


# A Bibliometric and Thematic Analysis of Digital Marketing Research in Reputable Journals (2010-2024)

Loso Judijanto<sup>1</sup>, Nuzmerini Rauf<sup>2</sup>, Siske Anani<sup>3</sup>, Rini Angriani Idrus<sup>4</sup>

<sup>1</sup>IPOSS Jakarta

<sup>2-4</sup>Universitas Bina Mandiri Gorontalo

Article Info	ABSTRACT
<p><b>Article history:</b></p> <p>Received June, 2025 Revised June, 2025 Accepted June, 2025</p> <hr/> <p><b>Keywords:</b></p> <p>Digital Marketing Social Media Marketing Bibliometric Analysis VOSviewer</p>	<p>This study presents a bibliometric and thematic analysis of digital marketing research published in reputable journals between 2010 and 2024, utilizing VOSviewer to map structural, conceptual, and temporal developments in the field. A total of curated Scopus-indexed journal articles was analyzed to identify key trends, prolific authors, collaborative networks, and evolving research themes. The results reveal that digital marketing has undergone significant transformation, with a shift from early emphases on technological enablers such as big data and artificial intelligence to more recent interests in consumer behavior, social media engagement, and sustainability. Co-authorship analysis highlights dominant scholarly clusters in both Western and emerging economies, reflecting a globally distributed knowledge base. Country-level collaboration networks further underscore the increasing contribution of nations like India, Indonesia, and Spain to the digital marketing discourse. Thematic clustering and temporal mapping indicate a maturation of the field, with growing interdisciplinary integration and practical relevance. This study provides critical insights for academics, practitioners, and policymakers aiming to navigate and contribute to the evolving landscape of digital marketing research.</p> <p><i>This is an open access article under the <a href="#">CC BY-SA</a> license.</i></p> <div></div>

<p><b>Corresponding Author:</b></p> <p>Name: Loso Judijanto Institution: IPOSS Jakarta e-mail: <a href="mailto:losojudijantobumn@gmail.com">losojudijantobumn@gmail.com</a></p>
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## 1. INTRODUCTION

Over the past decade, digital marketing has emerged as a central force in reshaping the marketing landscape. Rapid advances in information and communication technologies, combined with the explosive growth of internet users and mobile devices, have shifted the way consumers interact with brands and products [1]. Digital marketing encompasses a broad range of strategies, including content marketing, search engine optimization (SEO), social media marketing,

influencer engagement, mobile marketing, and data-driven advertising [2]. These tools have become essential in the competitive toolkit of modern enterprises, from multinational corporations to small and medium-sized enterprises (SMEs), seeking to remain relevant and competitive in an increasingly connected world [3].

The academic community has responded to these developments with a growing body of literature aimed at understanding the mechanisms, strategies,

effectiveness, and implications of digital marketing. This growing interest reflects not only the pervasiveness of digital tools in contemporary marketing but also the complexity and evolving nature of digital consumer behavior [4]–[6]. Research outputs from reputable journals have addressed various aspects of digital marketing, including customer engagement, personalization, e-commerce adoption, social media analytics, and return on investment (ROI) measurement. As this body of work expands, there is a need to systematically evaluate and map the evolution of digital marketing research to better understand key trends, dominant themes, and future research directions.

Bibliometric analysis offers a robust quantitative approach to assess scholarly output, citation patterns, authorship networks, and journal impact in a given research domain [7]. When combined with thematic analysis, researchers can gain both structural and conceptual insights into the field. This dual approach allows for the identification of influential authors, countries, and institutions, as well as thematic clusters that define the intellectual and conceptual development of digital marketing. Such insights are critical in understanding how the field has matured, what themes have gained prominence, and where scholarly attention may be lacking.

Between 2010 and 2024, digital marketing research has expanded alongside technological shifts such as the rise of artificial intelligence (AI), big data analytics, augmented reality (AR), and privacy-related challenges like GDPR and digital trust. The COVID-19 pandemic further accelerated digital transformation, compelling businesses to intensify their digital engagement with customers [8]. These dynamics have not only increased scholarly output but also diversified research topics and methodologies within the digital marketing domain. For instance, the intersection of AI and consumer personalization, the effectiveness of influencer marketing on platforms like Instagram and TikTok, and the ethical

concerns surrounding data collection have all emerged as prominent themes in recent years.

Despite the exponential growth of digital marketing literature, a comprehensive synthesis of its evolution remains limited. Previous reviews have often focused on specific platforms or techniques, such as social media marketing or SEO, without capturing the holistic picture of the field's development across reputable journals [9]. Moreover, many reviews rely on narrative or qualitative methods, lacking the rigor and objectivity that bibliometric and thematic analyses can provide. A consolidated bibliometric review that spans over a decade of research is essential to map scientific production, assess the field's intellectual structure, and identify thematic trajectories that have shaped digital marketing scholarship.

While digital marketing has been extensively explored in academic literature, there is a noticeable gap in comprehensive studies that combine bibliometric and thematic analyses to provide an integrated understanding of the field's development over time. Most existing reviews tend to be fragmented or limited in scope, focusing on specific tools or timeframes, thereby failing to offer a panoramic view of the research landscape from 2010 to 2024. Furthermore, there is a lack of clarity regarding how dominant research themes have evolved in relation to emerging technologies, consumer behavior shifts, and market demands. Without a structured mapping of scholarly contributions, researchers and practitioners alike may find it challenging to navigate the digital marketing literature effectively, identify critical gaps, and propose future research agendas grounded in empirical patterns. This study aims to conduct a bibliometric and thematic analysis of digital marketing research published in reputable journals between 2010 and 2024.

## 2. METHODS

This study employed a bibliometric and thematic content analysis approach to systematically examine digital marketing research published between 2010 and 2024.

Bibliometric analysis was chosen to quantitatively evaluate the scientific production and citation patterns within the domain, while thematic analysis was conducted to identify and interpret key conceptual trends. Data were collected exclusively from the Scopus database, which is recognized for its comprehensive indexing of high-impact journals and reliability in bibliometric studies [7]. The search query included terms such as “digital marketing,” “online marketing,” “social media marketing,” “influencer marketing,” and “content marketing,” combined with Boolean operators to refine results. Only peer-reviewed journal articles written in English and published between January 2010 and May 2024 were included, while conference papers, book chapters, and editorials were excluded to ensure consistency and quality.

After exporting the metadata in CSV and RIS formats, the files were cleaned to remove duplicates and irrelevant records. The cleaned dataset was then imported into VOSviewer (version 1.6.x) to conduct the bibliometric mapping. VOSviewer was used to generate various visualizations including co-authorship networks, keyword co-occurrence maps, citation networks, and bibliographic coupling. These visualizations helped to identify the most prolific authors, influential articles, leading journals, and collaborative clusters of countries or institutions contributing to the digital marketing literature. Keyword co-occurrence analysis enabled the identification of thematic patterns and research hotspots by measuring the frequency and co-occurrence of author keywords within the selected articles.

To explore the thematic evolution of digital marketing research, the study conducted a co-word analysis on the keywords and abstracts using VOSviewer’s full counting method. The minimum threshold for keyword occurrence was set (e.g., five or more times), and clusters were automatically generated using the software’s clustering algorithm. Each cluster was analyzed to identify dominant themes and their interrelations. Furthermore, temporal mapping was used to visualize the emergence

and decline of certain themes across time intervals within the 2010–2024 range.

### 3. RESULTS AND DISCUSSION

#### *Keyword Co-Occurrence Network*

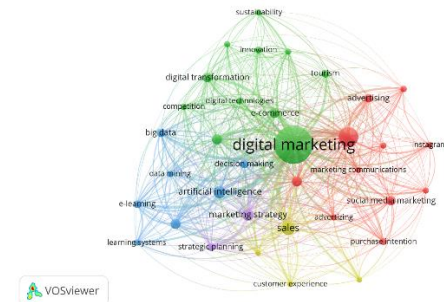


Figure 1. Network Visualization

Source: Data Analysis

Figure 1 represents a co-occurrence network of keywords in digital marketing research from 2010 to 2024, derived from bibliometric analysis. Each node signifies a keyword, with its size indicating frequency of occurrence across publications. Colors reflect cluster groupings—thematic concentrations based on co-word analysis—while lines (edges) denote co-occurrence relationships between keywords. The term “digital marketing” stands as the central and most dominant node, indicating its role as the conceptual anchor of the field.

The green cluster (top center) emphasizes themes related to digital innovation and strategic transformation. Keywords such as digital transformation, sustainability, e-commerce, innovation, and digital technologies suggest that a significant portion of the literature explores how businesses adopt digital tools to remain competitive and sustainable. This thematic group reflects a strategic and forward-looking orientation of digital marketing, emphasizing organizational change, technological adoption, and the role of digital ecosystems in shaping marketing practices. The red cluster (right side) focuses on social media marketing and consumer engagement. Keywords like social media marketing, marketing communications, purchase intention, Instagram, and advertising point to a strong research interest in how digital channels influence consumer behavior and brand

interaction. This cluster underlines the operational and tactical dimensions of digital marketing, particularly on platforms like Instagram, where engagement, visibility, and personalization play central roles in driving marketing outcomes.

The blue cluster (left side) captures the intersection between data analytics and intelligent systems. It includes terms such as artificial intelligence, big data, data mining, e-learning, and learning systems, indicating growing scholarly focus on leveraging AI and data-driven decision-making in digital marketing strategies. This reflects an emerging frontier where predictive analytics, personalization algorithms, and machine learning are deployed to optimize customer targeting and campaign performance. The yellow and purple clusters (bottom side) bridge between strategic planning and customer experience. The yellow cluster includes terms like customer experience, sales, and purchase intention, which suggests a thematic focus on performance measurement and consumer-centric outcomes. Meanwhile, the smaller purple cluster connects strategic planning with broader marketing strategy development. Together, these clusters indicate that digital marketing research has evolved from isolated tactical efforts to a more holistic, customer- and strategy-focused discipline.

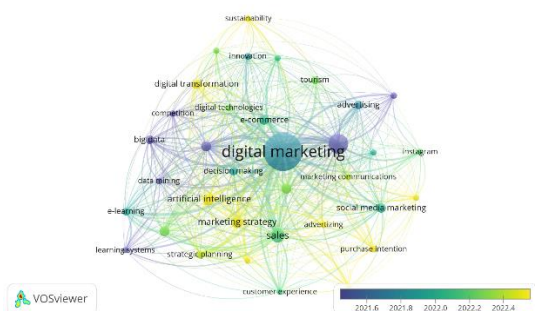


Figure 2. Overlay Visualization  
Source: Data Analysis

Figure 2 illustrates the temporal evolution of digital marketing research keywords from 2010 to 2024. The color gradient, ranging from dark blue (earlier years, ~2021) to yellow (recent years, ~2024), reflects the average publication year of documents associated with each keyword.

The central term, digital marketing, appears in a neutral green-blue tone, indicating its persistent and sustained presence throughout the entire study period. In contrast, keywords like social media marketing, purchase intention, advertising, and customer experience appear in yellow hues, signifying that these themes have gained increasing attention in the most recent years, especially post-2022. Themes in blue and purple, such as big data, data mining, advertising, and decision making, represent earlier focal points in digital marketing literature. These topics were dominant around 2021 and served as foundations for emerging research. The clustering around artificial intelligence, e-learning, and learning systems also belongs to this earlier wave, highlighting the initial academic interest in integrating technology and education with marketing strategies. Over time, however, the scholarly focus shifted from these foundational technological explorations toward consumer-centric outcomes, including sales, customer experience, and social media engagement, as indicated by the lighter shades moving toward yellow. More recent research trends, particularly in the 2022–2024 window, are centered on social media marketing, purchase intention, sustainability, innovation, and tourism. These yellow-shaded nodes reflect an evolving interest in platform-specific engagement, ethically driven marketing, and sectoral applications of digital marketing. The emergence of sustainability and innovation as lighter-colored terms suggests that current discourse is moving toward responsible and forward-thinking marketing strategies.



Figure 3. Density Visualization  
Source: Data Analysis

The density visualization from VOSviewer illustrates the intensity and frequency of keyword co-occurrence in digital marketing literature between 2010 and 2024. The color gradient ranges from blue (low density) to yellow (high density), indicating how frequently specific terms appear in relation to others. At the center, digital marketing is the most prominent and dense node—highlighted in bright yellow—demonstrating its role as the core concept and most researched term in the dataset. Surrounding this core are moderately dense terms such as marketing communications, social media marketing, sales, and artificial intelligence, which appear in green, indicating their high but secondary frequency of usage in scholarly discussions. The less intense (blue-to-green) areas such as tourism, sustainability, learning systems, innovation, and purchase intention suggest emerging or more niche themes within the digital marketing discourse. These keywords may represent specialized subtopics or developing areas of inquiry that are gaining academic attention but have not yet reached the centrality of more established terms.

#### Co-Authorship Network

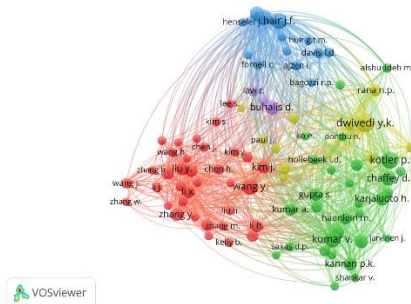


Figure 4. Author Visualization

Source: Data Analysis

Figure 4 illustrates a co-authorship network among prolific authors in the field of digital marketing research from 2010 to 2024. Each node represents an author, with node size indicating the number of publications or co-authorship frequency, while the links denote collaborative relationships. The network is organized into several distinct clusters, each colored differently, representing closely connected research communities. For example, the blue cluster is dominated by influential figures like Hair J.F.,

Henseler J., and Fornell C., indicating strong collaboration in methodological and structural equation modeling research. The green cluster includes scholars like Dwivedi Y.K., Kotler P., Kumar V., and Chaffey D., signifying a group focused on strategic, theoretical, and applied dimensions of digital marketing. The red cluster, heavily concentrated and interconnected, features prolific Asian authors like Wang Y., Li X., and Liu Y., suggesting a growing body of regional scholarship with high internal collaboration

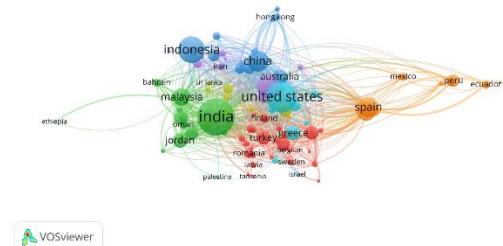


Figure 5. Author Visualization

Source: Data Analysis

Figure 5 represents the country co-authorship network in digital marketing research from 2010 to 2024. Each node symbolizes a country, with node size indicating publication volume and link thickness denoting the strength of international collaboration. The United States emerges as the central hub with the largest node, reflecting its dominant role in global digital marketing research and extensive cross-country collaboration. Surrounding clusters reveal strong regional groupings: India, Malaysia, and Indonesia form a dense green cluster indicating active intra-Asian collaborations; Spain leads the orange cluster with strong ties to Latin American countries like Mexico, Peru, and Ecuador. The blue cluster, featuring China and Hong Kong, shows prominent East Asian participation. Meanwhile, countries like Turkey, Greece, and Romania cluster in red, reflecting growing European involvement. Notably, Indonesia and India stand out as significant contributors from the Global South, indicating a shift toward more geographically diverse research participation in the field of digital marketing.



## DISCUSSION

The results of this bibliometric and thematic analysis offer a comprehensive understanding of the structural, temporal, and conceptual developments in digital marketing research from 2010 to 2024. The findings demonstrate a maturing research landscape marked by increasing diversity in themes, growing global collaboration, and an expanding academic community. Through co-occurrence and keyword mapping, it is evident that the field has transitioned from foundational strategic and technological themes to more nuanced, consumer-centric, and interdisciplinary investigations.

At the core of the network, digital marketing remains the most dominant and persistent keyword, serving as the conceptual anchor of the literature. This is unsurprising given its role as an umbrella term encompassing multiple subdomains such as social media marketing, marketing communications, e-commerce, and content strategy. The strong linkages observed between central keywords reflect the integrative nature of digital marketing practices, where technologies, consumer behavior, and business strategy intersect. The high-density visualization further corroborates this by showing a bright concentration of research activity around these core concepts.

One of the most striking patterns revealed in the overlay visualization is the temporal evolution of research themes. Earlier research, as represented by keywords such as big data, data mining, and artificial intelligence, reflects an early scholarly emphasis on the technological enablers of digital marketing. These foundational studies laid the groundwork for predictive analytics, automation, and segmentation models that have since become standard practice. However, over time, attention has increasingly shifted toward more customer-experience-oriented topics such as purchase intention, customer experience, and social media engagement. These themes, appearing in yellow tones (2022–2024), highlight a growing interest in understanding the outcomes and implications of digital

marketing on end-users, suggesting a conceptual maturation from tools to impact.

The emergence of keywords such as sustainability, innovation, and tourism also signal the expansion of digital marketing into adjacent fields and contexts. Sustainability, in particular, reflects an important shift toward responsible marketing practices and ethical engagement. In parallel, the increased appearance of tourism as a keyword suggests that researchers are exploring digital marketing applications within specific industries. This indicates the contextual broadening of the field, where generic frameworks are being tailored to the needs and behaviors of particular sectors, thereby enhancing practical relevance.

The co-authorship network analysis further reveals the intellectual structure of the field, showcasing several prominent author clusters that drive the discourse. Scholars like Hair J.F., Henseler J., and Fornell C. are clustered in the methodological nucleus of the field, contributing to the development of SEM (Structural Equation Modeling), which has been instrumental in validating digital marketing constructs. Another significant cluster is led by Dwivedi Y.K., Chaffey D., and Kotler P., whose work spans strategic frameworks, digital consumer behavior, and thought leadership. Meanwhile, the dense and interconnected red cluster of authors, primarily from Asia—including Wang Y., Li X., and Zhang Y.—demonstrates an increasingly active and collaborative body of work in the Eastern academic context. This reflects a global decentralization of knowledge production, where influential contributions are no longer limited to traditional Western academic strongholds.

Complementing this is the country co-authorship analysis, which provides geographical context to scholarly collaboration. The United States emerges as the central actor, reflecting its continued influence in shaping global marketing discourse. However, the rise of India, Malaysia, and Indonesia as prominent contributors indicates a diversification of the knowledge base. These countries not only show strong national output but also exhibit

increasing levels of international collaboration. The dense green cluster linking India and Southeast Asian nations reflects shared regional priorities such as digital inclusion, mobile commerce, and small business digitization. The vibrant orange cluster centered around Spain and connected to Mexico, Peru, and Ecuador suggests a growing Latin American engagement in digital marketing research, potentially influenced by regional adoption of social commerce and mobile platforms.

The interdisciplinary nature of digital marketing is another key insight from the thematic mapping. Terms like e-learning, decision making, and learning systems indicate cross-pollination with fields such as education, information systems, and behavioral science. This convergence allows researchers to explore more dynamic and human-centered aspects of marketing, including personalization, user trust, and cognitive engagement. Furthermore, the presence of artificial intelligence and big data in close proximity to marketing keywords confirms the field's embrace of data-driven paradigms, a trend that is likely to intensify with ongoing technological advancements.

Despite these positive developments, the study also reveals gaps and underexplored areas. While themes such as social media marketing and purchase intention are heavily represented, less attention appears to be devoted to ethical challenges, data privacy, and cross-cultural digital behaviors, despite their rising importance in practice. The limited presence of these terms suggests an opportunity for future research to engage more critically with the risks, regulations, and societal implications of digital marketing technologies, especially as digital environments become more immersive and algorithmically mediated.

Another area for growth lies in methodological diversity. While VOSviewer reveals a high level of connectivity among authors using quantitative approaches like SEM or text mining, qualitative explorations—such as ethnographic case studies, netnography, and narrative

analysis—appear less visible. Given the increasing complexity of digital consumer identities and behaviors, there is a strong case to be made for more mixed-method and interpretive approaches that can capture depth and context alongside measurable trends.

In practical terms, the insights from this study are valuable for practitioners, educators, and policymakers. For practitioners, understanding which themes are rising (e.g., customer experience, sustainability, platform-specific marketing) can guide strategic investments and capability development. For educators and curriculum designers, the clustering of topics provides a basis for structuring contemporary digital marketing syllabi that align with scholarly and industry trends. For policymakers, recognizing the role of global collaboration and the influence of emerging markets may help in designing international research programs, funding schemes, and innovation networks that nurture inclusive digital growth.

#### 4. CONCLUSION

This study provides a comprehensive bibliometric and thematic analysis of digital marketing research published in reputable journals from 2010 to 2024, using VOSviewer as the primary analytical tool. The findings reveal that digital marketing has evolved into a multidisciplinary and globally collaborative research field, with core themes such as social media marketing, artificial intelligence, customer experience, and marketing strategy dominating scholarly discourse. Temporal analysis shows a shift from foundational technological topics to more recent emphases on consumer behavior, sustainability, and ethical marketing. Authorship and country networks highlight the expanding contributions of Asian and Latin American researchers alongside established Western scholars, reflecting the internationalization of the field. While digital marketing research has grown in both depth and breadth, gaps remain in areas such as data privacy, cross-cultural analysis, and qualitative exploration.

Overall, the study underscores the dynamic trajectory of digital marketing scholarship and offers a roadmap for future research that

is inclusive, impact-driven, and socially responsive.

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