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AGILE AND ETHICAL IMPLEMENTATION OF AI FOR SUSTAINABLE MARKETING STRATEGIES

Milica Balaban[1]*,
Slavko Alčaković[2]

[1]PhD candidate,
Singidunum University,
Belgrade, Republic of Serbia

[2]Singidunum University,
Belgrade, Republic of Serbia

Abstract:

Artificial intelligence is transforming marketing through enhanced personalization, automation, and predictive analytics, providing new opportunities for business agility. However, organizations face a critical challenge when rapidly deploying AI (Artificial Indigence) while upholding ethical and sustainable practices. This research examines how marketing professionals balance the need for speed and innovation with responsible AI implementation. By surveying 60 marketing practitioners, this study identifies common strategies and best practices that promote both agility and ethical, sustainable outcomes in AI-driven marketing. Initial analysis suggests that clear ethical guidelines, cross-functional oversight, and continuous training are key to achieving agility without compromising integrity. The findings are presented in a practical framework of best practices and recommendations, demonstrating that ethical AI practices can increase business agility in a competitive marketing environment.

Keywords:

AI marketing, business agility, ethical AI, sustainable marketing.

1. INTRODUCTION

The marketing landscape has been gradually undergoing digital transformation, particularly since the emergence of big data (Akter *et al.*, 2022). Artificial intelligence (AI) is now at the forefront of this transformation, reshaping marketing through data-driven personalization, automation, and predictive analytics, and promising significant gains in efficiency and responsiveness (Islam *et al.*, 2024). The theoretical foundations of artificial intelligence in marketing have evolved from traditional marketing paradigms toward sophisticated, data-driven approaches that fundamentally alter the marketer-consumer relationship. Kumar and Reinartz (2016) conceptualize AI marketing as the systematic application of machine learning algorithms, natural language processing, and predictive analytics to automate and enhance marketing processes. This conceptualization represents a paradigmatic shift from transactional marketing models toward relational, predictive frameworks that leverage vast datasets to anticipate and influence consumer behavior.

Correspondence:
Milica Balaban

e-mail:
milica.balaban.24@singimail.rs

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Given the increasing integration of AI within marketing, academic and industry research have both highlighted the significant potential of AI-enabled systems to deliver tailored consumer experiences, optimize resource allocation, and drive strategic innovation. These new capabilities are fundamentally important as they offer marketing organizations the agility required to thrive in rapidly changing environments and to address evolving consumer expectations. The significance of this research area is underscored by the scope and speed at which AI technologies are being adopted, making it one of the most dynamic and consequential domains in modern business practice. As AI continues to transform marketing, both researchers and experts are drawn to the complex interaction of technological capabilities, organizational agility, and governance frameworks that ultimately influence marketing performance and societal outcomes.

What makes this topic particularly interesting and urgent is the dual imperative for agility and ethics in implementing AI for marketing. While AI promises substantial competitive advantages, its rapid evolution raises profound ethical concerns, including issues related to data privacy, algorithmic bias, lack of transparency, and the generation of misleading predictions (Elliott & Soifer, 2022). In this context, the managerial challenge is to achieve business agility, especially the ability to adapt, innovate, and respond to market changes, without compromising ethical and sustainable standards. Addressing this challenge is crucial for organizations intent on promoting transparency, accountability, and sustainable value creation.

This article addresses these pressing issues by examining how marketing practitioners balance speed and innovation with responsible AI implementation, and by deriving a set of best practices that align ethical governance with agile execution. Specifically, the study aims to connect the theoretical takeaways from the literature with empirical evidence on agile and ethical implementation in the current marketing practice. In the first part, the paper reviews the academic and managerial literature that addresses both the opportunities and the ethical issues raised by AI in marketing. The second part presents the primary research results that showcase the strategies, barriers, and success factors in real-world implementation. The paper concludes with a discussion, recommendations, and directions for future research.

2. LITERATURE REVIEW

2.1. ARTIFICIAL INTELLIGENCE IN MARKETING

Artificial intelligence (AI) has expanded the range of use cases, offering powerful solutions across the marketing discipline. In addition to common applications such as customer segmentation and predictive analytics, AI is utilized for customer lifetime value modeling, where machine learning identifies high-value clients and predicts churn, enabling firms to tailor retention strategies more precisely (Davenport *et al.*, 2020). AI-driven sentiment and emotion analysis use natural language processing to decode brand perception from large volumes of social media, online reviews, and customer interactions, giving marketers richer insights into both explicit and implicit attitudes (Huang & Rust, 2021). Computer vision enables the analysis of product placements and shelf-monitoring in retail images, increasing brand auditing and in-store optimization. AI-powered dynamic pricing systems use real-time demand and competitor data to automatically adjust product prices, improving revenue management and adaptability to changing market conditions (Kumar, 2021). Another case is in programmatic advertising, where AI continuously optimizes ad placement, creative messaging, and bidding strategy to maximize campaign outcomes and minimize wasted spend. AI is also pivotal in automating and personalizing the customer journey mapping process, allowing organizations to deliver contextually relevant experiences across channels based on individual preferences and behaviors. Chatbots and conversational agents have become mainstream, supporting customer service, resolving common inquiries, and guiding purchase decisions with growing sophistication (Deckker & Sumanasekara, 2025). Finally, fraud detection and prevention use machine learning to identify abnormal patterns in online transactions or ad clicks, protecting firms and customers from security breaches. Despite these wide-ranging applications, scholars warn that the complexity of integrating AI tools, ensuring model transparency, and safeguarding ethical standards remain significant obstacles that require ongoing attention from researchers and practitioners alike (Deckker & Sumanasekara, 2025).

2.2. ETHICAL RISKS

Many leading scholars have investigated the ethical risks of AI in marketing, with research focusing on key concepts such as bias, transparency, data privacy, and fairness.

Zuiderveen Borgesius (2018) highlights how algorithmic marketing systems can discriminate against individuals based on factors like gender or socioeconomic status, making bias detection and mitigation a priority for ethical AI use. Mehrabi *et al.* (2021) provide a comprehensive survey demonstrating how biases can be introduced through data selection, feature engineering, or training processes, ultimately influencing marketing outcomes and potentially perpetuating societal inequalities. Acquisti *et al.* (2020) address the concept of privacy as a tension between personalization benefits and the risks associated with extensive data collection. Their research points to growing consumer unease and regulatory scrutiny as data-driven marketing relies on increasingly granular personal information, requiring firms to develop robust privacy strategies. Burrell (2016) introduces algorithmic opacity, explaining that the complexity and proprietary nature of many AI models make their decision processes difficult to interpret or audit. Doshi-Velez & Kim (2017) expand on interpretability, advocating for transparent explanations so that stakeholders understand and trust automated marketing decisions. Dignum (2018) and Floridi *et al.* (2018) examine frameworks for governing AI ethically, highlighting the importance of interdisciplinary collaboration, principle-based design, and ongoing auditing to ensure fairness, accountability, and responsible innovation in marketing contexts. These frameworks guide both the design and deployment stages, stressing that ethical AI requires continuous oversight.

Cowgill & Tucker (2020) set a research agenda for assessing algorithmic fairness, arguing that without deliberate checks, marketing algorithms may unintentionally amplify stereotypes or structural injustices. Their work links algorithmic outcomes to broader societal effects, making fairness central for ethical AI.

2.3. ORGANIZATIONAL AGILITY

Organizational agility, defined as the ability to sense and interpret environmental shifts and rapidly adapt through resource and strategic reconfiguration (Sambamurthy *et al.*, 2003), has gained new depth in the era of digital transformation. Artificial intelligence (AI) enhances agility by automating decision-making, enabling real-time analytics and scenario modeling, and allowing firms to anticipate market changes with greater speed and precision (Kraus *et al.,* 2021). Through machine learning–driven experimentation, cross-functional teams can test products, customer segments, and marketing approaches in short cycles, embedding a "fail fast, learn fast" ethos central to agile practice (Rasmussen & Ulrich, 2023).

AI integration into operations, including supply chains, resource allocation, and dynamic pricing, further supports adaptive responses to volatile markets by providing granular, data-informed adjustments that optimize workflows and strategic planning (Nguyen *et al.*, 2024). Enhanced natural language processing and computer vision similarly deliver real-time insights into customer sentiment, competitive dynamics, and societal trends, strengthening adaptive decision-making.

Scholars emphasize that successful translation of AI into agility depends not only on technology but also on supportive organizational culture, openness to change, digital literacy, and cross-disciplinary collaboration, as well as measurement systems that prioritize learning and responsiveness (Kraus *et al*., 2021; Rasmussen & Ulrich, 2023). Yet technology alone is insufficient: long-term agility requires adaptive leadership, systematic integration of AI insights into routines, and ethical governance to mitigate risks such as bias and unintended consequences (Nguyen *et al*., 2024). In sum, AI functions both as an enabler and a test of agility, delivering performance gains to firms that combine technological innovation with cultural, structural, and ethical adaptation (Rasmussen & Ulrich, 2023; Sambamurthy *et al*., 2003).

2.4. INTEGRATING ETHICS AND AGILITY

Integrating ethics and agility in AI-driven organizations is increasingly viewed as mutually reinforcing rather than competing priorities (Lane *et al.*, 2024; Cockburn *et al.*, 2020). Governance, when embedded "by design" can enhance responsiveness, reduce rework, and mitigate reputational or regulatory risks (Cockburn *et al.*, 2020; Lane *et al.*, 2024).

Harvard Business School research emphasizes that as AI integration expands, issues of safety, morality, and velocity become central (De Freitas *et al.*, 2024). Ethical imperatives such as clear roles, interpretable models, and an AI-literate workforce are also enablers of agility, ensuring human oversight and real-time responsiveness (Lane *et al.*, 2024). This aligns with the responsible-innovation paradigm, which prioritizes anticipation, reflexivity, inclusion, and responsiveness (Stilgoe *et al.*, 2013).

Studies of agile, iterative human–AI collaboration further indicate that ethical judgment combined with rapid prototyping produces more innovative and feasible outcomes (Lane *et al.*, 2024). Responsible innovation, however, requires inclusive oversight, accountability mechanisms, and continuous training to address evolving risks (Nagle *et al.*, 2025). Case studies, such as those on generative search optimization, show that without anticipatory governance, agile practices may drift into ethically ambiguous territory (Lakkaraju & Kumar, 2024).

Overall, current literature underscores the convergence of ethics and agility: robust frameworks and iterative practices are not only compatible but interdependent. Embedding ethics through proactive oversight, continuous learning, and intentional design ensures that speed and responsibility co-exist in AI-enabled transformation (Lane *et al.*, 2024; De Freitas *et al.*, 2024).

3. METHODOLOGY

This research examined how marketing teams in Belgrade, Serbia, implement artificial intelligence (AI) in an agile and ethical manner. A study was conducted in September 2025 using a structured questionnaire as the primary data collection tool. The instrument combined closed and open-ended items covering four domains: (1) the extent and nature of AI use in marketing, (2) ethical challenges such as bias and privacy, (3) the application of agile methods, and (4) perceived outcomes and challenges.

The study surveyed 60 respondents representing a diverse cross-section of industries, organizational sizes, and professional experience levels, ensuring breadth in perspectives on AI adoption in marketing. Data were analyzed using descriptive statistical methods to summarize response distributions and identify trends in AI adoption, ethical guideline implementation, and impacts on agility and performance. Open-ended responses were thematically reviewed to complement quantitative findings and highlight best practices. The study adhered to ethical standards: respondents were informed of the research objectives, provided informed consent, and their anonymity was ensured.

4. RESULTS

The demographic profile of the survey sample reflects diversity in professional roles, experience, industries, and organizational size. Respondents most frequently identified as Marketing Managers (18.3%) or Digital Marketing Specialists (18.3%), followed by AI/Data Analytics Specialists and Marketing Directors/VPs (13.3% each). Smaller shares were Chief Marketing Officers (6.7%) and Campaign Managers (5.0%), while the remaining quarter of participants held other marketing-related positions.

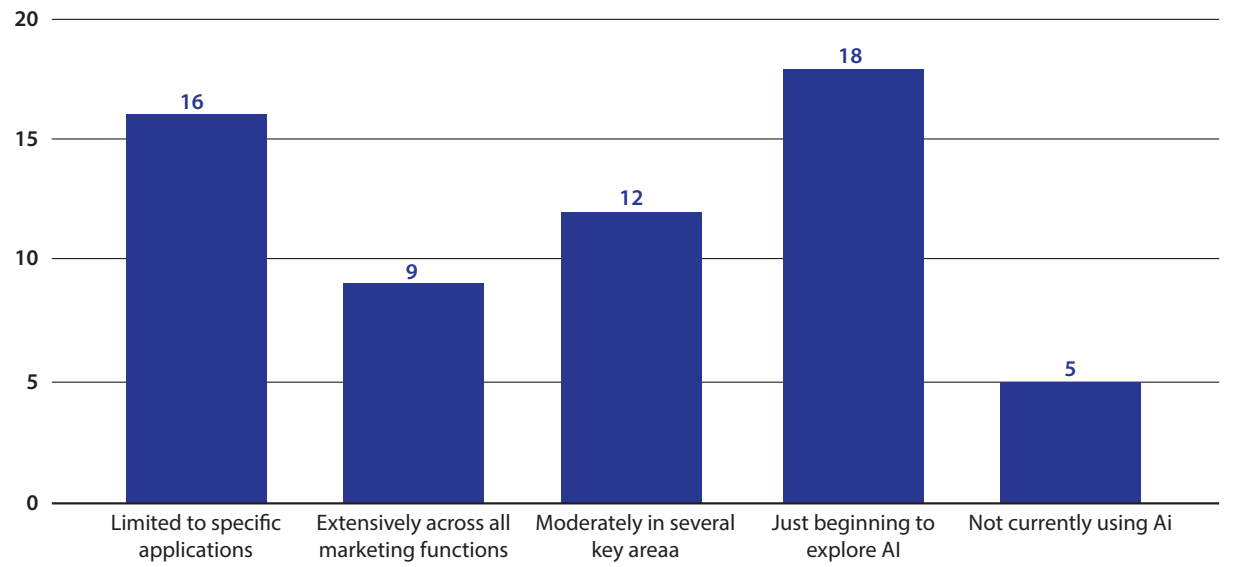
In terms of professional experience, 8.3% of respondents spent less than two years in marketing, while 23.3% reported two to five years. The majority clustered in mid-career, with 31.7% having six to ten years of experience and 23.3% reporting eleven to fifteen years. A further 13.3% had been in the field for more than fifteen years, ensuring representation across different career stages.

The sample also spanned multiple industries, with retail and e-commerce (21.7%) and technology (18.3%), followed by healthcare and manufacturing (15% each). Media and entertainment, as well as professional services, each accounted for 10% and financial services for 8.3%.

Organizational size varied, though small enterprises (1–50 employees) were most strongly represented (40%). Medium-sized firms (51–250 employees) comprised 30% of participants, while larger organizations (251–1000 employees) accounted for 15%.

The study indicates that AI adoption in marketing among Serbian organizations is growing but remains uneven. While 8% of organizations report no experience with AI, 30% are at the exploratory stage and 26.7% apply it in limited functions. Moderate, multi-functional use is reported by 20%, and only 15% demonstrate extensive, integrated adoption. These results align with global research, which similarly finds that AI's potential frequently outpaces its systematic application.

Figure 1. Extent of AI usage in Marketing

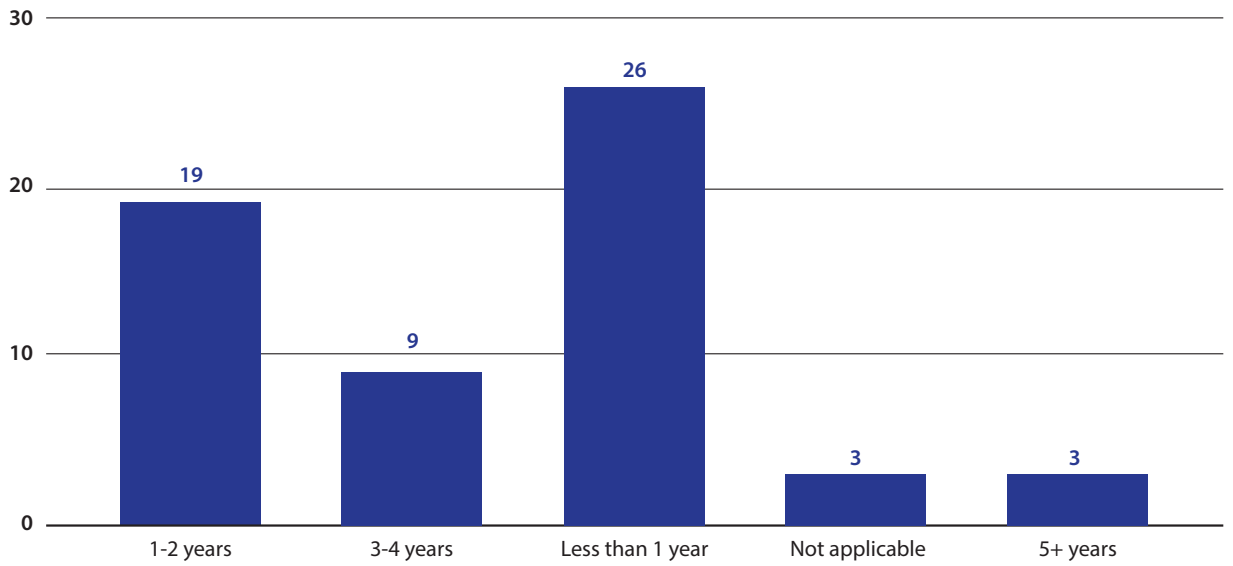


Source: Authors' data

Current applications are concentrated in content generation and communication. Social media content creation is the most common use case (48%), closely followed by email automation (46.7%) and personalized recommendations (43%). Chatbots (40%) and AI-driven customer segmentation (36.7%) are also prevalent, while ad optimization (31.7%), predictive analytics (21.7%), lead scoring (16.7%), and dynamic pricing (13.3%) remain less common. Additionally, 18% of organizations use specialized AI tailored to their contexts.

Adoption is relatively recent, with 75% of organizations introducing AI tools within the past two years, of which 43.3% have less than one year of experience. Only 15% have used AI for three to four years, and 5% for more than five years. This reflects both the accessibility of AI and the ongoing challenges of governance and organizational learning.

Figure 2. Lenght of AI usage in Marketing



Source: Authors' data

Ethical governance structures are underdeveloped. Only 30% of organizations report having AI-specific guidelines, and just 6.7% describe them as comprehensive. A third of organizations have no guidelines, while others are in planning (21.7%) or development stages (15%). This absence leaves many teams without systematic frameworks, and 25% cite unclear rules as a barrier to adoption. Training is similarly weak: half of respondents report none, and only about 20% offer regular formal programs. Informal practices or occasional workshops are used in some cases, but remain insufficient.

Where guidelines exist, they are often seen as moderately effective (40%) or only slightly effective (25%). Nevertheless, key ethical concerns are widely recognized. Data privacy (70%), security (58.3%), and human oversight (56.7%) were prioritized most, while accountability (36.7%), transparency (33.3%), and bias prevention (31.7%) ranked lower. This suggests regulatory compliance pressures, especially GDPR, dominate over fairness concerns.

Respondents identified major barriers, including privacy compliance (over 50%), lack of expertise (38.3%), regulatory uncertainty (30%), system integration difficulties, and tensions between personalization and privacy (28.3% each). Resource constraints and algorithmic bias were also noted.

Cross-functional collaboration practices remain limited. Formal committees exist in only 8.3% of organizations and regular informal cooperation in 11.7%. Most collaboration is project-based (28.3%) or rare (21.7%), while 30% report none. Marketing and IT departments are most frequently engaged, with customer service and sales also common (>40%). Legal/compliance and executive leadership are less involved.

Perceptions of collaboration were mixed: 43% reported improvements in both efficiency and ethical quality, while some noted trade-offs, with either speed (16.7%) or oversight (11.7%) compromised. A minority (6.7%) viewed collaboration as causing delays. These results stress the need for clear communication and structured processes.

Efforts to align agile development with ethics remain nascent. Proactive compliance strategies (45%) and customer feedback loops (42%) are most used, while training, oversight, and scenario planning appear in about one-third of organizations. Agile-specific "ethical review processes" are rare (17%).

Reported outcomes are modest but generally positive. Around 35% of organizations observed moderate performance improvements and 13.3% significant gains, while negative effects were rare. Nevertheless, 31.7% stated it was too early to assess outcomes. Customer trust followed the same pattern: 41.7% reported increases, 20% no change, 6.7% decreases, and 28.3% deemed it premature to evaluate. These findings suggest transparency and ethical use of AI can support trust and performance, though impacts remain uneven.

Challenges continue to center on governance, expertise, data management, and regulatory clarity. While most report only minor or moderate delays, 8.3% faced severe disruption, though 5% considered the challenges drivers of agility. Organizations highlighted the need for clearer guidelines (60%), enhanced training (53%), compliance tools, specialist advice, and executive support. Smaller organizations particularly stressed practical examples and case studies.

Looking ahead, 73% of respondents expect ethical considerations in AI marketing to become increasingly important in the next two to three years, with very few anticipating decline. This reflects a consensus that ethical vigilance will be essential as AI is becoming widely used in marketing.

In summary, Serbian organizations are adopting AI in marketing at a growing pace, but full integration and ethical governance remain limited. While early outcomes are positive, sustained progress depends on stronger frameworks, interdisciplinary coordination, and capacity-building to ensure that adoption is both effective and ethically robust.

5. DISCUSSION

The findings indicate that the adoption of AI in marketing is broad but predominantly nascent, with the highest uptake in executional activities (content generation, email automation, chat-based service, and basic personalization), while advanced decisioning (predictive modelling, dynamic pricing, and lead scoring) is less frequently reported. This profile is consistent with the recent diffusion of AI tools (majority adoption ≤2 years) and suggests that implementation has largely preceded the development of institutional capabilities.

A pronounced governance capability gap is evident. Although privacy and security are widely prioritized, formal ethical frameworks remain limited: comprehensive guidelines and systematic training are not yet standard practice, and where guidelines exist, their perceived effectiveness is typically moderate. Reported challenges, privacy compliance, regulatory uncertainty, algorithmic bias, and the tension between personalization and privacy underscore the need to translate ethical intent into operational routines (e.g., privacy-by-design, bias assessment, consent management).

Cross-functional and agile modes of work are beneficial on average, yet their effects are conditional on implementation quality. Where roles, cadence, and checkpoints are clear, respondents report simultaneous gains in delivery speed and ethical assurance. Conversely, diffuse ownership or ad-hoc coordination can produce either speed gains with heightened ethical risk or improved assurance with process delays. Notably, explicitly "agile ethics" mechanisms (iterative ethical reviews, continuous monitoring with pre-agreed mitigations) are underutilized relative to general enablers (proactive compliance, consumer feedback loops).

With respect to outcomes, respondents more frequently report performance improvements and increases in consumer trust than neutrality or decline, although a substantial share considers it too early to determine effects. Obstacles most often result in minor to moderate delays, rather than systematic blockage, suggesting that responsible AI can be reconciled with business agility where governance and capability building proceed in tandem.

6. CONCLUSION

This study provides an empirical overview of AI use in marketing with specific attention to ethical governance, agile practices, and perceived outcomes. The evidence shows: (1) early-stage, execution-oriented adoption of AI; (2) insufficient formalization of ethical governance and training despite high salience of privacy and security; (3) conditionally effective cross-functional/agile collaboration; and (4) generally positive or indeterminate effects on performance and trust, with challenges producing manageable frictions.

Practical implications include the need to: (i) institutionalize proportional ethical governance (clear guidelines, routine training, living playbooks); (ii) embed agile-compatible ethics checkpoints (lightweight pre-launch risk scans, acceptance criteria, continuous monitoring with predefined mitigations); and (iii) address capability bottlenecks (privacy engineering, bias assessment, integration architectures) alongside clearer external guidance and internal resourcing.

The results support a cautiously optimistic conclusion: when ethical governance and technical capacity are operationalized within agile delivery, AI-enabled marketing can achieve commercial objectives while maintaining responsible practice.

LITERATURE

Acquisti, A., Brandimarte, L., & Loewenstein, G. (2020). Secrets and likes: The drive for privacy and the difficulty of achieving it in the digital age. *Journal of Consumer Psychology, 30*(4), 736–758.

Akter, S., Dwivedi, Y. K., Sajib, S., Biswas, K., Bandara, R. J., & Michael, K. (2022). Algorithmic bias in machine learning-based marketing models. *Journal of Business Research, 144*, 201-216.

Burrell, J. (2016). How the machine 'thinks': Understanding opacity in machine learning algorithms. *Big Data & Society, 3*(1), 1–12.

Cockburn, I. M., Henderson, R., & Stern, S. (2018). *The impact of artificial intelligence on innovation* (Working Paper No. 24449). National Bureau of Economic Research.

Stilgoe, J., Owen, R., & Macnaghten, P. (2013). Developing a framework for responsible innovation. *Research Policy, 42*(9), 1568–1580.

Cowgill, B., & Tucker, C. (2020). Algorithmic bias: A research agenda. *Proceedings of the National Academy of Sciences, 117*(48), 30082–30090.

Davenport, T., Guha, A., Grewal, D., & Bressgott, T. (2020). How artificial intelligence will change the future of marketing. *Journal of the Academy of Marketing Science, 48*(1), 24–42.

Deckker, D., & Sumanasekara, S. (2025). The rise of AI in digital advertising: Trends, challenges, and future directions. *International Journal of Research Publication and Reviews, 6*(3), 1788–1799.

De Freitas, J., Uuralp, A. K., Ouz-Uuralp, Z., Paul, L. A., Tenenbaum, J., & Ullman, T. D. (2024). How humans outshine AI in adapting to change. In AI in 2025: A Guide by HBS Working Knowledge (pp. 8–10). Harvard Business School.

Dignum, V. (2018). Ethics in artificial intelligence: introduction to the special issue. Ethics and Information Technology, 20(1), 1–3.

Doshi-Velez, F., & Kim, B. (2017). Toward a rigorous science of interpretable machine learning. Cornell University, arXiv preprint arXiv:1702.08608.

Elliott, D., & Soifer, E. (2022). AI technologies, privacy, and security. *Frontiers in Artificial Intelligence, 5,* 826737.

Floridi, L., Cowls, J., Beltrametti, M., Chia, P., *et al.* (2018). AI4People—An Ethical Framework for a Good AI Society: Opportunities, Risks, Principles, and Recommendations. *Minds and Machines, 28*(4), 689–707.

Huang, M.-H., & Rust, R. T. (2021). Artificial Intelligence in Service. *Journal of Service Research, 24*(1), 3–25.

Islam, M. A., Fakir, S. I., Masud, S. B., Hossen, M. D., Islam, M. T., & Siddiky, M. R. (2024). Artificial intelligence in digital marketing automation: Enhancing personalization, predictive analytics, and ethical integration. *Edelweiss Applied Science and Technology, 8*(6), 6498–6516.

Kumar, V. (2021). A Theory of AI-Based Transformational Marketing: From Decision Support to Autonomous Marketing. *Journal of Marketing, 85*(1), 140–161.

Kumar, V., & Reinartz, W. (2016). Creating enduring customer value. *Journal of Marketing, 80*(6), 36-68.

Kraus, S., Palmer, C., Kailer, N., Kallinger, F. L., & Spitzer, J. (2021). Digital transformation and entrepreneurship: A systematic review of the literature. *Journal of Business Research, 123*, 489–507.

Lakkaraju, H., & Kumar, A. (2024). Gen AI Marketing: How some gibberish code can give products an edge. In AI in 2025: *A Guide by HBS Working Knowledge* (pp. 5–7). Harvard Business School.

Lane, J. N., Lakhani, K., & Zhang, M. (2024). Can AI match human ingenuity in creative problem-solving? In AI in 2025: *A Guide by HBS Working Knowledge* (pp. 2–4). Harvard Business School.

Martin, K., Borah, A., & Palmatier, R. W. (2019). Data privacy: Effects on customer and firm performance. *Journal of Marketing, 81*(1), 36–58.

Mehrabi, N., Morstatter, F., Saxena, N., Lerman, K., & Galstyan, A. (2021). A survey on bias and fairness in machine learning. *ACM Computing Surveys, 54*(6), 1–35.

Nagle, F., Hoffmann, M., Boysel, S., Xu, K., & Peng, S. (2025). Can AI help managers love their jobs again? In AI in 2025: *A Guide by HBS Working Knowledge* (pp. 11–12). Harvard Business School.

Sambamurthy, V., Bharadwaj, A., & Grover, V. (2003). Shaping agility through digital options: Reconceptualizing the role of information technology in contemporary firms. *MIS Quarterly, 27*(2), 237–263.

Stilgoe, J., Owen, R., & Macnaghten, P. (2013). Developing a framework for responsible innovation. *Research Policy, 42*(9), 1568–1580.

Zuiderveen Borgesius, F. (2018). Discrimination, artificial intelligence, and algorithmic decision-making. Council of Europe Commissioner for Human Rights.