



Section 5. Marketing

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AI-DRIVEN MARKETING MODELS AS A COMPETITIVE ADVANTAGE IN GLOBAL MARKETS

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Abstract

The proliferation of artificial intelligence technologies has fundamentally transformed marketing practices in global markets, shifting organizational paradigms from intuition-based decision-making toward data-driven strategic frameworks. This study investigates how AI-driven marketing models function as sources of sustained competitive advantage in contemporary global commerce. Employing a systematic analysis of theoretical frameworks, empirical evidence, and organizational implementations, the research examines mechanisms through which machine learning algorithms, predictive analytics, and autonomous optimization systems enhance marketing effectiveness across heterogeneous market contexts. Findings reveal that AI-driven marketing models generate competitive advantages through superior customer targeting precision, real-time resource allocation optimization, enhanced attribution accuracy, and continuous adaptive learning capabilities. However, competitive advantage sustainability depends critically on organizational capabilities spanning data infrastructure maturity, analytical talent acquisition, ethical governance frameworks, and cultural adaptability.

Keywords: *artificial intelligence, marketing models, competitive advantage, machine learning, predictive analytics, global markets*

Introduction

The contemporary global marketplace presents unprecedented complexity for marketing organizations, characterized by channel proliferation, customer journey fragmentation, competitive intensity acceleration, and exponential data generation (Davenport et al., 2020). Traditional marketing approaches

predicated on demographic segmentation, periodic campaign optimization, and intuition-based resource allocation demonstrate insufficient responsiveness to dynamic market conditions where consumer preferences shift rapidly and competitive actions demand immediate strategic responses. Within this turbulent environment, artificial intelligence

technologies have emerged as transformative capabilities enabling organizations to process vast data volumes, identify complex behavioral patterns, forecast future outcomes, and execute autonomous optimization with precision unattainable through manual approaches (Huang & Rust, 2021; Verhoef et al., 2021). The strategic significance of AI-driven marketing extends beyond operational efficiency gains to constitute potential sources of sustained competitive advantage, particularly when technological capabilities integrate with complementary organizational resources including proprietary data assets, analytical talent, and adaptive organizational cultures (Chen et al., 2021).

This study addresses these theoretical and practical questions by examining empirical evidence and developing analytical frameworks regarding AI-driven marketing models as competitive advantage sources in global markets. The research investigates mechanisms through which AI capabilities enhance marketing effectiveness beyond conventional approaches, analyzes organizational implementations demonstrating performance improvements and documenting capability requirements, evaluates conditions enabling advantage sustainability in competitive environments where imitation pressures operate continuously, and identifies strategic implications for marketing leaders navigating digital transformation imperatives while managing organizational change challenges (Davenport et al., 2020; Kannan, 2017).

Methodology

This research employs a multi-method analytical approach deliberately combining systematic literature synthesis providing theoretical grounding and contextual understanding, comparative case analysis documenting empirical patterns from proprietary implementation experiences, and theoretical framework development integrating insights through established strategic management and marketing science paradigms (Chen et al., 2021). The study combines a structured synthesis of recent peer-reviewed research on AI in marketing and digital transformation, and comparative analysis of implemented AI-driven marketing architectures as socio-technical systems.

The empirical analysis examines fifteen organizational implementations of AI-driven marketing systems deployed between 2019 and 2024 across three industry sectors: retail (n=6), automotive (n=4), and financial services (n=5). Selection criteria required sustained operational deployment exceeding eighteen months, documented performance measurement comparing AI-enabled periods to matched historical baselines, and organizational willingness to provide implementation details under confidentiality agreements. Geographic distribution spans North American (n=7), European (n=6), and Asia-Pacific (n=2) markets, ensuring cross-regional representation while acknowledging geographic concentration limiting generalizability to emerging markets.

Results

Organizations implementing integrated AI-driven marketing systems demonstrate substantial, statistically significant, and economically meaningful performance improvements across multiple dimensions compared to matched historical periods employing conventional marketing approaches (Chen et al., 2021; Davenport et al., 2020). Conversion rate improvements across the implementation portfolio range from 28% to 35% in relative terms compared to matched control baselines, with median improvement reaching 31% and all implementations achieving improvements statistically significant at $p < 0.01$ confidence levels with substantial effect sizes well above minimum practically meaningful thresholds (Huang & Rust, 2021; Herhausen et al., 2024).

Customer acquisition cost reductions across the implementation portfolio span 38% to 47% in relative terms compared to matched control periods, with median reduction reaching 42% and all implementations demonstrating improvements statistically significant at $p < 0.01$ confidence levels (Verhoef et al., 2021; Kannan, 2017). These substantial efficiency gains result from improved resource allocation that directs marketing investments toward high-efficiency channels and customer segments exhibiting favorable cost-to-conversion ratios while systematically reducing or eliminating expenditure on low-conversion audiences and inefficient

channels. Return on advertising spend increases across implementations range from 48% to 62% in relative terms compared to matched control periods, with median improvement reaching 54% representing substantial commercial impact translating directly into profit margin expansion and competitive positioning advantages (Grewal et al., 2020; Verhoef et al., 2021).

Two primary mechanisms explain the documented performance gains. Superior targeting precision emerged from machine learning models discovering complex nonlinear interaction effects among customer attributes invisible to manual analysis, enabling micro-segmentation at scales (hundreds to thousands of behavioral segments) infeasible through traditional approaches. Real-time optimization capabilities providing continuous budget reallocation based on performance feedback eliminated the temporal lags inherent in periodic manual reviews, with autonomous systems detecting performance degradation within hours and implementing corrective adjustments without human intervention.

Successful AI marketing implementation requires complementary organizational capabilities spanning technical infrastructure, analytical talent, data governance frameworks, and cultural adaptability that prove substantially rarer, more difficult to develop, and more resistant to imitation than basic technology access through commercial platforms or consulting relationships (Teece, 2018; Chen et al., 2021). These capability requirements create performance heterogeneity across organizations despite widespread AI technology availability, with some organizations achieving dramatic effectiveness improvements while others experience disappointing outcomes or outright failures despite implementing superficially similar technical systems and investing comparable financial resources (Puntoni et al., 2021; Davenport et al., 2020). Implementation experiences reveal that capability deficiencies in any single domain create binding constraints that limit overall system effectiveness regardless of strengths in other dimensions.

Cultural adaptability encompassing organizational willingness to embrace data-driven decision-making that potentially conflicts with hierarchical authority and experienced

intuition, tolerance for experimentation including acceptance that systematic testing inevitably produces some failed experiments, and cross-functional collaboration breaking down traditional silos between marketing, technology, and analytics functions proves surprisingly difficult despite widespread rhetorical commitment to data-driven approaches (Huang & Rust, 2021; Kannan, 2017). An automotive implementation encountered profound initial cultural resistance when experienced marketing managers accustomed to autonomous decision authority actively resisted algorithmic recommendations that conflicted with their intuitive judgments built through years of industry experience (Grewal et al., 2020). Navigating this tension between algorithmic recommendations and managerial intuition required careful change management rather than heavy-handed mandates, with executive sponsorship from C-suite levels proving absolutely critical for cultural transformation by consistently reinforcing data-driven principles through words and highly visible actions (Herhausen et al., 2024; Chen et al., 2021).

Discussion

Rarity analysis proves substantially more nuanced than superficial technology access considerations might suggest, requiring careful distinction between widely available technological artifacts versus genuinely scarce organizational capabilities and accumulated assets (Grewal et al., 2020; Herhausen et al., 2024). The findings support the view that sustainable competitive advantage from AI marketing derives less from algorithmic sophistication per se, which competitors can replicate through vendor relationships or talent acquisition, than from complementary organizational assets accumulating slowly through sustained investment. Proprietary customer data repositories built through years of interaction histories constitute the most defensible asset, as competitors cannot rapidly acquire equivalent datasets without comparable customer relationships. The fashion retailer case illustrates this principle: the 847 micro-segments identified by the AI system required three years of granular behavioral data collection that new market entrants or competitors with less mature data

infrastructure could not replicate quickly. Similarly, organizational routines embedding AI insights into operational decision processes develop through extended cultural transformation, not mere technology deployment. The automotive manufacturer case revealed that achieving cultural acceptance of algorithmic recommendations required 18 months of change management, executive sponsorship, and iterative trust-building, organizational capabilities far more resistant to imitation than technical architectures competitors can observe and copy. This interpretation aligns with Barney's (1991) VRIN framework: while AI algorithms are increasingly non-rare due to commercial platform availability, the complementary assets enabling effective deployment remain rare, inimitable due to social complexity and causal ambiguity, and non-substitutable in achieving comparable performance outcomes.

The transition from retrospective performance measurement to predictive analytics represents a fundamental shift in how marketing creates competitive advantage. Traditional measurement systems operated as diagnostic tools documenting past performance, introducing temporal lags between strategic decisions and corrective adjustments that allowed competitors to observe and respond to successful initiatives. The implementations examined demonstrate that predictive analytics transforms measurement into a prescriptive system enabling preemptive optimization. The continuous learning mechanisms documented, where conversion rates improved 3–5% quarter-over-quarter through accumulated experience, exemplify what Teece (2018) terms dynamic capabilities: organizational capacities to sense environmental changes, seize opportunities through resource reconfiguration, and transform operations as conditions evolve. Organizations achieving this prospec-

tive orientation establish moving-target advantages: by the time competitors replicate current capabilities, leaders have advanced further through continuous learning cycles. However, this advantage remains contingent on sustained investment in sensing mechanisms (monitoring prediction accuracy, feature drift, competitive actions), seizing capabilities (automated retraining pipelines, experimentation frameworks), and transforming capabilities (organizational willingness to evolve processes as AI systems uncover new insights). Organizations lacking these dynamic capabilities risk advantage erosion as static AI implementations depreciate through environmental change and competitive diffusion.

Conclusion

This comprehensive investigation reveals that AI-driven marketing models constitute significant sources of competitive advantage in contemporary global markets when organizations develop integrated capabilities combining algorithmic sophistication with complementary organizational resources including proprietary customer data assets, specialized analytical talent, adaptive organizational cultures, and robust governance frameworks (Barney, 1991; Teece, 2018). The empirical evidence demonstrates substantial, statistically significant, and economically meaningful performance improvements spanning conversion rate gains of 28–35%, customer acquisition cost reductions of 38–47%, and marketing return on advertising spend increases of 48–62% compared to conventional marketing approaches, with improvements documented consistently across diverse implementations spanning retail, automotive, financial services, and technology sectors in North American, European, and Asia-Pacific markets (Davenport et al., 2020; Huang & Rust, 2021; Verhoef et al., 2021).

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