

## Social media marketing: A bibliometric study in digital marketing literatures

(*Work-in-Progress*)

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### ABSTRACT

After the COVID-19 pandemic influenced the global market, people around the world reduced their visits to physical stores, however opted to make purchases online instead. By providing a platform for their products to be heard during the crisis, the public was able to express their opinion through social media. The purpose of this study is to improve the understanding of "digital marketing" and to examine the effects and factors that influence the use of social media (digital marketing), publication-related journals on online marketing on brands and consumers in the study of digital marketing. The study collected data using the Web of Science (WoS) SSCI database from January 2016 to June 2022 on the topic "Digital Marketing", where 4,295 articles containing quantitative analysis of the relevant literature on Digital Marketing (DM) to find overall trends and predictions were adopted. Six different categories of DM articles were used to classify and investigate the different distribution states in order to find the relevant research developments and division states between 2016 and 2022. Research gaps and DMs are analyzed and synthesized, and a framework for future directions is proposed. This study presents the relevance of digital marketing journal capabilities to the advertising business, research trends and future information in organizing digital marketing (DM), marketing-related research and identifying the core of DM-related research, key aspects of measuring business performance. The proposed dimension of the Digital Marketing Capability Framework is to identify new research directions in the marketing and advertising chain. Systematic evaluation of the relevant literature is categorized at the company level. Key measures of the relevance of digital marketing capabilities to companies (B2C and B2B) and business performance are presented.

*Keywords:* Social media, bibliometric, digital marketing, Lotka's Law, web of science.

### INTRODUCTION

With the increasing competition of digital globalization on the Internet, and even more so after the Covid-19 epidemic, consumers have started to be more receptive to digital marketing, and in advertising has shifted from traditional TV and outdoor media to a large number of online placements, people are using social media to draw closer to their friends through message sharing, posting, liking and commenting, and sharing experiences, and therefore brands are more widely using social media platforms to share their products (Bailey et al., 2018, Dimitriu and Guesalaga, 2017, Martín-Consuegra et al., 2018). Past advertising on social platforms has heavily explored three key areas of the overall user: socialization among friends, the relationship between the user and the platform, and the brand relationship, and how these three relationships affect the perceived value of advertising on social platforms (Ramadan et al., 2018). Although there is a growing body of research on the influence of social networks (SNS) on advertising (Hennig-Thurau et al., 2004; Eckler and Bolls, 2011; Hayes et al., 2016), much of it focuses on the credibility of social network advertising, the recognition of friends, and the influence of preferences and trust on social network platforms. However, with the proliferation of online digital marketing platforms using social networks, active pushing finds data on consumers' preferences, interests, and interactions with brands, allowing brands to move away from relying on followers' interactions and recognition to determine marketing decisions and instead use the conversion rates that brands ultimately expect as their marketing strategy. As a result, digital marketing has revolutionized consumer purchase and acceptance behavior, and a large number of studies on the impact of social media on consumer purchase behavior driven by digital marketing have proliferated to understand the trends in digital marketing and in academic research in general. This paper attempts to understand how the development of digital technology has reshaped marketing processes and strategies, and the implications of this change for the broad space of research we call "digital marketing." Yadav and Pavlou's (2014) article focuses on marketing in a computer-mediated environment and reviews the literature in marketing and information systems. Lambertson and Stephen's (2016) article focuses on consumer psychology, motivation and expression in the digital environment, highlighting some of these. The article by Wedel and Kannan (2016) focuses on the modeling and methodological issues in marketing analytics necessary for the emergence of digital, social, and mobile environments. Our review cites these articles in appropriate sections for more detailed information on issues we have not covered. Based on these findings, we set the agenda for future research on digital marketing capabilities.

### RESEARCH METHOD

Bibliometrics was defined by Pritchard (1969) as the application of mathematics and statistical methods to books and other media of communication. Broadus (1987) also defined bibliometrics as the quantitative study of physical published units, or of

bibliographic units, or of the surrogates for either. Bibliometric techniques have been used primarily by information scientists to study the growth and distribution of the scientific article. Researchers may use bibliometric methods of evaluation to determine the influence of a single writer, for example, or to describe the relationship between two or more writers or works. Besides, properly designed and constructed (Moed & Van Leeuwen, 1995; Van Raan, 1996; Van Raan, 2000), bibliometrics can be applied as a powerful support tool to peer review. This is certainly possible for interdisciplinary research fields (Van Raan & Van Leeuwen, 2002). One common way of conducting bibliometric research is to use the SSCI, the Science Citation Index (SCI) or the Arts and Humanities Citation Index (A&HCI) to trace citations.

## RESEARCH RESULTS

### *Distribution by publication years*

As Table 1 shows that the publication year of DM articles has keeping rising. The status implicates that DM has great potential to grow in the future.

Table 1: Distribution by Publication Years

Field: Publication Years	Record Count	% of 4,295
2022	542	12.62%
2021	1,272	29.62%
2020	812	18.91%
2019	646	15.04%
2018	446	10.38%
2017	318	7.40%
2016	259	6.03%

Source: web of science database on (2022/07/07)

### *Distribution by citations*

Based on Table 2, it presents that the citation of DM articles has keeping rising. The status implicates that DM has great potential to grow in the future.

Table 2: Distribution by Citations

Field: Citation	Record Count
2022	11,816
2021	20,467
2020	10,957
2019	6,145
2018	2,526
2017	936
2016	209

Source: web of science database on (2022/07/07)

### *Distribution by countries*

According to table 3, we can figure out that the US is at the top with 1,179 (27.45%) in DM, following by England, with 702 (16.35%), respectively. The P.R.C. ranks third with 429 (9.99%). Behind them, Australia, Germany, Italy, Spain, France, Netherlands and Canada are also major academic providers in the field of DM.

Table 3: Distribution by Countries

Field: Countries/Regions	Record Count	% of 4,295
The US	1,179	27.45%
England	702	16.35%
The P.R.C.	429	9.99%
Australia	359	8.36%
Germany	330	7.68%

Italy	280	6.52%
Spain	270	6.29%
France	206	4.80%
Netherlands	190	4.42%
Canada	177	4.12%
India	145	3.38%
Sweden	123	2.86%
South Korea	120	2.79%
Finland	116	2.70%
Taiwan	81	1.89%
Scotland	80	1.86%
Switzerland	80	1.86%
Denmark	78	1.82%
Belgium	76	1.77%
Norway	68	1.58%
Portugal	68	1.58%
Ireland	64	1.49%
Singapore	62	1.44%
Austria	57	1.33%
Poland	54	1.26%

Source: web of science database on (2022/07/07)

#### *Distribution by affiliations*

Table 4 is easy to indicate that University of London (132 articles, 3.07%), University of California (UC) System (66 articles, 1.54%) and State University System of Florida (61 articles, 1.42%) are the top three scholarly affiliations in DM research domain.

Besides, University of Oxford, The University of Sydney, Pennsylvania Commonwealth System of Higher Education, University of Texas System, University College London, University of Cambridge and Harvard University are also outstanding scholarly affiliations in DM research domain.

Table 4: Distribution by Affiliations

<b>Field: Affiliations</b>	<b>Record Count</b>	<b>% of 4,2956</b>
University of London	132	3.07%
University of California (UC) System	66	1.54%
State University System of Florida	61	1.42%
University of Oxford	54	1.26%
The University of Sydney	54	1.26%
Pennsylvania Commonwealth System of Higher Education	46	1.07%
University of Texas System	45	1.05%
University College London	43	1.00%
University of Cambridge	42	0.98%
Harvard University	36	0.84%
The University of Melbourne	36	0.84%
University System of Georgia	36	0.84%
New York University	35	0.82%

Udice, French research universities	35	0.82%
Indian Institutes of Management System	34	0.79%
The University of North Carolina	34	0.79%
Erasmus University Rotterdam	32	0.75%
Copenhagen Business School	31	0.72%
University of California, Berkeley	31	0.72%
The University of New South Wales (UNSW Sydney)	31	0.72%
University of Amsterdam	30	0.70%
The University of Manchester	30	0.70%
University System of Maryland	30	0.70%
King's College London	29	0.68%
University of Groningen	29	0.68%

Source: web of science database on (2022/07/07)

#### *Distribution by research areas*

Table 5 offers critical information for future research tendencies in DM, allowing researchers a better understanding of the distribution of the top 25 research areas in future research. According to table 5, the top three research areas for DM research domains are Business Economics (1,979 articles, 46.08%), followed by Communication (449 articles, 10.45%) and Environmental Sciences Ecology (386 articles, 8.99%).

Furthermore, this paper's analysis suggests that there are other important research disciplines for DM article production such as Science Technology Other Topics, Information Science Library Science, Computer Science, Social Sciences Other Topics, Engineering, Government Law and Sociology.

Table 5: Distribution by Research Areas

<b>Field: Research Areas</b>	<b>Record Count</b>	<b>% of 1,696</b>
Business Economics	1,979	46.08%
Communication	449	10.45%
Environmental Sciences Ecology	386	8.99%
Science Technology Other Topics	341	7.94%
Information Science Library Science	337	7.85%
Computer Science	291	6.78%
Social Sciences Other Topics	235	5.47%
Engineering	219	5.10%
Government Law	218	5.08%
Sociology	189	4.40%
Psychology	135	3.14%
Public Environmental Occupational Health	134	3.12%
Public Administration	133	3.10%
Operations Research Management Science	98	2.28%
Education Educational Research	95	2.21%
Geography	90	2.10%
Telecommunications	78	1.82%
Cultural Studies	73	1.70%
Health Care Sciences Services	68	1.58%
International Relations	54	1.26%

Substance Abuse	54	1.26%
Medical Informatics	42	0.98%
Social Issues	42	0.98%
Development Studies	38	0.89%
Agriculture	33	0.77%

Source: web of science database on (2022/07/07)

#### *Distribution by publication titles*

Table 6 highlights information on trends for DM, allowing researchers to closely approach the distribution of the top 25 publication titles in future research. According to table 6, the top three DM research journals are Sustainability (245 articles, 5.70%), followed by Journal of Business Research (109 articles, 2.548%) and Technological Forecasting and Social Change (73 articles, 1.70%).

In addition, there are a significant number of research sources for DM article production such as Industrial Marketing Management, European Journal of Marketing, International Journal of Environmental Research and Public Health, Journal of Research in Interactive Marketing, Electronic Markets, Journal of Business & Industrial Marketing, Profesional de la información, and Telecommunications Policy.

Table 6: Distribution by Publication Titles

<b>Field: Publication Titles</b>	<b>Record Count</b>	<b>% of 1,696</b>
Sustainability	245	5.70%
Journal of Business Research	109	2.54%
Technological Forecasting and Social Change	73	1.70%
Industrial Marketing Management	49	1.14%
European Journal of Marketing	40	0.93%
International Journal of Environmental Research and Public Health	38	0.89%
Journal of Research in Interactive Marketing	32	0.75%
Electronic Markets	31	0.72%
Journal of Business & Industrial Marketing	30	0.70%
Profesional de la información	30	0.70%
Telecommunications Policy	30	0.70%
Frontiers in Psychology	28	0.65%
IEEE Access	28	0.65%
Journal of Interactive Marketing	28	0.65%
Journal of Theoretical and Applied Electronic Commerce Research	28	0.65%
Media, Culture and Society	27	0.63%
International Journal of Communication	26	0.61%
Journal of Retailing and Consumer Services	26	0.61%
Information, Communication & Society	25	0.58%
Information Systems Research	25	0.58%
International Journal of Information Management	25	0.58%
Business Horizons	24	0.56%
Computer Law & Security Review	24	0.56%
Digital Journalism	24	0.56%
Journal of the Academy of Marketing Science	24	0.56%

Source: web of science database on (2022/07/07)

## CONCLUSION

The purpose of this study is to improve the understanding of "digital marketing" and to examine the effects and factors that influence the use of social media (digital marketing), publication-related journals on online marketing on brands and consumers in the study of digital marketing. The study collected data using the Web of Science (WoS) SSCI database from January 2016 to June 2022 on the topic "Digital Marketing", where 4,295 articles containing quantitative analysis of the relevant literature on Digital Marketing (DM) to find overall trends and predictions were adopted. Six different categories of DM articles were used to classify and investigate the different distribution states in order to find the relevant research developments and division states between 2016 and 2022. Research gaps and DMs are analyzed and synthesized, and a framework for future directions is proposed. This study presents the relevance of digital marketing journal capabilities to the advertising business, research trends and future information in organizing digital marketing (DM), marketing-related research and identifying the core of DM-related research, key aspects of measuring business performance. The proposed dimension of the Digital Marketing Capability Framework is to identify new research directions in the marketing and advertising chain. The results in this paper have several important implications. From the distribution of publication year and citation, DM has more potential to grow up and becomes more popular in the future.

The results in this paper have several important implications. From the distribution of publication year and citation, DM has more potential to grow up and becomes more popular in the future.

On the basis of the countries/regions, the US, England and the PRC are the top three countries/territories in DM research. Besides, Australia, Germany, Italy, Spain, France, Netherlands and Canada are also the major academic article providers in DM.

From the distribution of top 25 institutes, University of London, University of California (UC) System and State University System of Florida are the top three scholarly affiliations in DM research domain. In addition, University of Oxford, The University of Sydney, Pennsylvania Commonwealth System of Higher Education, University of Texas System, University College London, University of Cambridge and Harvard University are also outstanding scholarly affiliations in DM research domain.

Judging from the research area, the most important categories in DM provided by Business Economics, Communication and Environmental Sciences Ecology. Besides, Science Technology Other Topics, Information Science Library Science, Computer Science, Social Sciences Other Topics, Engineering, Government Law and Sociology will also become the most relevant disciplines for DM research category.

According to the publication titles, the most enthusiastic supports for DM scholarly publishing enterprise come from Sustainability, Journal of Business Research and Technological Forecasting and Social Change. Furthermore, Industrial Marketing Management, European Journal of Marketing, International Journal of Environmental Research and Public Health, Journal of Research in Interactive Marketing, Electronic Markets, Journal of Business & Industrial Marketing, Profesional de la información, and Telecommunications Policy will also turn into the most critical journals for DM researchers.

Based on the results of this analysis, it is possible to use on future research maps, the quantitative ranges and market segments that have been identified to help provide accurate guidelines for the digital marketing industry data collection to provide a more accurate country or regional guideline. With the massive use of digital marketing and the increase in the number of researchers and users, this study can provide a clear categorization of the two aforementioned, allowing for effective targeting of academic and market needs.

### A. Limitation of the study

The results and conclusion are limited and not intended to be exclusive. The journals in WOS adopt stringent journal reviewing criteria, the articles might take one to two years from submission to publication. Therefore, findings in this study may not reflect the most recent research trends.

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