NOVA IMS Information Management School

MDDM

Master Degree Program in

Data-Driven Marketing

Unlocking the Potential of Generative AI in Marketing

A Systematic Literature Review and Emerging Dimensions

Danilo dos Santos Belo Mota

Master Thesis

presented as partial requirement for obtaining a Master's Degree in Data-Driven Marketing

NOVA Information Management School

Instituto Superior de Estatística e Gestão de Informação

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by

Danilo dos Santos Belo Mota

Master Thesis presented as partial requirement for obtaining the Master's degree in Data-Driven Marketing, with a specialization in Marketing Research and CRM.

Supervised by

Manuela Aparício, PhD, NOVA Information Management School

November, 2024

STATEMENT OF INTEGRITY

I hereby declare having conducted this academic work with integrity. I confirm that I have not used plagiarism, any form of undue use of information or falsification of results along the process leading to its elaboration. I further declare that I have fully acknowledged the Rules of Conduct and Code of Honor from the NOVA Information Management School.

Lisbon, 30 November 2024

Danilo dos Santos Belo Mota

DEDICATION

À medida que o tempo passa, percebo que o próprio tempo é o maior desafio da minha aprendizagem enquanto ser humano. Diz-se que tudo vem a tempo e no seu tempo. Eu acredito que tudo vem no seu tempo, mas raramente chega a tempo. A vida, em toda a sua imensidão, oferece-nos o maior presente: tempo. Tempo para rir, tempo para chorar, tempo para viver. E, por vezes, falta-nos a vida para acompanhar esse tempo. Dá vontade de pedir um bocadinho de tempo ao tempo. E eu sei o que gostaria de pedir.

Dedico esta etapa a todos aqueles que me inspiraram, mas que não poderei abraçar no seu final. Apesar disso, estão presentes em cada palavra que escrevi, em cada passo que dei, em cada momento de superação que vivi.

Ainda não alcancei plenamente este sonho, mas vou alcançar. E, quando o fizer, desejo que o tempo me conceda um breve instante, um vislumbre do impossível, para que me possam ver a concretizar um dos maiores sonhos da minha vida.

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Aos meus amigos mais próximos e à minha família, obrigado por cada palavra de encorajamento e por nunca vacilarem no vosso apoio.

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ABSTRACT

Generative Artificial Intelligence (GenAI) is revolutionizing the marketing landscape by enabling innovative approaches to content creation, personalization, and operational efficiency, while also presenting challenges related to ethics and consumer trust. This study investigates the integration of GenAI into marketing strategies, focusing on its theoretical and practical implications. A dual-methodology approach was employed: a bibliometric analysis identified key thematic clusters in the field, and a systematic literature review (SLR) guided by PRISMA standards distilled insights from 37 selected publications. The research resulted in the development of the Generative AI Marketing Integration Framework, which comprises eight critical dimensions: Technological Infrastructure, Operational Efficiency, Ethics and Governance, Consumer Perception, Consumer Trust, Personalization, Engagement, and Market Innovation. These dimensions reflect the multifaceted role of GenAI in transforming marketing strategies. The study highlights GenAI's potential to automate processes, foster innovation, and enhance personalized consumer experiences. However, its success is contingent upon implementing ethical safeguards and building consumer trust. Validation interviews with industry professionals emphasized the interplay between theoretical concepts and practical applications, suggesting refinements to the framework to better address real-world challenges. For example, the importance of ethical governance and transparency was consistently noted as essential for ensuring sustainable adoption. This study contributes to the growing body of knowledge on GenAI in marketing by integrating theoretical and practical insights into a robust framework. It underscores the need for marketers to balance technological capabilities with ethical considerations to drive innovation, improve efficiency, and maintain consumer trust. Future research could expand on these findings by exploring industry-specific applications and the long-term impacts of GenAI on marketing strategies.

KEYWORDS

Generative Artificial Intelligence (GenAI); Marketing; Operational Efficiency; Market Innovation

Sustainable Development Goals (SDG):

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LIST OF ABBREVIATIONS AND ACRONYMS

AI	Artificial Intelligence
CRM	Customer Relationship Management
GenAI	Generative Artificial Intelligence
LLM	Large Language Models
PRISMA	Preferred Reporting Items for Systematic Reviews and Meta-Analyses
SLR	Systematic Literature Review

1. INTRODUCTION

According to Google Trends (2024), global search interest in terms like "marketing generative AI" or "generative AI in marketing" emerged in early 2023, with a peak in July and August 2024. It has partially coincided with some big occurrences relevant to the industry: some of the biggest agencies and companies began incorporating generative AI (GenAI) tools into workflows in 2023 and continuing. While GenAI first appeared as a creativity-focused tool – essentially creating text and images – it has since branched out into other areas. As Thormundsson (2024) shows, the earliest applications were centered around artistic endeavors, like generating art or writing, with tools such as ChatGPT and DALL-E 2. Then people started to realize that this tech could be used to scale content creation for businesses, and soon enough, marketers jumped onto the bandwagon, using the powers of AI to make advertising development, social media posts, and even personalized customer experience creation so much easier. By 2023, already 37% of marketers and advertisers were using GenAI in the U.S., making the sector with the highest adoption rate (Statista, 2024). This heightened the technology that could improve efficiency and creativity in customer engagement strategies. At this point, companies like WPP, one of the world's largest advertising agencies, entered partnerships with Nvidia to push the boundaries of AI-powered content creation (Dencheva, 2024). Consequently, with the growing competition for audience attention, GenAI's ability to craft personalized and dynamic content will only further cement its role in the future of marketing.

While GenAI is being adopted at an explosive rate, recent research calls for a deeper look at what this technology means practically to marketing and the ethical implications. Kshetri et al. (2023) also discussed some of the challenges that need to be overcome: consumer trust and data privacy issues. On the other hand, Gupta et al. (2024) raise ethical concerns related to AI adoptions in marketing practices. At the same time, Hartmann et al. (2024) recommend researching how GenAI affects consumer behavior and productivity, while Islam et al. (2024) focus on scaling up content creation and personalization. Regarding scholarly research, Soni (2023) emphasizes the need to analyze barriers to the adoption of GenAI in digital marketing campaigns; Acar (2024) discusses the potential role it may play in marketing education, with special reference to AI-powered tools for marketing analytics. Aggregated, these studies have underlined some limitations in knowledge of ethical, personalization, and educational impacts that GenAI has produced on marketing practices.

While GenAI paradigm is basically revolutionizing the marketplace of how marketing is practiced, the broader implications for consumer engagement, ethics, and education have yet to be upon us. The rapid development and increasing utilization of AI-generated content and strategies will need an enhanced appreciation of significant challenges and opportunities by marketers and educators.

This research aims to address the following objectives:

RO1: Understand the usage of GenAI in Marketing area, particularly in literature.

RO2: Identification of the main dimensions of Marketing that apply GenAI.

This study adopts a two-phased methodological approach: conducting a bibliometric analysis and a Systematic Literature Review (SLR) conducted by PRISMA guidelines. This ensures the analysis of GenAI role in marketing is conducted with rigor, transparency, and replicability to meet the research objectives.

The bibliometric analysis serves as the first phase, mapping the broader research landscape of GenAI in marketing. By analyzing keyword co-occurrence networks from 123 publications in the SCOPUS database, this phase identifies dominant themes, trends, and interconnections. Tools such as VOSviewer visualize keyword clusters, revealing the intellectual structure of the field. This approach helped pinpoint key focus areas such as ethics, personalization, and operational efficiency, which guided the subsequent study phases. Furthermore, the bibliometric analysis ensures the research is anchored in the most relevant and high-impact areas of academic discussion.

Complementing the bibliometric analysis, the PRISMA-guided SLR focuses on depth and specificity. While the bibliometric analysis provides an overview of the field, the SLR narrows its scope to 37 rigorously selected publications that directly explore the application of GenAI in marketing. This dual approach ensures the study captures both the breadth of the research landscape and significant depth in key areas. The PRISMA methodology guarantees transparency, reproducibility, and a structured process for filtering and analyzing studies, aligning with the goal of comprehensively understanding the practical and theoretical implications of GenAI.

The structure of this dissertation is designed to ensure coherence and comprehensive coverage of the research topic. Starting with the introduction, the exploratory literature review uses a co-occurrence analysis to map key topics within the GenAI and marketing domain. This is followed by an SLR that outlines the methodology used for identifying and selecting relevant studies, detailing the inclusion and exclusion criteria. The critical analysis section then explores the key dimensions of GenAI in marketing, including content creation, consumer trust, operational efficiency, ethical challenges, personalization, and technological advancements. The next section presents and validates a theoretical framework based on conceptual dimensions and their interrelationships, supported by insights from expert interviews. Finally, the thesis concludes by summarizing the findings, discussing both theoretical and practical implications, and suggesting avenues for future research. This structured approach ensures a logical progression from broad exploratory insights to focused, actionable contributions.

2. EXPLORATORY LITERATURE REVIEW

The swift adoption of GenAI in marketing has captured widespread attention from both academics and industry professionals. This convergence of advanced AI technologies with marketing strategies is transforming how brands connect with consumers, enhance campaign performance, and drive innovation. Given the expansive and dynamic nature of GenAI applications in marketing, a thorough and systematic review of the research landscape is essential to uncover key topics, emerging trends, and opportunities for future exploration.

2.1 Co-occurrence Analysis based on All Keywords

To map the intellectual landscape of this interdisciplinary field, a bibliometric analysis was conducted using the SCOPUS database related to the literature review about marketing and GenAI. With the search terms “marketing” AND “generative AI” OR “GenAI” OR “gai”, 123 results were obtained in all types of publication from the entire database with no defined time frame. The corpus included 63 journal articles, 2 books, 12 book chapters, 29 conference papers, 6 conference reviews, 3 editorials, 3 notes, and 5 reviews.

After that, the keywords chosen papers underwent through a co-occurrence analysis on VOSviewer, as shown in Figure 2-1. Keywords which occurred at least twice were included in the co-occurrence network. Thus, the number was lowered from 684 keywords found down to 105. What was returned, therefore, was a keyword map showing significant associations among the most used terms that underline the conceptual structure of recent research of GenAI in marketing.

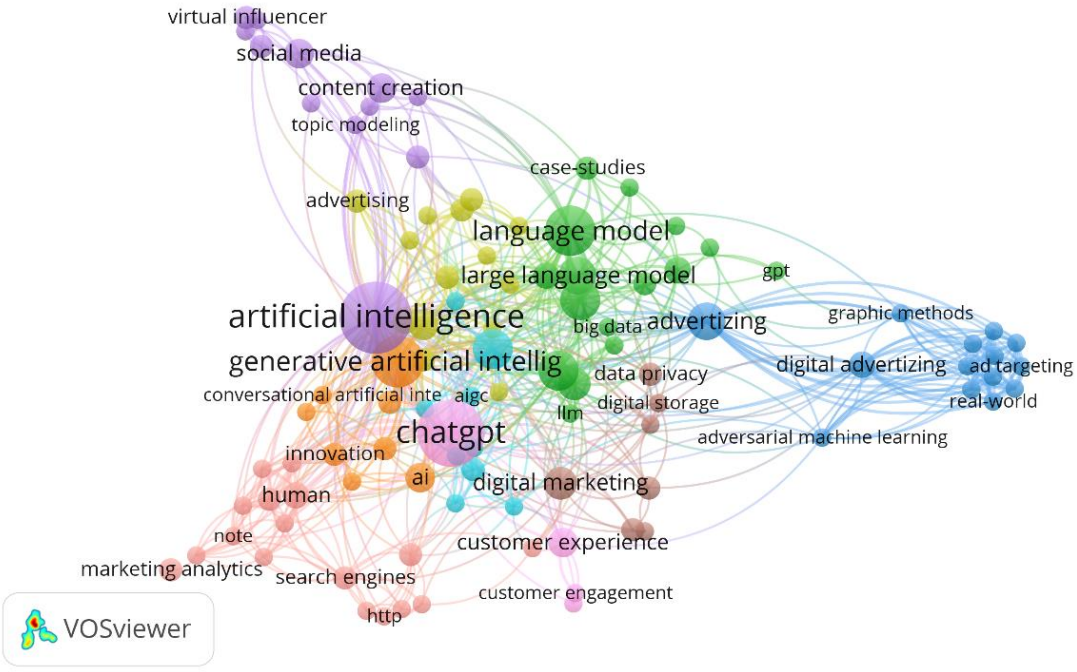

Figure 2-1. Co-occurrence network among all the keywords of 123 publications

A comprehensive compilation of the most frequent keywords for each cluster was conducted, as presented in Figure 2-2. Based on this compilation, appropriate labels were assigned to each cluster, reflecting the terms that most effectively encapsulated their core themes. The labels were carefully selected according to the most significant and interpretative keywords associated with each cluster, ensuring that the central concepts were accurately represented.

The salmon-colored first cluster is **Interaction**-oriented. Some of the major terms include “conversational agents”, “chatbots”, “humans”, and “natural language processing”. AI-driven systems have changed face in human-machine interactions. The current cluster brings the fore that instruments like “chatbots” or “conversational agents” could contribute to marketing strategies, while “natural language processing” may lie in the backbone for refining user experience, gaining trust, and wheels of customer interactions for easier accomplishment.

The second cluster is green, focusing on **Business Innovation**, including terms such as “predictive analytics”, “digital transformation”, “commerce”, and “technology”. That means AI has now become a need for innovating businesses regarding e-commerce related initiatives and product development. Due to the advancement in AI-driven predictive analytics, organizations will be further outcompeting others by optimizing processes, anticipating marketing trends, and offering superior customer experiences based on better and more insightful decision-making.

The third cluster, in blue-green color, tends to be on the **Ethics and Policies** workout. The recurring terms such as “data mining”, “ethical technology”, and “policymakers” suggest the crucial ethical and regulatory challenges of AI technologies. This cluster represents an urge that grows for responsible AI practices when an organization starts feeling the ethical impact of deploying AI into marketing and commerce. At this point, policymakers and business leaders need to work out a way to ensure that artificial intelligence (AI) is implemented in a way that respects privacy while upholding ethical measures.

The fourth cluster is colored citron and spans the domains of **Consumer Insights**. Terms such as “ad targeting”, “advertising”, “computational advertising”, and “user modeling” suggest that this cluster will be about applying AI in improving consumer-to-business understanding and developing effective advertising. AI targeting ads and modeling user behavior helps businesses get the most from their marketing campaigns and make sure these campaigns will be more personalized and relevant to each customer, which leads to higher engagement and even conversion.

The lilac-colored fifth cluster refers to the area of **Data Systems**. Some of the big themes that come across are “large language models”, “machine learning”, and “big data”. This therefore shows a growing reliance on rich AI technologies that perform volumes of data. Thus, this cluster would suggest that AI does not just help organizations keep track of data but shapes how organizations process information, evaluate risk, or make data-driven decisions in their respective pursuits of efficiency and enriched customer experiences.

The sixth cluster, turquoise-colored, focuses on **Social Influence**, where keywords such as "social media", "influencer marketing", and "virtual influencer" have been in use. The latter underlines the idea of AI modifying faces with respect to "content creation" and "influencer marketing". AI-generated content and virtual influencers are about to capture how a brand speaks to an audience through any social media platform. That has been a perfect example of how trends will keep influencing consumer behavior and set a stage for new meanings within digital marketing strategies.

The seventh cluster, colored orange, is all about **Data Governance**. Terms such as "data privacy", "digital storage", and "security risks" point to a growing focus on the importance of responsible data handling in AI-driven marketing frameworks. While AI is getting deeply integrated into marketing frameworks, a host of issues related to "data privacy" and data governance have emerged. It also emphasizes that businesses must balance innovation with proper processes for data handling for them to hold trust and adhere to regulations.

The eighth cluster in tan color reflects research into **Perceived Experience**. "Customer engagement", "customer experience", and even "ChatGPT" are all very talked-about and used terms, yet they point toward the very transformative effect of AI in corporate-customer interactions and industries – such as hospitality and tourism. These instruments have made communication more personalized and relevant. They yield greater "customer experience" with more meaningful levels of engagement exemplified by those AI-enabled instruments. This cluster is representative of the growing importance of AI in creating positive and memorable customer journeys that drive loyalty and satisfaction.

The last, ninth cluster colored pink focuses on **Industry Advancement**. Featured "marketing education" as a single term; thus, showing the role of AI technologies in introducing progress into other industries. This cluster presents an understanding of the fast-paced integration of AI to expand capacities, further efficiency, and new channels of growth in the industry sectors which are getting increasingly dependent on technology to maintain their lead.

Cluster 1 Interaction	Cluster 2 Business Innovation	Cluster 3 Ethics and Policies	Cluster 4 Consumer Insights	Cluster 5 Data Systems	Cluster 6 Social Influence	Cluster 7 Data Governance	Cluster 8 Perceived Experience	Cluster 9 Industry Advancement
adoption	aigc	current	ad targeting	big data	consumption	artificial	chatgpt	marketing
ai	artificial	advertising	adversarial	case-studies	behavior	intelligence (ai)	customer	education
artificial	intelligence	bibliometric	machine	computational	content	data privacy	engagement	
intelligence	technologies	bibliometric	learning	linguistics	creation	digital	customer	
chatbots	commerce	analysis	advertizing	gpt	content	marketing	experience	
conversational	digital	bibliometrics	computational	information	marketings	digital storage	hospitality and	
agents	transformation	analysis	advertising	management	diversity	generative ai	tourism	
conversational	google+	customisation	computational	language model	generative ai	(gai)		
artificial	http	data mining	advertisings	large language	influencer	its applications		
intelligence	marketing	deep learning	digital	model	marketing	llms		
gai	marketing	e-commerce	advertizing	large language	metaverse	openai		
generative	strategy	electronic	graph-based	models	social media	risk assessment		
artificial	online	commerce	graphic	llm	topic modeling	security risks		
intelligence	marketing	ethical	methods	machine	twitter			
hospitality	optimisations	technology	petabytes	learning	virtual			
human	predictive	ethics	privacy	machine-learning	influencer			
humans	analytics	genai	preserving	recommender				
innovation	product design	generative	real-world	systems				
investment	sales	adversarial	user modeling	supply chains				
language	search engine	networks	user modeling					
marketing	optimization	policy makers	user path					
analytics	search engines	social						
natural	students	networking						
language	technology	(online)						
processing								
note								
search engine								
trust								

Figure 2-2. Cluster analysis of co-occurrence network among all the keywords of 123 publications

Figure 2-3 presents the overlay visualization, showing how these clusters have evolved over time. In this visualization, nodes represent prominent keywords, with larger nodes indicating more frequently occurring terms. The colors reflect the timeline of research, with blue indicating earlier studies (2023), transitioning through green, and culminating in yellow for more recent works (late 2023 to early 2024).

The studies that have been conducted within this research landscape in early 2023 are easily identifiable as having a main focus on foundational technologies, digital advertising, and the emergent role of GenAI in marketing. Keywords such as "digital advertising", "graphic methods", and "search engines", in blue, would hint toward an initial drive to make sense of the technological underpinning of AI and how these may be leveraged to maximize efficiency in marketing and automate routine tasks.

While research gradually evolved, as identified by the transition into green and yellow nodes, the topics have shifted to "social media", "content creation", and "influencers". This shift in trend has indicated an increase in the importance of social influence and the usage of social media marketing in research findings of mid-2024. The keywords of Cluster 6 – "social media", "content creation", and "virtual influencers" – prove the extension of the influence of AI into the use of influencer-driven approaches whereby AI-created content and virtual influencers have become important levers to shape strategic approaches towards consumer engagement.

The evolution points toward the evolutionary shift in how AI marketing research has moved from pure technological optimization to more subtle understandings of the societal impact,

data governance, and regulatory frameworks. As companies adopt AI for marketing, the need to balance technological advancement with responsible practices has become increasingly evident, underscoring the critical role of ethical policies and social responsibility in the adoption of GenAI in marketing.

As time passed by, moving from a focus on "digital advertising" in 2023 to "virtual influencer" in 2024, reflects a significant shift in GenAI research. Initially centered on technological optimization and foundational applications, it now emphasizes AI's transformative impact on modern marketing strategies. Moreover, this progression highlights the need for a balanced approach to innovation. While GenAI offers unprecedented opportunities, integrating these technologies responsibly is essential to address societal and regulatory concerns effectively. This balance ensures that advancements in AI continue to align with ethical and sustainable practices in marketing.

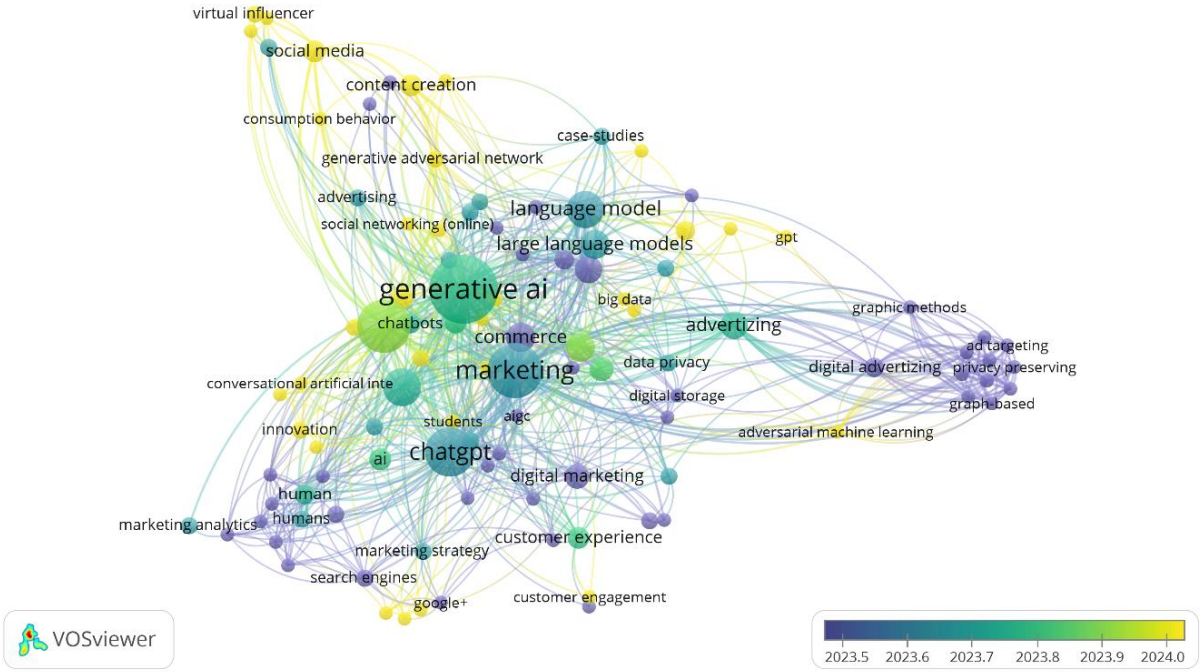

Figure 2-3. Co-occurrence overlay among all the keywords of 123 publications

3. SISTEMATIC LITERARURE REVIEW

An SLR was conducted, in accord with the PRISMA guidelines on comprehensive, transparent, and methodical identification, screening, and selection of relevant studies concerning the application of GenAI in marketing. In fact, the SLR is to achieve the following research objectives:

RO1: Understand the usage of GenAI in Marketing area, particularly in literature.

RO2: Identification of the main dimensions of Marketing that apply GenAI.

This methodology outlines a rigorous approach to identifying and screening literature relevant to the usage of GenAI in marketing. By following this framework, the review contributes to both the credibility and precision of findings, while also highlighting relevant topics and gaps in the literature. PRISMA helps ensure transparency, replicability, and comprehensiveness in SLR; its checklist and flow diagram guided this study's reporting of search strategies, inclusion and exclusion criteria, and the critical appraisal of identified studies (Moher et al., 2009). This rigorous process enabled the identification of 37 highly relevant publications from an initial dataset of 123, forming the theoretical foundation for the Generative AI Marketing Integration Framework.

3.1 SEARCH STRATEGY

The search for relevant literature was conducted using the SCOPUS database, for which access was obtained on October 14, 2024. In fact, the review covers publications ranging from 1986 to 2024 but will focus on the most recent ones, going from 2023 to 2024, to capture state-of-the-art developments in GenAI within the marketing sector. The keywords used have been "marketing" AND "generative AI" OR "GenAI" OR "gai." A total number of 123 publications were derived from that search.

3.2 INCLUSION AND EXCLUSION CRITERIA

In line with the research objectives, a set of inclusion and exclusion criteria was established to ensure the relevance of the selected studies. In this regard, the selection criteria required that publications deal with the aspect of GenAI applied to the marketing domain and its relationship to the essential aspects of marketing. Further, only articles and conference papers published in reviewed journals and written in English were included, limited to the period between the years 2023 and 2024.

Conversely, several exclusion criteria were applied. Publications were excluded if they focused on sectors outside marketing, such as finance, health, or education and those that focused on the technological advancement of AI systems, with no elaboration on its applicability in marketing. There is also general literature about AI that does not relate to GenAI. Also,

publications such as books, book chapters, conference proceedings, editorials, notes, and reviews, were removed from the selection process.

3.3 Screening and Selection Process

The screening process began with the initial identification of 123 publications. Of these, 36 publications were excluded during the initial review based on the inclusion and exclusion criteria. Three publications were discarded for not being written in English, and older publications were removed for being published before 2023. Furthermore, based on the type of publication, two books, twelve book chapters, six conference reviews, three editorials, two notes, and five reviews were excluded out of the study.

Following this, the titles and abstracts of the remaining 87 publications were screened. That resulted in the exclusion of 45 studies unrelated to marketing sectors or dealing with general AI topics without addressing GenAI in marketing. This screening process was guided by the aim of concentrating on literature that discussed specific marketing applications of GenAI, such as advertising, branding, CRM, and personalization.

At the final stage of the selection process, after reviewing all titles and abstracts, 42 publications were initially identified as meeting the inclusion criteria. However, five of these publications were unavailable and, therefore, excluded from the literature review. This resulted in a final selection of 37 publications. Among the included works, certain studies, such as Almeida et al. (2024), which examined the impact of GenAI in hotel marketing, were included due to their relevance in offering broader insights into marketing applications beyond their specific context. Each selected publication was deemed to provide significant contributions to the research objectives, particularly in discussing the practical applications of GenAI in marketing.

Figure 3-1 illustrates the flowchart detailing the steps in the identification, screening, and selection of studies for the SLR.

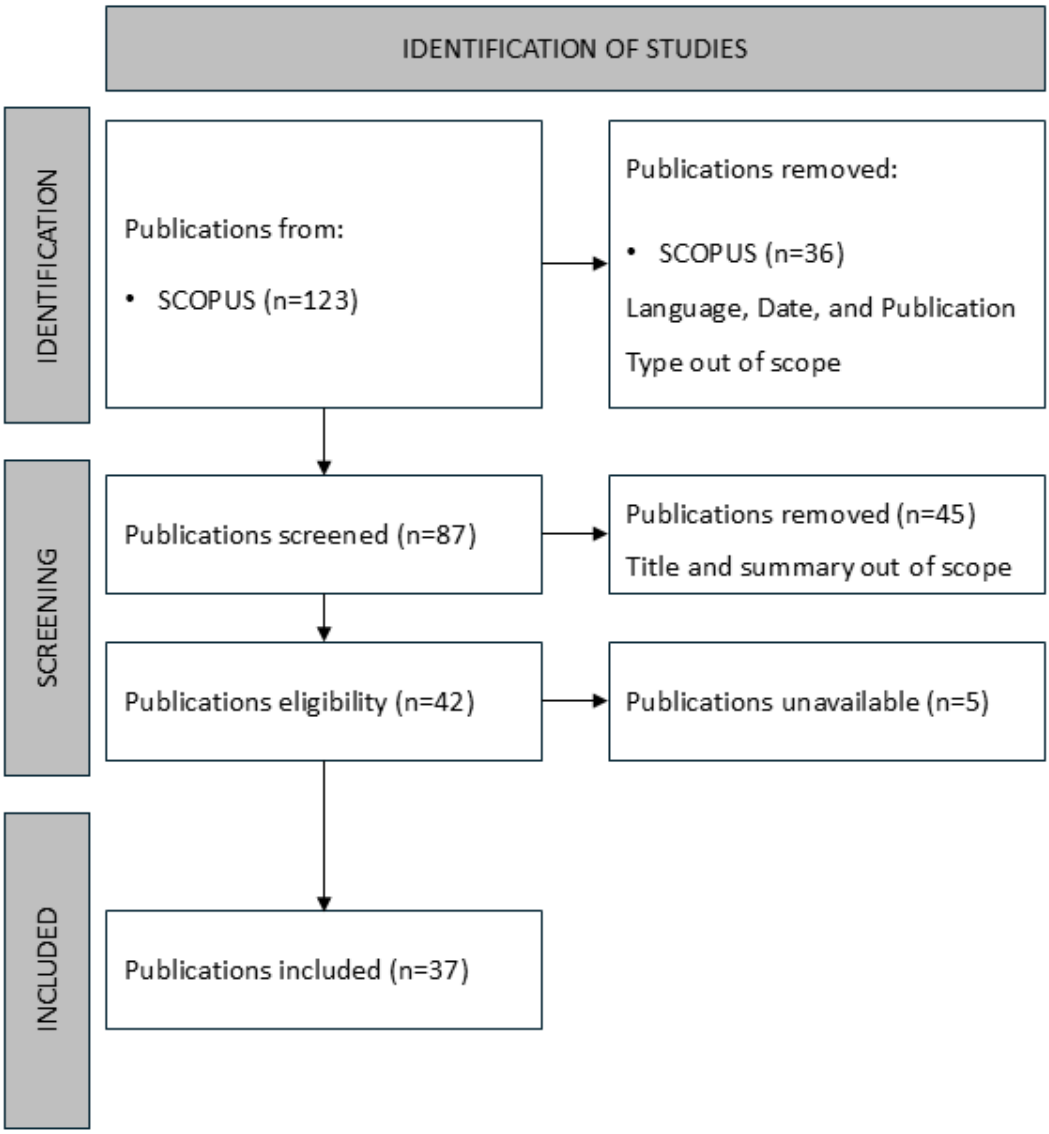

Figure 3-1. PRISMA information flowchart

The main topics of the selected publications cited on Table 3-1 and reviewed in detail in the Appendix A include Consumer Perception and Trust (e.g., Aldaihani et al., 2024; Zhou et al., 2023), Adoption Drivers and Barriers (e.g., Kuang et al., 2024; Sands et al., 2024), Operational Efficiency (e.g., Crisp et al., 2024; Gude, 2023), Ethical and Regulatory Challenges (e.g., Lee et al., 2024; Ziakis & Vlachopoulou, 2024), Content Quality and Engagement (e.g., Capone et al., 2024; Sigala et al., 2024), Personalization and Customer Experience (e.g., Ferraro et al., 2024; Vice et al., 2024), and Technological Advancements (e.g., Spence & Keller, 2024; Tafesse & Wien, 2024). These clusters represent the primary impact factors of GenAI in marketing.

Table 3-1. Selected publications for the systematic literature review

Selected publications
Aldaihani, F. M. F., Islam, M. A., Saatchi, S. G., & Haque, M. A. (2024). Harnessing green purchase intention of generation Z consumers through green marketing strategies. Business Strategy and Development, 7(3). Scopus. https://doi.org/10.1002/bsd2.419
Aldous, K., Salminen, J., Farooq, A., Jung, S.-G., & Jansen, B. (2024). Using ChatGPT in Content Marketing: Enhancing Users' Social Media Engagement in Cross-Platform Content Creation through Generative AI. 376–383. Scopus. https://doi.org/10.1145/3648188.3675142
Almeida, S., & Ivanov, S. (2024). Generative AI in Hotel Marketing – A Reality Check. Tourism, 72(3), 422–455. Scopus. https://doi.org/10.37741/t.72.3.10
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Cillo, P., & Rubera, G. (2024). Generative AI in innovation and marketing processes: A roadmap of research opportunities. Journal of the Academy of Marketing Science. https://doi.org/10.1007/s11747-024-01044-7
Crisp, D., Newsted, J., Brendon, B., Barnes, D., Hayes, C., & Prantner, J. (2024). Customising generative AI: Harnessing document retrieval and fine-tuning alternatives for dynamic marketing insights. Applied Marketing Analytics, 10(1), 18–31. Scopus. https://doi.org/10.69554/ybxq5617"
Ferraro, C., Sands, S., Zubcevic-Basic, N., & Campbell, C. (2024). Diversity in the digital age: How consumers respond to diverse virtual influencers. International Journal of Advertising. Scopus. https://doi.org/10.1080/02650487.2023.2300927
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4. CRITICAL ANALYSIS

This SLR explores the impact of GenAI in marketing, representing insights from 37 publications. The analysis discusses content creation, consumer trust, operational efficiencies, ethical concerns, and personalization. This dataset approaches the changing positions of GenAI for dynamic marketing strategies and provides a thematic outline for literature exploration.

The keyword analysis reflects dominant keywords and topics such as "consumer trust", "personalization", "ethical technology", "content creation", or "digital transformation". These topics have revealed the pervasive influence in marketing strategies that GenAI has induced. Works such as Aldaihani et al. (2024) and Aldous et al. (2024) explore the rising topic of GenAI in marketing and how it scales up content creation to the evolution of consumer needs. Recent trends indeed confirm interest in these technologies, as most of the publications fall between 2023 and 2024, emphasizing that much has been placed on the application of AI within the post-pandemic digital economy.

4.1 GENERATIVE AI AND CONTENT CREATION

A significant portion of the literature focuses on GenAI as a facilitator of content creation automation. For example, both Almeida & Ivanov (2024) and Brüns & Meißner (2024) investigate how GenAI creates efficiency through the scalable production of relevant content in digital marketing campaigns. Aldous et al. (2024) narrow their research to the efficiency of AI-generated content at the level of social media and identify cross-platform integration as key to driving engagement.

However, several studies indicate limitations in the content generated by AI. Sigala et al. (2024) state that while AI is very good at generating structured content, it faces huge challenges when generating narrative-driven formats that may require emotional resonance. Nguyet (2024) complements this by stating that human creativity needs to be merged with the capability of AI in order to overcome such limitations. This finding is also supported by Capone et al. (2024), who present that iterative refinement of content leads to an increase in engagement metrics.

4.2 CONSUMER PERCEPTION AND TRUST

Consumer perception becomes one of the dominant themes regarding transparency and authenticity of AI content. Aldaihani et al. (2024) underlines the fact that younger consumers are more likely to be involved with brands if those brands transparently disclose their use of GenAI. On the other hand, Brüns & Meißner (2024) mentioned maintaining authenticity as an integral part of ensuring consumer acceptance.

Such a difference in trust is culturally bounded; consumer attitude toward AI would be based on demographic factors such as age and culture (Gupta et al., 2024). The results signal the

importance of a brand strategy on AI towards the fulfillment of diverse expectations among consumers.

Another aspect that Ferraro et al. (2024) emphasize is the conceptual embedding of trust into authenticity. The study results indicated that emotionally touching content, which is usually lacking in AI-generated content, had more consumer engagement. This corresponds with the findings in Chaisatitkul et al. (2024), which indicate that at least partial mitigation of these limitations can be observed when integrating human creativity into AI.

4.3 Operational Efficiency and Challenges

GenAI has much potential in streamlining marketing operations. According to Yin (2024), GenAI tools can reduce the intensity of workload by automating tasks, hence leading to quick decision-making and cost-cutting. This is also evident through the works of Ziakis & Vlachopoulou (2024), who note that with the help of different GenAI tools, the marketing team becomes more agile and is authorized to make changes to their content strategy momentarily, depending on consumers' feedback.

Despite these gains, there are challenges in their integration. Onboarding of GenAI systems requires pneumatic technical training and changes in workflow besides implementation costs (Gupta et al., 2024). Moreover, too much trust in automation bypasses the opportunity for innovation and imagination in fast-moving markets that best demand human judgment (Hocutt, 2024). These findings further establish that while GenAI offers operational efficiencies, effective implementation of GenAI requires addressing adoption hurdles and effectively balancing automation with human oversight.

4.4 Ethical and Regulatory Challenges

Ethical issues around GenAI are recurring around data privacy and algorithmic transparency. Works such as Lee et al. (2024) investigate the impact of AI-driven personalization on consumer trust and caution against perceived privacy invasions as a potential significant disincentive to engagement.

Regulatory considerations further complicate the ethical landscape. The issue of constantly changing legal frameworks governing data protection has been discussed by Islam et al. (2024), who urge brands to be extremely cautious in trying to navigate such complexities.

This indicates that ethical considerations in technological innovation must be factored in to ensure sustainable adoption.

4.5 Personalization and Customer Experience

GenAI gives personalization strategies a pivoting role in marketing. GenAI algorithms curate recommendations with individual consumers through user-generated and real-time interactions; they foster better customer satisfaction because of their hyper-relevant suggestions (Hocutt, 2024). AI generated-content should be checked and overseen by humans

for the AI content to fall within ethical and user-centered advertising practices. This aligns with the findings of Rosenberg (2023) reporting how AI-driven personalization creates deeper emotional bonds between consumers and brands by addressing individual preferences.

Nevertheless, difficulties in personalization are increasing. Capone et al. (2024) reports a study of consumer reactions to personalized recommendations; in some cases, too particular suggestions can generate skepticism or unease, as the algorithms behind sometimes may be felt invasive. Besides, transparency in how collected data is employed for personalization bears mention, and furthermore, consumers trust much more those brands that communicate transparently, not only about data usage but about the role of AI in their experience (Sands et al., 2024). Also, GenAI may bring associated risks because of its capability to manipulate user data in creating psychometric profiles (Horzyk, 2024). While this works well for precision targeting, these profiles also raise critical concerns over consent, transparency, and privacy. The study further notes that users commonly do not have the appropriate awareness or understanding of when their personal data is being harvested and used for targeted advertising – a factor that amplifies issues of trust and fairness in personalized marketing.

This points to a dual potential of GenAI personalization: while one side allows for tailored engagement and customers' experience, it has to be implemented with appropriate ethical safeguards in place. Without the necessary consideration of consent, transparency, and privacy issues, no long-term effective personalized marketing strategies can be ensured. Clear communication focused on ethical practices is what enables brands to better exploit the benefits involved with AI-driven personalization while preserving consumer trust.

4.6 TECHNOLOGICAL ADVANCEMENTS

The continuous and rapid technological evolution of GenAI is fostering marketing capabilities at tremendous velocity. Kuang et al. (2024) shift the spotlight to innovations in natural language processing, which channels and captures more nuance and context in content creation, thereby allowing marketers to slice and dice their messaging with a great deal of specificity. In the same light, Yin (2024) discusses developments in predictive analytics and how such AI models analyze market trends as a means to foresee customer needs and to optimize campaigns. But accessibility is a barrier. According to Islam et al. (Islam et al., 2024), although advanced GenAI tools are becoming increasingly sophisticated, high cost and complexity limit the adoption of advanced GenAI tools. These findings also indicate that technological advances in GenAI indeed have transformative potential; benefits can only be fully realized through broader accessibility and ongoing skill development.

This analysis confirms GenAI as a transformative force in marketing, enhancing efficiency, engagement, and personalization. However, realizing its full potential requires addressing adoption barriers, ethical concerns, and balanced implementation through scalable solutions, robust ethical frameworks, and professional development.

5. THEORETHICAL FRAMEWORK PROPOSAL AND VALIDATION

5.1 THEORETICAL FRAMEWORK PROPOSAL

The swift evolution of GenAI technologies and its integration into marketing strategies calls for a structured framework to understand their diverse impact. This research introduces a framework designed to capture the dynamic interaction between technological capabilities, ethical principles, consumer behavior, and market innovation. The Generative AI Marketing Integration Framework is based on six primary dimensions:

5.1.1 TECHNOLOGICAL INFRASTRUCTURE

This foundational concept encompasses the systems, tools, and technical expertise essential for effectively embedding GenAI into marketing operations. It includes investments in AI tools, cloud solutions, and training for marketing teams. (Kuang et al., 2024; Nguyet, 2024; Yin, 2024)

5.1.2 OPERATIONAL EFFICIENCY

GenAI automates routine tasks such as customer segmentation and campaign management, boosting productivity and enabling real-time decision-making. (Aldous et al., 2024; Almeida & Ivanov, 2024; Brüns & Meißner, 2024; Chaisatitkul et al., 2024; Gołąb-Andrzejak, 2023; Gupta et al., 2024; Hocutt, 2024; Islam et al., 2024; Isler et al., 2024; Nguyet, 2024; Yin, 2024; Yoo et al., 2024; Ziakis & Vlachopoulou, 2024)

5.1.3 ETHICS AND GOVERNANCE

As GenAI becomes more integrated into marketing, concerns about data privacy, algorithmic transparency, and ethical AI usage gain prominence. This dimension emphasizes the establishment of ethical standards and compliance with regulatory frameworks. (Aldaihani et al., 2024; Ferraro et al., 2024; Islam et al., 2024; Isler et al., 2024; Lee et al., 2024; Sands et al., 2024; Sigala et al., 2024; Yoo et al., 2024; Ziakis & Vlachopoulou, 2024)

5.1.4 CONSUMER TRUST AND PERCEPTION

Consumer trust plays a critical role in the acceptance of AI-generated content and strategies. This dimension examines the influence of transparency and authenticity on consumer perceptions and brand relationships. (Aldaihani et al., 2024; Chaisatitkul et al., 2024; Ferraro et al., 2024; Gude, 2023; Lee et al., 2024)

5.1.5 PERSONALIZATION AND ENGAGEMENT

GenAI provides advanced personalization, tailoring marketing content to individual consumer preferences and fostering deeper engagement. (Aldous et al., 2024; Cillo & Rubera, 2024; Gude, 2023; Gupta et al., 2024; Hocutt, 2024; Huang & Rust, 2024; Lee et al., 2024; Rosenberg, 2023; Zhao et al., 2024; Ziakis & Vlachopoulou, 2024)

5.1.6 MARKET INNOVATION

By leveraging GenAI, businesses can anticipate market trends, refine product development, and design scalable strategies for competitive advantage. (Cillo & Rubera, 2024; Nguyet, 2024; Sigala et al., 2024; Yoo et al., 2024)

These dimensions are interdependent, with Technological Infrastructure serving as the foundational driver. The framework highlights that effective GenAI integration requires a balanced approach, blending technical expertise with ethical standards and consumer-focused strategies.

5.2 FRAMEWORK DIAGRAM

The Generative AI Marketing Integration Framework, visually represented on Figure 5-1, highlights six interconnected dimensions, each influencing and supporting the others. Technological Infrastructure drives both Operational Efficiency and supports Ethics and Governance. At the same time, Ethics and Governance builds Consumer Trust and Perception, which further enhances Personalization and Engagement. Furthermore, Operational Efficiency supports Personalization and Engagement, demonstrating how streamlined operations enable tailored marketing efforts. Finally, Personalization and Engagement feeds into Market Innovation, showcasing the ultimate goal of leveraging GenAI in marketing.

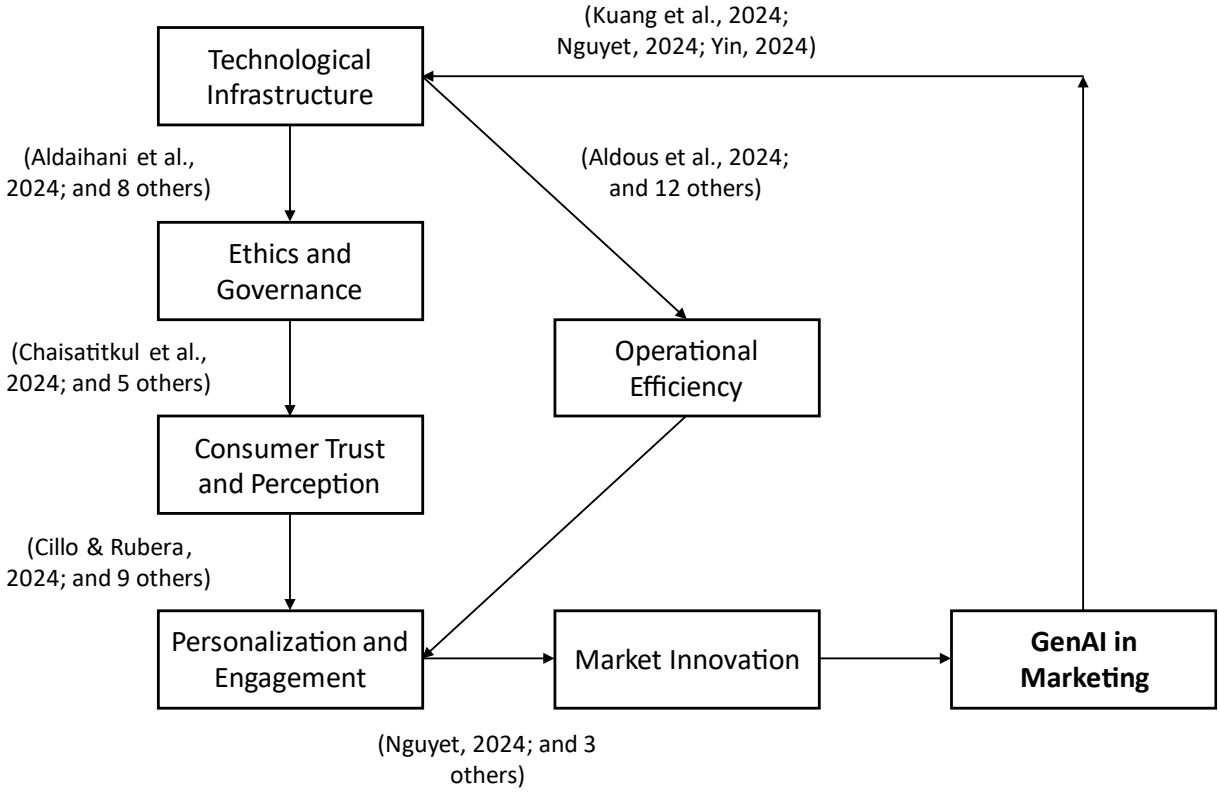

Figure 5-1. Generative AI Marketing Integration Framework proposal for validation

The diagram emphasizes the dynamic relationships between these dimensions, demonstrating how progress in one area can spark advancements in others. Furthermore, the framework contains some of the authors who have contributed to its construction, and more detailed information can be found in the Theoretical Framework Proposal subsection (page 27).

5.3 VALIDATION METHODOLOGY

The framework presented was validated through a combination of SLR, bibliometric analysis, and two interviews with marketing professionals. This multi-method approach ensures both theoretical rigor and practical relevance.

The framework is grounded in insights from a PRISMA-guided review of 123 publications on GenAI applications in marketing. The dimensions and their interrelations are informed by key themes identified in this review, ensuring alignment with current academic perspectives.

Also, using VOSviewer, a co-occurrence analysis of keywords in the SCOPUS database identifies conceptual clusters pertinent to GenAI in marketing. This analysis helped validate the selection of dimensions and highlights their interdependencies, particularly in areas such as personalization, ethics, and operational efficiency.

Finally, to assess the framework's practical applicability, two semi-structured interviews were conducted. This method was chosen for its ability to combine structured inquiry with the flexibility to explore emergent topics. Semi-structured interviews allow the interviewer to explore topics in greater depth as they arise during the conversation while still adhering to a structured framework (Patton, 2014). Unlike rigidly structured approaches, semi-structured interviews allow researchers to explore participants' lived experiences and nuanced perspectives, which are critical for assessing the operational relevance of theoretical frameworks. The interviews featured two participants with distinct expertise. A marketing scholar (Interviewee 1) with expertise in GenAI evaluated the framework's theoretical foundation and relevance. At the same time, a retail marketing professional (Interviewee 2) actively using GenAI assessed the framework's real-world utility, focusing on the challenges and opportunities involved in its implementation. The interviews were conducted online via Microsoft Teams, where the proposed theoretical framework for the impact of GenAI in Marketing was presented. During the discussions, the logical reasoning and evidence that led to the selection and organization of dimensions were explained in detail, providing interviewees with a comprehensive understanding of the framework. This approach ensured that feedback was well-informed and relevant to both theoretical and practical applications.

This comprehensive validation ensures the framework is both conceptually robust and practically implementable in diverse marketing contexts.

5.4 VALIDATION IMPLICATIONS

The validation interviews with Interviewee 1 (Appendix C), an academic expert in marketing, and Interviewee 2 (Appendix D), a retail marketing professional, provided valuable insights into the proposed Generative AI Marketing Integration Framework. These discussions affirmed the framework's relevance while highlighting areas for refinement and practical application. The distinct perspectives of both participants, shaped by their professional contexts, underscored the interplay between theoretical and practical considerations in GenAI adoption.

Interviewee 1 (I1) emphasized the interconnected nature of the framework's constructs, recommending their reorganization into a hierarchical structure of antecedents, mediators, and outcomes. I1 identified Technological Infrastructure and Ethics and Governance as foundational antecedents, enabling other dimensions. Also, I1 identified Consumer Trust and Perception, along with Personalization and Engagement, as mediators that enable GenAI to create value for consumers. Also, they proposed splitting Personalization and Engagement into separate constructs, citing findings from a research project they co-authored (Santini et al., 2020). Their perspective was that personalization focuses on tailored marketing efforts, while engagement pertains to the broader consumer interaction with the brand, shaped by trust and experience. I1 viewed Operational Efficiency and Market Innovation as natural outcomes of a system that integrates technological capability with consumer-centric strategies. Additionally, I1 noted overlap between constructs like trust and perception, recommending clearer distinctions to strengthen the framework.

Interviewee 1 (I2), drawing from their experience in retail, highlighted the practical challenges of implementing GenAI. Unlike I1, who emphasized theoretical coherence, I2 focused on the operational realities of deploying AI tools. I2 cited examples from their organization where GenAI improved operational efficiency, such as customer segmentation and regional market analysis. However, they pointed out that the cost of acquiring advanced tools and the lack of comprehensive training often hinder adoption. I2 remarked that their team primarily uses GenAI for efficiency, but its potential for strategic decision-making remains untapped. On Ethics and Governance, I2 agreed with I1 assessment but acknowledged that governance frameworks in their organization were still underdeveloped. I2 stressed the need for stronger policies on data privacy and algorithmic transparency as consumers become increasingly aware of how their data is used.

Regarding Consumer Trust and Perception, I2 expressed a more cautious viewpoint. While recognizing the benefits of personalized marketing enabled by GenAI, they warned that overly precise recommendations could feel intrusive to consumers. This aligns with literature, such as Capone et al. (2024), which highlights the risks of psychometric profiling.

Both I1 and I2 identified Market Innovation as a promising outcome of effective GenAI adoption, though their perspectives differed. I1 viewed innovation as the culmination of a

well-integrated system driven by insights from personalization and operational efficiency. I2, while optimistic about GenAI's potential, expressed skepticism about its current strategic use in their organization, noting that their focus has been on tactical applications, but the real value of GenAI lies in informing long-term strategy and innovation.

The interviews revealed areas of convergence and divergence. I1 focuses on theoretical rigor aligned with the framework's academic foundation, while I2 emphasis on practical challenges highlighted the need for greater accessibility and support in deploying GenAI tools. Together, their insights underscored the importance of balancing technological innovation with ethical and operational considerations. I1 hierarchical reorganization of the framework clarified the relationships between dimensions, enhancing theoretical coherence. Meanwhile, I2 practical feedback emphasized the need for accessible tools and comprehensive training, addressing barriers to GenAI implementation.

The validation process affirmed the relevance of this framework while suggesting valuable refinements. I1 reorganization clarified the dimension relationships, enhancing the framework's conceptual robustness. I2 insights highlighted practical barriers, emphasizing the need for accessible tools and training. These contributions bridge the gap between theory and practice, ensuring that the framework is both academically sound and practically applicable in diverse marketing contexts.

Considering the valuable feedback provided by both interviewees, and combining it with the theoretical research conducted, a final proposal for the Generative AI Marketing Integration Framework is presented in Figure 5-2. Both interviewees agreed with the proposed dimensions of the framework and supported many of its core arguments while also suggesting refinements – grounded either in academic studies or their professional experience. This final version retains the dimensions supported by the reviewed literature while implementing a reorganized structure informed by the interview feedback.

The Ethics and Governance dimension remains unchanged, as it is consistently highlighted in literature as a critical area for improvement. Interviewee 2 confirmed that, in practice, companies often adopt GenAI technologies primarily to enhance Operational Efficiency without adequately considering their ethical implications. This observation aligns with findings from various studies such as Sands et al. (2024) that emphasize the importance of ethical governance in sustainable GenAI adoption.

The most significant changes are related to the separation of dimensions such as Consumer Trust and Perception and Personalization and Engagement. Drawing on insights from Interviewee 1, and despite this study not formally addressing mediators, causality between these dimensions is referenced throughout literature. Interviewee 1 perspective was supported by research linking the use of personalization to shaping consumer perceptions of a brand, fostering trust, and ultimately driving engagement (Santini et al., 2020). This cascading relationship, as outlined in the revised framework, underscores how these

dimensions interact to leverage Market Innovation as the ultimate outcome of successful GenAI integration.

This refined framework, readjusted to eight dimensions, reflects the interplay between theoretical rigor and practical considerations, ensuring it is both conceptually robust and applicable across diverse marketing contexts.

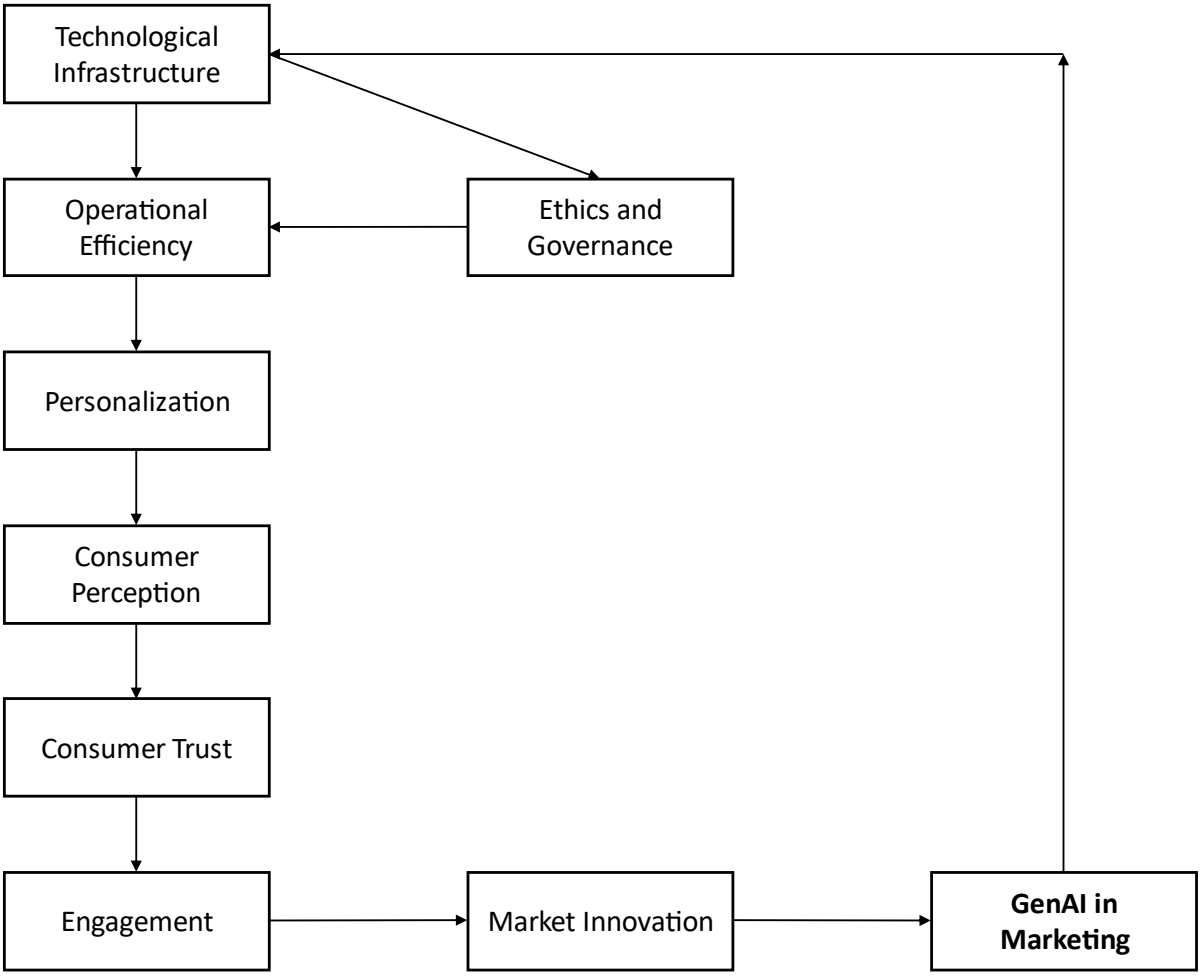

Figura 5-2. Generative AI Marketing Integration Framework after the validation interviews

6. CONCLUSIONS AND FUTURE WORK

This research studies the role of GenAI in marketing, analyzing its applications and implications through a bibliometric and systematic literature review. The proposed Generative AI Marketing Integration Framework captures the dynamic interplay between technological infrastructure, ethics, operational efficiency, consumer trust, personalization, and innovation. By incorporating keyword co-occurrence analysis, a PRISMA-guided literature review, a bibliometric analysis, and validation interviews with marketing professionals, the study effectively supports its objectives.

The findings demonstrate that GenAI is transforming marketing by automating creative tasks, enhancing operational efficiencies, and enabling hyper-personalized consumer experiences. However, ethical concerns, particularly related to consumer trust and data privacy, remain prominent. While GenAI significantly enhances marketing capabilities, its adoption requires robust ethical safeguards and transparent practices to mitigate associated risks.

Furthermore, eight key dimensions critical for integrating GenAI into marketing were identified: Technological Infrastructure, Operational Efficiency, Ethics and Governance, Consumer Perception, Consumer Trust, Personalization, Engagement, and Market Innovation. Its validation confirmed their relevance in both academic and practical contexts, particularly the interviews that emphasized the interconnectedness of the framework's dimensions, advocating for a balanced approach that integrates technology, ethics, and consumer-centric strategies.

This research contributes to the growing body of knowledge on GenAI in marketing by proposing and validating a comprehensive framework. It bridges gaps in existing research by integrating ethical, operational, and consumer-related dimensions, providing a holistic perspective on GenAI's potential and challenges. The hierarchical structuring of dimensions, as suggested during validation, offers a refined theoretical model for future studies.

In practical terms, the framework provides actionable guidance on implementing GenAI in marketing strategies; it underscores the importance of investing in technological infrastructure, ethical governance, and consumer engagement mechanisms. The insights into operational efficiencies and market innovation offer a roadmap for leveraging GenAI to enhance competitiveness. Addressing barriers such as cost, training, and transparency can further accelerate its adoption in practical settings.

Despite its contributions, the study has limitations. First, the validation was limited to two marketing professionals, which restricted the diversity of perspectives. Second, the focus on academic literature may not fully capture industry-specific nuances or emerging trends. Future research should address these limitations by incorporating broader datasets. The validation efforts should involve a more diverse group of stakeholders across industries. Additionally, longitudinal studies could explore the long-term impact of GenAI on marketing

strategies, particularly its ability to drive innovation and address ethical challenges. Region-specific applications and cultural differences could also provide valuable insights into the global adoption of GenAI in marketing.

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APPENDIX A – SELECTED PUBLICATIONS LITERATURE REVIEW

Table A. Literature review of the selected publications

Year	Description	Methodology	Conclusions	Ref.
2024	Green purchase intention of Generation Z consumers through green marketing strategies.	Quantitative method using Partial Least Squares Structural Equation Modeling (PLS-SEM) based on a survey (a total of 500 questionnaires were distributed, yielding 388 responses. However, only 356 of these were usable)	Green marketing strategies can positively influence Generation Z's purchase intention when mediated by green attitudes. Generative AI usage strengthens this relationship.	Aldaihani et al., 2024
2024	Using ChatGPT in content marketing: Enhancing users' social media engagement in cross-platform content creation through generative AI.	Quantitative method using surveys conducted on 892 participants to evaluate content created for Facebook, Instagram, and Twitter using a within-subjects design.	GPT-4's AI-created content performed well in driving engagement on Facebook and had comparable performance to Human-created content on Instagram and Twitter. The potential of AI-generated content for enhancing social media marketing was evident, particularly for Facebook.	Aldous et al., 2024
2024	Generative AI in hotel marketing: A reality check on using ChatGPT to design a marketing strategy for a 5-star hotel in Lisbon.	Qualitative method involving a case study approach, where ChatGPT was tasked to generate marketing strategies through a series of structured prompts. The study used prompt engineering as a research method.	The research confirmed that generative AI like ChatGPT could assist significantly in designing marketing strategies but should complement human expertise. The AI's ability to handle tasks like content creation and operational suggestions was useful.	Almeida & Ivanov, 2024
2024	ChatGPT adoption in marketing: Exploring drivers and barriers using Behavioral Reasoning Theory.	Quantitative method using a structured survey distributed to 390 marketing professionals through LinkedIn. Data was analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) and SPSS.	The adoption of ChatGPT by marketing professionals is influenced by both positive and negative reasons, with uncertainty avoidance and digital literacy playing crucial roles. Digital literacy moderates the negative influence of reasons against adoption.	Aminifard et al., 2024

Year	Description	Methodology	Conclusions	Ref.
2024	The paper investigates the impact of using generative artificial intelligence (AI) for social media content creation on perceived brand authenticity.	Three experimental studies using scenario-based online experiments on participant reactions to brands' adoption of GenAI for social media content creation, measuring attitudinal and behavioral responses.	Generative AI content creation can harm perceived brand authenticity, reducing follower engagement, loyalty, and credibility. Human involvement in the content creation process can mitigate these negative effects.	Brüns & Meißner, 2024
2023	Diversity representation in advertising: Analysis of the portrayal of diverse groups across different areas, including age, gender, race, body size, LGBTQIA+ identities, and physical and mental ability.	Systematic literature review and qualitative analysis of 337 articles on diversity representation in advertising, using a structured, multi-step review process.	Diversity in advertising positively impacts inclusion and brand perception but can trigger negative reactions like reactance or perceived inauthenticity if not handled carefully. More research is needed on intersectionality and non-Western contexts .	Campbell et al., 2023
2024	Examining consumer reactions to generative AI, specifically ChatGPT, using neuroscientific techniques to assess both conscious and subconscious responses in marketing contexts.	Qualitative approach combining neuroscientific techniques (eye-tracking, facial expression analysis) with a survey of 36 participants on ChatGPT's use for product recommendations.	Generative AI can engage consumers effectively but may elicit subconscious discomfort, suggesting that while consumers find GenAI useful, they still value human contact in marketing interactions.	Capone et al., 2024
2024	The use of AI-generated storyboards to enhance efficiency and improve customer perception in marketing.	Experimental study using AI-generated storyboards for a Fast-Moving Consumer Goods product advertisement (dishwashing liquid). Participants were divided into three groups: agency professionals, marketing professionals, and end users.	AI-generated content can increase efficiency and has the potential to improve customer perceptions in marketing. However, human involvement is still valued, and there are concerns regarding the legal and ethical implications.	Chaisatitkul et al., 2024
2024	The potential of generative AI (GenAI) in innovation and marketing processes, focusing on how it impacts consumer behavior, firm strategies, and market research.	The study is theoretical, based on literature review and in-depth interviews with managers from multiple industries, such as fast-moving consumer goods and high-end fashion.	GenAI holds significant potential to enhance marketing and innovation processes, but firms must carefully balance its use with maintaining human creativity and engagement.	Cillo & Rubera, 2024

Year	Description	Methodology	Conclusions	Ref.
2024	Enhancing generative AI in marketing through document retrieval techniques and alternative fine-tuning methods, such as Retrieval-Augmented Generation (RAG) and Low-Rank Adaptation (LoRA).	Case studies demonstrating RAG and LoRA applications in marketing, particularly for processing customer reviews and call center data.	Techniques like RAG and LoRA allow generative AI to interact dynamically with unstructured data, offering valuable insights and tailored responses in marketing. These methods support ongoing model updates without losing baseline capabilities.	Crisp et al., 2024
2024	How consumers respond to diverse representation in virtual influencers created by generative AI.	Two experimental studies using virtual influencers to test hypotheses related to word-of-mouth, follow intention, and purchase intention across diverse and non-diverse influencer representations.	Diversity in virtual influencers positively influences consumer engagement through novelty and likability. The results show the potential for brands to adopt diverse virtual influencers to improve audience connection and brand perception.	Ferraro et al., 2024
2023	The use of generative AI (GAI) and ChatGPT in digital advertising campaigns, focusing on how these tools can enhance the campaign creation process.	Critical literature analysis, secondary data analysis from industry reports, and in-depth interview (IDI) with a CEO of an advertising agency using GAI tools.	GAI and ChatGPT are effective tools for improving efficiency in creating digital ad campaigns, particularly for generating ideas and content. However, human expertise remains essential for supervision and quality control.	Gołąb-Andrzejak, 2023
2023	Factors influencing the adoption of ChatGPT and similar generative AI systems for product research and information retrieval, and how these tools may replace traditional search engines like Google.	Quantitative study using a cross-sectional, web-based survey of 219 participants, analyzing data through chi-square tests and logistic regression.	ChatGPT has the potential to transform product research by offering personalized and conversational interfaces. However, demographic factors like age and gender, along with trust and product knowledge, play key roles in adoption.	Gude, 2023
2024	Theoretical exploration of the adoption and impact of generative AI, specifically ChatGPT, in various industries, with a focus on marketing strategies.	The paper uses a systematic literature review approach, analyzing empirical studies and theoretical frameworks. Data collection involved databases like Web of Science, Scopus, and ProQuest.	Generative AI like ChatGPT can revolutionize industries, particularly marketing, by improving efficiency and personalization. However, ethical concerns and skill gaps present challenges that need to be addressed for widespread adoption.	Gupta et al., 2024

Year	Description	Methodology	Conclusions	Ref.
2024	The role of generative AI in composing digital advertisements, examining how AI influences the creation and optimization of digital advertising content across platforms.	Case study analysis of Google Ads and other online ad platforms, highlighting the integration of generative AI and its influence on ad copy creation.	Generative AI can enhance efficiency in digital advertising, but human oversight is crucial to ensure that AI-generated content aligns with ethical and user-centered advertising practices.	Hocutt, 2024
2024	The risks and solutions associated with data protection and privacy in AI-driven advertising technologies (Ad-Tech), focusing on behavioral marketing and the ethical implications of data harvesting.	Doctrinal research through literature analysis and review of legal frameworks, court cases, and interviews with developers and regulatory bodies involved in AI-driven Ad-Tech.	The paper calls for stricter regulatory enforcement and suggests a layered approach, combining both conventional (e.g., GDPR compliance) and non-conventional solutions (e.g., independent standards) to address AI-driven Ad-Tech risks.	Horzyk, 2024
2024	The use of interactive generative AI (GenAI) to provide emotional customer care, focusing on how AI can recognize, understand, and manage customer emotions to enhance customer relationships and loyalty.	Mixed-method approach combining in-depth interviews with top managers and a survey of Chief Marketing Officers (CMOs) to derive marketing requirements for using AI in customer care.	AI, particularly GenAI, can significantly enhance emotional customer care, but human involvement remains essential for complex and nuanced emotional interactions. Marketing professionals need to understand the limitations and capabilities of AI when designing customer care strategies.	Huang & Rust, 2024
2024	The role of generative AI (GenAI) in transforming digital marketing strategies, focusing on content creation, personalisation, and campaign efficiency.	Case study analysis within the fashion industry using the MARK-GEN framework to illustrate how GenAI models can generate marketing content.	Two case studies demonstrated how GenAI can significantly transform digital marketing by improving personalisation, content creation, and efficiency. Businesses must ensure ethical and data privacy practices to maximize the potential of AI in marketing. While focused on fashion, the MARK-GEN framework is applicable across various industries, including retail, real estate, travel, hospitality, and entertainment, for creating diverse marketing materials such as posters, chatbots, and virtual experiences.	Islam et al., 2024

Year	Description	Methodology	Conclusions	Ref.
2024	The role of generative AI in creating advertising content for social media, particularly the use of models like ChatGPT, Pictory, and DALL-E to enhance advertising effectiveness.	Case study analysis involving real-world examples from companies using AI models (e.g., LPP, Hooyi Men) to generate social media ads, focusing on both successes and challenges.	Generative AI holds great potential for creating efficient, customized, and visually appealing social media ads. However, it requires a blend of automation and human intervention to align with brand values and ensure ethical use.	Isler et al., 2024
2024	The practicability of using AI-generated text for Food and Beverages (F&B) marketing ads, focusing on the effectiveness of various generative AI techniques like Long Short-Term Memory (LSTM), Open Pretrained Transformers (OPT), and Keyword to Text (K2T).	Experimental Approach: Implementation and testing of LSTM, OPT, and K2T models using locally collected marketing text samples. Validation: Human experts evaluate the realism and practicality of the generated texts.	AI-generated ads, particularly using OPT, hold great potential for automating F&B marketing text creation. However, human involvement is still necessary to ensure relevance and quality. Further improvements are needed for broader applications.	Kuang et al., 2024
2024	The development of a personalized marketing service using generative AI, focusing on automated message generation for customer engagement in the context of social networking services (SNS) like Facebook and Instagram.	Mixed-method approach: Includes prompt engineering, AI model implementation (GPT-4), and validation through consumer surveys to assess the effectiveness of AI-generated personalized marketing messages.	The research demonstrates that generative AI can enhance personalized marketing services by automating the creation of persuasive messages, but ethical considerations and consumer privacy must be carefully managed to maintain trust.	Lee et al., 2024
2024	Exploring how YouTubers utilize generative AI (GenAI) for content creation across various domains, focusing on the tools, techniques, and outcomes of using AI in user-generated content.	Qualitative analysis of 68 YouTube videos demonstrating the use of GenAI in various content creation activities, focusing on domains, tools, and processes employed.	GenAI has a profound impact on content creation by enabling creators to automate and enhance their work, though concerns remain about how AI might overshadow human creativity and originality.	Lyu et al., 2024
2024	The integration of generative AI in content creation within the advertising industry, focusing on how AI-driven tools can streamline creative processes.	Qualitative interviews with professionals from a global advertising agency, examining perspectives across roles from executives to managing directors.	The adoption of generative AI in advertising fosters a collaborative human-AI creative process. User-friendly tools, supportive systems, and human skills are critical for AI integration, signaling a shift toward human-AI synergy in content creation.	Nguyet, 2024

Year	Description	Methodology	Conclusions	Ref.
2024	The comparison between traditional and AI-generated brand personalities and their effects on brand preference and purchase intention, particularly in the luxury fashion sector.	Two studies using surveys of 543 adults in the U.S., comparing traditional and AI-generated brand personalities for luxury brands such as Dior, Gucci, Chanel, Hermes, and Balenciaga.	While traditional brand personalities remain influential in building consumer trust, AI-generated content offers an innovative approach to enhancing brand connection and engagement, especially in the luxury market.	Park & Ahn, 2024
2023	The risks associated with generative AI as a new form of media, particularly focusing on how it can manipulate and personalize content to target individuals through interactive generative media (IGM).	Theoretical analysis with examples and references to recent developments in AI technologies like GPT-3 and foundational language models.	Generative AI introduces new forms of media that pose significant risks by creating interactive, personalized content that can manipulate human agency. Regulatory protections are needed to prevent misuse of these technologies.	Rosenberg, 2023
2024	The responsible use of generative AI in advertising, focusing on ethical principles to guide marketers in leveraging AI for content creation and advertising campaigns.	Theoretical analysis and review of ethical guidelines, complemented by interviews with advertising professionals who have adopted generative AI tools in their workflows.	Marketers should embrace AI-driven advertising with caution, ensuring ethical practices such as transparency, respect for consumer privacy, and avoiding bias. Human oversight remains crucial to ensure AI-generated content aligns with ethical standards.	Sands et al., 2024
2023	The role of generative AI, specifically ChatGPT, in augmenting brainstorming for content marketing, focusing on how humans and AI can collaborate to improve idea generation.	Experimental design involving different groups using ChatGPT at various stages of brainstorming. The groups were divided into two experimental groups and one control group, measuring the impact on creativity and idea generation.	Integrating ChatGPT into brainstorming sessions can enhance both the speed and quantity of creative idea generation. However, human involvement remains crucial for ensuring the quality and relevance of the ideas.	Schmidt et al., 2023
2024	The role of ChatGPT in transforming the service industry, focusing on opportunities, challenges, and research directions in service marketing, customer experience, digital services, and corporate digital responsibility.	Expert-oriented perspective approach using contributions from 11 researchers, combined with a review of current literature on AI in services, to assess the implications of ChatGPT across multiple service sectors.	ChatGPT has immense potential to transform the service industry, but businesses must address privacy concerns, maintain ethical standards, and balance human-AI interactions to ensure positive customer experiences.	Sigala et al., 2024

Year	Description	Methodology	Conclusions	Ref.
2024	The rapid growth of sonic branding and the intersection of art and science in its application. The paper discusses how scientific approaches, such as psychoacoustics and AI, are increasingly used to inform sonic branding.	Narrative review analyzing existing scientific literature, frameworks, and methods, including semantic differential technique, psychoacoustics, and semiotics.	Sonic branding is evolving into a blend of art and science, with AI offering promising tools for sound design. However, human creativity and intuition will likely remain crucial in the sonic branding process.	Spence & Keller, 2024
2024	Exploration of ChatGPT's applications in marketing, focusing on content marketing, digital marketing, B2B marketing, search engine optimization, and customer strategy through topic modeling from social media data.	Web scraping and topic modeling (LDA) analysis of 23,757 tweets from X (formerly Twitter) covering November 2022 to April 2023. The study identifies seven key topics related to ChatGPT's marketing applications.	ChatGPT is being adopted across various marketing functions, especially content generation and customer strategy. While still in the early stages of adoption, it has great potential to transform digital marketing.	Tafesse & Wien, 2024
2024	The paper introduces a novel backdoor attack (BAGM) on text-to-image generative models, showing how these attacks can subtly manipulate the generated content for malicious purposes, particularly in marketing scenarios.	Experimental study, testing the BAGM attack on three popular text-to-image generative models (Stable Diffusion, Kandinsky, and DeepFloyd-IF), measuring the success and stealth of the attacks using new evaluation metrics.	The paper demonstrates that text-to-image generative models are vulnerable to subtle manipulation through backdoor attacks, which can be used to influence user perceptions in marketing and other contexts.	Vice et al., 2024
2024	Investigating consumer attitudes toward AI-generated advertising by using automatic feature engineering techniques to analyze large datasets of consumer feedback.	Data collection from 2023 participants who evaluated seven AI-generated advertisements on six dimensions: entertainment value, aesthetic appeal, interactivity, trendiness, customer trust and perceived value of the advertisement. Automatic feature extraction using OpenFE and Evolutionary Forest.	AI-generated advertising can succeed if it is perceived as trustworthy, aesthetically appealing, and interactive. Automatic feature engineering methods provide valuable insights into consumer preferences, allowing marketers to refine AI-generated content.	Yin, 2024
2024	The role of generative AI (GAI), particularly ChatGPT, in creating digital advertising campaigns, focusing on how these technologies influence the process of campaign creation.	Critical literature review, secondary data analysis from reports on generative AI in marketing, and an in-depth interview with the CEO of an advertising agency.	Generative AI, especially ChatGPT, is poised to transform the digital advertising industry by increasing efficiency in content creation, but marketers must balance AI-generated content with human creativity to maintain originality and ethical standards.	Yoo et al., 2024

Year	Description	Methodology	Conclusions	Ref.
2024	The use of ChatGPT in co-creating tourism marketing materials, exploring its potential to generate content indistinguishable from that created by tourism marketers and its effectiveness in tourism promotion.	Two online experiments involving content generation for tourism marketing materials (for Norwegian destinations), using a Turing test and evaluations of fluency and attractiveness.	ChatGPT holds potential as a valuable tool for co-creating tourism marketing materials, producing content that is effective and indistinguishable from human marketers. However, further research is needed on its broader implications.	Zhang & Prebensen, 2024
2024	Optimization of the end-to-end customer journey using machine learning and generative AI, focusing on sales, marketing, retention, and churn prevention.	Workshop format with invited talks, lightning talks, and a panel discussion from academic researchers and industry professionals.	Holistic customer journey optimization requires the integration of AI and machine learning models to predict and enhance customer outcomes across multiple touchpoints, balancing short-term metrics with long-term customer value.	Zhao et al., 2024
2023	Public perceptions and early discourse on Twitter regarding ChatGPT's role in marketing, identifying key themes such as customer interaction, content creation, and competitive impact on digital marketing.	BERTopic-based topic modeling applied to a dataset of Twitter posts, filtered and analyzed for relevance to ChatGPT's marketing applications.	ChatGPT has sparked varied interest in marketing applications, with potential to impact strategic, functional, and administrative tasks. Future studies should explore evolving trends and impacts as AI tools advance.	Zhou et al., 2023
2024	The transformative role of artificial intelligence (AI) in search engine optimization (SEO), focusing on how AI enhances SEO strategies through automation, personalization, and semantic search.	A systematic literature review conducted using the PRISMA framework, analyzing 28 key articles on AI and SEO to understand current trends and future directions.	AI presents vast opportunities to revolutionize SEO, offering automation, personalization, and improved user intent understanding. However, ethical issues like data privacy and algorithmic bias must be addressed to ensure responsible use.	Ziakis & Vlachopoulou, 2024

APPENDIX B – ETHICS COMMITTEE REPORT

Dear Danilo Mota,
Dear Professor Manuela Aparício,

Thank you for filling in the Research Ethics Checklist. After reviewing your request, you can proceed with the study we do not foresee any major ethical concerns with the project.

Project No.: **DDMKT2024-11-252623**

Project Title: **Unlocking the Potential of Generative AI in Marketing**

Principal Researcher: **Danilo dos Santos Belo Mota**

according to the regulations of the Ethics Committee of NOVA IMS and MagIC Research Center this project was considered to meet the requirements of the NOVA IMS Internal Review Board, being considered **APPROVED** on 26/11/2024.

Figure A. Ethics Committee Report Approval

APPENDIX C – SEMI-STRUCTURED INTERVIEW WITH INTERVIEWEE 1 (I1), CONDUCTED ON NOVEMBER 20, 2024

Table B. Thematic analysis of the semi-structured interview with Interviewee 1

Topics	**Answers**
1. Role of Generative AI in Marketing	• GenAI *"has revolutionized marketing, enabling dynamic interaction between companies and consumers"*. • Key transformations include personalized targeting, segmentation, and content creation in real-time. • Highlights *"the 'magical' consumer experience of witnessing content generation*", which enhances engagement and service delivery.
2. Agreement with Framework Dimensions	• Views the *"constructs as interrelated rather than standalone*". • Recommends clarifying overlaps, such as *"distinguishing Consumer Trust from Perception and Personalization from Engagement"*. • Suggests "*reorganizing constructs into antecedents, mediators, and outcomes*" for clarity. • Proposes *"Operational Efficiency and Market Innovation as outcomes*" driven by the framework's antecedents.
3. Alignment of Framework with Marketing Strategies	• Agrees that *"the framework aligns with his perspective, particularly in emphasizing infrastructure, ethics, and governance as foundational elements*". • Recognizes GenAI's *"capacity to bridge operational efficiency and consumer engagement through personalization*".
4. Missing or Less Relevant Dimensions	• No dimensions appear missing but suggest that *"Personalization and Engagement operate at different levels and should not be grouped*". • Reiterates the *"need for clearer hierarchical relationships between dimensions*".

Danilo dos Santos Mota (DSM) - How do you perceive the role of Generative AI (GenAI) in transforming marketing practices today?

I1 - I think GenAI changed everything we know about marketing because it puts on the side of the company, on the side of the consumer, new perspectives for interaction. Although with AI you can do personalized targeting, personalized segmentation, personalized content, with GenAI you can create content in front of the consumer, and I think this is kind of magical for consumers, to see content being created or content emerging in their face.

I do think that not only do we interact with GenAI tools like ChatGPT, or cloud, or whatever tool you use, but also when you interact with consumer tools that use generative AI to deliver the service. So, I think it is very interesting really, it changed everything.

DSM - Do you agree that the six constructs identified (Technological Infrastructure, Operational Efficiency, Ethics and Governance, Consumer Trust and Perception, Personalization and Engagement, and Market Innovation) are key to leveraging GenAI in marketing? Why or why not?

I1 - Looking at this, the first question that comes to mind is: does the "GenAI in marketing" need to be the final box, or is it everything? I mean, if you remove this box, it could be OK as well because GenAI is present in everything here. So, you have a conceptual framework of GenAI in marketing, and then everything relates to that.

Thinking about the conceptual framework, I don't know if there is room to separate some variables or not, maybe not. For example, consumer trust and perception. Perception is very broad. Trust is something very specific. What kind of consumer perception is it? Consumer trust perception? OK. Is it perception attitudes? That's something different. But anyway, I could give this to you.

Then, personalization and engagement, totally different stuff. Personalization is "I will do for you something personalized, and because of that you will engage on my platform". For example, Instagram gives you personalized content; that is why you engage on Instagram. What is engagement? It can be staying on the platform, likes, comments, shares, etc. I think both need to be separated, so I would like to try to think about maybe in your model what are antecedents, what are consequences, and what are processes which will be mediators or in the middle?

I do agree that operational efficiency is a target outcome, and maybe even market innovation could be an outcome. Then, I think that market innovation leads to operational efficiency as a target variable. Because I think market innovation or adaptation to market innovation or creating or responding to market innovation will lead ultimately to operational efficiency.

And then, if you think about antecedents, I'd say tech infrastructure for sure, ethics and governance as well, then I would say that trust and personalization are kind of in the middle because this structure allows you to personalize, and governance allows you to think about consumer trust and perception, and also about personalization and engagement. And then both trust and engagement would lead to operational efficiency. That is what I think in the end.

DSM - Does this framework align with your understanding of how GenAI can be effectively integrated into marketing strategies?

I1 - I think my previous answer aligns perfectly with the response to this question.

DSM - Are there any dimensions you feel are missing or less relevant in this framework?

I1 - I don't think anything is missing. I just think that some things are a bit different to be put in the same box, especially personalization and engagement. I think there are two different levels. I think personalization is one antecedent and engagement one outcome, so I don't think they are in the same level.

APPENDIX D – SEMI-STRUCTURED INTERVIEW WITH INTERVIEWEE 2 (I2), CONDUCTED ON NOVEMBER 16, 2024

Table C. Thematic analysis of the semi-structured interview with Interviewee 2

Topics	**Answers**
1. Role of Generative AI in Marketing	• GenAI has *"versatility in both creative and logical tasks"*. • More logical and efficiency-driven applications are now being *"harnessed with greater frequency, demonstrating AI in the simplification of complicated tasks"*. • *"GenAI can improve structured and logical tasks*" but holds untapped potential in creative insights and analytics.
2. Agreement with Framework Dimensions	• Agrees with the framework and its relevance, especially Operational Efficiency, Consumer Trust and Perception based on her own experiences. • Notes *"using GenAI in mind for asks like writing copy*" and understanding regional intelligence. • Recognizes *"Ethics and Governance as critical but underexplored*" in her practice.
3. Alignment of Framework with Marketing Strategies	• Finds that GenAI *"could be more widely deployed within their company*" (e.g., CRM and predictive analytics). • Views "*ethics, governance, and consumer trust as areas of expansionary opportunities"* along with deployment of GenAI in consumer research.
4. Missing or Less Relevant Dimensions	• Suggests that "*GenAI may have a more prominent place in strategic decision-making*". • Questions about *"whether GenAI is effective in subjective or open-ended tasks"*. • Posits strategic uses – e.g., "*convincing stakeholders with data-driven insights*" – may be in line with Operational Efficiency but worth exploring.

Danilo dos Santos Mota (DSM) - How do you perceive the role of Generative AI (GenAI) in transforming marketing practices today?

I2 - I mean, you could use it in so many different ways, right? And I feel like where I see it could be really interesting as a tool is helping with the actual creative work in marketing. I think I find that more interesting that let's say "pro bot" for the lack of a better term, something that isn't actually living could make something creative, which I think is a little bit harder to generate with a set of rules. That's actually also the part of AI that I haven't used so much for

marketing, I probably used it once or twice for that, but for the most part I would use AI when it comes to anything that involves logic, because I feel that's where it would be much easier to kind of use.

So, for example, if I'm going to give a solution, I'm going to break it down and I'm going to say “hey, can you help me make an Excel formula for it, or what's the code to be able to do this on Python”? I don't know how to use Python. And I think it really helps with things like efficiency. But I think it's more impressive when AI is able to really help people in terms of something that isn't as structured, like the creative side of marketing or even the analysis and drawing insights.

DSM - Do you agree that the six constructs identified (Technological Infrastructure, Operational Efficiency, Ethics and Governance, Consumer Trust and Perception, Personalization and Engagement, and Market Innovation) are key to leveraging GenAI in marketing? Why or why not?

I2 - It makes sense. I agree, although I've never given it thought. To an extent, it's biased because I'm also thinking about “would I be able to use that in my field, in marketing”? I have, you know, used the concepts of operational efficiency. I feel that's where I use AI the most. If I don't want to learn how to code for 10 weeks, then I'm going to use it.

Consumer trust and perception, I also understand how that could come to be. I think it's also something that I could be using, like for example “hey, I have these two copies, and this is what I'm trying to convey. What would sound better?” Or I think there was also a time when I used ChatGPT asking, “How to be able to regenerate findings from tests and understanding”, like “do you have insights if this region is particularly ABC and that region is particularly different on those same dimensions”?

Ethics and governance are also like I'd imagine, it's key. I've never used AI for it, but I should bring it up.

DSM - Does this framework align with your understanding of how GenAI can be effectively integrated into marketing strategies?

I2 - So, this actually also gives me more of an idea that we could actually be leveraging GenAI more than we usually do at Emma. Or at least in CRM at Emma. I think the idea of AI or GenAI is usually like for either generate some copy for me or when it's on the CRM platform tool or whatever tools we use and ask for predictive analytics like “predict when this person will next purchase” or “predict when this person will next do something using historical data” since it is able to do something faster than we can or finding an answer faster than we can.

But with ethics and governance, I think that's also something that we haven't really talked into for AI. And even the consumer trust and perception, we probably haven't thought about it as much in the sense that, you know, maybe we could be finding answers of what do consumers respond well to with AI and things like research for example. I think it's also because our team

isn't very research-focused, but it could be really interesting. In the end, yes, I think it makes sense.

DSM - Are there any dimensions you feel are missing or less relevant in this framework?

I2 - I don't know how effective it is, and I don't know if people actually use it, but to an extent, AI or GenAI could also be used on the strategic side of things. Maybe it falls under one of these, but for example, I need to convince my country to do XYZ, and I have these data points of what is the best angle or approach to try and convince.

I don't know if it's actually going to be effective, and those are one of the things that I'd probably be skeptical about. I probably wouldn't use AI for it because I would think this is something that's much more subjective and there's not as much of a structure. It's much more open-ended.

But, for example, I remember a colleague of mine having asked ChatGPT a bunch of times things like “can you help me phrase this email”? I know that it's more copy, but at the same time there's always going to be a prompt of, “What's the best way for me to position this?” So, I would say it's more on the business side of things, of how to run the business well. But, at the same time, it's still related to marketing and the things that go into marketing. Maybe it falls under operational efficiency, actually. Maybe I'm guessing that.

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