops between DM and DT, and mutual influences driving sustainability.

3. Research methodology

3.1. Choice of methodological approach

This study employs a qualitative interpretive approach, selected for its capacity to elucidate multifaceted and context-dependent phenomena, specifically the digital transformation and its resulting influence on banking marketing (Eisenhardt, 1989; Yin, 2018).

The central aim is not statistical generalization, but rather a comprehensive understanding of the strategic, organizational, and marketing rationales driving the observed changes within a specific instance: BNP Paribas El Djazaïr, a bank demonstrating early adoption of digitization and sustainable practices within the Algerian environment.

This methodological framework enables an investigation into the ways in which, and the reasons why, digital transformation shapes marketing strategies and banking sustainability. This is achieved through the utilization of substantial and diverse data sources, including internal documentation, interviews, observations, and reports.

3.2 Justification for the choice of case study

Case study methodology proves particularly effective when a researcher aims to investigate a present-day phenomenon within its natural setting (Yin, 2018).

BNP Paribas El Djazaïr was chosen based on the subsequent parameters:

Empirical relevance: the institution is actively pursuing a sophisticated digital evolution (encompassing AI, electronic banking platforms, automation, and digital learning initiatives).

Contextual representativeness: as a subsidiary of a global organization, BNP Paribas functions within a developing and regulated environment, providing an opportunity to observe localized adjustments to a sustainable digital marketing framework.

This case functions as an instrumental example (Stake, 1995), facilitating comprehension of a broader phenomenon: the digitization of banking marketing strategies in developing nations.

3.3. Unit of analysis and observation framework

The focus of this investigation is the digital marketing and communication function within BNP Paribas El Djazaïr, as it is embedded within the organization's broader transformation strategy. The analysis is structured around three key levels:

Strategic Orientation: This level examines the policies and approaches related to digital transformation and innovation implementation.

Marketing and Customer Engagement: This focuses on the digitization of the customer experience, encompassing communication strategies and personalization efforts.

Sustainability Considerations: This incorporates an examination of environmental, social, and governance (ESG) initiatives, alongside financial accessibility programs and ethical marketing practices.

These three levels are aligned with the dimensions of the conceptual framework employed: Digital Transformation (DT) → Digital Marketing (DM) → Sustainable Banking (SB) → Sustainable

3.4. Data collection methods

3.4.1. Primary sources

Semi-structured interviews were conducted with a cohort of twelve executives and managers from BNP Paribas El Djazaïr, encompassing roles such as heads of digital strategy, marketing, communications, corporate social responsibility, and branch managers. These discussions, ranging in duration from 45 to 90 minutes, were implemented either in person or via videoconference between February and May of 2025. The primary purpose of these interviews was to gather in-depth data pertaining to digital methodologies, promotional plans, and environmental, social, and governance (ESG) programs within the organization.

Interview guide structured around four themes:

- Vision and implementation of digital transformation.
- Impacts on marketing practices and customer relations.
- Integration of ESG criteria and sustainability into marketing activities.
- Perception of financial inclusion via digital channels.

3.4.2. Secondary sources

To ensure a robust and internally valid analysis (Eisenhardt, 1989), the study employs a triangulation methodology, drawing upon a variety of source materials. This includes the 2024 Annual Report of BNP Paribas El Djazaïr (serving as a primary source of documentation), official publications from the BNP Paribas group (encompassing websites, press releases, and corporate social responsibility reports), scholarly articles and institutional reports pertaining to banking digitalization in Algeria, and direct observation of digital platforms such as the website, mobile application, and online

banking services. The convergence of insights derived from these diverse sources strengthens the overall research design.

3.5. Data analysis and processing

The qualitative data, encompassing interviews, reports, and field notes, were subjected to thematic analysis following an inductive approach (Miles, Huberman & Saldaña, 2014). The analytical process was structured in the following stages:

➤ Analytical Procedures

Initially, interviews were transcribed verbatim, and a preliminary, immersive reading was conducted to identify salient ideas and overarching concepts.

Subsequently, an open coding process was employed to identify text segments that represented key concepts, such as automation, customization, sustainable finance, and "inclusivity.

This was followed by axial coding, where codes were aggregated into thematic categories aligning with the dimensions of the established conceptual framework (TD, MD, DB, IFD).

Finally, selective coding was implemented to structure the analysis into three principal analytical axes:

- ✓ Digital Innovation and Efficiency
- ✓ Customer Value and Marketing Experience
- ✓ Sustainability, Responsibility, and Inclusivity

The analysis was facilitated by the use of NVivo 14 software, which aided in visualizing relationships between themes and exploring co-occurrences within the data.

4. Discussion of results

4.1. Introduction to the discussion

The analysis of the findings from the BNP Paribas El Djazaïr case study elucidates how digital transformation is influencing banking marketing strategies and fostering sustainable financial inclusion within a developing market.

These outcomes support established theoretical frameworks in the literature (Bharadwaj et al., 2013; Vial, 2019; Kotler et al., 2021), while also uncovering contextual peculiarities specific to the Algerian banking sector's environment.

The discussion is structured around four key areas, each corresponding to a dimension of the conceptual model:

- Digital Transformation and Organizational Dynamics
- Digital Marketing and Customer Value Generation
- Banking Sustainability and Responsibility Paradigm
- Sustainable Financial Inclusion and Societal Merit

4.2. Digital transformation: a catalyst for strategic and cultural change

Empirical findings corroborate that digital transformation transcends mere technological deployment, evolving into a pivotal strategic and cultural catalyst. Initiatives implemented by BNP Paribas El Djazaïr, including robotic process automation, automation, artificial intelligence, and continuous professional development, exemplify a synergy between technological advancement, organizational learning, and value creation.

These observations resonate with Vial's (2019) perspective, positing digital transformation as a sequence of internal adaptation and orchestration processes. Similarly, Kane et al. (2019) underscore

the significance of organizational culture as a critical success factor.

In the examined context, digital transformation is evidenced by:

- A restructuring of marketing functions centered around data analytics and customer relationship management;
- Enhanced cross-functionality among digital, marketing, and Corporate Social Responsibility (CSR) departments;
- A governance framework prioritizing innovation and agility.

Consequently, the bank showcases a digital maturity paradigm wherein technology supports a customer-centric and sustainable strategy, thereby substantiating hypothesis H1 of the conceptual model.

4.3. Digital marketing: towards co-creation of value centred on experience

This analysis indicates that BNP Paribas El Djazaïr's digital marketing strategy is demonstrably aligned with a value co-creation framework, consistent with the tenets of Service-Dominant Logic (Vargo & Lusch, 2004). The optimization of digital customer pathways, the customization of service offerings, and the automation of customer engagement contribute to enhanced customer satisfaction and loyalty. These findings resonate with research conducted by Lemon and Verhoef (2016), which underscores the pivotal role of the customer journey in cultivating a seamless and consistent customer experience.

A significant paradigm shift within the banking sector is the transition from a transactional approach to one prioritizing relationship building and experiential value. BNP Paribas El Djazaïr effectively leverages digital platforms to cultivate both closeness and trust with its customers. This approach aligns with the perspectives presented by Kotler et al. (2021) in Marketing 5.0, which emphasizes

the synergistic integration of technology with humanized customer interactions.

Consequently, the findings support hypothesis H2, suggesting that when digital marketing is strategically aligned with the principles of sustainability and personalization, it strengthens both brand perception and overall marketing effectiveness.

4.4. Banking sustainability: towards alignment between technological innovation and social responsibility

BNP Paribas El Djazaïr's sustainability endeavors, encompassing green financing, the GreenTech Challenge, and ESG policies, illustrate a shift towards a framework of responsible innovation. These outcomes align with Porter and Kramer's (2019) perspective on shared value creation, wherein economic performance and societal impact are mutually reinforcing.

The findings reveal a positive relationship between digital technologies and sustainability, specifically:

- Digitalization enhances the tracking and clarity of ESG-related data.
- Digital tools facilitate improved evaluation of environmental and social consequences.
- Digital corporate social responsibility campaigns increase awareness and customer involvement.

This convergence corroborates the research of Peattie and Belz (2010) and Kotler et al. (2021), who posit sustainable marketing as the evolving domain of strategic marketing. Consequently, Hypothesis H3 is supported: the digital transformation aids in embedding ESG practices within the strategic marketing approach of the banking institution.

4.5. Sustainable financial inclusion: digitalisation as a driver of equity and development

The findings suggest that the increasing implementation of digital banking services, such as electronic banking, mobile platforms, and automated kiosks, is driving unprecedented levels of financial inclusion, particularly among younger demographics and individuals residing in rural areas.

This observation aligns with the argument presented by Ozili (2020), who posits that financial technology (FinTech) and digital banking represent a crucial mechanism for economic integration in developing nations.

Individuals previously marginalized from traditional banking systems are now gaining access to straightforward, efficient, and secure services through their mobile devices. In this context, digital marketing emerges as a valuable resource for financial literacy and transparency, fostering user trust and empowering responsible financial behavior.

This social dimension lends support to hypotheses H4 of the proposed model, indicating that the synergistic relationship between technology, marketing, and sustainability promotes equitable inclusion and sustainable growth.

5. Conclusion

This investigation sought to explore the manner in which the digital transformation of Algerian banks, exemplified by the case of BNP Paribas El Djazaïr, reconfigures marketing strategies and contributes to enduring financial inclusion.

Employing an interpretive qualitative approach based on a single case study, the research facilitated an in-depth comprehension

of the internal dynamics of digitalization and their consequences on customer relations, marketing effectiveness, and sustainability.

The findings corroborate that digital transformation functions as a strategic enabler, facilitating:

- Improved operational efficiency.
- Enhanced customer experience through digital marketing.
- The incorporation of Environmental, Social, and Governance (ESG) principles into banking strategy.
- The advancement of broader financial inclusion via digital technologies.

Consequently, digital transformation is not merely a technological process but an organizational, cultural, and societal shift, grounded in a logic of responsible innovation and economic equity (Vial, 2019; Kotler et al., 2021).

Theoretical Contributions

This research provides several contributions to the fields of strategic management and banking marketing.

- Contribution to the Literature on Digital Transformation

It affirms the perspective of Bharadwaj et al. (2013) and Verhoef et al. (2021) that digitalization is an independent business strategy, redefining value creation.

The study demonstrates empirically that, in emerging contexts, digital transformation takes the form of a hybridization process between technological innovation and sustainable governance.

- Contribution to Sustainable Digital Marketing

The study extends the framework of Marketing 5.0 (Kotler et al., 2021) by demonstrating that marketing effectiveness stems not only

from technology but also from the integration of ethical and environmental values.

It thus proposes an integrated conceptual model connecting four key dimensions:

- ✓ Digital Transformation
- ✓ Digital Marketing
- ✓ Banking Sustainability
- ✓ Sustainable Financial Inclusion
- Contribution to Service-Dominant Logic Theory

By employing service-dominant logic (Vargo & Lusch, 2004), the research demonstrates that the co-creation of value through digital channels can also be ethical and inclusive, broadening the scope of the concept to the societal sphere.

Managerial Contributions

The practical implications are extensive for banking executives, marketing managers, and public policymakers.

Banking Strategies

The results suggest that banks should conceive of digitalization not as a technical project but as a holistic strategy, integrating technology, human capital, and sustainability. The BNP Paribas El Djazaïr case reveals that the success of transformation depends on:

- Transversal governance.
- Investment in digital skills.
- Clear communication of ESG objectives.

Marketing managers should intensify the personalization of customer journeys through data, while adhering to principles of transparency and privacy. Digital channels thus become tools for emotional connection and accountability, rather than simply promotional avenues.

Societal Role

The study highlights the capacity of digital tools to serve as vectors for inclusion and social cohesion, by democratizing access to financial services. Policymakers can draw on these findings to encourage responsible fintech, aligned with the Sustainable Development Goals (SDGs) of the United Nations.

Limitations of the Research

Despite the rigor of the approach, this research presents certain limitations:

Single Case: Generalization of the results remains analytical, not statistical.

Qualitative Nature: The absence of quantitative measurement limits the objective evaluation of impacts on performance.

Internal Perspective: Customer perceptions were not directly integrated into the investigative framework.

These limitations do not invalidate the analytical validity but pave the way for supplementary research.

Future Research Directions

- Comparative Approaches

A comparison between several Algerian or Maghreb banks could validate the transferability of the proposed model and better understand the contextual conditions for success.

➤ Quantitative Approaches

The integration of an analysis by structural equation modeling (PLS-SEM) could quantify the relationships among digital transformation, digital marketing, sustainability, and performance.

Future research could explore

- The role of artificial intelligence in the ethical personalization of banking services.
- The impact of blockchain on digital trust.
- The contribution of green banking to sustainable performance.

In conclusion, this study demonstrates that digital transformation constitutes far more than a technological evolution: it is the foundation for a new banking paradigm, uniting innovation, performance, and accountability. The case of BNP Paribas El Djazaïr illustrates how a bank operating in an emerging context can become a pioneering agent of sustainable digital marketing, reconciling economic and societal objectives.

This hybrid model of a digital and sustainable bank opens a promising pathway for financial institutions in the Global South, which are called upon to rethink their role in an ecosystem where technology becomes a lever for inclusion and sustainability.

Thus, the digital transformation of Algerian banks appears not only as a strategic imperative but also as an opportunity for equitable and sustainable development.

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