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# Quantifying the Evolution: A Bibliometric Exploration of the Intersection between Artificial Intelligence and Marketing

*Mr. Gagan Mahato*

Faculty in Commerce, Gandhi Mahavidyalaya Rourkela, Sundargarh, ODISHA

Gmail- [gaganmahato00@gmail.com](mailto:gaganmahato00@gmail.com)

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## ABSTRACT

Considering the growing trends in artificial intelligence in the marketing industry around the world, it is imperative that we all comprehend this trend. This paper presents bibliometric analysis of the scholarly literature concerned with artificial intelligence and marketing. Other bibliometric indicators like country wise scientific production, thematic evolution map, top cited document, most frequently used words, year wise publication and most relevant authors have been studied. This work will be beneficial to scholars and researchers in the relevant fields.

**Keywords:** artificial intelligence, marketing, bibliometric study.

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## Introduction

Artificial Intelligence (AI) has become a disruptive force in several industries, changing how companies function and engage with their clientele. Artificial Intelligence has emerged as a crucial instrument in the marketing domain, transforming conventional methods for client interaction, data examination, and campaign enhancement. Marketing professionals are increasingly using artificial intelligence (AI) to obtain a competitive edge in a crowded and dynamic marketplace as technology continues to grow at an unparalleled rate.

A new era of data-driven decision-making has emerged as a result of the merging of artificial intelligence and marketing. Machine learning models and algorithms comb through massive volumes of data to find trends, forecast customer behavior, and improve the overall efficacy of campaigns. As a result of this collaboration, a new industry known as AI-powered marketing has emerged. In this industry, automation and algorithms are used to optimize workflows, customize communications, and increase the value of client encounters.

A thorough grasp of how AI affects marketing requires an exploration of bibliometrics, which is the quantitative evaluation of academic publications, papers, and research results. The scholarly environment around artificial intelligence (AI) in marketing is systematically examined by this bibliometric analysis, which also highlights important trends, notable scholars, and foundational publications that have influenced the conversation in this developing field. The aim of this bibliometric analysis is to extract meaningful information from the extensive literature, pinpoint significant themes, and chart the progression of artificial intelligence in marketing research across several eras. We hope to give a broad overview of the intellectual landscape by looking at the citation patterns, collaboration networks, and thematic clusters within the academic community. This will help researchers, marketers, and industry stakeholders navigate the nexus between artificial intelligence and marketing.

This investigation will not only identify the key players and influential people in the industry, but it will also clarify how different ideas, approaches, and technological advancements that support artificial intelligence in marketing are interconnected. The goal of this bibliometric trip is to extract actionable insights that might guide future strategies, innovations, and best practices in the dynamic field of AI-powered marketing, rather than only measuring the rise of research in this area

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## Prior Literature

Peyravi et al. (2020) found that AI is used extensively in marketing, primarily for text and image identification, with little usage in speech recognition. Present-day tools, which combine CRM, automation, and profiling for improved marketing initiatives, facilitate the shift towards digitalization. Future developments in AI might include autonomous devices and robots for intensive client engagement, networking, and personalization, which would enhance the effectiveness and approach of marketing managers.

Huang and Rust (2021) observed that applications such as consumer greeting robots, big data analytics, recommender systems, natural language processing, and sentiment analysis demonstrate artificial intelligence's growing importance in marketing. With ramifications for multiple stakeholders, a

collaborative intelligence framework that integrates technical AI viewpoints with strategic marketing delivers insights into utilising AI-HI strengths for marketers and customers. This interdisciplinary approach emphasises a balanced viewpoint for improved strategies and experiences, aligning theory, research, and implementations of AI in marketing both now and in the future.

Eriksson et al. (2020) intend to contribute in some tiny way to the investigation of whether and how AI might help with the creation of marketing strategies. It offers qualitative proof that AI may be used to create marketing strategies. In order to help with the strategy creation-related question "what innovation can we imagine?" the article suggests a creative-possibility approach as well as the concept of creative analytics. Future research directions are indicated, and obstacles to a firm's adoption of AI as a business competence are also explored.

Stone (2019) in their study found that according to 84% of C-suite executives, using artificial intelligence (AI) is essential to achieving their growth goals. The majority of C-suite executives believe that AI will help them achieve their strategic goals and that growing AI initiatives across the entire company is necessary to get a good return on investment.

Verma et al. (2021) in their research study conclude that Manufacturing, pharmaceuticals, healthcare, agriculture, logistics, and digital marketing are just a few of the industries that artificial intelligence (AI) is altering. AI is a relatively new and powerful disruptor amid other technologies like blockchain, IoT, and big data. There is a paucity of bibliometric reporting on AI in marketing research, despite the widespread interest in applying AI solutions. In order to close the gap, this study aggregates and analyses research patterns using bibliometric and co-citation techniques, providing insights into the changing field of artificial intelligence in marketing.

Bruyn et al. (2020) found that marketing firms must foster and organise relationships between AI and stakeholders in order to convey tacit knowledge effectively. This requires proximity and shared experiences. It takes two-way observation, imitation, and practise to create an environment that promotes "intimacy" between experts or consumers and artificial intelligence. The seamless interchange of tacit knowledge is ensured by this bidirectional transfer, which improves the synergy between AI and human expertise in the marketing area.

Hermann (2021) conclude that AI marketing ethics are multifaceted, stakeholder-dependent, and highlight tensions and interdependencies. Specifically, the promise of goodness and non-maleficence is called into question because AI developments could increase both individual and societal consumption. It becomes clear that explainability, which is essential for accountability and intelligibility, is a major enabler of ethical norms. The ethical issues posed by AI intelligence and humanization are growing, indicating that a deontological approach might oversimplify the complex ethical terrain of AI growth in the future.

Arumugam (2024) observed that essential installation and machine learning abilities are necessary to stay competitive and efficient in the ever-changing business world of today. The combination of machine learning (ML) and artificial intelligence (AI) has improved marketing applications and automated a number of tasks. Process focus points have been changed with the shift to online transformations, making substantial data analysis possible. Comprehensive understanding and categorization instruments provide in-depth customer analysis, providing insightful information for improving customer relationship management at various stages.

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## Methodology

The Dimension database was used to collect the study's data. I have used the keywords "'artificial intelligence" and marketing' in title and abstract yielding 3490 documents. We narrowed down the search criteria to last decade only (2014-2023) and got 3082 documents. Further these documents were filtered on the basis of field of research and got 1651 documents. In this study, I have considered only the publications from the field of Commerce, Management, Tourism and Services. Ultimately, 1304 documents remained for the final analysis since I only took into account articles and book chapters as document kinds. Bibliometric analysis involves quantitatively examining a set of publications to gain insights. This method uses statistical techniques to evaluate patterns, trends, and impact within a given collection of scholarly works (Maharana & Panda, 2023). The analysis was conducted with the help of Biblioshiny software (Rstudio). Various bibliometric indicators like publication trend, top authors, important themes etc. have been analysed in the paper.

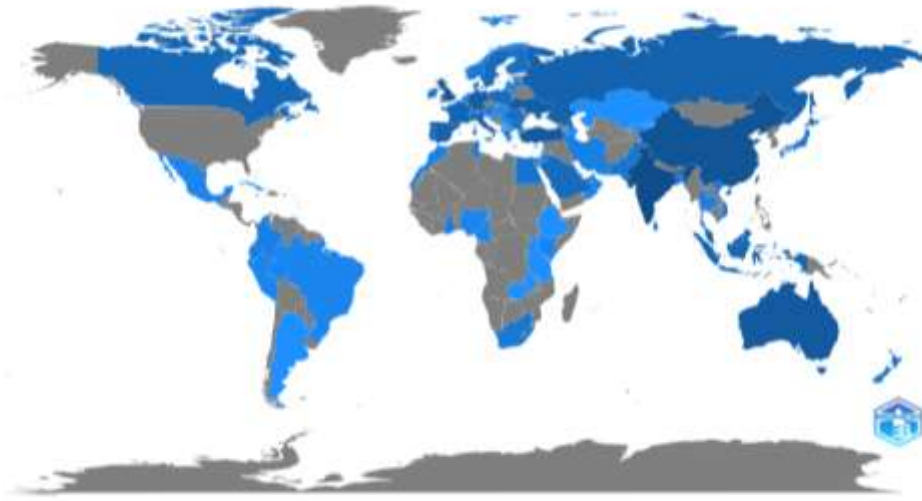
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## Analysis and Result:

The following table and graph (Figure1 and Table1), shows the publications on artificial intelligence and modern marketing, broken down by country. In the graph below, low to high publication counts are represented by the hues grey to dark blue, respectively. The grey portion of the map has no publications, whereas the dark blue section has the most.

India, symbolized by the image's deep blue hue, has been featured in the most publications worldwide in regards to artificial intelligence and modern marketing. With 75 publications, China comes in second, ahead of the UK, Australia, and Turkey with 72, 50, and 49 publications, respectively.

Figure 1: Country scientific production



Source: Compiled from biblioshiny

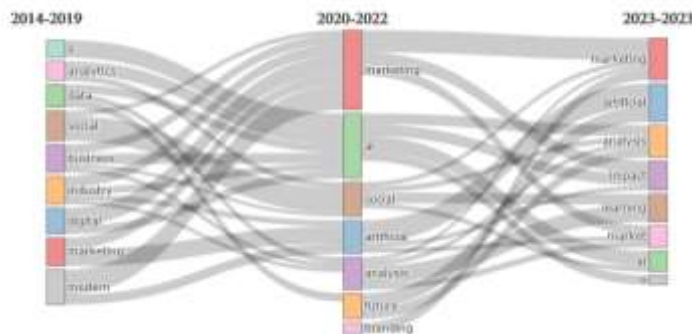
Table 1: Country scientific production

Region	Freq
INDIA	124
CHINA	75
UK	72
AUSTRALIA	50
TURKEY	49

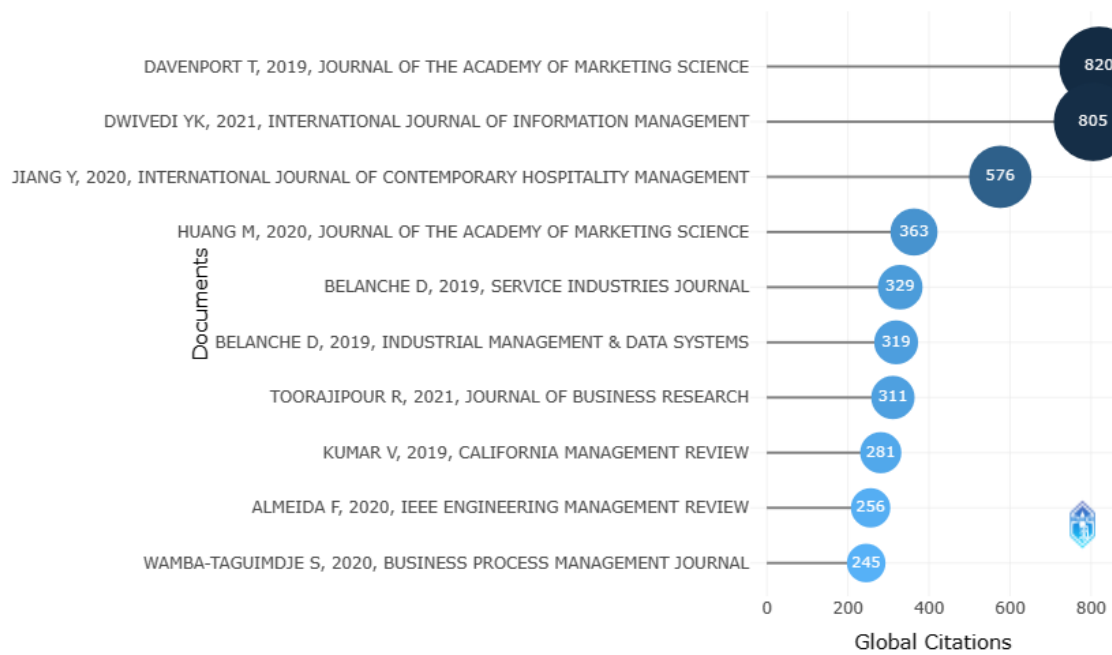
Source: Compiled from biblioshiny

The image below (figure-2), which spans the year 2014-2023 illustrates the area that writers are focusing on as time goes on. Analytics, data, social, business, industry, digital, marketing and modern were given more weight in the beginning i.e., from 2014-2019. After that, from 2020-2022 the term marketing, ai, social, artificial, analysis, future and branding have given more weightage. And in 2023 the terms marketing, artificial, analysis, impact, learning, market and ai have been focused. Here If we see the evolution of the words from 2014-2019 and 2020-2022 the words analytics, data, business, industry and digital are evolved into the word ai and then the ai is further evolved into different words namely analysis, impact, ai and B (where B stands for BERT- Bidirectional Encoder representations from transformers). Here if we observe the past and recent trends the word analysis, impact and learning are not given much attention in the past. These subjects are currently the subject of more substantial research.

Figure 2: Thematic Evolution Map



Source: Compiled from biblioshiny

**Figure 3: Most Global Cited Document**

Source: Compiled from biblioshiny

The abovementioned data in figure-3 illustrates which article are most frequently cited while conducting research on the AI and modern marketing. DAVENPORT T, (2019) is based on artificial intelligence, the authors provide a multifaceted paradigm that takes into account task kinds, robot integration, and intelligence levels in order to comprehend the effects of artificial intelligence. The second most cited paper i.e., DWIVEDI YK, 2021, International Journal of information management is concerned with important topic along with viewpoints on more focused themes including digital content management, augmented reality marketing, artificial intelligence, mobile advertising, B2B marketing, electronic word-of-mouth, and related ethical concerns. Then comes JIANG Y, 2020 International Journal of contemporary hospitality management which is based on robots, artificial intelligence (AI), sanitation and hygiene, and health and medical care.

**Table 2: Most Frequent Word**

Terms	Frequency
MARKETING	568
ARTIFICIAL	476
INTELLIGENCE	460
DIGITAL	189
AI	166
CUSTOMER	94
RESEARCH	93
IMPACT	79
ANALYSIS	76
ROLE	75

Source: Compiled from biblioshiny

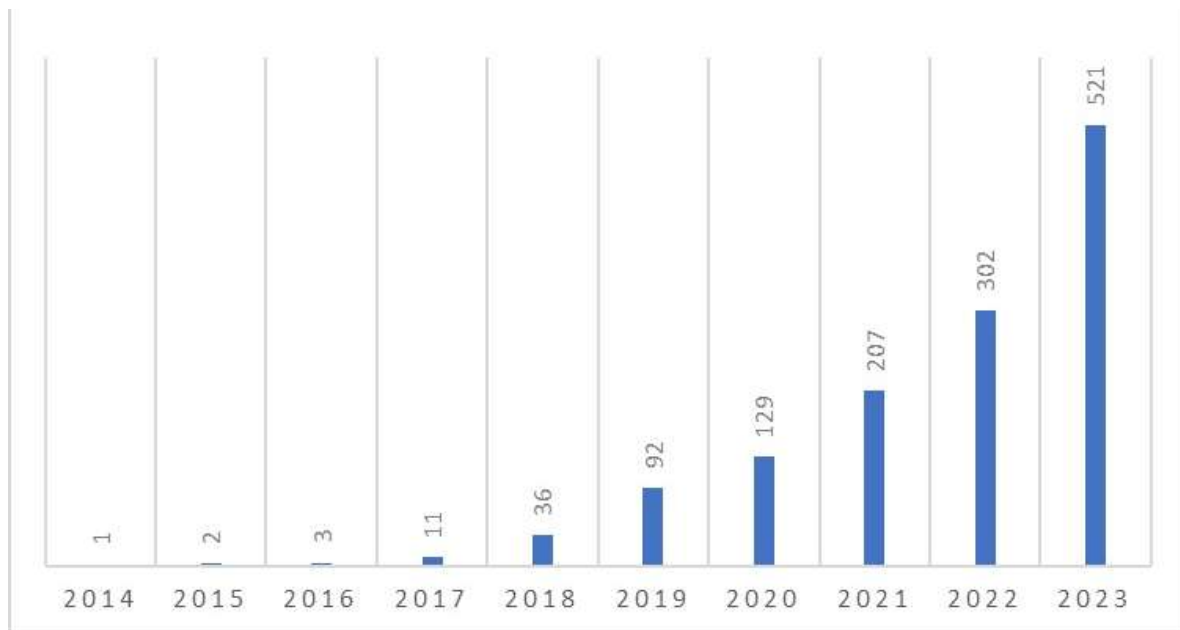
Figure 4: Most frequently used word



Source: Compiled from biblioshiny

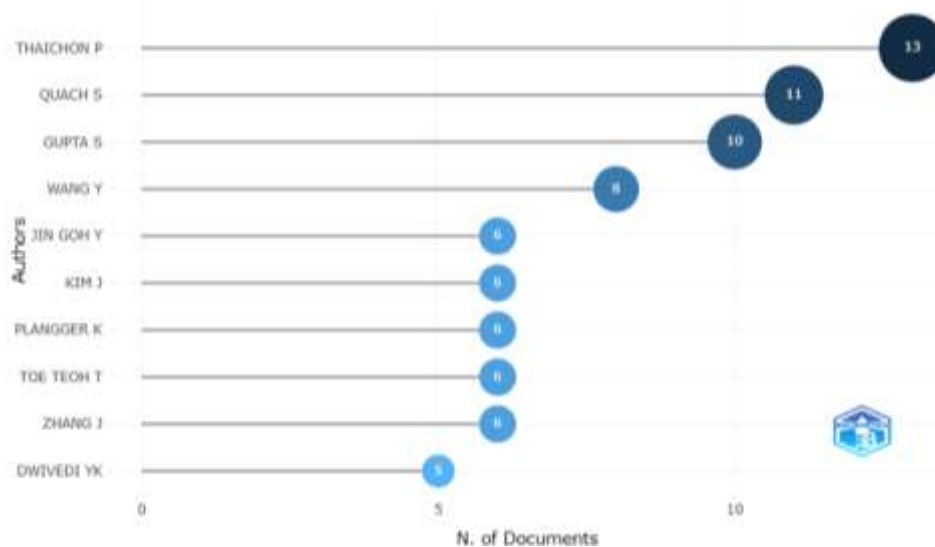
The above table and Figure (table2 and Figure4) illustrate the most frequent word used in the Journal relating to AI and Marketing. In the fields of artificial intelligence and marketing, the term "marketing" is most frequently used, with 568 instances between 2014 and 2023, followed by the words like artificial, intelligence, digital, ai customer etc., with a frequency of 476, 460, 189, 166 and 94 times.

Figure 5: year wise publication



Source: Compiled from biblioshiny

The above figure (figure5) shows the number of journal articles published on the topic artificial intelligence and marketing and from the data we can see an increasing trends. In 2023, 521 articles have been published which is 72.52% more in comparison to its previous year i.e., 2022 where 302 articles were published, likewise if we compare the year 2022 with 2021 there is an increase of 45.89% and so on. Thus, it is clear from this that the subject will be crucial in the future.

**Figure 6: Most Relevant Authors**

Source: Compiled from biblioshiny

The data of the most relevant writers who have written about this subject is displayed in the above figure (figure 6). THAICHON P has written the most about marketing and artificial intelligence, followed by QUACH S, GUPTA S, WANG Y, and so on.

## Conclusion

My conclusion from the aforementioned study is that there is a growing trend in the number of papers being published about artificial intelligence and marketing. It is found that themes like ‘marketing’, ‘artificial’, ‘intelligence’ and ‘digital’ are the mostly used in the existing literature. The country which have the most publication on the relevant topic is India followed by China and UK. Thaichon P is the most significant author in the concerned field. The future researchers can use this study and the themes explored here to add to the existing body of knowledge.

## Referencing

Arumugam, T., Arun, R., Natarajan, S., Thoti, K. K., Shanthi, P., & Kommuri, U. K. (2023). Unlocking the power of artificial intelligence and machine learning in transforming marketing as we know it. In *Data-Driven Intelligent Business Sustainability* (pp. 60–74). <https://doi.org/10.4018/979-8-3693-0049-7.ch005>

De Bruyn, A., Viswanathan, V., Beh, Y. S., Brock, J. K. U., & von Wangenheim, F. (2020). Artificial Intelligence and Marketing: Pitfalls and Opportunities. *Journal of Interactive Marketing*, 51(0), 91–105. <https://doi.org/10.1016/j.intmar.2020.04.007>

Eriksson, T., Bigi, A., & Bonera, M. (2020). Think with me, or think for me? On the future role of artificial intelligence in marketing strategy formulation. *TQM Journal*, 32(4), 795–814. <https://doi.org/10.1108/TQM-12-2019-0303>

Hermann, E. (2022). Leveraging Artificial Intelligence in Marketing for Social Good—An Ethical Perspective. *Journal of Business Ethics*, 179(1), 43–61. <https://doi.org/10.1007/s10551-021-04843-y>

Huang, M. H., & Rust, R. T. (2022). A Framework for Collaborative Artificial Intelligence in Marketing. *Journal of Retailing*, 98(2), 209–223. <https://doi.org/10.1016/j.jretai.2021.03.001>

Maharana, A. K., & Panda, P. (2023). Exploring the Landscape of Corporate Tax Reforms: A Comprehensive Bibliometric Analysis. *VISION: Journal of Indian Taxation*, 10(2), 71–86. <https://doi.org/10.17492/jpi.vision.v10i2.1022305>

Open, C., & The, V. (2020). Artificial Intelligence ( AI ) in Strategic Marketing Decision-Making : A research agenda To be published in The Bottom Line , 2019 Professor Merlin Stone St Mary ’ s University , London , UK ; University of Portsmouth UK ; Merlin Stone Consulting Dr Elen. *Emerald Insight*, 33(2), 183–200.

Peyravi, B., Nekrošienė, J., & Lobanova, L. (2020). Revolutionised technologies for marketing: Theoretical review with focus on artificial intelligence. *Business: Theory and Practice*, 21(2), 827–834. <https://doi.org/10.3846/btp.2020.12313>

Verma, S., Sharma, R., Deb, S., & Maitra, D. (2021). International Journal of Information Management Data Insights Artificial intelligence in marketing : Systematic review and future research direction. *International Journal of Information Management Data Insights*, 1(1), 100002. <https://doi.org/10.1016/j.ijime.2020.100002>