

WHEN CONTENT GOES VIRAL: ANALYZING THE STRUCTURE AND TRENDS OF VIRAL MARKETING RESEARCH IN THE DIGITAL AGE

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ABSTRACT

This study examines the intellectual structure and future directions of viral marketing in the digital era through a bibliometric review of 4,629 Scopus-indexed articles collected on July 24, 2025. Using bibliographic coupling and co-word analysis via VOSviewer, this study identifies four major clusters shaping the current knowledge base: strategic communication and brand engagement through influencer authenticity, informational quality and cognitive processing of eWOM in consumer adoption, influence mechanisms and social identity in digital endorsement, and trust formation and reputation signals in peer-based interactions. Looking ahead, three strategic themes are highlighted: brand narrative and identity amplification, viral propagation models in digital commerce and social media, and influencer capital as a driver for digital persuasion. Theoretically, this study advances digital marketing scholarship by integrating consumer behavior, social influence, and technological factors into a comprehensive framework for viral marketing strategies. Its originality lies in linking intellectual landscapes with emerging trends, offering both academics and practitioners with evidence-based insights for theory development and strategy design. By mapping existing knowledge and forecasting future directions, this study contributes to the development of adaptive viral marketing practices aligned with technological innovation and evolving consumer dynamics.

Purpose

This study examines the existing knowledge framework surrounding viral marketing in the digital age and forecasts its future development. This study emphasizes the identification of trends, strategic themes, and research gaps, which can provide a foundation for creating more effective theories and practices in viral marketing.

Design/methodology/approach

This study adopts a bibliometric review approach that incorporates two primary techniques: bibliographic coupling, which maps the intellectual structure and current research trends, and co-word analysis, which aims to forecast future research directions. Data were gathered from the Scopus database on July 24, 2025, using relevant keywords, which identified 4,629 articles. The articles were subsequently analyzed using VOSviewer software.

Findings

The analysis identified four key clusters within the knowledge structure: (1) Strategic Communication and Brand Engagement through Influencer Authenticity, (2) Informational Quality and Cognitive Processing of electronic word-of-mouth (eWOM) in Consumer Adoption, (3) Influence Mechanisms and Social Identity in Digital Endorsement, and (4) Trust Formation and Reputation Signals in Peer-Based Digital Interactions. Additionally, the co-word analysis highlighted three strategic themes for the future: Brand Narrative and Identity Amplification through Viral Marketing, Viral Propagation Models in Interconnected Digital Commerce and Social Media Platforms, and Influencer Capital and the Power of Digital Persuasion.

Research Implication

This study theoretically enhances the digital marketing literature by presenting a conceptual framework that combines factors of digital consumer behavior, social influence, and digital technology within viral marketing strategies. The findings can serve as an academic reference for developing new theories that address the complexities of the digital marketing ecosystem, particularly in digital viral marketing.

Originality/Value

This study integrates bibliographic coupling and co-word analysis to develop a comprehensive map of viral marketing knowledge and forecast future research directions based on data. Its distinctiveness stems from the connection between the intellectual landscape and emerging trends in strategic keywords, providing both a conceptual framework for academics and an evidence-based guide for practitioners to follow. This approach is intended to support the design of research and the development of viral marketing strategies that can adapt to technological advancements and shifting consumer behaviors.

Keywords: Viral marketing, bibliometric analysis, bibliographic coupling, co-word analysis, social media marketing, influencer marketing, eWOM.

INTRODUCTION

Currently, viral marketing strategies, an integral aspect of digital marketing, have proven to be one of the most effective methods for reaching and engaging broader audiences. Viral marketing has the potential to promote content that spreads rapidly and exponentially across social media platforms, thereby significantly influencing brand perception and consumer behavior (Ayu 2020). With the advancement of digital technology and the rise of prominent social media platforms, new challenges and opportunities have emerged in executing viral marketing strategies. This study aims to examine the current knowledge framework in viral marketing research, identify emerging trends, and predict future research directions. The central aim is to conduct a thorough review of the existing literature on viral marketing using a bibliometric approach, which will help illuminate the development dynamics and application of theories and practices within this field.

Bibliometric analysis plays a crucial role in understanding viral marketing, particularly given the many aspects that remain unclear, including the relationship between viral marketing effects, consumer purchasing decisions, and their impact on business performance. Existing research indicates that although viral marketing can enhance a product's visibility and attractiveness, its success is influenced by numerous variables, including the nature of the content, the target audience, and the social context in which the content is disseminated (Fatah & Arsyad, 2022; Rimbasari et al., 2023). The research questions underpinning this study focus on two main areas: (1) What are the key trends and existing knowledge frameworks in viral marketing research in the digital era? (2) What are the anticipated future directions and strategic themes in viral marketing research? The significance of this study lies not only in gaining a comprehensive understanding of the current knowledge structure but also in identifying and addressing gaps in the existing research. Additionally, it aims to provide valuable recommendations for both academics and practitioners for future exploration in the continually evolving field of viral marketing (Ethelda et al., 2022; Rukuni et al., 2017).

This article begins with a brief introduction to the context of viral marketing and its significance in the current digital marketing landscape. The following section provides a comprehensive analysis detailing the bibliometric review methodology employed in this research, including the strategies used for data selection and processing from the Scopus database. This research process will lead to a thorough presentation of the findings, accompanied by an in-depth examination of how these insights enhance our understanding of viral marketing. Furthermore, this study addresses the limitations encountered during the research and offers suggestions for future studies, all aimed at enriching our comprehension of the dynamics of viral marketing in the digital age (Fouad, 2017; Torrance et al., 2021). Ultimately, this study seeks to provide valuable and fresh insights for researchers, professionals, and decision-makers regarding the adoption and execution of effective and innovative viral marketing strategies.

METHODOLOGY

Bibliometric Approach

Bibliometric analysis has gained popularity among researchers as a valuable quantitative method for evaluating and mapping scholarly literature within a specific field, enabling the understanding of research trends over time, including past, present, and future developments (Donthu et al., 2021; Fauzi et al., 2022). This method uses a quantitative analysis of scientific publications to uncover knowledge dynamics, evaluate scientific collaboration, measure author and journal productivity, and analyze the structure and size of a scientific discipline (Raboaca

et al., 2021; Rojas-Lamorena et al., 2022). Bibliometric analysis enables researchers to comprehend the evolving knowledge landscape in a specific field by identifying dominant research themes, emerging research directions, and research gaps that have not been extensively explored (Zupic & Čater, 2015). In the rapidly changing landscape of viral marketing, which evolves with advancements in digital technology, this approach is essential for understanding how knowledge on a topic is created, shared, and developed within the global scientific literature.

This study employs two bibliometric analysis methods to achieve the two main objectives that have been previously defined. First, bibliographic coupling was used to identify current research trends in the field of viral marketing. This technique connects scientific documents based on the similarity of the references they cite, offering an overview of the current intellectual landscape, knowledge dissemination, and thematic relationships among studies (Donthu et al., 2021; Fauzi, 2023a). Second, to further explore the direction of future research, this study employs co-word analysis, a technique that examines the frequency and associations of keywords that appear together in publications. This method is based on the idea that words frequently found together often represent related topics and concepts. Therefore, co-word analysis can be used to map current and emerging research themes (Zupic and Čater, 2015).

This study conducted its analysis using VOSviewer software, which was selected for its outstanding capability to intuitively and interactively visualize bibliometric networks, including bibliographic coupling and co-word analyses. VOSviewer also allows for the efficient processing of large datasets and has been widely utilized in previous bibliometric research because of its reliability in mapping intellectual structures and thematic connections between scientific documents (van Eck & Waltman, 2010). The visualizations produced by these devices are particularly valuable for identifying research clusters and the relationships between concepts, which form the foundation of knowledge mapping in this study.

Searching Strategy and Data Collection Procedures

Data collection for this study was conducted on July 24, 2025, using the Scopus database. Scopus was selected because it is one of the largest and most comprehensive databases of scientific literature worldwide, encompassing over 27,000 scientific journals in various disciplines. Scopus provides complete and high-quality metadata for bibliometric analysis, including information on citations, affiliations, keywords, and author collaborations. As a result, it is widely used in similar studies (Donthu et al., 2021; Fauzi, 2023b). The search will concentrate on scientific articles published in reputable journals that have reached their final publication stage.

The primary focus of this study is on “viral marketing.” This main keyword was expanded into 19 related keywords, including synonyms and commonly used technical terms found in the academic literature. This diversification aims to provide a comprehensive and inclusive overview of the various terminologies used in viral marketing research. Using these keywords, the following search string is employed to retrieve publication metadata from Scopus: *TITLE-ABS-KEY ("viral market*" OR "word-of-mouth market*" OR "electronic word-of-mouth" OR ewom OR "buzz market*" OR "referral market*" OR "influencer market*" OR "social transmission market*" OR "peer-to-peer market*" OR "evangelist market*" OR "content virali*" OR "viral content" OR "online shar* behavior" OR "digital wom" OR "digital word of mouth" OR "social media virali*" OR "viral advertis*" OR "digital social contag*" OR "network based market*") AND PUBYEAR > 1938 AND PUBYEAR < 2026 AND (LIMIT-TO (DOCTYPE, "ar")) AND (LIMIT-TO (LANGUAGE, "English")) AND (LIMIT-TO (SRCTYPE, "j")) AND (LIMIT-TO (PUBSTAGE, "final"))*

A total of 4,629 articles were successfully gathered from this search, spanning 1939 to 2024. The collected data included bibliographic information such as titles, authors, affiliations,

publication years, journals, abstracts, keywords, and citations. These data will be analyzed using the approaches and software previously described.

FINDINGS AND DISCUSSION

Descriptive Analysis

Based on the results of a bibliometric analysis conducted using the Scopus database, the trend of scientific publications on the topic of “viral marketing” has shown substantial year-on-year growth. The term first appeared in the scientific literature in 1939, but the number of related documents remained minimal for several decades. Research on this topic only began to increase significantly after the onset of the digital era and the rapid development of information technology in the early 2000s. This growth accelerated sharply in 2015, coinciding with the widespread use of social media as a platform for sharing viral content. During this time, researchers from various disciplines began exploring the dynamics of content virality, mechanisms of digital information dissemination, and their effects on consumer behavior, marketing strategies, and brand image formation.

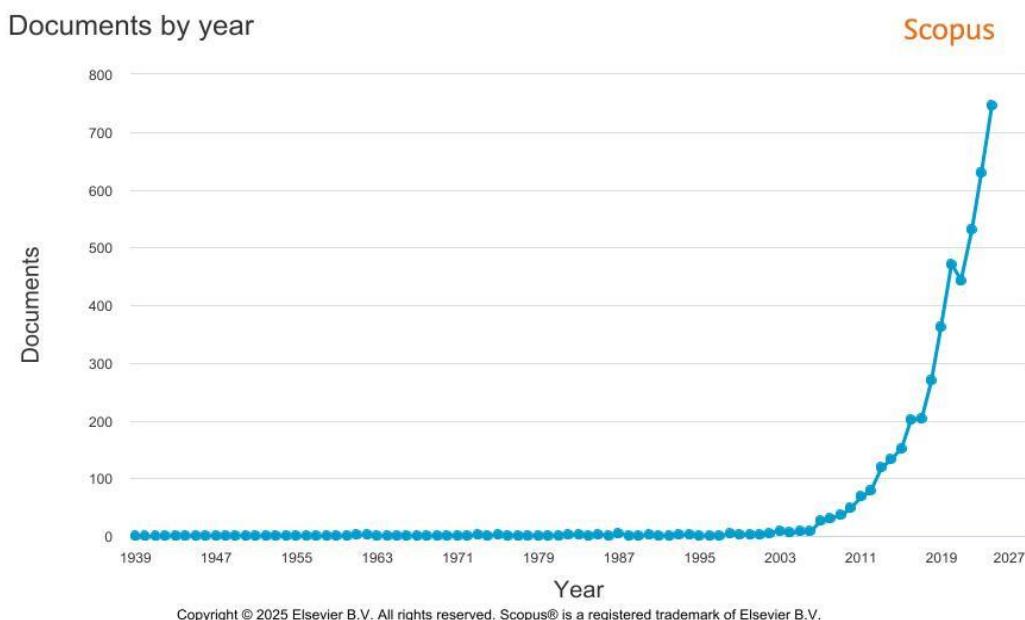


Figure 1: The number of publications on viral marketing in the Scopus database accessed on July 24, 2024

The peak of publication records occurred in 2024, with 746 scientific documents published—the highest number observed during the study period. Interestingly, by mid-2025, specifically on July 24, 2025, the number of published articles reached 502, suggesting that this year's figures could surpass those of the previous year. Cumulatively, from 1939 to 2024, the total number of publications related to viral marketing reached 4,629 articles. This data suggest that viral marketing is not just a fleeting trend; it has evolved into a well-established and continually relevant topic of study in the modern marketing landscape.

The increasing trend in research on digital marketing is closely linked to the growing complexity of the digital ecosystem and the necessity for businesses to understand and harness viral power. This understanding is crucial for shaping perceptions, reaching markets and enhancing consumer engagement. Studies in this area have adopted various approaches, including exploratory qualitative methods, predictive quantitative models, and the application of artificial intelligence and machine learning technologies to analyze how content spreads across different social media platforms. This trend not only highlights the significant rise in the number of published documents but also indicates a broadening of topics, methodological

approaches, and interdisciplinary contributions that enrich the field of digital marketing. Furthermore, this underscores the importance of viral marketing research as a strategic focus for understanding the dynamics of communication and consumer behavior in today's fast-paced and competitive digital landscape.

Bibliographic Coupling

In the bibliographic coupling analysis conducted in this study, establishing a threshold for the minimum number of citations was crucial to ensure that only the most influential documents were included in the analysis. After filtering, we started with 4,629 papers and set a minimum threshold of 456 citations per document. As a result, 60 papers met the criteria for further analysis. This number is ideal for bibliometric studies, as recommended by Geng et al. (2020), because it effectively balances the inclusion of relevant literature while avoiding the excessive duplication of themes. If the threshold is set too high, important literature that contributes to cluster formation may be overlooked because of over-filtering. Conversely, a threshold that is too low can result in numerous clusters with overlapping themes.

In bibliographic coupling, the main focus is on Total Link Strength (TLS), which indicates the strength of bibliographic relationships between documents (Zupic & Čater, 2015). Total Link Strength (TLS) measures the strength of the relationship between two documents based on the shared references they cite. A higher TLS value indicates a stronger conceptual connection between publications and a greater contribution to shaping the viral marketing field's intellectual structure. TLS serves as a key metric for assessing relevant documents when mapping them into thematic clusters. It also forms the basis for creating comprehensive knowledge maps and identifying future research trends in the digital and viral marketing landscapes.

Table 1 presents ten documents that exhibit the highest Total Link Strength (TLS), highlighting their significant contributions to the intellectual structure of viral marketing research in the digital era. The document by King (2014) ranks first with the highest TLS of 248, followed by Mauri (2013) with a TLS of 233 and Filieri (2015b) with a TLS of 226. Other notable documents, such as Cheung (2012a) and Filieri (2015a), exhibit strong connection strengths in bibliographic networks with TLS scores of 224 and 191, respectively. Although Chu (2011) has the highest number of citations (1,501), his TLS is only 131, indicating that the number of citations does not always correlate directly with the strength of the connectivity in a bibliographic coupling network. Overall, these documents are central to the literature network as they possess numerous references to other works, playing a crucial role in shaping the main clusters and themes in the study of viral marketing. Their presence can be viewed as an essential point in the evolving landscape of knowledge.

Table 1. Top 10 documents in bibliographic coupling analysis

No	Documents	Citations	Total Link Strength
1	King (2014)	799	248
2	Mauri (2013)	539	233
3	Filieri (2015b)	658	226
4	Cheung (2012a)	1201	224
5	Filieri (2015a)	647	191
6	Zhang (2014)	608	160
7	Filieri (2016)	459	153
8	Hennig-thurau (2010)	911	137

9	Chu (2011)	1501	131
10	Cheung (2008)	1093	131

A network visualization of the bibliographic coupling results is shown in Figure 2. It revealed four distinct clusters, each represented by a different color: red, green, blue, and yellow. The naming of these clusters was done inductively by reviewing representative publications within each group and identifying the themes and common threads within their studies.

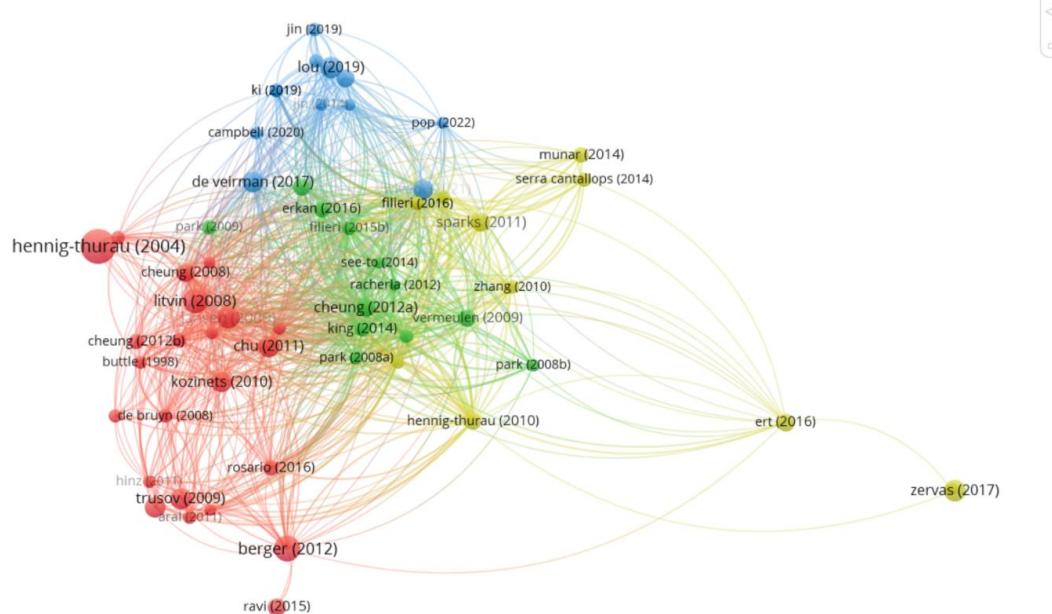


Figure 2: Network Visualization from bibliographics coupling for Viral Marketing
 A systematic summary of network visualization for the bibliographies of viral marketing is presented in Table 2. This table includes data on the number of publications, cluster colors, key publications and main themes.

Tabel 2. Results of the bibliographic coupling tables for each cluster.

Cluster	Color	Number of Publication	Representative Publications	Theme
1	RED	23	Audrezet, de Kerviler & Moulard (2020); Campbell & Farrell (2020); De Veirman, Cauberghe & Hudders (2017); Djafarova & Rushworth (2017); Dwivedi, Ismagilova, Carlson, Fillieri, Jacobson, Jayawardhena, Karjaluoto, Kefi, Krishen, Kumar, Rahman, Raman, Rauschnabel, Rowley, Salo, Tran, Sharma, Tan, Trivedi, Vishwakarma, Wirtz & Wang (2021); Hughes, Swaminathan & Brooks (2019); Jin & Phua (2014); Jin, Muqaddam & Ryu (2019); Ki & Kim (2019); Lou & Yuan (2019); Pop, Mihăiță, Drăghici & Iorgulescu (2022)	Strategic Communication and Brand Engagement through Influencer Authenticity

2	GREEN	12	Cheung, Lee & Rabjohn (2008); Cheung, Lee & Thadani (2009); Erkan & Evans (2016); Filieri (2015); King, Racherla & Bush (2014); Park & Lee (2009); Park & Kim (2008); Park & Lee (2008); Racherla & Friske (2012); See-To & Ho (2014); Vermeulen & Seegers (2009); Zhang, Cheung & Lee (2014) Ki & Kim (2019); Jin, Muqaddam & Ryu (2019); Lou & Yuan (2019); Hughes, Swaminathan & Brooks (2019); Djafarova & Rushworth (2017); Jin & Phua (2014); Campbell & Farrell (2020); De Veirman, Cauberghe & Hudders (2017); Audrezet, de Kerviler & Moulard (2020); Dwivedi, Ismagilova, Carlson, Fillieri, Jacobson, Jayawardhena, Karjaluoto, Kefi, Krishen, Kumar, Rahman, Raman, Rauschnabel, Rowley, Salo, Tran, Sharma, Tan, Trivedi, Vishwakarma, Wirtz & Wang (2021); Pop, Mihăiță, Drăghici & Iorgulescu (2022)	<i>Informational Quality and Cognitive Processing of eWOM in Consumer Adoption</i>
3	BLUE	11	Cachon, Daniels & Lobel (2017); Ert, Fleischer & Magen (2016); Filieri (2016); Filieri, McLeay, Tsui & Lin (2015); Hennig-Thurau, Malthouse, Friege, Gensler, Lobschat, Rangaswamy & Skiera (2010); Mauri & Minazzi (2013); Munar & Jacobsen (2014); Serra Cantalops & Salvi (2014); Sparks & Browning (2011); Zervas, Proserpio & Byers (2017); Zhang, Ye, Law & Li (2010)	<i>Influence Mechanisms and Social Identity in Digital Endorsement</i>
4	YELLOW	11		<i>Trust Formation and Reputation Signals in Peer-Based Digital Interactions</i>

Cluster 1 (RED). Strategic Communication and Brand Engagement through Influencer Authenticity

The first cluster, highlighted in red, consists of 23 documents that are strongly interconnected by bibliographic coupling. The theme "Strategic Communication and Brand Engagement through Influencer Authenticity" was derived inductively by analyzing the common focus of the documents in this cluster. Most of these documents discuss the critical role that influencers play in enhancing brand engagement through authentic and credible communication methods. The primary emphasis of this cluster is on how the authenticity of the narratives shared by influencers directly impacts the effectiveness of digital marketing strategies and audience loyalty to the brands they represent.

In today's rapidly changing digital landscape, research on the relationship between strategic communication and brand engagement through influencer authenticity is becoming

increasingly important. Influencer marketing involves utilizing individuals who can significantly impact consumer behavior because of their active presence on social media platforms. Studies indicate that the effectiveness of communication strategies is strongly influenced by the authenticity displayed by influencers, enhancing the emotional connection between the audience and brand. (Hinz et al., 2011). The success of viral marketing hinges on how effectively an influencer establishes trust and credibility, as well as their ability to encourage active participation from their followers. This idea is supported by Kozinets et al. (2010), who highlight the importance of a sincere and relevant personal narrative for the audience, which helps foster authentic engagement.

The significance of this theme is highlighted by Berger and Schwartz (2011), who indicate that products with high social visibility are more frequently discussed in the context of word-of-mouth (WOM) marketing. This creates a widespread and sustainable effect on spreading brand messages. Strong brand engagement is influenced not only by the message itself but also by the messenger, specifically an influencer who is viewed as trustworthy and respected. Additionally, Aral and Walker (2011) found that passive and broad messaging can lead to higher social influence within the network than a more personalized approach. This implies that an effective viral marketing strategy requires a balance between the scale of outreach and authenticity of communication.

Cluster 2 (GREEN). Informational Quality and Cognitive Processing of eWOM in Consumer Adoption

The second cluster, represented in green, consisted of 12 documents that were closely related based on bibliographic coupling analysis. The theme of this cluster is “Informational Quality and Cognitive Processing of eWOM in Consumer Adoption.” This was chosen because most publications discuss in detail the role of information quality and the cognitive processes involved in how consumers understand and adopt product or service recommendations conveyed through electronic word-of-mouth (eWOM). The primary focus is on how the quality, credibility, and relevance of information in eWOM can influence consumer attitudes, build trust, and ultimately affect purchasing decisions.

In today's digital age, consumers increasingly rely on information from online platforms and social media, making electronic word-of-mouth (eWOM) a crucial factor influencing buying behavior. King et al. (2014), through a review of more than 190 studies confirms the diverse characteristics of eWOM, including the accuracy of information, the style of message delivery, and the context of dissemination. This diversity highlights the need for a comprehensive understanding of the new dimensions of eWOM communication. Meanwhile, Zhang et al. (2014) indicate that the quality of information in online reviews is closely linked to consumers' cognitive processes during decision-making. The impact of this quality varies depending on the type of product being reviewed. This suggests that differences in product characteristics affect how consumers process information, which, in turn, influences product adoption.

Research on the quality of information in electronic word-of-mouth (eWOM) focuses on how the information consumers receive influences their attitudes and behaviors toward brands. High-quality information, defined by accuracy, completeness, and relevance, boosts consumer trust and enhances their understanding of a product's value. The heuristic and systematic models presented by Zhang et al. (2014) suggest that when consumers trust eWOM, they are more likely to engage with and adopt the product.

Additionally, emphasizing the cognitive processing of information in electronic word-of-mouth (eWOM) highlights the need for marketers to adapt their communication strategies to align with consumer perceptions and surrounding social dynamics. Consumer adoption is influenced not only by the quality of the information itself but also by the social context that

shapes how this information is interpreted and understood. With this understanding, as suggested by King et al. (2014), marketers can create more effective viral marketing campaigns by developing relevant, engaging, and credible content. This approach maximizes the potential of eWOM as a key driver of consumer adoption.

Cluster 3 (BLUE). *Influence Mechanisms and Social Identity in Digital Endorsement*

The third cluster, represented by blue, consisted of 11 documents that demonstrated high citation relevance in the bibliographic coupling analysis. This cluster is centered around the theme "Influence Mechanisms and Social Identity in Digital Endorsement." Most publications in this group explore how influencers affect consumer behavior through psychological and social mechanisms, particularly the desire to mimic and the connections of social identity between influencers and their audiences. The documents consistently examine the relationship between digital endorsement strategies and key concepts such as identity formation, credibility perception, and brand engagement—all of which are essential for the success of viral marketing strategies in the social media era.

In modern digital marketing, the role of social media influencers is becoming increasingly important. Understanding how influence works and how it relates to social identity is thus crucial. According to Ki and Kim (2019), an influencer's ability to sway consumers is closely linked to consumers' desire to emulate their behavior, a key factor in the purchasing decision process. This desire to imitate is even stronger when consumers believe that the influencer reflects their personal identity, values or aspirations (Jin et al., 2019; Ki & Kim, 2019). The social identity that emerges from this connection not only deepens the emotional bond between the audience and the influencer but also boosts the likelihood of adopting the messages or products that the influencer endorses, making it a highly effective strategy for creating viral marketing.

Further research highlights the importance of this theme in viral marketing strategy. Jin et al. (2019) showed that the popularity of influencers, particularly on visual platforms such as Instagram, significantly impacts brand perception. Key factors, such as social presence, trust in the source, and emotional engagement, drive the effectiveness of digital endorsements. Hughes et al. (2019) also note that the success of these endorsements not only depends on the characteristics of individual influencers but also on the compatibility between the platform, campaign objectives, and the content delivered. These insights emphasize that viral marketing strategies based on endorsements require a holistic approach that combines an understanding of audience psychology, selecting the right platform, and crafting narratives that align with the social identity of the target consumers.

Cluster 4 (YELLOW). *Trust Formation and Reputation Signals in Peer-Based Digital Interactions*

Cluster four, identified through bibliographic coupling analysis, included 11 documents that examined the formation of trust and the role of reputation signals in peer-based digital interactions. This theme was selected because all the publications in this cluster emphasized the significance of how trust is established and how reputation is conveyed through user interactions on digital platforms. These factors, in turn, affect the effectiveness of viral marketing strategy. The primary focus is on social mechanisms, information framing, and the quality of reputation signals generated by users to enhance engagement and decision making in the digital landscape.

In today's digital age, research on viral marketing is becoming increasingly important, particularly regarding how trust and reputation are established through these peer interactions. The rise of social media and consumer reviews highlights the need to understand how trust is built within user interactions and how this affects their decisions to share information or make

purchases. Sparks and Browning (2011) demonstrated that positive reviews focused on interpersonal service can significantly enhance consumer trust, which is crucial for making informed purchasing decisions, such as hotel bookings. These findings demonstrate that the way information is presented can influence perceptions of trust, a crucial element in viral marketing strategies that aim to effectively utilize consumer reputation.

The rise of new media platforms, such as TikTok, presents companies with opportunities to strengthen their relationships with customers through engaging content, online comments, and live streaming. Hennig-Thurau et al. (2010) argue that new media democratize access to information, allowing consumers to play an active role in the market and altering the traditional dynamics of brand-consumer relationships. Additionally, Filieri et al. (2015) emphasize that the quality of information, website performance, and customer satisfaction are essential for establishing trust in consumer-generated content. Furthermore, Zervas et al. (2017) illustrate how review-based and peer recommendation models can influence consumer behavior and significantly impact the industry. These insights emphasize the importance of understanding trust formation and reputation signals. This knowledge is essential for creating effective viral marketing strategies and navigating the new dynamics of digital interactions in increasingly complex and rapidly evolving markets.

Co-word Analysis

Co-word analysis was performed using a research database to identify keywords most frequently found in the literature on viral marketing. The advantage of co-word analysis lies in its ability to map the conceptual structure of current research and predict future research directions and trends. By visualizing the relationships between keywords that often appear together, researchers can identify emerging topics, anticipate shifts in research focus, and develop research strategies relevant to both academia and industry. Of the 16,058 detected keywords, a minimum appearance threshold of 62 was established. The results revealed that 60 keywords satisfied this criterion. Choosing the appropriate threshold value is essential because thresholds that are too high may eliminate relevant keywords and result in a significant loss of clusters, while thresholds that are too low can lead to an excessive number of repeating clusters and theme duplication. (Geng et al., 2020); Liu

Table 3. Top 15 Keywords in The Co-Occurrence of Keywords Analysis

Rank	Keywords	Occurrences	Total Link Strength
1	social media	754	1535
2	ewom	670	857
3	marketing	537	1678
4	influencer marketing	485	700
5	social networking (online)	404	1568
6	viral marketing	403	993
7	electronic word of mouth	336	525
8	electronic word-of-mouth	331	520
9	commerce	286	1063
10	purchase intention	241	579
11	online reviews	203	378
12	social networks	197	575
13	social network	177	639
14	influence maximizations	164	630
15	sales	161	626

The results of the co-word analysis, presented in Table 3, highlight the most prominent keywords in the viral marketing literature. The term "social media" ranks first, with 754 occurrences, indicating that it is a foundational element in both digital and viral marketing studies. Following closely is "eWOM" (electronic word-of-mouth) with 670 occurrences, underscoring the importance of research focused on electronic word-of-mouth. The keyword "marketing" appeared 537 times, reaffirming its significance in general marketing strategies. Additionally, "influencer marketing" occurs 485 times, and "social networking (online)" appears 404 times, illustrating the vital role social networks and digital influencers play in shaping consumer behavior. Interestingly, the term "viral marketing" itself is mentioned 403 times, indicating sustained academic interest in strategies for disseminating content widely. Variations in related keywords, such as "electronic word of mouth" and "electronic word-of-mouth," with 336 and 331 occurrences, respectively, indicate a consistent focus on mechanisms of information dissemination. Other important keywords include "commerce," "purchase intention," and "online reviews," highlighting the close relationship between digital interactions and consumer purchasing decisions. Furthermore, keywords such as "social networks," "social network," "influence maximization," and "sales" suggest that the research also explores topics such as network strengthening, influence optimization, and the impact of these factors on sales. Together, these elements shape the trends and future directions of viral marketing research.

Figure 3 illustrates the network structure of the co-word analysis, featuring three distinct clusters representing various themes. The author assigned appropriate labels to each cluster through inductive interpretation. A summary of the co-word analysis is presented in Table 4 includes cluster numbers and colors, labels for each cluster, the number of keywords associated with each cluster, and representative keywords for each cluster.

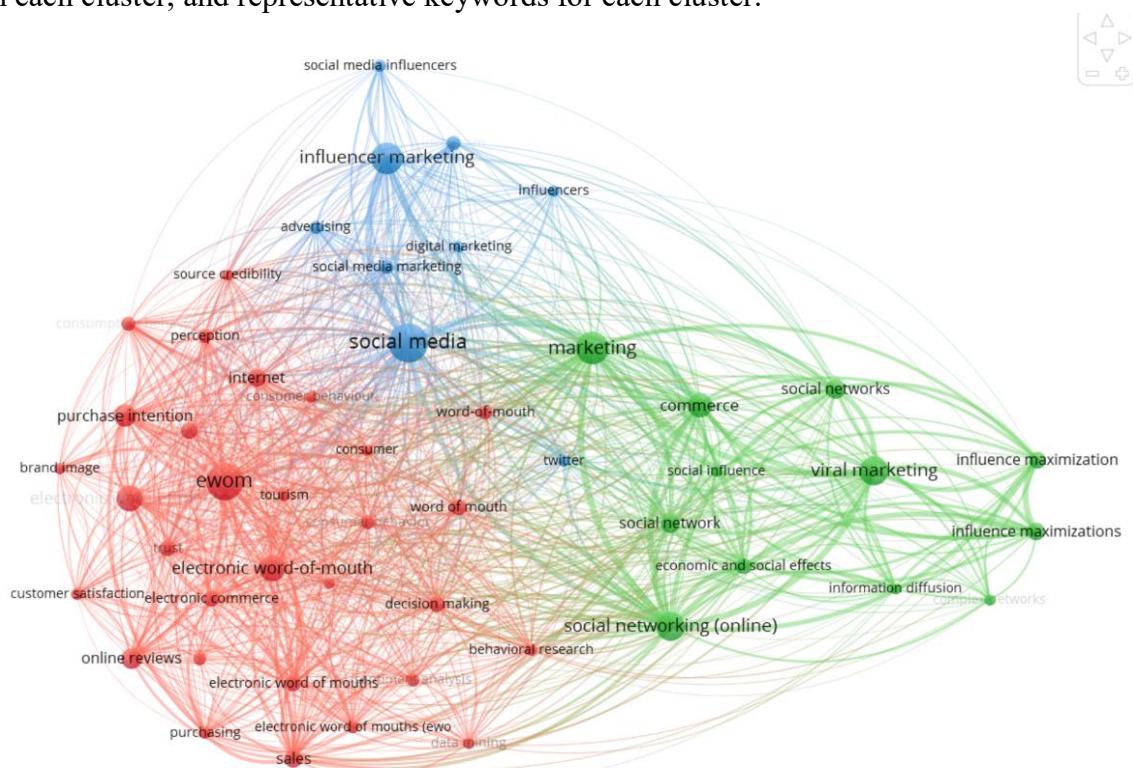


Figure 3: Network Visualization from cowords analysis for Viral Marketing

Table 4. Summary of co-words Analysis on Viral Marketing

Cluster	No of Keywords	List of Keywords	Cluster Themes
Cluster 1 (RED)	30	behavioral research, brand image, consumer, consumer behavior, consumer behaviour, consumption behavior, customer satisfaction, data mining, decision making, e-wom, electronic commerce, electronic word of mouth, electronic word of mouth (ewom), electronic word of mouths, electronic word of mouths (ewom), electronic word-of-mouth, electronic word-of-mouth (ewom), ewom, internet, online reviews, perception, purchase intention, purchasing, sales, sentiment analysis, source credibility, tourism, trust, word of mouth, word-of-mouth	Brand Narrative and Identity Amplification via Viral Marketing
Cluster 2 (GREEN)	12	commerce, complex networks, economic and social effects, influence maximization, influence maximizations, information diffusion, marketing, social influence, social network, social networking (online), social networks, viral marketing	Viral Propagation Models in Interconnected digital Commerce and social media Platforms
Cluster 3 (BLUE)	9	advertising, digital marketing, influencer marketing, influencers, instagram, social media, social media influencers, social media marketing, twitter	Influencer Capital and Digital Persuasion Power

Cluster 1 (RED). Brand Narrative and Identity Amplification via Viral Marketing

Cluster 1 in co-word analysis consists of a set of closely related keywords, which the researcher has inductively identified as the theme "Brand Narrative and Identity Amplification through Viral Marketing". This theme is crucial for future research in viral marketing, as it sheds light on how brand narratives and identity enhancement can shape perceptions, engagement, and customer loyalty. In an era of heightened digital competition, developing a strong brand narrative creates an emotional connection with the audience and enables brands to distinguish themselves in an increasingly saturated market.

Al-Dwairi and Alawneh (2024) confirm that the effectiveness of viral marketing largely depends on a company's ability to communicate its brand narrative consistently and authentically. This narrative can be further strengthened through collaborations with influencers, who, according to Ozuem et al. (2024), can effectively spread the brand message and act as catalysts in overcoming crises, such as service failures, by implementing reputation recovery strategies. Electronic word-of-mouth (eWOM) has emerged as a key driver of brand awareness and purchase intent. Khan et al. (2023) found that eWOM not only influences brand perception but also enhances brand equity. Furthermore, Yoo et al. (2024) demonstrated that effective eWOM strategies can foster virality while establishing trust and credibility in the brand.

With the development of social media, which allows for the dissemination of massive amounts of information, strong integration of brand narratives, influencer roles, and eWOM strategies becomes a key element in strengthening brand identity while mitigating reputation risks. Moving forward, research in this field will become increasingly relevant for understanding the synergistic relationship among these three elements and their implications for viral marketing strategies. An approach that combines authentic storytelling, brand identity reinforcement, and strategic eWOM management is believed to be capable of creating a long-term positive impact for brands in the constantly evolving digital landscape.

Cluster 2 (GREEN). Viral Propagation Models in Interconnected digital Commerce and social media Platforms

Cluster 2 in the co-words analysis comprises closely related keywords that represent the theme “Viral Propagation Models in Interconnected Digital Commerce and Social Media Platforms.” This theme is highly significant for future research as it enhances our understanding of how information, opinions, and marketing messages spread rapidly within interconnected digital commerce ecosystems and social media platforms. Gaining this understanding is crucial for developing more effective viral marketing strategies, especially given the constantly changing dynamics of social networks and consumer behavior in digital landscapes.

Recent research highlights that using influencers as the main drivers of marketing campaigns can significantly impact consumer opinions and preferences. Zhang et al. (2024) and Martínez-Falcó et al. (2024) showed that influencers can leverage their personal connections and credibility to accelerate the widespread dissemination of messages. In this context, Zhou et al. (2024) proposed a viral propagation model that emphasizes the role of parasocial interactions between influencers and followers as a key determinant of successful viral marketing strategies. This model is crucial for understanding the complexities of digital communication, which involves various interconnected platforms.

Sustainability and social engagement have become essential components of modern viral marketing models. Nazir and Wani (2024) and Sharma et al. (2023) indicate that influencers who promote sustainability values can enhance social awareness and impact consumer purchasing behavior. Additionally, advancements in technology, such as virtual influencers, broaden the possibilities for viral marketing strategies, as shown by Melnychuk et al. (2024) and Yan and colleagues (2024). Furthermore, data-driven approaches, such as those utilized by Wu et al. (2023), enable researchers to identify key factors that contribute to content virality, laying the groundwork for more effective, relevant, and adaptive digital marketing strategies in response to future changes in user behavior.

Cluster 3 (BLUE). Influencer Capital and Digital Persuasion Power

Cluster 3 in co-word analysis consists of keywords that are closely related and represent the theme “Influencer Capital and Digital Persuasion Power.” This theme is essential for future research on viral marketing as it offers a deeper understanding of how influencers’ social and digital capital can be strategically utilized to influence consumer behavior. With the ongoing evolution of the digital landscape, this topic is pivotal for developing more effective, adaptive, and relevant viral marketing models that can accommodate the increasingly complex dynamics of online interactions.

In the era of digital marketing, influencer marketing has been recognized as one of the most effective strategies for reaching and communicating with consumers. Pourkarim et al. (2023) indicated that the characteristics of appropriate influencers can be used not only for commercial purposes but also for social purposes, such as influencing societal behavior in the health context. This emphasizes the need for a deeper understanding of how various types of influencers can optimize their social and digital capital to maximize their impact on viral marketing strategies. Meanwhile, Ozuem et al. (2024) highlight the strategic role of influencers

in responding to crisis situations, such as service failures, where they function not only as message disseminators but also as essential connectors in restoring consumer trust.

Research in this field also suggests that the persuasive power of digital influencers is becoming increasingly crucial for fostering engagement and brand loyalty. Al-Dwairi and Alawneh (2024) provide empirical evidence that viral marketing strategies involving influencers can significantly increase sales and interactions on e-commerce platforms. Furthermore, Wies et al. (2023) and Liao et al. (2023) revealed that micro-influencers with authentic content and clear goals can create strong emotional connections with their audiences. Therefore, further exploration of "Influencer Capital and Digital Persuasion Power" is essential to optimize current marketing strategies and establish a more efficient, adaptive, and relationship-oriented foundation for future viral marketing between brands and consumers.

IMPLICATION

Theoretical Implication

The theoretical implications of this research lie in its contribution to a comprehensive mapping of the existing knowledge landscape related to viral marketing, as well as in identifying future development directions. By employing bibliometric coupling and co-word analysis techniques, this study reveals the intellectual structure and thematic relationships within the field and highlights major clusters representing strategic themes. These include brand narrative reinforcement, viral propagation models, influencer capital, and trust building in peer-based digital interactions. The findings of this study enhance the body of knowledge in digital marketing by offering a conceptual framework for understanding the dynamics of information dissemination, mechanisms of social influence, and role of technology in shaping consumer behavior in the digital age. Additionally, this study expands our understanding of how psychological, social, and technological factors are integrated into viral marketing strategies. This serves as a reference for developing new theories that are more relevant to the complexities of the current digital ecosystem.

Managerial Implication

The managerial implications of this study provide evidence-based strategic guidance for digital marketing professionals aiming to design, implement, and evaluate viral marketing campaigns more effectively in the digital age. By analyzing knowledge structures and research trends through bibliographic coupling and co-word analysis, this study assists marketers in identifying key themes that significantly influence consumer behavior. These themes include strengthening brand narratives, developing cross-platform viral propagation models, optimizing the use of social capital and digital influencers, and fostering trust through peer interaction. The findings can inform marketers to prioritize investments in high-impact strategies, such as selecting authentic influencers, leveraging quality electronic word-of-mouth (eWOM), and ensuring consistent integration of cross-channel content. Furthermore, by understanding key terms and connections among various topics, practitioners can anticipate market trends and create campaigns that address contemporary issues such as sustainability and emerging technologies (e.g., virtual influencers). This approach not only enhances campaign effectiveness but also helps companies build a strong reputation, expand their market reach, and maintain customer loyalty in a dynamic and highly competitive environment.

LIMITATION AND SUGGESTION FOR FUTURE RESEACRH

This study has several limitations that present opportunities for further research. Methodologically, bibliometric analysis relies on a single database (Scopus) and is restricted to English-language publications. This approach may introduce coverage bias and exclude important studies from other databases or literature in different languages. Although this study

comprehensively mapped the knowledge structure and research trends in viral marketing, it did not test the theoretical relationships discovered in various empirical contexts, such as specific industries or cultures. Additionally, although focusing on bibliographic coupling and co-word analysis offers a rich macro overview, it does not capture temporal dynamics or rapid changes driven by developments in digital technology, such as artificial intelligence, augmented reality, or content personalization algorithms. Practically, the implications generated do not fully incorporate the perspective of real-time analytics, which has become crucial for success in viral marketing. Therefore, future research should: (1) expand data sources across various databases and languages to enhance global representation; (2) combine bibliometric methods with longitudinal approaches or temporal network analysis; (3) examine findings within diverse industrial contexts, social media platforms, and countries; and (4) explore the integration of advanced technologies and digital consumer behavior more thoroughly to predict and optimize the effectiveness of viral marketing campaigns.

CONCLUSION

This research confirms that the main objective of the study—investigating current knowledge structures and predicting future research directions related to viral marketing in the digital era—has been successfully achieved through comprehensive bibliometric coupling and co-word analysis. The results identified four main clusters within the knowledge framework and three strategic themes derived from the keyword relationships. These themes include enhancing brand narratives, cross-platform viral propagation models, influencer social capital, and trust building in peer-based digital interactions. Overall, these findings make a significant contribution to the development of digital marketing science by providing a clear knowledge map, a robust conceptual framework, and strategic insights that can be utilized by academics to develop new theories and practitioners to design more effective campaigns. Thus, this study enriches the academic literature and provides a solid foundation to guide future research and practice in viral marketing, which is increasingly relevant in the dynamic and competitive digital landscape.

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