

Mapping research in marketing: trends, influential papers and agenda for future research

Mapping
research in
marketing

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Abstract

Purpose – This study aims to map the conceptual structure and evolution of the recent scientific literature published in marketing journals to identify the areas of interest and potential future research directions.

Design/methodology/approach – The 100 most influential marketing academic papers published between 2018 and 2022 were identified and scrutinized through a bibliometric analysis.

Findings – The findings further upheld the critical role of emerging technologies such as Blockchain in marketing and identified artificial intelligence and live streaming as emerging trends, reinforcing the importance of data-driven marketing in the discipline.

Research limitations/implications – The data collection included only the 100 most cited documents between 2018 and 2022, and data were limited only to Scopus database and restrained to the Scopus-indexed marketing journals. Moreover, documents were selected based on the number of citations. Nevertheless, the data set may still provide significant insight into the marketing field.

Practical implications – Influential authors, papers and journals identified in this study will facilitate future literature searches and scientific dissemination in the field. This study makes an essential contribution to the marketing literature by identifying hot topics and suggesting future research themes. Also, the important role of emerging technologies and the shift of marketing toward a more data-driven approach will have significant practical implications for marketers.

Originality/value – To the best of the authors' knowledge, this is the first comprehensive study offering a general overview of the leading trends and researchers in marketing state-of-the-art research.

Keywords Marketing, Bibliometric analysis, Citation analysis, Research publications, Science mapping

Paper type Research paper

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Mapa de la investigación en marketing: Tendencias, artículos influyentes y agenda para futuras investigaciones

Resumen

Propósito – Este estudio tiene como objetivo mapear la estructura conceptual y la evolución de la literatura científica reciente publicada en revistas de marketing para identificar las áreas de interés y las posibles direcciones futuras de investigación.

Diseño – Los 100 artículos académicos de marketing más influyentes publicados entre 2018 y 2022 fueron identificados y escudriñados a través de un análisis bibliométrico.

Hallazgos – Nuestros hallazgos confirmaron aún más el papel crítico de las tecnologías emergentes como Blockchain en el marketing e identificaron la inteligencia artificial y la transmisión en vivo como tendencias emergentes, lo que refuerza la importancia del marketing impulsado por datos en la disciplina.

Originalidad – Este es el primer artículo exhaustivo que ofrece una visión general de las principales tendencias e investigadores en la investigación del estado del arte del marketing.

Limitaciones de la investigación – La recopilación de datos incluyó solo los 100 documentos más citados entre 2018 y 2022, y los datos se limitaron solo a Scopus Database y se restringieron a las revistas de marketing indexadas en Scopus. Además, los documentos se seleccionaron en función del número de citas. Sin embargo, el conjunto de datos aún puede proporcionar una visión significativa del campo del marketing.

Implicaciones prácticas – Los autores, artículos y revistas influyentes identificados en este estudio facilitarán las futuras búsquedas bibliográficas y la divulgación científica en este campo. Este estudio supone una contribución esencial a la bibliografía sobre marketing al identificar temas candentes y sugerir futuros temas de investigación. Asimismo, el importante papel de las tecnologías emergentes y el cambio del marketing hacia un enfoque más basado en los datos tendrán importantes implicaciones prácticas para los profesionales del marketing.

Palabras clave Marketing, Análisis bibliométrico, Análisis de citas, Publicaciones de investigación, Mapeo científico

Tipo de artículo Trabajo de investigación

营销研究地图：趋势、有影响力的文章和未来研究议程

摘要

目的 – 本研究旨在绘制近期在市场营销期刊上发表的科学文献的概念结构和演变图，以确定感兴趣的领域和未来可能的研究方向。

设计 – 通过文献计量学分析，确定了 2018 年至 2022 年间发表的 100 篇最具影响力的市场营销学术文章，并对其进行了仔细研究。

研究结果 – 我们的研究结果进一步证实了区块链等新兴技术在市场营销中的关键作用，并将人工智能和直播确定为新兴趋势，从而加强了数据驱动型市场营销在该学科中的重要性。

独创性 – 这是第一篇全面概述最新市场研究主要趋势和研究人员的文章。

研究局限性 – 数据收集仅包括 2018 年至 2022 年间被引用次数最多的 100 篇论文，数据仅限于 Scopus 数据库，且仅限于 Scopus 所收录的市场营销期刊。此外，这些论文是根据被引用次数来选择的。不过，该数据集仍能为市场营销领域提供有意义的见解。

实际意义 – 本研究中发现的有影响力的作者、文章和期刊将有助于该领域未来的文献检索和科学传播。本研究通过确定热点话题和提出未来研究课题，为市场营销文献做出了重要贡献。此外，新兴技术的重要作用以及市场营销向更多数据驱动方法的转变将对营销人员产生重要的实际影响。

关键词 市场营销；文献计量分析；引文分析；研究出版物；科学绘图。

文章类型 研究型论文

1. Introduction

Marketing is vital to all businesses' survival, long-term growth, development and success (Czinkota *et al.*, 2021). Generally, the domain of marketing encompasses (1) the identification of marketing opportunities, (2) the creation of competitive advantages, (3) the effective utilization of resources, (4) the communication and delivery of products or services to

customers, (5) the creation of value to customers and (6) the satisfaction of customers' needs profitably (Simkin, 2000).

The evaluation of academic marketing literature has progressively become relevant in recent years (Das *et al.*, 2022; Hair and Sarstedt, 2021). The increasing number of academic publications in marketing varies in different contributions, which made it difficult for scholars to track new trends and find influential manuscripts to advance the body of knowledge. The primary objective of a research publication is to be known and influence others' work. Nevertheless, the created knowledge is fragmented, and the emergence of new marketing topics is continuously changing the research map of marketing. Moreover, marketing is an applied discipline in that marketing research not only aims to generate scientific knowledge but also to provide insights and knowledge that can be practically used to inform marketing decisions (Jedidi *et al.*, 2021). In addition, technological advancement has rapidly affected marketing practices and management (Amado *et al.*, 2018). To address this challenge, this paper aims to map the conceptual structure and the evolution of knowledge to uncover the existing topics, trending areas of interest and future directions.

Despite considerable research efforts in the marketing field, little has been done to review prior research works systematically. Moreover, recent review articles have mainly focused on specific marketing domains or are limited to particular contexts, such as customer experience (Chauhan *et al.*, 2022), marketing communication (Domenico *et al.*, 2021), customer engagement (Chen *et al.*, 2021), consumer behavior (Oliveira *et al.*, 2022), advertising (Jebarajakirthy *et al.*, 2021) and product or brand positioning (Saqib, 2021), while context-specific reviews include marketing in emerging markets (Paul *et al.*, 2016), sustainable marketing (Lunde, 2018), business-to-business marketing (Pandey *et al.*, 2020), luxury brand marketing (Arrigo, 2018) and tourism marketing (Han and Bai, 2022). The lack of a holistic review of marketing research created a gap in the existing research. Therefore, it is necessary to provide a big picture of the most recent marketing literature. The most recent review work in the same vein was conducted by Morgan *et al.* (2019), who evaluated 257 marketing strategy articles published in the six most influential marketing journals during 1999–2017. Nevertheless, given its focus on marketing strategy and limited research sources, it does not provide a comprehensive framework that covers all aspects of the marketing field. To complement the work by Morgan *et al.* (2019), this paper conducts a review with a more recent timeframe that focuses on recent trends, patterns and development in the field. The inclusiveness of journals will also enable identifying areas of interest beyond marketing strategy.

The purpose of this study is to conduct a bibliometric analysis of the 100 most influential academic marketing research and to identify trending research topics in the marketing field with a focus on synthesizing data from existing studies, which will facilitate researchers in literature search and academic evaluation, as well as guide them to select the most compelling paths to conduct their future works (Boell and Cecez-Kecmanovic, 2014). Specifically, this paper aims to answer the following questions:

- RQ1. What is the knowledge structure of the state-of-the-art most influential academic research in marketing?
- RQ2. What are the current research trends?
- RQ3. What are possible pathways for future research in marketing?

The present work will facilitate the understanding and advancement of theories and knowledge in the field. Also, this paper provides valuable insights into the field's most relevant and pressing issues and informs where future research efforts should be focused.

This will, in turn, improve the practical relevance and usefulness of future research and ensure that research efforts are targeted toward topics that will yield impactful results. Moreover, it offers up-to-date information for marketing researchers.

2. Methodology

This study focuses on characterizing the most influential academic marketing articles published between 2018 and 2022 and discussing the marketing state of the art.

2.1 Search strategy

A search string was applied in the Scopus database to find the most relevant articles for this research (Ramos *et al.*, 2019). The Scopus database was chosen for the literature review as it is generally considered one of the largest repositories with the most relevant indexed publications and one of the most universally acknowledged bibliographic databases (Kumar *et al.*, 2020). It is recognized as the most well-organized and of the highest credibility and quality standards, with the most significant global impact and more comprehensive cover (Muñoz-Leiva *et al.*, 2015; Rojas-Lamorena *et al.*, 2022) and is consistent with previous bibliometric reviews applied in the marketing research setting (Kumar *et al.*, 2021; Paul and Bhukya, 2021). In addition, it follows Donthu *et al.* (2021)'s recommendation to select only one database to minimize human errors during analysis. All marketing journals (212) indexed in Scopus were included in the current study. The journal selection takes a rather inclusive approach instead of the sole inclusion of marketing-specific journals, as marketing is a diverse and evolving field not strictly tied to a single-subject field (Baumgartner and Pieters, 2003) but often intersects with other disciplines. For instance, given the rapid advancement of technology and its influence on marketing practices, topics such as information systems or big data are growing in importance and relevance to the marketing literature (Amado *et al.*, 2018). Accordingly, journals such as the *International Journal of Information Management* have also contributed significantly to marketing recently (Veloutsou and Ruiz Mafe, 2020). The search was conducted on June 9, 2023.

2.2 Selection process and final data set

The search was conducted in the Scopus database and limited to 2018 to 2022 to obtain state-of-the-art articles. Five years is a reasonable timeframe to capture a discipline's essence and to conduct a bibliometric analysis (Borghain *et al.*, 2022). The collection of articles over five years reflects varied, robust, broad, inclusive and unrelated marketing research interests in the marketing field (Bettenhausen, 1991). The focus on the most recent works permits uncovering the most recent trends without the influence of older topics. Only articles were selected as they represent the most advanced and up-to-date knowledge and are recognized for their academic value (Rojas-Lamorena *et al.*, 2022). In total, 44,767 articles were collected. To select the most recent influential marketing articles, the top 100 most cited articles were selected. The citation metric acknowledges the impact of the articles (Donthu *et al.*, 2021) and reflects the impact of scholarly work in subsequent research (Purkayastha *et al.*, 2019).

In addition, it is recognized as one of the most relevant metrics of academic research (Dowling, 2014). Although assessing the influence of an article based on citation analysis represents a significant limitation because articles may be cited for multiple reasons, citation analysis is considered an objective approach that exhibits less systematic biases for research impact evaluation (Baumgartner and Pieters, 2003). Previous works have used citation metrics for bibliometric analysis. For instance, Law *et al.* (2009) analyzed the most influential articles published in Tourism journals using citation counts, whereas Brito *et al.* (2018) identified the areas of interest in football research and listed the articles based on

citation frequency. From each article, the following variables were retrieved: authors' names and keywords, document title, year, source title and citation count. The information was extracted in CSV file format.

2.3 Final data set

The final data set includes 100 articles from 28 journals. The authors' names were reviewed for normalization purposes as they have different nomenclatures in different articles (e.g. Dwivedi YK vs Dwivedi Y) so that the software understands them as the same.

2.4 Data analysis

The CSV file with the final data set was input for the bibliometric analysis. Data were analyzed using the mapping analysis R-tool bibliometrix (Aria and Cuccurullo, 2017). This package allows different types of analysis, offering an overview of the research field. A bibliometric analysis permits to analyzing the bibliographic material quantitatively, providing an objective and reliable analysis (Broadus, 1987; Sepulcri *et al.*, 2020) and summarizing the existing literature and identifying emerging topics of research (Hota *et al.*, 2020). The authors' names and keywords, year of publication, source title and the number of citations were collected from each article. A performance analysis was performed to acknowledge the field's citation structure, most relevant sources, authors and articles. Then, science mapping analysis through a co-occurrence analysis was performed. The co-occurrence analysis aims to overcome the descriptive nature of the bibliometric analysis, uncovering gaps and research trends (Palmatier *et al.*, 2018; Quezado *et al.*, 2022). The gaps and research trends led to a future research agenda.

3. Results and discussion

3.1 Total citations by year

As indicated in Table 1, the 100 articles were cited 41,888 times, an average of 418.88 citations per article. The most contributing years were 2019 and 2020, with 33 published articles yearly. The year with the highest number of citations was 2019, with 14,621 citations, corresponding to 34.90% of the total citations. This record is strongly linked to the work of Snyder (2019), with 1,872 citations that characterized different types of literature reviews and suggested guidelines on conducting and evaluating business research literature reviews. Due to the increasing number of publications, it is challenging to keep current with state-of-the-art research (Briner and Denyer, 2012). Reviewing the existing research is fundamental for understanding marketing research inconsistencies, gathering and synthesizing previous research and serving as guidance for researchers and practitioners. In addition, literature reviews contribute to identifying potential gaps, suggesting novel

Year	N	TC*	Mean TC* per article	Mean TC* per year	Citable years
2018	26	9,015	346.73	57.79	6
2019	33	14,621	453.36	90.67	5
2020	33	13,692	414.91	103.73	4
2021	8	4,220	527.5	175.83	3
2022	0	0	0	0	2
Total	100	41,888	418.88	69.81	

Note: *TC = total citations

Table 1.
Top 100 most cited
articles structure

research lines and allowing a balanced growth of a research field (Hulland and Houston, 2020).

The year with the highest mean total citations per article and year was 2021 (527.5 and 175.83, respectively). This result is highly associated with Donthu *et al.* (2021)'s work, with 1,221 citations, that explained how to develop a bibliometric analysis.

The main difference between a literature review and bibliometric analysis is the focus and the methodological approach. A literature review aims to critically analyze and synthesize existing knowledge under a research topic (Snyder, 2019). In turn, a bibliometric analysis is a specific approach within the field of scientometrics that uses quantitative and statistical methods to analyze the scientific production and articles' characteristics published in a specific research domain (Aria and Cuccurullo, 2017).

3.2 Most influential articles

Seminal articles in marketing assume an essential role in its development (Berry and Parasuraman, 1993). The number of citations was used to define and measure the impact of the most influential articles. The most cited document (total citation = 1,872) was Snyder's (2019) work on conducting an overview and suggesting guidelines for conducting a literature review (Table 2). The normalized citation compares an article's performance to the data set's average performance (Bornmann and Marx, 2015; Rita and Ramos, 2022). Snyder (2019)'s work has the highest normalized citation index (4.13), revealing its outstanding performance compared with the remaining articles from the data set.

Among the top 10 most cited articles, three are related to PLS-SEM. The partial least squares – structural equation modeling (PLS-SEM) is relevant for marketing as it allows to examine of complex relationships between latent variables and manifest variables, permitting a flexible and less restrictive analysis in terms of statistical assumptions than

Document	Title	TC	Average TC per year	Normalized TC
Snyder (2019)	Literature review as a research methodology: an overview and guidelines	1,872	374.40	4.13
Donthu <i>et al.</i> (2021)	How to conduct a bibliometric analysis: an overview and guidelines	1,221	407.00	2.31
Hair <i>et al.</i> (2020)	Assessing measurement model quality in PLS-SEM using confirmatory composite analysis	1,103	275.75	2.66
Sigala (2020)	Tourism and COVID-19: impacts and implications for advancing and resetting industry and research	977	244.25	2.35
Shmueli <i>et al.</i> (2019)	Predictive model assessment in PLS-SEM: guidelines for using PLSpredict	913	182.60	2.01
Verhoef <i>et al.</i> (2021)	Digital transformation: a multidisciplinary reflection and research agenda.	758	252.67	1.44
Sarstedt <i>et al.</i> (2019)	How to specify, estimate, and validate higher-order constructs in PLS-SEM	728	145.60	1.61
Duan <i>et al.</i> (2019)	Artificial intelligence for decision making in the era of big data – evolution, challenges and research agenda	724	144.80	1.60
Sheth (2020)	Impact of covid-19 on consumer behavior: will the old habits return or die?	716	179.00	1.73
Koivisto and Hamari (2019)	The rise of motivational information systems: a review of gamification research	639	127.80	1.41

Table 2.
Top-cited documents

other modeling techniques, such as confirmatory factor analysis and principal component analysis (Hair *et al.*, 2020). By using PLS-SEM, marketing researchers can explore complex relationships among variables, test research hypotheses, identify the relative importance of different influencers and assess the validity and reliability of the measured variables (Sarstedt *et al.*, 2019). It is frequently used in research involving the modeling of theoretical constructs, such as customer satisfaction (Ramos *et al.*, 2022), brand image (Kunkel *et al.*, 2020) or perceived quality (Ariffin *et al.*, 2021) research.

Surprisingly, there are no articles from 2018 in the top 10 most cited articles. However, there are two articles published in 2021. One of the papers published in 2021 is the work of Verhoef *et al.* (2021), which explores digital transformation and innovation in business models and suggests a research agenda for future studies. Digital transformation and innovation are highly relevant for marketing as it provokes consumer behavior change (Lemos *et al.*, 2022). In addition, it allows companies to adapt to consumer behavior changes, seize the opportunities for segmentation and personalization, improve communication and engagement and increase operational efficiency (Muneeb *et al.*, 2023; Zhang *et al.*, 2022).

3.3 Source impact

Table 3 depicts the top 10 most impactful sources of the 100 most influential marketing articles. The intellectual convergence is exhibited based on common sources and referencing patterns (Donthu *et al.*, 2021), and identifying journals may facilitate future literature search and scientific dissemination.

Among the 28 journals, the *International Journal of Information Management* (IJIM) contributed the most papers (26 papers), followed by the *Journal of Business Research* (JBR) (22 papers) and the *Journal of Retailing and Consumer Services* (JRCS) (6 papers). These journals are all First Quartile journals based on SCImago Journal Rank (SJR) indicator, with an impact factor of 4.906, 2.895 and 2.543, respectively. The IJIM focuses on contemporary issues in information management (Elsevier, 2023a). Information management field of research plays a fundamental role in marketing, providing data and insights that guide marketing strategies, improve segmentation and customization, leverage automation marketing, data-driven decision-making and the performance evaluation of marketing initiatives (Dwivedi *et al.*, 2020). The JBR aims to publish recent business research dealing with the spectrum of actual business practical settings among different business activities (Elsevier, 2023b), while the JRCS focuses on consumer behavior and policy and managerial decisions (Elsevier, 2023c). The findings indicate the contribution and importance of IJIM to

Journal	No. of articles	Scopus quartile	SJR	TC
<i>International Journal of Information Management</i>	26	Q1	4.91	10,008
<i>Journal of Business Research</i>	22	Q1	2.90	12,265
<i>Journal of Retailing and Consumer Services</i>	6	Q1	2.54	1,875
<i>Annals of Tourism Research</i>	4	Q1	3.43	1,376
<i>Business Horizons</i>	4	Q1	2.48	1,706
<i>Journal of Consumer Research</i>	4	Q1	6.02	1,220
<i>Journal of the Academy of Marketing Science</i>	4	Q1	6.25	1,850
<i>European Journal of Marketing</i>	3	Q1	1.63	1,769
<i>Industrial Marketing Management</i>	3	Q1	2.66	984
<i>Journal of Marketing</i>	3	Q1	10.8	1,120

Notes: SJR = SCImago Journal Rank indicator; TC = total citations

Table 3.
Source impact

the marketing field, recognizing the relevance of information management. Surprisingly, leading marketing journals listed in the Financial Times 50 (Ormans, 2016), such as the *Journal of Consumer Research*, *Journal of the Academy of Marketing Science* and *Journal of Marketing*, only produced a small number of relevant articles in our data set. This result suggests that their papers may not be as impactful or influential as those published in other outlets. Nevertheless, the quality of the articles published in these outlets reflects the most original and well-executed research, as they have high submission rates. However, their rate of acceptance is very low.

Among the top 10 most productive journals, JBR is the one with the highest number of citations. This result confirms Table 2's results as it lists six articles that were published in this journal (Donthu et al., 2021; Hair et al., 2020; Sheth, 2020; Sigala, 2020; Snyder, 2019; Verhoef et al., 2021).

3.4 Contributing authors

Key authors are essential to the field's structure and growth (Berry and Parasuraman, 1993) and positively influence the most impactful articles (Rojas-Lamorena et al., 2022). Thus, it is imperative to identify them and acknowledge their impact. Between 2018 and 2022, 100 documents were written by 312 different authors.

Table 4 characterizes the top 10 most productive authors among the most influential marketing research articles over the past five years. The authors' indices were calculated, including *h*-index, *g*-index and *m*-index. The Hirsh index (*h*-index) is the proposal to quantify productivity and the journal's impact considering the number of papers and citations per publication (Hirsch, 2005). The *g*-index aims to measure the performance of the journals (Egghe, 2006), considering the citation evolution of the most cited papers over time. Furthermore, the *m*-index, also called the *m*-quotient, considers the *h*-index and the time since the first publication (*n*); hence, $m\text{-index} = h\text{-index}/n$ (Halbach, 2011).

Professor Dwivedi YK is the most prolific, with seven published articles indicating more than one paper yearly. Although he is placed second as the most cited author (3,361), he has the highest *h*- (7), *g*- (7) and *m*-index (1.17). Professor Dwivedi's research focuses on digital innovation and technology consumer adoption and the use of information systems and information technology for operation management and supply chain, focusing on emergent markets. Digital innovation and understanding technology consumer adoption allow companies to engage with consumers efficiently and personally (Alalwan et al., 2023). In addition, information systems and information technology applied in operation management and supply chain permit a higher efficiency and visibility in commercial activities, aiding companies to optimize processes, reduce costs and improve customer care (Tasnim et al., 2023). Professor Dwivedi is a Professor at the School of Management,

Table 4.
Most productive authors and their impact

Authors	Topical focus	No. of articles	Fractionalized frequency	Total citations	<i>h</i> -Index	<i>g</i> -Index	<i>m</i> -Index
Dwivedi YK	Digital innovation	7	1.16	3,361	7	7	1.17
Hair JF	Multivariate analysis	5	1.18	3,615	5	5	0.83
Hughes DL	Artificial intelligence	5	0.57	2,305	5	5	1.00
Ringle CM	Data and business analytics	4	0.84	2,512	4	4	0.67
Sarstedt M	Structural equation modeling	4	0.84	2,512	4	4	0.67

Swansea University, UK (Swansea, 2023). The second most productive author is Hair JF, and Hughes DL, with five articles each. Professor Hair JF is the most cited author in the list of the most productive authors. This record is highly associated with the work “Assessing measurement model quality in PLS-SEM using confirmatory composite analysis” (Hair *et al.*, 2020), with 1,103 citations. Multiple papers gather authors from the list. For instance, the article “Artificial Intelligence (AI): Multidisciplinary perspectives on emerging challenges, opportunities, and agenda for research, practice and policy” (Dwivedi *et al.*, 2021) was co-authored by Professors Dwivedi YK and Hughes DL. This paper has 637 citations and addresses the transformative power that artificial intelligence (AI) may have for the automation and replacement of human tasks, highlighting opportunities, challenges and impacts. AI plays a fundamental role in marketing, permitting advanced personalization, task automation, advanced data analysis, campaign optimization and improved customer experience, leading to personalized experiences and better marketing results (Duan *et al.*, 2019; Dwivedi *et al.*, 2021).

Fractionalized frequency displays the multiauthored articles. This analysis is relevant to understand how researchers interact with each other (Rojas-Lamorena *et al.*, 2022). A credit is attributed to each author, depending on the number of co-authors. If a paper has two authors, each receives a half-point. If a paper has three authors, each receives a third of a point, and so on (Cuccurullo *et al.*, 2016). Professor Hughes DL has the lowest score (0.57) on the five most productive authors list, suggesting a strong relationship with colleagues through co-authorship based on shared interests.

3.5 Co-occurrence analysis

Figure 1 presents the authors’ keywords co-occurrence analysis and reflects the relationship between the keywords and the data set (Wang *et al.*, 2012). Co-occurrence analysis aims to establish relationships and map the conceptual structure of the most influential marketing academic articles and reveal current research trends (Eduardsen and Marinova, 2020). The thicker the lines among each cluster, the stronger the connection between the keywords. The size of each edge indicates the occurrence frequency. Thematic map displays the top 50 keywords and a minimum of 5 clusters. The thematic map shows six clusters, of which two are with the largest nodes, including AI (brown) and Covid-19 (blue). However, clusters with

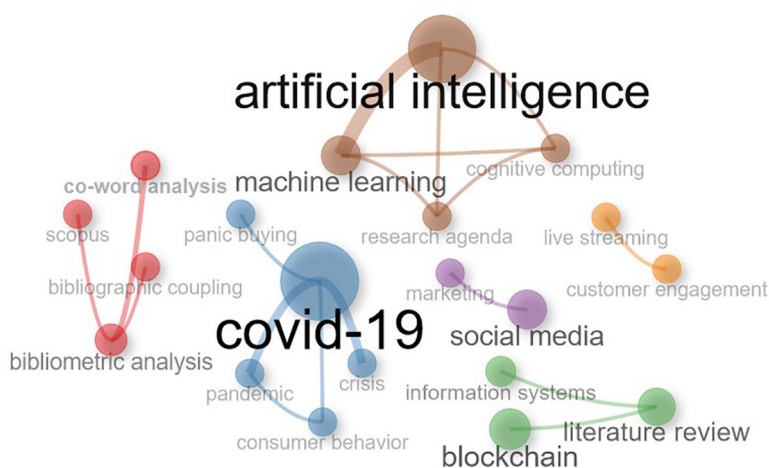


Figure 1.
Thematic map based
on the authors’
keywords co-
occurrence

smaller nodes are bibliometric analysis (red), social media (purple), blockchain (green) and customer engagement (orange).

The brown cluster suggests a topic under AI technology. The cluster's keywords highlight an interconnection and application of AI, machine learning and cognitive computing in the marketing research field. Deep learning, natural language processing and machine learning make part of a broader spectrum of AI (Verma *et al.*, 2021). Cognitive computing refers to the capacity of computer systems to mimic human capacity to process information, learn and make decisions (Duan *et al.*, 2019). These technologies handle big data efficiently, predict consumer behavior and support decision-making in actionable insights, transforming marketing strategies (Blanco-Moreno *et al.*, 2023; Dwivedi *et al.*, 2021).

The blue cluster reflects the pandemic that affected the globe between 2020 and 2023 (United Nations, 2023). This cluster reveals a close relationship between the Covid-19 pandemic and consumer behavior (Sheth, 2020). The interest in understanding the attitudes and consumers' decision-making is highly relevant for future pandemics (Pereira *et al.*, 2023). In addition, the pandemic brought social and industry challenges that deserve academic attention (Dwivedi *et al.*, 2020; Muneeb *et al.*, 2023). This cluster also addresses overconsumption driven by impulsive behavior promoted by the pandemic (Islam *et al.*, 2021; Marikyan *et al.*, 2023). This cluster suggests insights on how companies can adequately develop marketing strategies to face the pandemic challenges and effectively respond to health crises.

The red cluster reveals a direct connection between bibliometric analysis and scientific assessment. The bibliometric analysis is applied to reveal research patterns and knowledge structure and access the scientific production impact (Ramos and Rita, 2023). The use of bibliographic coupling, co-occurrence analysis and the Scopus database supplies the data set for the identification of relationships and patterns within the literature (Donthu *et al.*, 2021), summarizing the existing literature and identifying emerging topics of research (Hota *et al.*, 2020).

The purple cluster highlights the terms social media and marketing. The keyword social media highlights the role of platforms, such as Instagram or TikTok, for advertising (Alalwan, 2018), understanding the role of influencers (Lou and Yuan, 2019), and for co-creation in brand communities (Kamboj *et al.*, 2018), influencer marketing. Social media platforms are fundamental for any communication strategy as they connect with the audience, create engagement and awareness and promote products and services (Lou and Yuan, 2019). The strategic use of social media in marketing is fundamental for companies to establish an effective presence and build long-lasting relationships.

The orange cluster suggests a relationship between live streaming and customer engagement (Wongkitrungrueng and Assarut, 2020). This interconnection suggests that live streaming can be an effective channel for developing social commerce, influencing purchase intentions (Sun *et al.*, 2019). Real-time and direct interaction with customers promote greater involvement and improve customer experience.

The green cluster suggests a focus on applying blockchain technology in information systems. Blockchain is a decentralized and immutable technology for transaction registers studied in the supply chain context (Min, 2019). It has a significant potential to transform data management (Lemos *et al.*, 2022).

4. Conclusions and future research agenda

This study represents a map of the conceptual structure and evolution of the state-of-the-art scientific literature published in marketing journals to identify the areas of interest and

potential future research directions. This review aimed to (1) acknowledge the structure of the state-of-the-art most influential academic marketing research, (2) identify current research trends and (3) suggest future research prospects.

4.1 RQ1: knowledge structure

Regarding RQ1, the most cited article among the top 100 between 2018 and 2022 was the work of Snyder (2019), with 1,872 citations, followed by the work of Donthu *et al.* (2021), with 1,221. The years 2019 and 2020 were those that most contributed to the top 100 most cited, with 33 articles each. Accordingly, these years had the most citations, 14,621 and 13,692, respectively. The IJIM was the source with the highest number of articles published from our data set ($n = 26$). However, the JBR, with 22 published articles, was the journal with the highest citations ($n = 12,265$). Every journal from the top 10 prolific sources is ranked in Scopus (SJR) as Q1. Professor Dwivedi YK was the most prolific author, with seven articles published, followed by Professors Hair JF and Hughes DL, with five articles each. Although placed second on the most productive authors list, the most cited author was Professor Hair JF, with 3,615 articles.

4.2 RQ2: current research trends

As for RQ2, this bibliometric analysis allowed us to identify current research trends through the co-occurrence analysis. Since a comprehensive future research agenda stimulates researchers to continue their research efforts (Hulland and Houston, 2020), we suggest marketing future research questions to gain a deeper knowledge of current research trends (Table 5).

Although AI has existed for over six decades (Duan *et al.*, 2019), the development of supercomputers that analyze big data led to the exponential use of this technology. Its application in marketing varies and includes trend and prediction analysis, chatbots and marketing automation. However, particularly for data analysis, multiple research questions are yet to be answered (Dwivedi *et al.*, 2021). Grounded on the AI (brown) cluster, it would be interesting to uncover different uses of AI to improve big data analysis.

The Covid-19 pandemic disrupted global habits (Sheth, 2020). New habits emerged, changing the industry landscape in multiple dimensions, such as consumer, leisure and work behavior. Although multiple studies were published regarding the topic, much is yet to be uncovered. The effects of this pandemic are yet to be fully acknowledged, demanding future studies to comprehend the permanent changes in society (Islam *et al.*, 2021). In addition, uncovering the best-implemented industry marketing strategies can be helpful, as it is inevitable that new pandemics occur in the future (Pereira *et al.*, 2023).

Bibliometric analyses map and summarize existent research, extending the global understanding of a research topic and increasing the quality and success of scholarly work (Donthu *et al.*, 2021). However, the analysis is mainly descriptive (Ramos and Rita, 2023). Combining bibliometric analysis with other methods may enhance the results, leading to an advancement in using such an approach.

Social media is broadly used for marketing-related activities. Through social media platforms, it is possible to build brand image, generate leads for the company's website, analyze and monitor data, or be an influencer marketer (Alalwan, 2018; Lou and Yuan, 2019). Nevertheless, the implementation of gamification techniques (Bhutani and Behl, 2023; Wanick and Stallwood, 2023), privacy concerns (Saura *et al.*, 2023) and collective decision-making (Dambanemuya *et al.*, 2023) are issues that deserve the attention of researchers.

Livestreaming captured the attention of digital retailing marketers in recent years and significantly changed social interaction. However, different types of live streaming exist,

Current research trends	Future research questions
Brown cluster – AI (e.g. Duan et al., 2019 ; Davenport et al., 2020 ; Dwivedi et al., 2021)	<ul style="list-style-type: none"> • How can big data analysis be improved using AI and machine learning in marketing research? • What are the main factors that influence the successful implementation of AI and machine learning in marketing research? • Which ethical considerations emerge from the application of AI in marketing research?
Blue cluster – Covid-19 (e.g. He and Harris, 2020 ; Sheth, 2020 ; Islam et al., 2021)	<ul style="list-style-type: none"> • What are Covid-19 lasting consumer behavior changes? • How should marketing strategies be adjusted to address the consumers' postpandemic concerns and priorities such as health and wellbeing, diversity, inclusion and sustainability? • How are companies prepared for future pandemic crises or disruptive events?
Red cluster – bibliometric analysis (e.g. Martínez-López et al., 2018 ; Verma and Gustafsson, 2020 ; Donthu et al., 2021)	<ul style="list-style-type: none"> • How can bibliometric analysis be combined with other approaches, such as Natural Language Processing, meta-analyses or narrative analyses, to improve scientific marketing insights?
Purple cluster – social media (e.g. Alalwan, 2018 ; Kamboj et al., 2018 ; Lou and Yuan, 2019)	<ul style="list-style-type: none"> • How can social media gamification techniques be used to engage and strengthen the brand-consumer? • How can companies influence consumers to share their social media personal data for marketing purposes? • How is decision-making influenced by social media collective intelligence and crowdsourcing?
Orange cluster – live streaming (e.g. Sun et al., 2019 ; Wongkitrungrueng and Assarut, 2020)	<ul style="list-style-type: none"> • How can different types of live streaming influence customer engagement? • What factors influence customer engagement on the live streaming? • What challenges and opportunities are associated with live streaming and customer engagement?
Green cluster – Blockchain (e.g. Hawlitschek et al., 2018 ; Min, 2019 ; Queiroz and Fosso Wamba, 2019)	<ul style="list-style-type: none"> • How does blockchain technology influence the management and governance of information systems? • How is a marketing campaign ROI be evaluated using blockchain technology? • How is brand interaction in co-marketing campaigns transformed using blockchain technology?

Table 5.
Co-occurrence topics
and future research
avenues

Note: ROI = Return on investment

such as webinars, game streaming, corporate streaming, vlogs or personalized content, and can be used in different industries (Zhang *et al.*, 2023). Investigating the influence of live streaming on consumer engagement may enhance understanding of its relevance for the industry and improve marketing effectiveness (Wongkitrungrueng and Assarut, 2020).

Blockchain technology allows tracing and enhances transaction transparency, creating authenticity certificates to prevent fraud or loyalty programs to build customers' loyalty and trust (Lemos *et al.*, 2022). Despite several studies being conducted to understand the impact of this technology on marketing (Marthews and Tucker, 2023; Tan and Salo, 2023), there is much to be learned and questions unanswered.

4.3 RQ3: future research agenda

Based on the comprehensive bibliometric analysis findings, potential directions for future research are presented (Table 6). Topics surrounding data-driven marketing are particularly relevant (Zhang *et al.*, 2022) due to the data abundance and technological advances, and they have the potential to be further developed. For instance, issues arising from adopting AI to uncover hidden patterns in big data or integrating data from different sectors or industries to understand consumer behavior are yet to be understood. In addition, environmental sustainability is highly relevant due to the increasing customers' awareness of the topic and its influence on developing marketing strategies (Jung *et al.*, 2020). However, multiple questions are yet to be answered. In particular, the influence of gamification techniques to promote positive, environmentally sustainable consumer behavior and how emerging technologies influence the customers' perception of sustainable products. Mass personalization allows consumers to customize product features (Qin and Lu, 2021). This topic is highly relevant to the industry and underexplored in marketing. For instance, how can mass personalization be efficiently implemented in highly productive industries? Or how can emerging technologies improve mass personalization programs? Finally, the wearable technologies market is exponentially growing and is increasingly essential to consumer behavior (Ferreira *et al.*, 2021).

5. Conclusions and limitations

Through the bibliometric analysis of the 100 most influential marketing papers published between 2018 and 2022, this review presents potential directions for knowledge advancement and comprehensive information to facilitate future literature search (Boell and Cecez-Kecmanovic, 2014) by identifying the current research focus, conceptual structure and trends in the marketing field. In addition, this review contributes to practice by identifying the most influential articles for the marketing scientific community interested in gaining scientific insights. Meanwhile, the important role of emerging technologies and the shift of marketing toward a more data-driven approach will have significant practical implications for marketers.

This work has limitations that need to be stated. First, data were limited to Scopus database and restrained to indexed marketing journals. However, it is essential to note that all scientific databases have limitations. Second, to select the most influential marketing documents, the only criterion was on a commonly used metric – the number of citations. Although citation metrics are commonly used, they may incorrectly demonstrate the quality of the work. There are multiple reasons for a work to be cited (Vogel and Güttel, 2012), such as a journal's prestige or factors related to the methods (Hota *et al.*, 2020). The Mathew effect phenomenon also exists in science (García-Lillo *et al.*, 2017). Third, articles take time to be cited. This means that the most recent articles from our data set may have fewer citations, but it does not mean that their quality is poorer. Fourth, to select the most influential

Potential research gaps	Future research questions
Data-driven marketing: to explore the potential of data-driven marketing by leveraging deep learning, AI and IoT technologies to enhance marketing practices, optimize customer targeting and improve overall business performance in the digital era	<ol style="list-style-type: none"> (1) How can big data hidden patterns be uncovered using deep learning and AI? (2) How new consumer behaviors could be disclosed using data from different sectors or industries? (3) How can data from the growing Internet of Things connected devices be used to improve marketing strategies?
Environmental sustainability: to investigate the potential of using neuromarketing techniques, gamification and mixed reality to promote sustainable consumption practices	<ol style="list-style-type: none"> (1) How can neuromarketing techniques be used to understand behavior change for sustainable consumption? (2) How can gamification techniques increase consumers' engagement in sustainable consumption practices? (3) How can mixed reality be used to promote a product's environmental sustainability?
Mass personalization: to investigate how personalization of customers' experiences can be enhanced and implemented responsibly and ethically	<ol style="list-style-type: none"> (1) How can mass personalization be implemented in traditionally nonpersonalized sectors? (2) How can the personalization of customers' experiences be enhanced using emerging technologies? (3) What are the ethical implications of mass personalization, considering data privacy and algorithmic justice?
Wearable technology: to investigate how wearable technologies can foster deeper connections between consumers and brands	<ol style="list-style-type: none"> (1) How can memorable brand interactions and experience marketing be enhanced using wearable technologies? (2) What is the potential use of wearables in location marketing? (3) How can wearable technologies impact customer loyalty and brand experience?

Table 6.
Potential research
gaps and future
research questions

Note: IoT = Internet of things

marketing articles, every journal under the subject area "Business, Management and Accounting" and category "Marketing" were selected. However, there are journals listed in other subject areas and categories. Nevertheless, the data set may still provide significant insight into the marketing field.

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