

# Exploring the Digital Transformation of Marketing: A Multidisciplinary Bibliometric Perspective

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**ABSTRACT-** The significance of digital marketing has grown throughout time in the current digital era as a way to provide clients with innovative properties for education, engagement, and the sale of goods and services. The purpose of the study is to evaluate research and development dynamics in the field of digital marketing (DM) from a multidisciplinary perspective by utilising bibliometric analysis to analyse the corpus of important research publications in the last twelve years (from 2012 to 2024). The Scopus database provided a total of 2403 published articles for the investigation. To provide more context, we evaluate patterns in the literature on digital marketing research in this study, considering the publication's year, author, keyword, and country. The findings showed that digital marketing research progressively grew during the study period. This bibliometric study generally provides the whole image of the field. It suggests that researchers focus on novel areas to add new findings and knowledge to the literature if they conduct digital marketing research.

**KEYWORDS-** Bibliometric Analysis, Digital Marketing, Marketing, Artificial Intelligence, Big Data.

## I. INTRODUCTION

The term "digital marketing" (DM) refers to the concept of marketing via electronic platforms using any kind of technology equipment [1].

The use of the following electronic tools and media to implement metrics based, objective, relational, and interactive marketing over the past 20 years has transformed global marketing: social media, television, radio channels, SMS, email, search engines, websites, mobile apps, electronic billboards, and social networks[2].

The adoption of cutting-edge tools and methods in digital marketing and advertising has increased comfort, reach, cost-effectiveness, and the capacity to transcend time and space barriers[2]. To achieve marketing goals in consumer-to-consumer and business-to-consumer environments, digital marketing makes use of various forms of technology, including artificial intelligence (AI) and the Internet of Things (IoT) [3][4][2][5][6].

DM tools based on retail platforms like Alibaba, Amazon Marketplace, iTunes, eBay, Flipkart, Booking.com,

Expedia, and social media marketing communities like Twitter, Facebook, LinkedIn, etc. both enhance and replace traditional marketing techniques[7][8][9][10]. As a result, DM is a constantly developing, multi-disciplinary domain, not confined to a simple application of electronic technology to marketing, but also able to advance with nascent developments in information and communication technology (ICT) tools and platforms (e. g., [11].

The main objective of this study is to evaluate research and development dynamics in the field of digital marketing from a multidisciplinary perspective by utilising bibliometric analysis to analyse the corpus of important research publications. Bibliometric analysis is a scientific computer-assisted review methodology that can identify core research or authors, as well as their relationship, by covering all the publications related to a given topic or field. For this analysis, Scopus data source was used, which is the largest abstract and citation database of peer-reviewed literature – scientific journals, books and conference proceedings. Also, Scopus delivers a comprehensive overview of the world's research output in the fields of science, technology, medicine social sciences and arts and humanities, Scopus features smart tools to track, analyze and visualize research.

Here, the study is confined to the last twelve years of duration (2012-2024). Because, in this period social networking services getting more popularity. In 2012, the most popular social networking site i.e., Facebook crossed 1 billion users and which still on top in SNS with 3 billion users followed by YouTube and WhatsApp.

This study intends to analyze the publication trend in digital marketing, the top authors and countries that are publishing articles on digital marketing and the top journals publishing such works, using citation analysis. Co-occurrence analysis is used to highlight the trends and research directions regarding Digital marketing. A Bibliographic coupling is also used to infer the knowledge and thematic structure of digital marketing for 2012-2024, through which 5 specific areas focused on digital marketing are identified.

## II. THEORETICAL BACKGROUND

The World Wide Web and the Internet have been used for business purposes for about 25 years[12]. The corporate environment has rapidly evolved during this time[12].

Twenty years ago, large international organisations like Google, Facebook, Amazon, Alibaba, eBay, and Uber were unheard of. Today, these companies are major players in our modern economy[12].

Digital marketing can be defined as “Using "an adaptive, technology-enabled process," businesses work with partners and customers to jointly create, communicate, deliver, and sustain value for all stakeholders” [12]. Future consumer lives will be significantly transformed by digital technology and products including smartphones, smart gadgets, the Internet of Things (IoT), artificial intelligence, and deep learning[12]. Digital marketing is also broad and covers a variety of subjects, including analytics, e-commerce, social media marketing, mobile marketing, and customer data mining[13].

Companies that need to adjust their mindsets and come up with new strategies to attract and retain customers face new problems as a result of digital transformation and changes in consumer behaviour[14]. Outbound marketing refers to conventional forms of marketing. This is a tactic where a business informs consumers about its goods and services even if they have no intention of buying them[15].

In this digital age, it has become increasingly riskier for businesses to use traditional marketing techniques to reach their target audiences. Companies that have to modify their attitudes and come up with new strategies to attract and retain customers now face new challenges as a result of digital transformation and changes in consumer behaviour[16], [17].

### III. METHODOLOGY

The paper seeks to infer the intellectual information of digital marketing by examining the bibliometric structure encapsulating the publication trends of articles, journals, authors and countries.

#### A. Techniques For Analysis:

The paper adopts a range of bibliometric analysis techniques to unpack the research trend in digital marketing. Besides the ability to handle a large corpus, bibliometric analysis identifies publication trends, discerns progressive topics, and establishes visualizations of thematic evolution. This allows for both retrospection and the envisaging of future research directions[18]. Citation analysis gives the top cited authors, publications, institutions and even countries. Co-occurrence analysis gives the most focused themes by the authors and bibliographic coupling is used for explicating the themes in the body of knowledge. These are the three techniques of bibliometric analysis used in this paper.

#### B. Data collection:

The data is acquired from Scopus, as it is a database that offers the widest coverage of peer-reviewed research in digital marketing. The detailed systematic procedure adopted in collecting the data is given in Table 1.

Table 1: Search Criteria

Filtering Criteria	Reject	Accept
Data Source: Scopus Search date: 10.01.2025 Search term: “Digital Marketing” From 2012- 2024 Subject Area: All		5162
Document type Limited to: Article	2494	2668
Publication stage Limited to: Final	95	2573
Language Limited to:	170	2403

## IV. RESULTS AND DISCUSSION

### A. Publication Trend:

Figure 1 shows the trend in the number of publications published in the field of digital marketing research over the past 12 years. The graph demonstrates the gradual rise in digital marketing research over time. However, in terms of publishing volume, 2024 and 2023 rank highest, with over 400 publications each. The year 2019 had the highest growth rate at 105%. Surprisingly, the year 2022 had the lowest growth rate, at just 12% after 2019.

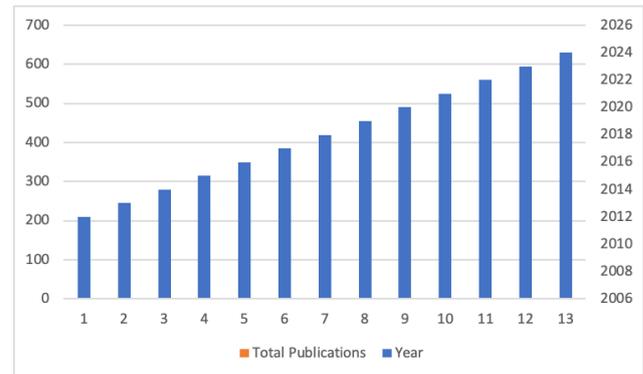


Figure 1: Publication Trend of Digital Marketing

Table 2: Publication Trend of Digital Marketing

Year	Total Publications	Growth Rate
2012	16	-
2013	20	25.00
2014	36	80.00
2015	31	-13.89
2016	52	67.74
2017	67	28.85
2018	95	41.79
2019	195	105.26
2020	232	18.97
2021	293	26.29
2022	329	12.29
2023	450	36.78
2024	587	30.44

### B. Top authors and countries in Digital marketing research:

Table 3 and Table 4 illustrate, respectively, the top researchers in the field of digital marketing as well as the top countries concerning the volume of documents that have been mentioned. With 582 citations H Karjaluo tops the list of authors in the field of digital marketing. JR Saura

comes in second with 509 citations. With 354 papers, the United States has made the greatest intellectual contributions to research on digital marketing among all other nations (13372). India came in second based on total publications (321), and the United Kingdom came in second based on citations (9729).

Table 3: Top Authors in Digital Marketing Research

Author	Publication	Citations
H Karjaluo	4	582
JR Saura	6	509
B dos Santos Ribeiro	4	259
DP Sakas	16	236
Arpan Kumar Kar	4	225
A Abell	5	151
Dimitrios P. Reklitis	7	135
NT Giannakopoulos	11	119
A Erdmann	5	115
Bridget Kelly	4	110
V Ahuja	7	107
KT Smith	4	107
JM Ponzoa	4	92
M Almansour	4	86
Marina C. Terzi	8	76
Nikos Kanellos	8	68
Lala Hu	5	63
Jusuf Zeqiri	4	46
E Constantinides	6	44

Table 4: Top Countries in Digital Marketing Research

Country	Publication	Citations
United States	354	13372
United Kingdom	190	9729
India	321	5297
Australia	85	4835
France	51	3330
Canada	59	3274
Finland	29	3065
Germany	39	2703
Spain	117	2548
China	143	2185
South Korea	56	1849
Netherlands	26	1769
Italy	58	1116
United Arab Emirates	48	1114
Indonesia	219	1100

Denmark	15	1059
Portugal	64	978
Norway	20	961
Greece	52	928
Singapore	17	847
Jordan	59	693
Turkey	30	576
Malaysia	91	575
Ukraine	72	547
Romania	30	534

**C. Top journals in Digital Marketing Research**

The top journals that were published in Digital Marketing research are presented in Table 5. In terms of citations, the Journal of Business Research and the Journal of Interactive Marketing are the most influential journals with 2215 and 1671 citations, respectively. However, in terms of publications, Sustainability (Switzerland) and International Journal of Data and Network Science are the most productive sources with 56 and 49 publications respectively.

Table 5: Top Journals in Digital Marketing Research

Source	Publication	Citations
Journal of Business Research	26	2215
Journal of Interactive Marketing	11	1671
International Journal of Research In Marketing	13	1666
Industrial Marketing Management	20	1464
Sustainability (Switzerland)	71	1381
Journal of Retailing And Consumer Services	15	967
International Journal of Data And Network Science	44	752
Psychology And Marketing	11	627
Journal of Marketing Education	16	546
Journal of Direct, Data And Digital Marketing Practice	17	344
Technological Forecasting And Social Change	10	241
Journal of Open Innovation: Technology, Market, And Complexity	10	186
Cogent Business And Management	41	154
Journal of Theoretical And Applied Electronic Commerce Research	11	150
African Journal of Hospitality, Tourism And Leisure	11	112

**D. Top articles on Digital Marketing Research**

The top cited articles in the field of Digital Marketing are presented in Table 6. The article entitled “From Social To Sale: The Effects Of Firm-Generated Content In Social

Media On Customer Behaviour” by Kumar A[18] is the most impactful and influential article with the highest number of citations (463), followed by the article entitled “Digital Marketing Technologies And New Markets: From Embryonic Markets To Digital Marketing” by Kannan P.K. [12] with 457 citations.

Table 6: Top Articles in Digital Marketing Research

Author	Title	Citations
Dwivedi (2021)	Setting the future of digital and social media marketing research: Perspectives and research propositions	1017
Appel (2020)	The future of social media in marketing	906
Kannan (2017)	Digital marketing: A framework, review and research agenda	746
Kumar (2016)	From social to sale: The effects of firm-generated content in social media on customer behaviour	697
Felix (2017)	Elements of strategic social media marketing: A holistic framework	535
Chung (2020)	Chatbot e-service and customer satisfaction regarding luxury brands	532
Leeflang (2014)	Challenges and solutions for marketing in a digital era	424
Dwivedi (2023)	Metaverse marketing: How the metaverse will shape the future of consumer research and practice	416
Tiago (2014)	Digital marketing and social media: Why bother?	367
Bossetta (2018)	The Digital Architectures of Social Media: Comparing Political Campaigning on Facebook, Twitter, Instagram, and Snapchat in the 2016 U.S. Election	352
Yadav (2013)	Social commerce: A contingency framework for assessing marketing potential	349
Ma (2020)	Machine learning and AI in marketing – Connecting computing power to human insights	322
Yadav (2014)	Marketing in computer-mediated environments: Research synthesis and new directions	320
Petit (2019)	Digital Sensory Marketing: Integrating New Technologies Into Multisensory Online Experience	303

**E. Co-authorship analysis of Digital Marketing research among countries**

Table 7 below shows the co-authorship among authors in different countries. Co-authorship is one of the most tangible and well-documented forms of scientific collaboration. Researchers are no longer independent players but members of teams that bring together complementary skills and multidisciplinary approaches around common goals. This analysis is a powerful tool to assess collaboration trends and to identify leading

sources[19], which is why this paper intends to look at the co-authorship analysis. United Kingdom have 162 Link strengths, which means, the UK authors have collaborated with other nations’ authors more than any of other countries. United States have 157 link strength and the Indian authors have 98 link strength, which positioned 3<sup>rd</sup> in the list.

Table 7: Co-authorship Among Different Countries Regarding Research in Digital Marketing

Country	Documents	Citations	Link Strength
United Kingdom	190	9729	162
United States	354	13372	157
India	321	5297	98
Australia	85	4835	93
China	143	2185	82
France	51	3330	76
Canada	59	3274	65
Spain	117	2548	58
Malaysia	91	575	58
Germany	39	2703	45
United Arab Emirates	48	1114	40
Jordan	59	693	39
Saudi Arabia	58	451	38
Pakistan	33	456	36
South Korea	56	1849	35
Denmark	15	1059	33
Italy	58	1116	31
Singapore	17	847	31
Norway	20	961	29
Netherlands	26	1769	28
Indonesia	219	1100	25
Finland	29	3065	24
Portugal	64	978	23
Qatar	8	608	22
Brazil	42	467	18
Viet Nam	30	328	18
Turkey	30	576	17
Greece	52	928	15
South Africa	35	374	12
Ukraine	72	547	9
Croatia	17	336	8
Slovakia	13	338	7
Belgium	6	304	7
Switzerland	9	505	6
Romania	30	534	5



## V. CONCLUSION

The study reveals that digital marketing research is steeply increasing each year. The popularity of digital marketing increased over the past ten years, much like that of social media. As a result, marketing researchers are now turning their attention to research in digital markets. In this study, studies over the last ten years total is more than 2000. More studies on it have been done by scholars in the US, UK, and India. Additionally, research on digital marketing is more prevalent in the fields of social media marketing, artificial intelligence, and different techniques applied in digital marketing. Finally, the rapid improvement in technology will expand the field of digital marketing which drive more study in this field.

## CONFLICTS OF INTEREST

The authors declare that they have no conflicts of interest.

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