

A Bibliometric Analysis of Digital Marketing Research in the Scopus Database (2016–2026)

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Abstract

The study aims to analyze the scientific literature on the topic of digital marketing using biometric analysis. This was during the period 2016-2026, when papers in the Scopus database were examined. 11,919 research papers were collected and 2,340 published articles were selected for analysis on the topic of digital marketing using the VOSviewer program for co-citation, co-presence and co-authorship.

We found a development in publishing, as we noticed an increase in publishing during the period studied, as the United States of America led in publishing, and the specialization of business, management and accounting was in first place in terms of published scientific papers. The keyword digital marketing also topped the highest correlation strength, and Hong Kong University topped the list as the best active research institution on the subject.

Keywords: digital marketing, bibliometric analysis, Scopus database, VOSviewer software.

Introduction

Technological advancements have brought about a profound transformation across various spheres of life, social, cultural, economic, political, and beyond. They have also opened up new horizons for several concepts, most notably the Internet, which has witnessed widespread diffusion and has become an integral part of contemporary societies. The emergence of the second generation of the Internet, commonly referred to as Web 2.0, has created broader opportunities for communication, interaction, networking, and the exchange of ideas and expertise, particularly within the business environment through the marketing function, which increasingly relies on digital transactions. This phenomenon is known as **digital marketing**, representing a shift from traditional transactional approaches to a new model characterized by digital interaction.

Accordingly, scholars and practitioners interested in digital marketing seek to identify the most significant developments in this field through diverse studies and by linking it to multiple areas of inquiry. In this context, the present study aims to determine the publication trends on digital marketing in the **Scopus** database over the last ten years, in order to examine the evolution of scholarly output and identify the most influential authors, journals, research institutions, and countries active in this field. To this end, the study employs **bibliometric analysis** using the **VOSviewer** software.

Based on this premise, this paper seeks to answer the following questions:

- What is meant by digital marketing?
- Which countries, researchers, and research institutions are most active in the field of digital marketing?

Research Significance

The importance of this study stems from several considerations, the most important of which are as follows:

- Digital marketing is no longer merely an optional tool for business growth; rather, it has become the lifeline that ensures the survival and expansion of brands in an era where the customer's purchasing journey often begins behind screens.
- The study highlights the importance of scientific publishing in the field of digital marketing.

Research Objectives

Through this study, we seek to achieve the following objectives:

- To identify the nature and concept of digital marketing.
- To explore the main statistical indicators available in the **Scopus** database regarding digital marketing research.

Research Methodology

This study adopts the **descriptive approach**. The theoretical section is based on a review of several research papers, while the applied section consists of an examination of data retrieved from the **Scopus** database and an analysis of the extracted results with the assistance of the bibliometric analysis tool **VOSviewer**.

Structure of the Study

In order to answer the research questions, the study is divided into two main sections:

- **First:** The theoretical framework of digital marketing.
- **Second:** An analytical study of publications on digital marketing in the **Scopus** database.

First: The Theoretical Framework of Digital Marketing

1.1 Definition of Digital Marketing

There are numerous definitions of the term **digital marketing**, as many scholars have approached the concept from different perspectives. According to **Keller and Kotler**, digital marketing refers to:

“All the efforts undertaken by the organization to inform buyers, communicate with them, and promote and sell its products through digital channels”
(Al-Shammari, 2017, p. 39).

Similarly, **Kian** defines it as:

“The use of digital, interactive technologies and information technology to carry out the organization's marketing activities”
(Al-Shammari, 2017, p. 39).

The two previous definitions indicate that the concept of digital marketing does not depart from the general concept of marketing in terms of its foundations and objectives. However, it is distinguished by the specific characteristics of the channels and media through which it operates. It should be noted here that these media are not limited to the Internet, as is commonly assumed; they also include the telephone, fax, extranet, intranet, and other digital means.

Moreover, the **Digital Marketing Institute** has offered a more precise definition by describing digital marketing as:

“The use of digital technologies to create an integrated, targeted, and measurable communication process that helps acquire and retain customers and build deeper relationships with them” (Wymbs, 2011, p. 94).

This definition captures the various dimensions of digital marketing, beginning with the scope of its tools—whether Internet-based (such as websites, email, and social media platforms) or other digital media—passing through its core foundation, namely integrated communication, as well as its two key features: precise targeting and measurability, and culminating in its ultimate objective, which is to build strong relationships between the organization and its customers.

Accordingly, digital marketing can be understood as the set of marketing activities based on integrated communication through digital technologies, aimed at reaching the largest possible number of targeted customers with precision—those who have a desire or need for the organization’s products—and at building deep and lasting relationships with them, while also enabling the measurement of various marketing functions, such as advertising effectiveness and customer responsiveness to the organization’s marketing campaigns.

1.2 Importance of Digital Marketing

Digital marketing is no longer a secondary option or merely a complementary tool in the contemporary business world; rather, it has become a strategic backbone that determines an organization’s ability to survive and remain competitive. Its importance arises from its exceptional ability to combine technology with human values in order to build sustainable relationships, transcending the constraints of time and place. This importance is particularly evident through the following vital roles (Piñeiro-Otero, 2016, p. 39):

- **Building and strengthening brand image:** Digital platforms and spaces provide a fertile environment for creating and sustaining a favorable first impression in the minds of audiences. Digital tools allow organizations to update their visual identity and communication messages instantly in response to unfolding events, thereby making the brand appear dynamic and interactive rather than static.
- **Expanding reach and diffusion:** Digital marketing transcends the traditional limitations of time and place. Audience access is no longer confined to their online presence; it also extends to physical channels supported by digital technologies, such as interactive displays in streets, airports, and public spaces. This integration of the digital and physical worlds creates a continuous brand presence in individuals’ daily lives and increases opportunities for visibility at different moments throughout the day.
- **Enhancing customer interactivity:** In the digital era, marketing has shifted from one-way communication to two-way dialogue. Its importance lies not only in selling but also in listening to the customer. This helps build bridges of trust and makes customers feel that they are part of the organization’s ecosystem, transforming them from occasional buyers into brand advocates.
- **Precise and personalized targeting:** Thanks to big data and artificial intelligence algorithms, organizations can now direct their messages with remarkable accuracy. Rather than spending resources on uninterested audiences, firms can analyze user behavior—what they like and where

they shop—and then present the right advertisement to the right person at the right time, thereby improving conversion rates and the efficiency of marketing expenditure.

- **Keeping pace with technological development:** By adopting emerging technologies such as augmented reality (AR), live streaming, and artificial intelligence applications, organizations can remain at the forefront of the contemporary landscape. This conveys an image of modernity and leadership, while enabling marketers to devise unconventional methods of capturing the attention of new generations of consumers.
- **Achieving marketing integration:** Digital marketing acts as an umbrella that brings together all marketing activities—promotion, advertising, public relations, and customer service—within one coherent framework. This integration ensures that the message customers see in email is consistent with what they encounter on a mobile app or social media platform, thereby creating a seamless user experience that supports all stages of the purchasing journey.

1.3 Characteristics of Digital Marketing

Digital marketing differs from traditional marketing in that it relies on modern technologies. In this regard, it is characterized by the following features (Salam, 2021, pp. 165–170):

- **Integration of activities:** Digital marketing requires the multiplicity and integration of activities. It is not merely about search engine optimization (SEO) or separate presence on social media platforms; rather, it is an integrated system that enables the use of multiple interconnected tools simultaneously.
- **Rapid evolution:** The fast pace of Internet technology development has increased its use and led to the emergence of innovative marketing tools, such as search engine marketing (SEM). Developments in digital banner advertising have also contributed to the emergence of models such as the **Web Portal**.
- **Accuracy of measurement and analysis:** Digital channels provide tools such as **Google Analytics**, allowing marketers to track every activity accurately, including the number of visits, pages viewed, and time spent on the site, thus facilitating performance evaluation.
- **Personalized targeting:** There has been a shift from targeting broad markets to targeting individuals by building interactive relationships with customers, treating them as partners, and offering personalized recommendations tailored to the needs of each customer.
- **Flexibility of design and customization:** The digital environment makes it easy to modify and customize the electronic store instantly based on customer behavior or product characteristics, whether in content or pricing—something that is difficult to achieve in traditional physical stores.
- **Transformation of the customer's role (co-creation):** The customer is no longer merely a consumer; rather, they have become an active participant in designing goods and services to better suit their own needs.
- **Direct and effective communication:** Digital marketing enables organizations to reach audiences easily and at any time, thereby facilitating communication without causing unnecessary disturbance.

- **Two-way interaction:** It allows information to flow in both directions, as companies receive direct customer feedback and opinions through digital platforms, which helps improve and refine commercial offerings.

1.4 Digital Marketing Tools

Contemporary organizations rely on digital marketing tools as a fundamental pillar for strengthening communication with customers. These tools make it possible to present the latest products and services effectively, allowing audiences to become familiar with the company’s identity and business activities without the burden of physical movement, thus saving both effort and financial cost. The main digital marketing tools include the following (Mohammed, 2020, pp. 8–10):

- **Mobile marketing:** Includes all communication activities with customers aimed at promoting sales or providing information.
- **Social media platforms:** Effective and low-cost tools for building and developing direct relationships with customers in a timely manner.
- **Email marketing:** Direct messages targeting carefully selected segments in order to stimulate immediate response and build ongoing relationships.
- **Website:** A means of personalized communication with each customer, meeting their needs by offering added value and specialized information through links and keywords.
- **Online advertising:** Primarily focuses on advertisements appearing through search engines.

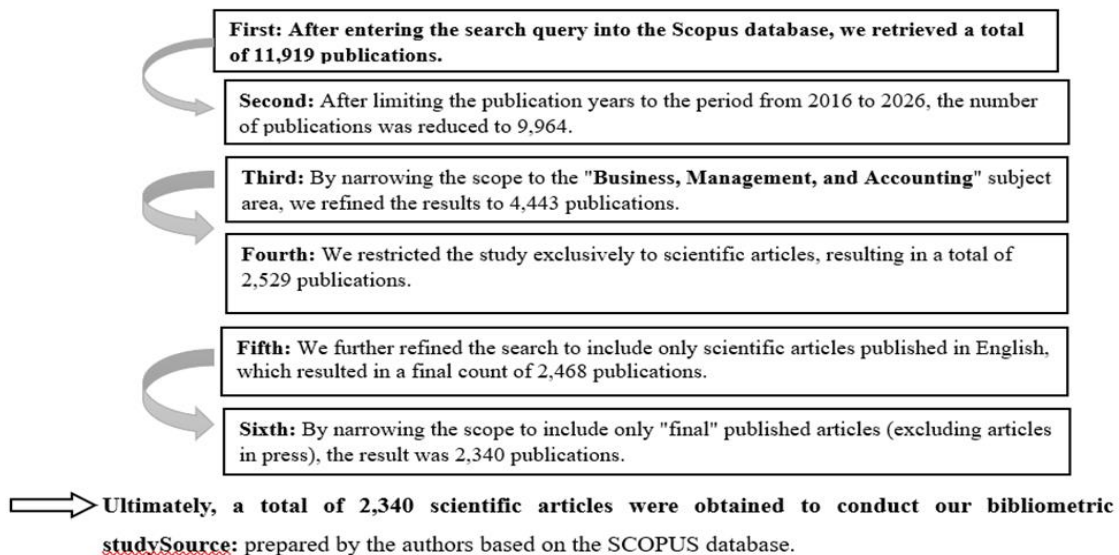
2. Bibliometric Analysis of Digital Marketing Research Through the Scopus Database

To conduct this analysis, we relied on the **Scopus** database after constructing the following search equation:

("digital marketing" OR "online marketing" OR "internet marketing")

This query was used to retrieve publications related to the topic. We then followed the subsequent steps:

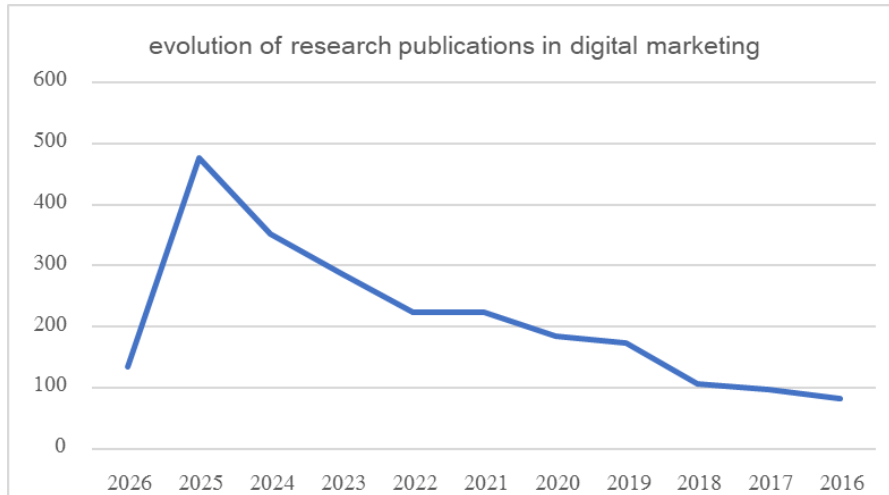
Figure 01: The stages followed to identify scientific publications related to the study.



2.1. Evolution of Publication Trends in Digital Marketing:

Figure (01) illustrates the progression of scholarly output in the field of digital marketing, which grew from 83 articles in 2016 to 477 articles by 2026. It is observed that 2025 represents the peak year for publications. This upward trend underscores the increasing interest among researchers and scholars in digital marketing, a phenomenon that may be attributed to the rapid advancement of digital services and the shift toward remote transactions. The following figure further elucidates these trends:

Figure (01): Evolution of International Publications in Digital Marketing (2016–2026).



Source: Elaborated by the authors based on the SCOPUS database.

2.2. The Top Ten Most Productive Countries in Digital Marketing Research:

Table (02) highlights the countries with the highest scholarly contribution to the field of digital marketing. The findings reveal a broad global interest, with 110 countries actively publishing on this topic. The United States leads the rankings with 371 articles, followed by India with 317 articles, and China in third place with 197 articles. The following table details the top ten countries that have demonstrated the most significant commitment to advancing research in digital marketing:

Figure (02): The Top Ten Countries by number of publications in Digital Marketing (2016–2026)



Source: Elaborated by the authors based on the Scopus database and Microsoft Excel.

2.3 Leading Subject Areas in Digital Marketing Research:

Based on the data, "Business, Management, and Accounting" emerges as the dominant field of publication within digital marketing, ranking first with 2,340 articles, which accounts for 50.9% of the total output. This is followed by "Social Sciences" with 613 articles, representing 13.3%. Table (01) provides a detailed breakdown of the remaining subject areas:

Table (01): Top Subject Areas Contributing to Digital Marketing Research (2016–2026)

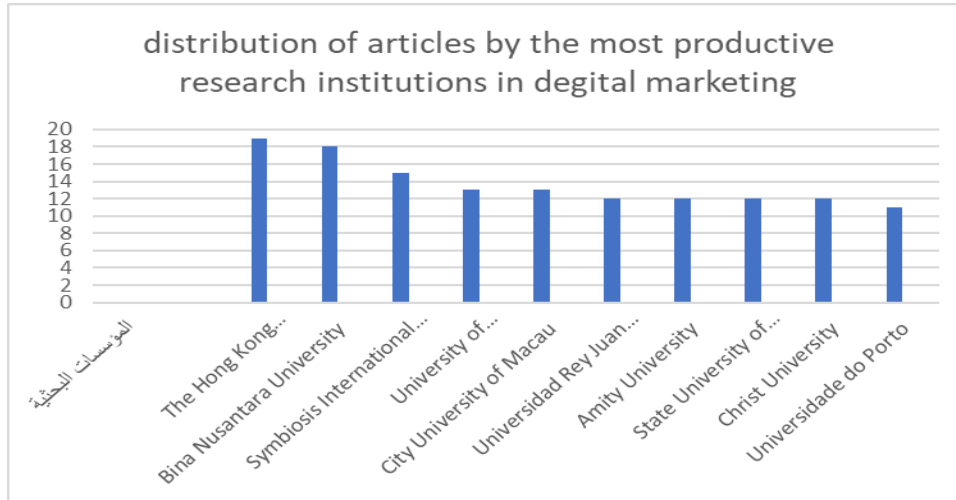
Subject Area	Number of Articles	Percentage
Business, Management, and Accounting	2340	50.9%
Social Sciences	613	13.3%
Economics, Econometrics, and Finance	485	10.5%
Decision Sciences	348	7.6%
Computer Science	301	6.5%
Engineering	169	3.7%
Environmental Science	70	1.5%
Psychology	70	1.5%
Arts and Humanities	56	1.2%
Resources Science	35	0.8%
Resources Science	25	2.5%
Agricultural and Biological Sciences	23	
Mathematics	20	
Energy	17	
Medicine	15	
Biochemistry, Genetics and Molecular	04	
Biology	03	
Health Professions	03	
Chemical Engineering	02	
Physics and Astronomy	01	

Source: Prepared by the authors based on the Scopus database.

2.4 Most Productive Research Institutions in Digital Marketing:

A total of 159 research institutions showed significant interest in the field of digital marketing between 2016 and 2026. The results indicate that the **University of Hong Kong** ranked first with 19 publications. Figure (03) illustrates the top ten most productive institutions.

Figure (03): Most productive research institutions in digital marketing (2016–2026).



Source: prepared by the researchers based on the Scopus database and Microsoft Excel.

5.2. Co-authorship Analysis:

In this section, we analyze co-authorship patterns at three levels: individual authors, countries, and research institutions, utilizing VOSviewer software.

- Co-authorship Collaboration at the Author Level:**

Out of a total of 6,478 authors, 15 met the specific criteria defined in VOSviewer (a minimum of 5 publications and a minimum citation threshold). The following figure illustrates the co-authorship network, categorized into clusters as follows:

Figure (04): Co-authorship network visualization map



Source: Prepared by the authors using VOSviewer software.

Table (02): Co-authorship collaboration results

Authors	Documents	Citations	Total Link Strength
Huertas-garcia,ruben	06	83	05
Reklits,dimitrios p.	05	135	05
Sakas, damianos p.	07	182	05
Saez-ortuno,laura	05	80	05

Abell, annika	05	339	00
Al-ababneh,hassanali	06	44	00
Dwivedi, yogesh k.	05	2068	00
Hu,lala	05	120	00
Ko,eunju	05	1016	00
Kumar, vikas	06	204	00
Kushwaha,bijayprasad	05	81	00
Law,rob	06	290	00
Mero, joel	05	200	00
Ponzoa, jose m.	05	143	00
Saura,joseramon	05	761	00

Co-authorship collaboration at the institutional level:

Out of 4,872 research institutions, 6 met the criteria specified in VOSviewer (a minimum of 4 publications and a minimum citation threshold). This resulted in the formation of 6 distinct clusters, as illustrated in the following figure:

Figure (05): Visualization map of the co-authorship network of research institutions



Source: Prepared by the authors using VOSviewer software.

Table (03): Results of co-authorship collaboration between research institutions

Research Institutions	Document	Citations	Total Link Strength
Department of economics and management	04	114	00
Department of marketing, business	04	68	00
Jaypee institute of information technologe	04	623	00
Mica,ahmedabad,inda	04	123	00

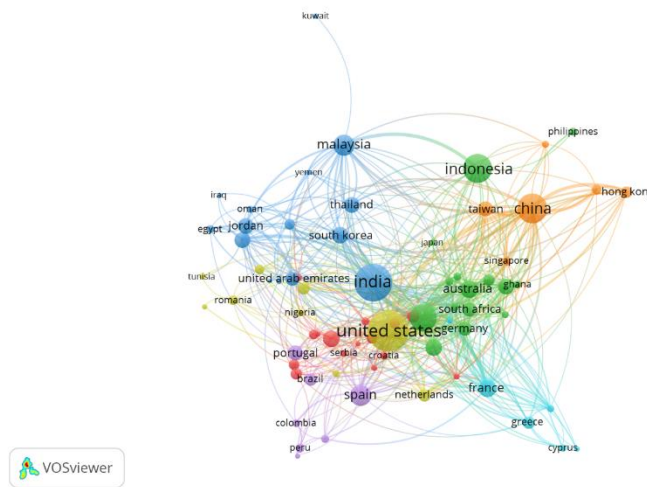
Rey juancarlosuniversity,madrid,spain	04	467	00
Vit business school, vellore institute	04	57	00

Source: Prepared by the authors using VOSviewer software.

- **Co-authorship collaboration at the country level:**

Out of 150 countries, 75 met the criteria defined in VOSviewer (a minimum of 5 publications and a minimum citation threshold). The analysis revealed 7 distinct clusters, as illustrated in the following figure:

Figure (06): Visualization map of the co-authorship network by countries



Source: Prepared by the authors using VOSviewer software.

Table (04): Results of co-authorship collaboration between countries

Total Link Strength	Citations	Documents	country
212	11941	167	United Kingdom
212	18737	375	USA)
158	4432	197	China
116	8943	318	India
110	5233	67	France
108	6629	72	Australia
83	900	98	Malaysia
81	3793	57	Canada
55	4228	47	Germany
55	3884	102	Spain

Source: Prepared by the authors using VOSviewer software.

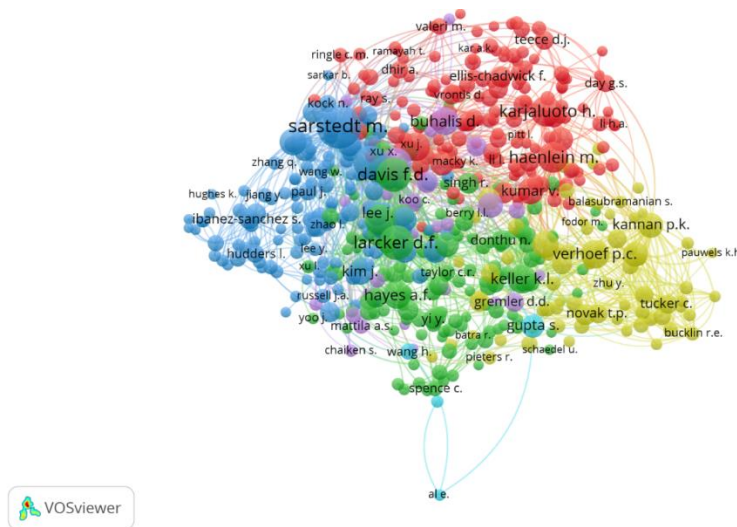
2.6 Co-citation Analysis:

In this section, we conduct a co-citation analysis at both the author and source levels.

- **Co-citation of Cited Authors:**

The results indicate that out of 64,591 authors, only 535 met the minimum citation threshold of 20 citations specified in VOSviewer. Notably, the author **Sarstedt, M.** achieved the highest total link strength with a value of 6,099 and is considered one of the most cited authors with 349 citations.

Figure (07): Co-citation network of cited authors



Source: Prepared by the authors using VOSviewer software.

Table (05): Results of the co-citation analysis for cited authors

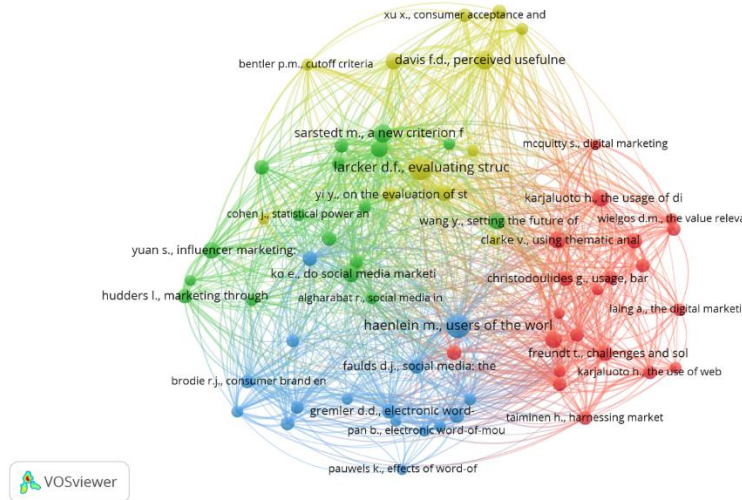
Authors	Citations	Total Link Strength
Sarstedt m.	349	6099
Larckerd.f.	207	4215
Davis f.d	212	3711
Dwivediy.k.	152	3316
Wang y.	204	3041
Verhoef p.c.	147	2858
Ajzen i.	163	2715
Podsakoffn.p.	124	2673
Haenlein m.	168	2663
Ringlec.m.	128	2620

Source: Prepared by the authors using VOSviewer software.

- **Co-citation of Cited Sources:**

The analysis shows that out of 116,688 sources, only 66 met the required minimum threshold of 20 citations. The results indicate that Fornell, C. (referenced as Larcker, D. F. in joint contexts) or specifically Larcker, D. F. has the highest co-citation link strength, with 93 citations and a total link strength of 279. The following figure illustrates these results:

Figure (08): Co-citation network of cited sources



Source: Prepared by the authors using VOSviewer software

2.7 Co-occurrence Analysis of Keywords (Author Keywords):

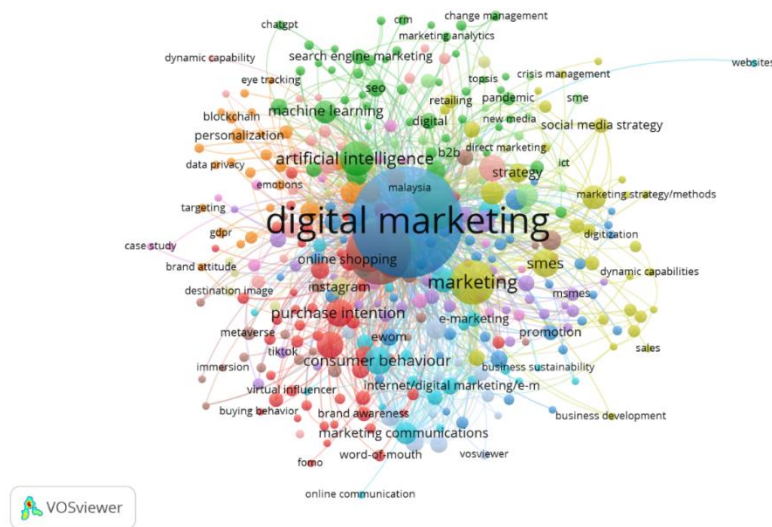
Out of a total of 6,477 keywords, only 363 met the threshold of at least 5 occurrences. The keyword "Digital marketing" ranked first, with a frequency of 850 occurrences and a total link strength of 1,797. The following table illustrates the top ten keywords:

Table (06): Co-occurrence results of author keywords

Keywords	Keyword Occurrences	Total Link Strength
Digital marketing	850	1797
Social media	271	721
Marketing	141	461
Social media marketing	105	318
e-commerce	103	298
Online marketing	136	293
Artificial intelligence	84	252
Internet marketing	105	209
Consumer behaviour	54	192
Consumer behavior	63	191

Source: Prepared by the authors using VOSviewer software

Figure (09): Co-occurrence network map of author keywords



Source: Prepared by the authors using VOSviewer software

Conclusion:

Digital marketing has emerged as a pivotal field of study, garnering significant scholarly attention, particularly in recent years. It has become a strategic necessity for any organization striving for success, competitive advantage, and excellence amidst rapid technological acceleration, diversifying consumer options, and shifting preferences. The current study focused on digital marketing research between 2016 and 2026 using the Scopus database. A total of 2,340 articles were retrieved and analyzed using bibliometric methods to understand research trends via VOSviewer software. The key findings are as follows:

We observed that digital marketing research experienced rapid growth between 2016 and 2026 (increasing from 83 to 477 articles), reflecting the growing significance of the field. Furthermore, the results revealed that the **"Business, Management, and Accounting"** category is the most dominant, accounting for 50.9% of the total publications. The **United States** ranked first in terms of publication volume in digital marketing, while the **University of Hong Kong** was the most productive research institution. Finally, the keyword **"Digital marketing"** topped the list with a total link strength of 1,797.

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