

DOI: <https://doi.org/10.54663/2182-9306.2023.v11.n20.142-165>

Research Paper

Trends in Digital Marketing Research: A Bibliometric Analysis.

Wan Mohd Hirwani Wan Hussain *
Abu H. Ayob **

ABSTRACT

Digital marketing is a modern strategy used by most businesses to increase sales. The Covid-19 pandemic made its use even more important. Recognizing the significance of digital marketing in practice, academics have conducted extensive research. Accordingly, this paper presents the findings from a bibliometric analysis of 1374 publications in digital marketing from the Scopus database between 1985 and 2020 to understand this trend better. Our research focuses on the publication outlet, research area, authorship, and keyword/citation analysis. In short, we found that publications in digital marketing have increased exponentially in the last decade and are primarily in business management and computer science studies. The contributors are diverse across developed and developing countries, mainly from the United States, India, the United Kingdom, and Indonesia. Lastly, we identified several emerging themes: big data, data mining, and artificial intelligence. This study advances current and future digital marketing research knowledge to benefit academics, policymakers, and practitioners.

Keywords: digital marketing, bibliometric, Scopus database, VOSViewer

* National University of Malaysia, Malaysia. E-Mail: wmhwh@ukm.edu.my

** National University of Malaysia, Malaysia. E-Mail: abuhanifah.ayob@ukm.edu.my

Received on: 2022/07/14

Approved on: 2023/02/18

Evaluated by a double-blind review system

1. INTRODUCTION

The rapid advancement of information technology has transformed the global social-economic landscape (Zhao & Balagué, 2017). In particular, the growth of the internet over the past decades has become a game changer for how businesses compete in the market (Assis et al. 2020). Companies can drastically revitalize their operational routines by exploiting the availability of digital platforms to distinguish themselves from their competitors (Ritter & Pedersen, 2020). Specifically, marketing activities today fully utilize a firm's online business strategy, such as digital ad marketing, search engine optimization (SEO), and social media marketing.

Digital marketing is a strategy that applies technology to marketing processes (Cuong 2019). It transforms traditional marketing efforts that previously used physical and mass media channels into more intelligent digital applications to communicate with customers. The recent Covid-19 pandemic significantly pushed businesses to adopt digital marketing to sustain their operations (Alshaketheep et al. 2020). Future business survival is determined by the capability of companies to plan and execute effective marketing strategies that utilize technology as a gateway to reach customers (Saura et al. 2020).

From the consumer's perspective, digital marketing improves their engagement and leads to the eventual purchase of the product or service (Pandey et al., 2020). This is possible by targeting the specific demographics and locations of consumers using SEO (Jambhale 2019; Kelsey 2017), website marketing (Kapoor et al. 2017), social media marketing (Dolega et al. 2021), and mobile marketing (Al-Hawary & Obiadat 2021).

Acknowledging the importance of digital marketing, academic scholars are also interested in advancing knowledge in this area (Jokonya & Mugisha, 2019; Kumar et al., 2020; Whitburn et al., 2020). Since the concept of digital marketing was introduced in the 1980s, research on this theme has progressed rapidly. To further understand this trend, our study attempts to perform a bibliometric analysis of 1374 publications from the Scopus database between 1985 and 2020.

Bibliometry is a standard analytical method introduced by Allen Richard in 1969 to assess patterns within a research domain. The analysis focuses on publication outlets, research areas, authorship, and keyword/citation analysis.

Although similar efforts exist, our study is broader in terms of publication years (35 years) and more profound regarding publication sources (over 1000 papers), as discussed in the following section. This paper brings an extensive understanding of the status quo of digital marketing research and sheds light on emerging topics for future exploration to benefit academics and practitioners.

The study proceeds as follows. The next section presents a literature review on digital marketing, particularly the gaps in the current literature. Then, we briefly explain the background of bibliometric analysis. The fourth section describes the method and execution of the study. Next, we present the results and discussion of the findings. Finally, the sixth section discusses the conclusions, limitations, and avenues for further research.

2. LITERATURE REVIEW

Scholars have offered several definitions of digital marketing. In short, digital marketing is a set of techniques developed online to persuade users to buy the product or service provided (Montgomery et al. 2012). It can also be understood as the use of digital technologies to create integrated, targeted, and measurable communication that helps to acquire and retain customers while building deeper relationships with them (Järvinen & Karjaluoto, 2015). Similarly, Kannan (2017) describes digital marketing as an adaptive technology-enabled process by which firms collaborate with customers and partners to create, communicate, deliver, and sustain value for all stakeholders. Above all, most companies recognize the importance of digital marketing to complement traditional marketing to increase sales (Bartosik-Purgat, 2019).

Digital marketing is often interchangeable with terms like internet, online, and electronic marketing. However, digital marketing offers broader applications beyond the single internet technology, including mobile applications and social media marketing (Melović et al. 2020).

There are tremendous advantages to adopting digital marketing. Most importantly, the cost of using social media platforms such as Facebook.com, Twitter.com, and Instagram.com are typically lower than other marketing platforms, yet they reach more customers via high website traffic (Nair & Radhakrishnan, 2019).

Furthermore, digital marketing increases brand awareness through personalized promotion materials and enhances brand loyalty as customers experience more robust engagement through customized ads (Aydin, 2019). Unlike traditional one-way marketing, digital marketing facilitates customer feedback that helps companies generate customer databases (Rangaswamy et al., 2020). Companies can then establish closer relationships with the consumers from the feedback and exchange experiences (Bose et al., 2020) and further improve future offerings (Bouçanova et al., 2020).

Despite its advantages, applying a digital marketing strategy is contextual and needs to accommodate the heterogeneous legal framework across countries regarding ethical and privacy issues related to consumers (Mandal, 2019).

Although similar efforts have been conducted before, our paper contributes to advancing prior works in several ways. First, some bibliometric studies analyze using specific digital platforms such as Instagram and Facebook (León-Castro et al., 2021). Thus, their discussion is very niche and neglects other digital marketing applications. Besides, the search query has been mixed up with another context, such as influencer marketing or content automation (Ghorbani et al., 2022). While the two terms are arguably parts of digital marketing, they require technical applications which are not necessarily applicable to general digital marketing.

Most important, the scope and depth of this paper have advanced from previous studies. Our choice of database is different from León-Castro et al. (2021) and Saheb et al. (2021), who analyzed documents in the Web of Science database, and Kim et al., (2021), who studied papers in three journals only. Although Web of Science has an advantage in reputable journals, Scopus is recognized for having more comprehensive coverage (AIRyalat et al., 2019). This can be seen as León-Castro et al. (2021) studied 162 articles, and Kim et al. (2021) reviewed 141 pieces only. Lastly, the recent study by Ghorbani et al. (2022) merits acknowledgement. Yet, their analysis was too niche with many refined keywords, including search engine marketing, content marketing, data-driven marketing, campaign marketing, e-mail direct marketing, social media optimization, e-mail marketing, and display ads, which to our judgment would limit the generalizability of digital marketing.

To fill in the gaps mentioned above, our study contributes to complementing and advancing the literature by analyzing research trends in digital applications for universal marketing purposes.

To do so, we performed a bibliometric analysis on 1374 articles from the Scopus database from 1985 to 2020.

3. BIBLIOMETRIC ANALYSIS

Bibliometric analysis statistically examines trends and patterns of research in a specific subject by quantifying the contribution toward the advancement of knowledge in that field (Echchakoui, 2020; Guler et al., 2016). It offers various insights into the features of scholarly publications by evaluating citations, co-citations, geographical distributions, and word frequency (Pai & Alathur, 2021). From that, it produces valuable conclusions beneficial for researchers and practitioners (Oliveira et al., 2018; Reyes-Gonzalez et al., 2016). Additionally, bibliometric analysis helps to minimize biases and improve the accuracy of the reviewing process (Sinkovics 2016). Therefore, it is an increasingly valuable tool for evaluating scholarly quality and productivity (Szomszor et al., 2021).

There are two primary methods for exploring a research field in bibliometrics: performance analysis and science mapping (Gutiérrez-Salcedo et al., 2018). Below are common steps in conducting bibliometric analysis proposed by earlier studies (Ali et al., 2019; Gutiérrez-Salcedo et al., 2018; Mitrzyk, 2008):

1. Sample selection and citation analysis of literature.
2. Document co-citation analysis to understand the subdomains within the study field.
3. Text analysis to understand the patterns and trends of the literature.
4. Text analysis to understand potential future research based on domain research.

As mentioned earlier, there have been prior attempts to perform bibliometric analysis on digital marketing research, as shown in Table 1. Our study is unique regarding the research domains searched, publication sources, and the years covered.

Table 1. Previous studies of bibliometric analysis on digital marketing research

Authors	Query String	Source and Period	No. of Documents	Analysis
León-Castro et al. (2021)	"influencer", "ewom", "youtube*", "instagram", "facebook"	Web of Science (1986 - 2019)	162	- types of publication - co-citation analysis
Krishen et al. (2021)	"Digital Marketing" OR "Digital Advertising" OR "Online Marketing" OR "Online Advertising" OR "Interactive Marketing" OR "Internet Marketing" OR "Internet Advertising" OR "Social Media Marketing"	Web of Science & Scopus (1990-2019)	45,260	- types of publication - co-citation analysis - citation network
Saheb et al. (2021)	"digital marketing", "social media marketing" OR "Bluetooth marketing", OR "mobile marketing", OR "email marketing", OR "SMS marketing", OR "proximity marketing", or "beacon marketing"	Web of Science (1900-2020)	29,123	- co-citation analysis - citation network - knowledge cluster
Kim et al. (2021)	"digital marketing communication"	Journal of Advertising, Journal of Advertising Research, and International Journal of Advertising (2004 - 2016)	141	- co-citation network
Faruk et al. (2021)	"digital marketing", OR "social networking online", OR "social media sales", OR "electronic commerce", OR "data mining", OR "information systems"	Scopus (2000 - 2019)	925	- citation network - knowledge cluster
Ghorbani et al. (2022)	"Digital Marketing" OR "Electronic commerce marketing" OR "e-commerce marketing" OR "Search engine marketing" OR "Influencer marketing" OR "Content marketing" OR "Content automation" OR "data-driven marketing" OR "Campaign marketing" OR "e-mail direct marketing" OR "Social media optimization" OR "e-mail marketing" OR "display ads" OR "Mobile marketing"	Scopus (1979 - 2020)	924	- types of publication

4. METHODS

In this study, we used the bibliometric technique that adheres to the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines (Yepes-Nuñez et al., 2021), shown in Figure 1. Note that the analysis was done on 10th September 2021.

First, we enter the query string of 'Digital Marketing' as the research topic. Then, we refine the scope and coverage of English articles available in the Scopus database between 1985 and 2020. The Scopus database was chosen as a data source because (i) it is recognized as the world's leading scientific citation index, comparable to other databases such as Web of Science, PubMed, ScienceDirect, and Google Scholar, (ii) it contains high-quality research publications, including more than 23,500 prestigious journals, books, conference proceedings, and review papers, and (iii) it enables users to search for and discover new publications. Finally, we retrieved 1374 publications for analysis, as presented in the next section.

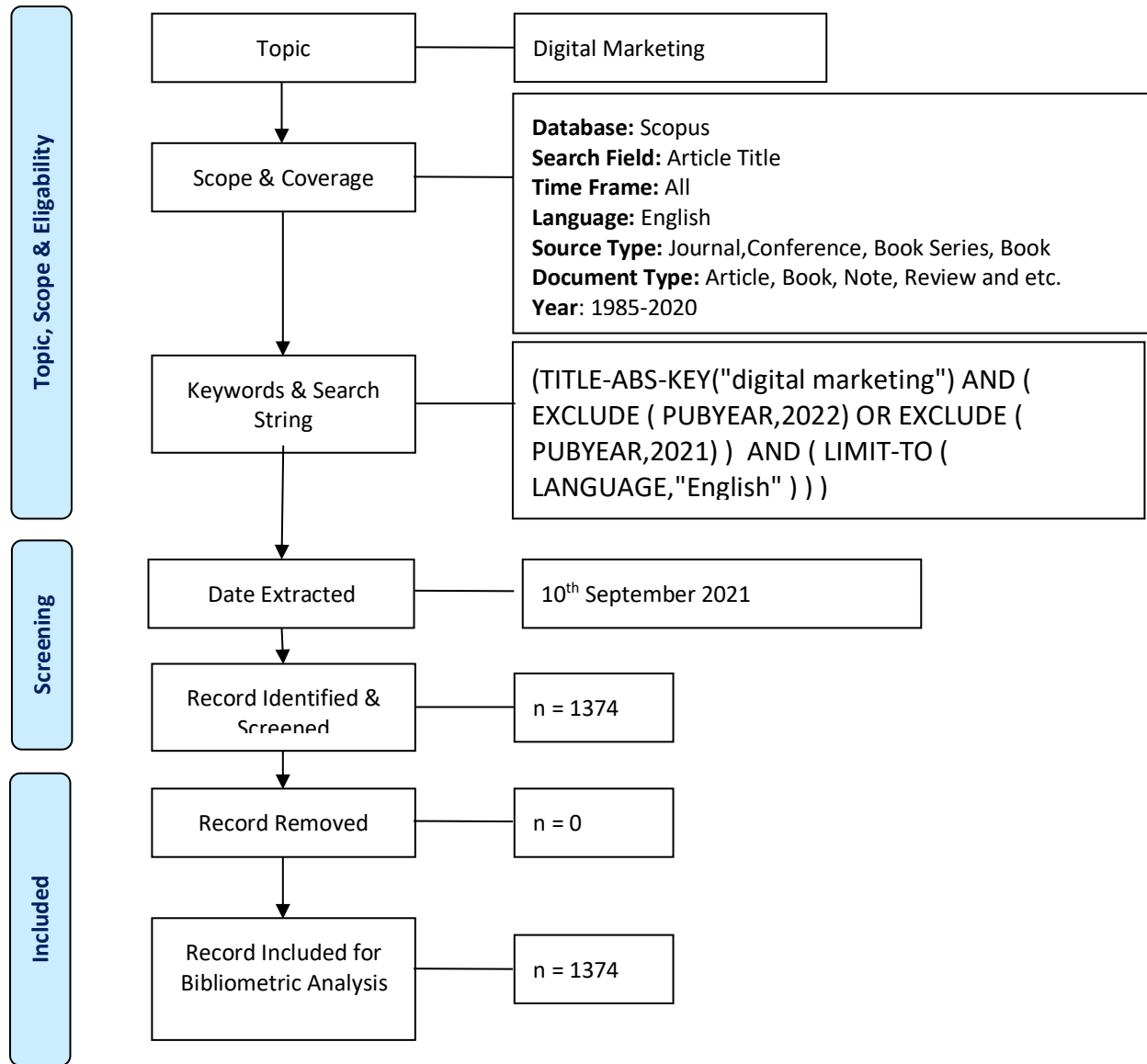


Figure 1. Flow diagram of the search strategy

5. RESULTS

We performed several analyses in the study. Firstly, we examine the number of publications for almost 40 years since 1085 in Table 2. From that, we further detail the sources (Table 3) and types (Table 4) of publications. Next, we check the source title in Table 5 and the subject area in Table 6. Overall, the publication outputs analysis provides a great understanding of digital marketing research trends and publication outlets.

Second, we analyze the pattern of contributors by geographic locations (Figure 2) and institutions (Figure 3). Also, we list down the most active scholars in the area in Table 7. Lastly, the co-authorship analysis prevails with the collaboration clusters exhibited in Figure 4. In sum, the study offers a comprehensive exploration of individuals and countries actively publishing research in digital marketing.

Third, we perform the citation analysis by article (Table 8) and country (Figure 5). Also, Table 9 derives the top keywords and is visualized in Figure 6. Both citation and keywords analyses enable us to discover the most impactful research and, more importantly predict the future niche in the digital marketing study.

6. DISCUSSIONS

6.1 Publication outputs

Table 2 shows the number of publications since 1985. There has been an exponential increase from less than 10 publications before 2008 to over 300 outputs since 2019. In other words, around 50 percent of the current digital marketing publications were published in 2019 and 2020 alone. Similarly, the citations have exceeded 100 since 2018, compared to less than 20 before 2012. Digital marketing has attracted more scholars to study it and more audiences to cite it, particularly in the past 5 years.

Table 2. Publication outputs

Year	TP	TC	C/P
2020	372	1084	6.19
2019	315	1116	6.60
2018	178	1019	8.78
2017	133	1507	15.54
2016	100	1796	26.41
2015	64	733	14.96
2014	63	1474	34.28
2013	37	659	24.41
2012	29	542	28.53
2011	18	635	52.92
2010	23	102	8.50
2009	13	78	13.00
2008	3	2	1.00
2007	8	36	18.00
2006	3	10	3.33
2005	7	89	29.67

2004	2	2	1.00
2003	1	74	74.00
2002	1	0	0.00
2001	1	1	1.00
2000	1	0	0.00
1989	1	0	0.00
1985	1	0	0.00
Total	1374		

Notes: TP=total number of publications; TC=total citations; C/P=average citations per publication.

Table 3 displays the sources of publications on digital marketing. Journals have contributed the most, with 834 publications (60 percent), followed conference proceedings (294, 21.40 percent), book series (124, 9.02 percent), books (88, 6.4 percent), and trade journals (34, 2.47 percent).

Table 4 shows the types of publications. Articles on digital marketing accounted for 773 (56 percent), and conference papers are the second most common with 375 (27.29 percent). Other types include book chapters, reviews, books, conference reviews, editorials, short surveys, notes, and erratum.

Table 3. Sources of publication

Type	Total	Percentage
Journal	834	60.70
Conference Proceeding	294	21.40
Book Series	124	9.02
Book	88	6.40
Trade Journal	34	2.47
Total	1374	100.00

Table 4. Types of publication

Type	Total	Percentage
Article	773	56.26
Conference Paper	375	27.29
Book Chapter	83	6.04
Review	62	4.51
Book	27	1.97
Conference Review	21	1.53
Editorial	16	1.16
Short Survey	10	0.73
Note	3	0.22
Erratum	2	0.15
Retracted	1	0.07
Undefined	1	0.07
Total	1374	100.00

For detail, Table 5 lists the source title. Journal of Direct Data and Digital Marketing Practice is the prominent outlet for research in digital marketing with 46 publications and more than 200 total citations. ACM International Conference Proceeding Series is in second place with 30 publications and 41 citations. A book series called Lecture Notes in Computer Science, including the subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics, follows with 28 publications. It is clear that Springer, a publishing company, dominates with three source titles including Advances in Intelligent Systems and Computing and Communications in Computer and Information Science.

Table 5. Titles of publication

Title	Publisher	TP	TC	C/P
Journal of Direct Data and Digital Marketing Practice	Palgrave Macmillan Ltd.	46	206	4.48
ACM International Conference Proceeding Series	Association for Computing Machinery	30	41	1.37
Lecture Notes in Computer Science Including Subseries Lecture Notes in Artificial Intelligence and Lecture Notes In Bioinformatics	Springer	28	24	0.86
Journal of Digital and Social Media Marketing	Henry Stewart Publications	27	8	0.30
Advances in Intelligent Systems and Computing	Springer	23	33	1.43
Emerald Emerging Markets Case Studies	Emerald Group Publishing Ltd	16	6	0.38
International Journal of Recent Technology and Engineering	Blue Eyes Intelligence Engineering and Science Publication	16	7	0.44
International Journal of Advanced Science and Technology	Science and Engineering Research Support Society	15	5	0.33
Communications in Computer and Information Science	Springer	13	9	0.69
Sustainability Switzerland	MDPI AG	12	48	6.50
International Journal of Scientific and Technology Research	International Journal of Scientific and Technology Research	11	78	3.33
Smart Innovation Systems and Technologies	Springer	11	7	0.64
Digital Marketing and Consumer Engagement Concepts Methodologies Tools and Applications	IGI Global	10	10	0.40
Econtent	Information Today	10	0	0.00

Notes: TP=total number of publications; TC=total citations; C/P=average citations per publication.

Last, we analyze the subject area into which research on digital marketing falls, as shown in Table 6. Unsurprisingly, around half of the publications are in business, management, and

accounting. Yet, it is worth noting that there are also many publications in non-traditional areas such as computer science, engineering, and mathematics. The trend suggests that digital marketing has reach beyond a conventional business research domain and continuously attracts researchers across a wide study area.

Table 6. Subject areas of publication

Subject Area	Total	Percentage
Business, Management and Accounting	661	48.11
Computer Science	519	37.77
Social Sciences	318	23.14
Engineering	300	21.83
Economics, Econometrics and Finance	184	13.39
Decision Sciences	147	10.70
Mathematics	98	7.13
Medicine	58	4.22
Energy	50	3.64
Arts and Humanities	48	3.49
Environmental Science	48	3.49
Physics and Astronomy	24	1.75
Materials Science	22	1.60
Psychology	22	1.60
Pharmacology, Toxicology and Pharmaceutics	16	1.16
Biochemistry, Genetics and Molecular Biology	14	1.02
Chemical Engineering	12	0.87
Earth and Planetary Sciences	12	0.87
Agricultural and Biological Sciences	11	0.80
Nursing	11	0.80
Health Professions	8	0.58
Multidisciplinary	5	0.36
Chemistry	3	0.22
Dentistry	3	0.22
Neuroscience	3	0.22

6.2 Contributors

Although research in digital marketing has been dominated by specific countries, Figure 2 shows contributions by scholars in both developed and developing countries. The United States is ahead with 251 publications, followed by India with 208 publications, and the United Kingdom with 146 publications. Researchers in other countries such as Indonesia (64), Spain (53), Portugal (50), Australia (49), China (32), and Germany (31) have also produced a significant number of publications.



Figure 2. Contributors of publication

In terms of institutions, Figure 3 demonstrates that digital marketing not only attracts scholars at universities but also practitioners in industries. Most publications come from academics at Amity University, India and Bina Nusantara University, Indonesia. However, employees at Adobe Inc. and Fujitsu Ltd. have also carried out high number of studies on digital marketing. Overall, we recognize that digital marketing research is disseminated across countries by both academics and practitioners.

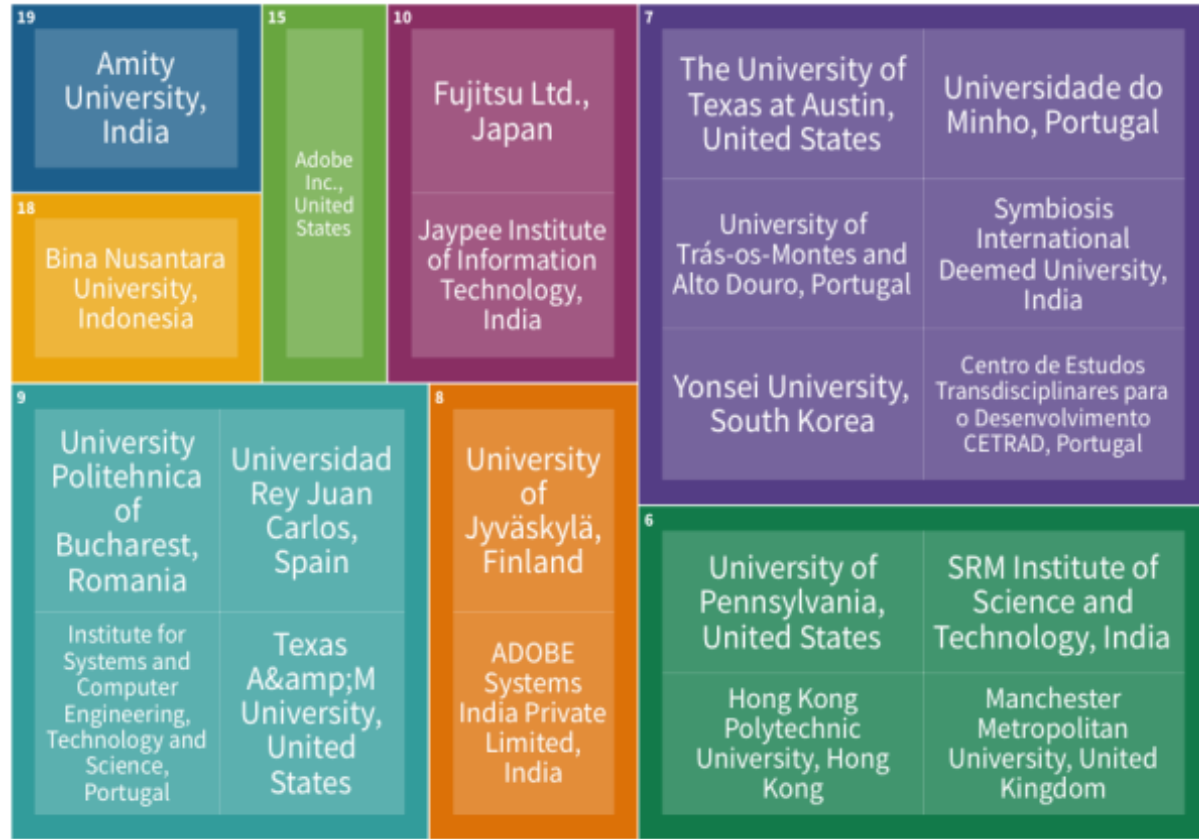


Figure 3. Institutions of the contributors

Specifically, Table 7 lists the most active authors. Derek Holder from the Institute of Direct Marketing, UK had the most publications (9), followed by Verdana Ahuja from Amity University, India (7), and Rohan Fairlie (6). There are four authors with 5 publications: Jeff Chester from Center for Digital Democracy, USA; Ramiro Gonçalves from Institute for Systems and Computer Engineering, Technology and Science, Portugal; Arpan Kumar Kar from Indian Institute of Technology Delhi, India; and Heikki Karjaluota from University of Jyväskylä, Finland.

Table 7. List of authors

Author	Total	Percentage
Holder, D.	9	0.66
Ahuja, V.	7	0.51
Fairlie, R.	6	0.44
Chester, J.	5	0.36
Gonçalves, R.	5	0.36

Kar, A.K.	5	0.36
Karjaluoto, H.	5	0.36
Alavi, S.	4	0.29
Au-Yong-Oliveira, M.	4	0.29
Branco, F.	4	0.29
Buchanan, L.	4	0.29
Chaffey, D.	4	0.29
Dwivedi, Y.K.	4	0.29
Grilo, A.	4	0.29
Jorge, F.	4	0.29
Kelly, B.	4	0.29
Koh, E.	4	0.29
Martins, J.	4	0.29
Montgomery, K.C.	4	0.29
Pandey, N.	4	0.29
Popescu, M.A.M.	4	0.29

Most publications in digital marketing are collaborative works among scholars from different institutions and countries. Figure 4 indicates the network visualization of authorship across countries. Only countries with a minimum of five documents and citations were considered for this analysis.

The results show that authors from the blue cluster (the United States) worked very closely with India, Australia, China, Spain, Turkey, and Canada. On the other hand, authors from the red cluster (the United Kingdom) collaborate mostly with scholars from the Russian Federation, South Africa, Croatia, Slovakia, the Czech Republic, Poland, Egypt, the United Arab Emirates, and Serbia. Lastly, the green cluster (Indonesia) co-authored with counterparts from Malaysia, Thailand, Japan, South Korea, and Pakistan. In sum, the trends show that scholars prefer working with others from similar regions, particularly those in Europe and Asia.

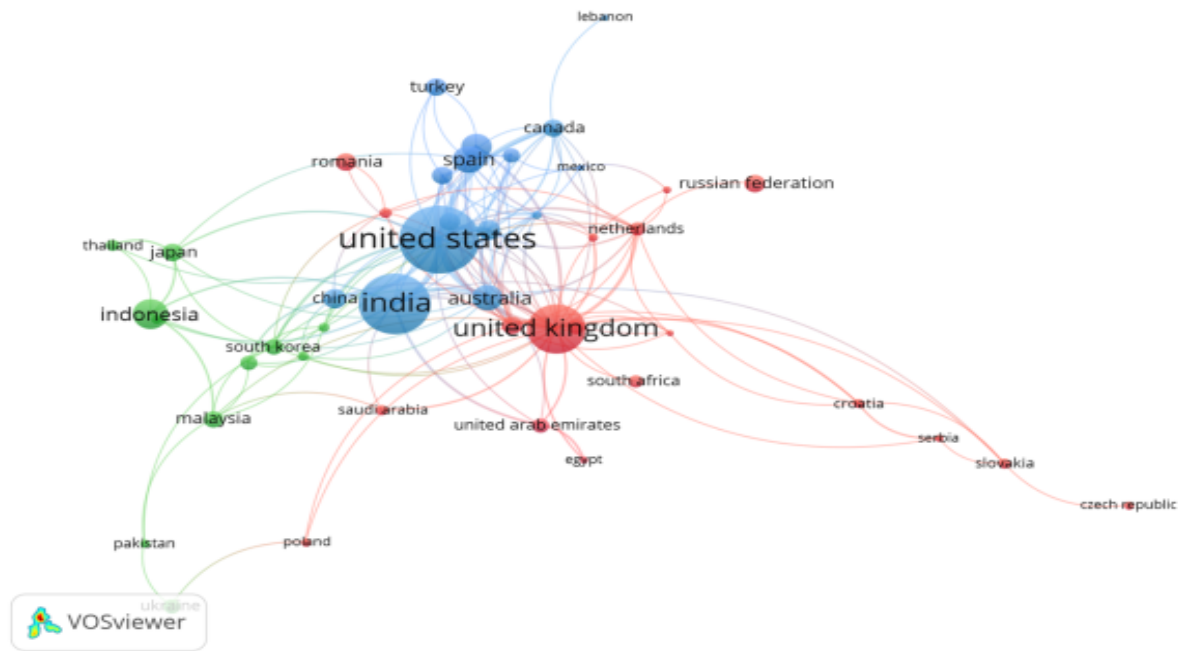


Figure 4. Network visualization of authorship

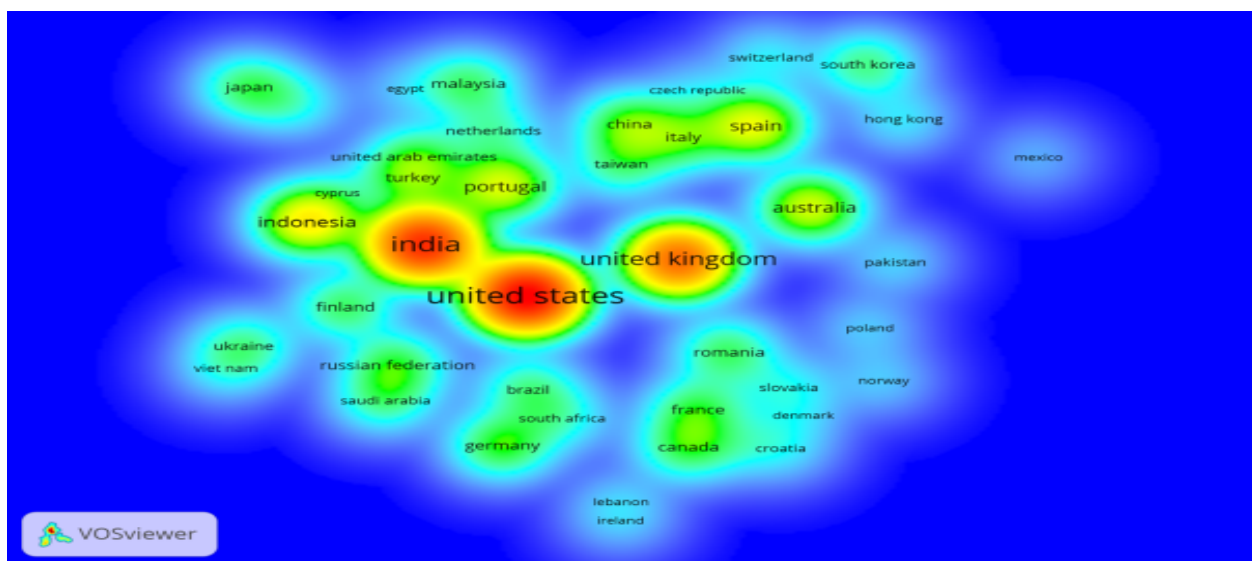
6.3 Citations

Table 8 shows the most impactful research based on the number of citations. There are three papers with over 300 citations each, led by “Closing the Marketing Capabilities Gap” by Day (2011) with 442 citations (44.20 cites per year). This article explains how marketers can adapt new marketing strategies to positively impact the performance of an organization. Next, an article by Kumar et al. (2016) entitled “From Social to Sale: The Effects of Firm-Generated Content in Social Media on Customer Behavior” received 342 citations. Lastly, “A Thematic Exploration of Digital Social Media and Mobile Marketing: Research Evolution from 2000 to 2015 and an Agenda for Future Inquiry” by Lamberton and Stephen (2016) has 325 citations. Notably, all these articles were published in the reputable Journal of Marketing.

Last, Figure 5 shows the visualization of citation analysis with a minimum of five documents and five citations per country. The red zone clusters demonstrate that the highest number of citations are earned by articles from scholars in the United States, India, and United Kingdom.

Table 8. Highly cited articles

No.	Authors	Title	Citations	Citation/Year	Journal
1	Day (2011)	Closing the marketing capabilities gap	442	44.20	Journal of Marketing
2	A. Kumar et al. (2016)	From social to sale: the effects of firm-generated content in social media on customer behavior	342	68.40	Journal of Marketing
3	Lamberton and Stephen (2016)	A thematic exploration of digital, social media, and mobile marketing: research evolution from 2000 to 2015 and an agenda for future inquiry	325	65.00	Journal of Marketing
4	Kannan and Li (2017)	Digital marketing: a framework, review and research agenda	293	73.25	International Journal of Research in Marketing
5	Felix et al. (2017)	Elements of strategic social media marketing: a holistic framework	260	65.00	Journal of Business Research
6	Leeflang et al. (2014)	Challenges and solutions for marketing in a digital era	259	37.00	European Management Journal
7	Yadav et al. (2013)	Social commerce: a contingency framework for assessing marketing potential	236	29.50	Journal of Interactive Marketing
8	Yadav and Pavlou (2014)	Marketing in computer-mediated environments: research synthesis and new directions	195	27.86	Journal of Marketing
9	Tiago and Verissimo (2014)	Digital marketing and social media: why bother?	189	27.00	Business Horizons
10	Van Mierlo (2014)	The 1% rule in four digital health social networks: an observational study	171	24.43	Journal of Medical Internet Research

**Figure 5.** Network visualization of citations

6.4 Keywords analysis

Table 9 shows the top keywords in digital marketing studies. Superficially, we categorize the keywords into two main domains: digital marketing, marketing, and commerce fall under the cluster of business and management, whereas the internet, big data, and data mining best fit under the computer science cluster. The findings further support digital marketing as a research agenda shared across many disciplines.

Accordingly, the network visualization in Figure 6 displays the keywords that commonly appeared in digital marketing research, with a minimum of 10 occurrences. We used VOSviewer, a software tool for building and visualizing bibliometric networks for mapping the keywords (VOSviewer, 2020). Different colors, lengths, and text size represent the connection among the terms. The red cluster represents digital marketing and social media, the blue cluster represents marketing, and the green cluster represents ecommerce.

Table 9. Top keywords in publication

Keywords	Total	Percentage
Digital Marketing	729	53.06
Marketing	373	27.15
Commerce	274	19.94
Social Media	214	15.57
Social Networking (online)	122	8.88
Sales	96	6.99
Electronic Commerce	66	4.80
Internet	61	4.44
Big Data	52	3.78
Human	49	3.57
Data Mining	45	3.28
Artificial Intelligence	43	3.13
Social Media Marketing	42	3.06
Consumer Behavior	41	2.98
Marketing Strategy	40	2.91
Decision Making	39	2.84
Websites	38	2.77
Information Systems	35	2.55

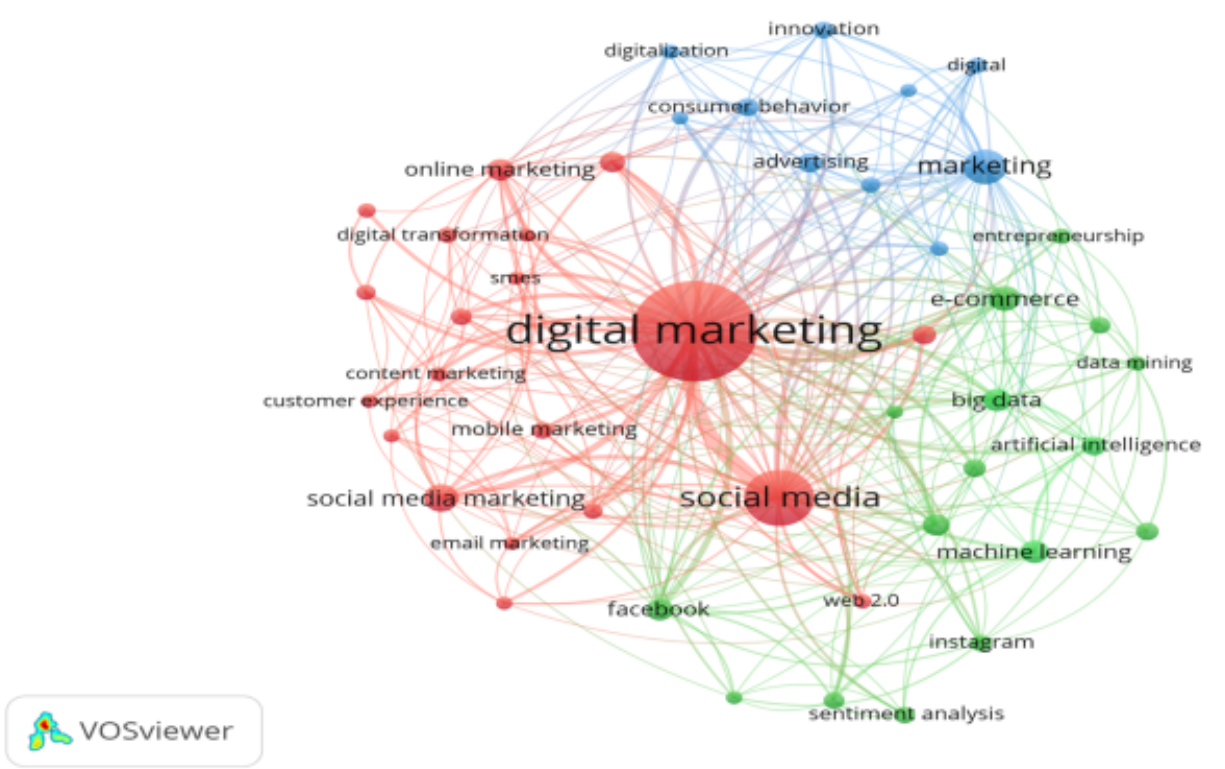


Figure 6. Network visualization of keyword

7. CONCLUSIONS

Digital marketing is ubiquitous in today's market and is necessary for future business success (Garg et al., 2020). The industrial revolution 4.0, Covid-19 pandemic, and social media popularity have all accelerated the digital transformation of companies including the adoption of online marketing strategies (Alshaketheep et al., 2020). Does it follow that academic scholars are interested in researching digital marketing?

To answer this question, we conducted a bibliometric analysis of 1374 publications from the Scopus database between 1985 and 2020. We executed several analyses and found some definitive results. First, our findings revealed that the outputs from digital marketing research have increased exponentially since 2015, mostly as journal articles. This promising trend suggests that digital marketing continuously attracts interest as a research domain.

Some top outlets include the Journal of Direct Data and Digital Marketing, ACM International Conference Proceeding Series, and Lecture Notes in Computer Science. This suggests that digital marketing has emerged as a cross-disciplinary theme beyond traditional business management research into a broader area of computer engineering and decision sciences. Accordingly, the

patterns exhibit a shared interest among scholars across geographically areas. Particularly, researchers from the US, India, the UK, and Indonesia are most active contributors in digital marketing studies. Leading institutions include Amity University, Bina Nusantara University, Adobe Inc. and Fujitsu Ltd., further signaling that the studies are not dominated by academics alone. Among the most productive scholars are Derek Holder, Verdana Ahuja, and Rohan Fairlie. They, along with others, are found to work closely with counterparts from the same region particularly in Europe and Asia.

Next, the study discovered most citations come from top journals such as the Journal of Marketing (Impact Factor: 9.462), International Journal of Research in Marketing (Impact Factor:4.513), and Journal of Business Research (Impact Factor:7.550). Although the publications on digital marketing are scattered, fellow scholars remain readily acknowledged in the contributions of articles in those top-tier journals. Lastly, the analysis ascertains digital marketing as a shared research agenda, particularly across the domains of business management and computer science.

Despite the significant contributions of this paper, it is nonetheless possess certain caveats. Most importantly, the data source is limited to English peer-reviewed publications in Scopus database. As a result, publications uniquely indexed in other databases such as Web of Science, PubMed, EbscoHost, and CSSCI are excluded. Future studies that include more databases would enrich the analysis and offer more insight.

Acknowledgement

The authors acknowledge the Fundamental Research Grant Scheme (FRGS/1/2020/SS01/UKM/02/2) funded by the Ministry of Higher Education Malaysia.

REFERENCES

- Al-Hawary, S. I. S., & Obiadat, A. A. (2021). Does mobile marketing affect customer loyalty in Jordan? *International Journal of Business Excellence*, 23(2), 226-250.
- Ali, A., Ahmi, A., & Saidin, S. Z. (2019). A performance of ingenuity research using bibliometric method. *International Journal of Recent Technology and Engineering*, 8(2S2), 332-337.
- Alshaketheep, K. M. K. I., Salah, A. A., Alomari, K. M., Khaled, A. S., & Jray, A. A. A. (2020). Digital marketing during COVID 19: Consumer's perspective. *WSEAS Transactions on Business and Economics*, 17(1), 831-841.
- Appel, G., Grewal, L., Hadi, R., & Stephen, A. T. (2020). The future of social media in marketing. *Journal of the Academy of Marketing Science*, 48(1), 79-95.

- Assis, E. E., Ferreira, V. M. R., & Andrade, F. O. (2020). Blogs used as marketing tools and their influence on consumers' decisions on purchasing fashion and beauty products. *Brazilian Journal of Marketing*, 19(3), 586-610.
- Aswani, R., Kar, A. K., Ilavarasan, P. V., & Dwivedi, Y. K. (2018). Search engine marketing is not all gold: Insights from Twitter and SEOclerks. *International Journal of Information Management*, 38(1), 107–116.
- Aydin, H. (2019). *Digital Marketing Applications*. Bandirma Onyedi Eylül University, Balıkesir, Turkey: Peter Lang AG.
- Bartosik-Purgat, M. (2019). Digital marketing communication from the perspective of individual consumers: a cross-country comparison. *Entrepreneurial Business and Economics Review*, 7(3), 205-220.
- Bose, R., Dey, R. K., Roy, S., & Sarddar, D. (2020). Sentiment analysis on online product reviews. In *Information and Communication Technology for Sustainable Development* (pp. 559-569). Springer, Singapore.
- Bossetta, M. (2018). The digital architectures of social media: Comparing political campaigning on Facebook, Twitter, Instagram, and Snapchat in the 2016 U.S. Election. *Journalism and Mass Communication Quarterly*, 95(2), 471–196.
- Bouçanova, C., Reis, J. L., & Vieira, J. C. (2020). Digital marketing and the new age of personal data protection: The case of advertising agencies in Portugal. *Revista Iberica de Sistemas e Tecnologias de Informacao*, 35, 141-151.
- Cuong, P. H. (2019). Role of digital marketing in consumer goods retailing. Evidence from Vietnam in the context of the 4th industrial revolution. *Journal of Advanced Research in Law and Economics*, 10(42), 1266-1273.
- Day, G. S. (2011). Closing the marketing capabilities gap. *Journal of Marketing*, 75(4), 183–195.
- Dolega, L., Rowe, F., & Branagan, E. (2021). Going digital? The impact of social media marketing on retail website traffic, orders and sales. *Journal of Retailing and Consumer Services*, 60, 102501.
- Echchakoui, S. (2020). Why and how to merge Scopus and Web of Science during bibliometric analysis: the case of sales force literature from 1912 to 2019. *Journal of Marketing Analytics*, 8(3), 165-184.
- Faruk, M., Rahman, M., & Hasan, S. (2021). How digital marketing evolved over time: A bibliometric analysis on scopus database. *Heliyon*, 7(12), e08603.
- Felix, R., Rauschnabel, P. A., & Hinsch, C. (2017). Elements of strategic social media marketing: A holistic framework. *Journal of Business Research*, 70, 118-126.
- Garg, P., Gupta, B., Dzever, S., Sivarajah, U., & Kumar, V. (2020). Examining the relationship between social media analytics practices and business performance in the Indian retail and IT industries: The mediation role of customer engagement. *International Journal of Information Management*, 52, 102069.
- Ghorbani, Z., Kargaran, S., Saberi, A., Haghighinasab, M., Jamali, S.M., & Ale Ebrahim, N. (2022). Trends and patterns in digital marketing research: bibliometric analysis. *Journal of Marketing Analytics*, 10, 158-172.
- Guler, A. T., Waaijer, C. J., & Palmblad, M. (2016). Scientific workflows for bibliometrics. *Scientometrics*, 107(2), 385-398.
- Gutiérrez-Salcedo, M., Martínez, M. Á., Moral-Munoz, J. A., Herrera-Viedma, E., & Cobo, M. J. (2018). Some bibliometric procedures for analyzing and evaluating research fields. *Applied*

Intelligence, 48(5), 1275-1287.

Jambhale, P. C. (2019). Search engine optimization with Google-Web. *International Journal of Scientific Research in Computer Science, Engineering and Information Technology*, 9(1), 227-30.

Järvinen, J., & Karjaluoto, H. (2015). The use of Web analytics for digital marketing performance measurement. *Industrial Marketing Management*, 50, 117-127.

Järvinen, J., & Taiminen, H. (2016). Harnessing marketing automation for B2B content marketing. *Industrial Marketing Management* 54, 164–75.

Jokonya, O., & Mugisha, C. (2019). Factors influencing retail SMEs adoption of social media for digital marketing. In *ECSSM 2019 6th European Conference on Social Media* (p. 145-153). Academic Conferences and publishing limited.

Kannan, P. K. (2017). Digital marketing: A framework, review and research agenda. *International Journal of Research in Marketing*, 34(1), 22-45.

Kapoor, N., Jain, M., & Prasad, R. (2017). Digital marketing strategies and the behaviour of millennials. *International Journal of Economic Research*, 14(16), 109–118.

Kelsey, T. (2017). *Introduction to search engine optimization: a guide for absolute beginners*. Apress.

Kim, J., Kang, S., & Lee, K. H. (2021). Evolution of digital marketing communication: Bibliometric analysis and network visualization from key articles. *Journal of Business Research*, 130, 552-563.

Krishen, A. S., Dwivedi, Y. K., Bindu, N., & Kumar, K. S. (2021). A broad overview of interactive digital marketing: A bibliometric network analysis. *Journal of Business Research*, 131, 183-195.

Kumar, A., Bezawada, R., Rishika, R., Janakiraman, R., & Kannan, P. K. (2016). From social to sale: The effects of firm-generated content in social media on customer behavior. *Journal of Marketing*, 80(1), 7-25.

Kumar, B., Sharma, A., Vatavwala, S., & Kumar, P. (2020). Digital mediation in business-to-business marketing: A bibliometric analysis. *Industrial Marketing Management*, 85, 126-140.

Lamberton, C., & Stephen, A. T. (2016). A thematic exploration of digital, social media, and mobile marketing: Research evolution from 2000 to 2015 and an agenda for future inquiry. *Journal of Marketing*, 80(6), 146-172.

Leefflang, P. S., Verhoef, P. C., Dahlström, P., & Freundt, T. (2014). Challenges and solutions for marketing in a digital era. *European Management Journal*, 32(1), 1-12.

León-Castro, M., Rodríguez-Insuasti, H., Montalván-Burbano, N., & Victor, J. A. (2021). Bibliometrics and Science Mapping of Digital Marketing. In *Marketing and Smart Technologies* (pp. 95-107). Springer, Singapore.

Mandal, P. C. (2019). Public policy issues in direct and digital marketing—Concerns and initiatives: Public policy in direct and digital marketing. *International Journal of Public Administration in the Digital Age*, 6(4), 54-71.

Melović, B., Jocović, M., Dabić, M., Vulić, T. B., & Dudic, B. (2020). The impact of digital transformation and digital marketing on the brand promotion, positioning and electronic business in Montenegro. *Technology in Society*, 63, 101425.

Mitryk, B. M. (2008). Practical research methods for librarians and information professionals. *Journal of the Medical Library Association*, 96(4), 388.

Montgomery, K. C., Chester, J., Grier, S. A., & Dorfman, L. (2012). The new threat of digital marketing. *Paediatric Clinics*, 59(3), 659-675.

Nair, K. S., & Radhakrishnan, L. C. (2019). Role of eWOM in customer buying decision-making

- process: A conceptual study. *International Journal on Emerging Technologies*, 10(4), 71-75.
- Oliveira, A. S., de Barros, M. D., de Carvalho Pereira, F., Gomes, C. F. S., & da Costa, H. G. (2018). Prospective scenarios: A literature review on the Scopus database. *Futures*, 100, 20-33.
- Pai, R. R., & Alathur, S. (2021). Bibliometric analysis and methodological review of mobile health services and applications in India. *International Journal of Medical Informatics*, 145, 104330.
- Pandey, N., Nayal, P., & Rathore, A. S. (2020). Digital marketing for B2B organizations: structured literature review and future research directions. *Journal of Business & Industrial Marketing*, 35(7), 1191–1204.
- Parise, S., Guinan, P. J., & Kafka, R. (2016). Solving the crisis of immediacy: How digital technology can transform the customer experience. *Business Horizons*, 59(4), 411-420.
- Persaud, A., & Azhar, I. (2012). Innovative mobile marketing via smartphones: Are consumers ready? *Marketing Intelligence & Planning*, 30(4),
- Rangaswamy, A., Moch, N., Felten, C., Van Bruggen, G., Wieringa, J. E., & Wirtz, J. (2020). The role of marketing in digital business platforms. *Journal of Interactive Marketing*, 51, 72-90.
- Reyes-Gonzalez, L., Gonzalez-Brambila, C. N., & Veloso, F. (2016). Using co-authorship and citation analysis to identify research groups: a new way to assess performance. *Scientometrics*, 108(3), 1171-1191.
- Ritter, T., & Pedersen, C. L. (2020). Digitization capability and the digitalization of business models in business-to-business firms: Past, present, and future. *Industrial Marketing Management*, 86, 180-190.
- Saheb, T., Amini, B., & Alamdari, F. K. (2021). Quantitative analysis of the development of digital marketing field: Bibliometric analysis and network mapping. *International Journal of Information Management Data Insights*, 1(2), 100018.
- Saura, J. R., Palos-Sanchez, P., & Rodríguez Herráez, B. (2020). Digital marketing for sustainable growth: Business models and online campaigns using sustainable strategies. *Sustainability*, 12(3), 1003.
- Saura, J. R., Reyes-Menendez, A., & Filipe, F. (2019). Comparing data-driven methods for extracting knowledge from user generated content. *Journal of Open Innovation: Technology, Market, and Complexity*, 5(4), 74.
- Shankar, V., Kleijnen, M., Ramanathan, S., Rizley, R., Holland, S., & Morrissey, S. (2016). Mobile shopper marketing: Key issues, current insights, and future research avenues. *Journal of Interactive Marketing*, 34(1), 37-48.
- Sinkovics, N. (2016). Enhancing the foundations for theorising through bibliometric mapping. *International Marketing Review*, 33(3), 327-350.
- Smith, K. T. (2012). Longitudinal study of digital marketing strategies targeting millennials. *Journal of Consumer Marketing*, 29(2), 86–92.
- Szomszor, M., Adams, J., Fry, R., Gebert, C., Pendlebury, D. A., Potter, R. W., & Rogers, G. (2021). Interpreting bibliometric data. *Frontiers in Research Metrics and Analytics*, 5, 628703.
- Tiago, M. T. P. M. B., & Veríssimo, J. M. C. (2014). Digital marketing and social media: Why bother? *Business horizons*, 57(6), 703-708.
- Van Mierlo, T. (2014). The 1% rule in four digital health social networks: an observational study. *Journal of medical Internet research*, 16(2), e2966.
- Whitburn, D., Karg, A., & Turner, P. (2020). The effect of digital integrated marketing communications on not-for-profit sport consumption behaviors. *Journal of sport*

management, 34(5), 417-434.

Wilson, J. A. J., & Grant, J. (2013). Islamic marketing – a challenger to the classical marketing canon? *Journal of Islamic Marketing*, 4(1), 7–21.

Yadav, M. S., De Valck, K., Hennig-Thurau, T., Hoffman, D. L., & Spann, M. (2013). Social commerce: a contingency framework for assessing marketing potential. *Journal of Interactive Marketing*, 27(4), 311-323.

Yadav, M. S., & Pavlou, P. A. (2014). Marketing in computer-mediated environments: Research synthesis and new directions. *Journal of Marketing*, 78(1), 20–40.

Yepes-Nuñez, J. J., Urrutia, G., Romero-Garcia, M., & Alonso-Fernandez, S. (2021). The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *Revista Espanola de Cardiologia (English ed.)*, 74(9), 790-799.

Zhao, Z., & Balagué, C. (2017). From social networks to mobile social networks: applications in the marketing evolution. In *Apps management and e-commerce transactions in real-time* (pp. 26-50). IGI Global.

How to cite this article:

Hussain, W. M. H. W. & Ayob, A. H. (2023). Trends in Digital Marketing Research: A Bibliometric Analysis. *International Journal of Marketing, Communication and New Media*, Vol. 11, N° 20, 142-165.