

Connectedness of Agricultural Commodity Markets: An Empirical Analysis Mapping the Convergence of Social Media Marketing And E-Crm : A Bibliometric Analysis of Scopus Indexed Literature

Sonia^{1*},Narinder Kaur²

¹Research Scholar, Department of Commerce, Punjabi University, Patiala.

Email ID: soniamoar16@gmail.com

²Associate Professor, Department of Business Studies, Punjabi University Guru Kashi Campus, Talwandi Sabo, Punjab, India.

Email ID: kaurnarinder@pbi.ac.in

*Corresponding Author

Sonia

Research Scholar, Department of Commerce, Punjabi University, Patiala.

Email ID: soniamoar16@gmail.com

ABSTRACT

In the digital business environment of today, the convergence of Social Media Marketing (SMM) and Electronic Customer Relationship Management (e-CRM) has gone beyond transactional communication to an intelligent data-driven ecosystem driven by AI, machine learning and real-time predictive analytics. Enhanced further by post-pandemic shifts in consumer behaviour, organisations are turning to social platforms as strategic engines for e-CRM to personalise customer experience, create brand trust and generate long-term loyalty. This study explores the role of Social Media Marketing (SMM) as a strategic driver of Electronic Customer Relationship Management (e-CRM) practices. It reviews the literature in a systematic manner to map important trends in publications, influential contributors, collaboration networks and thematic evolutions and fills the research gaps in social CRM capabilities and data-driven consumer engagement. A quantitative bibliometric and network analysis was performed for the period 2016-2025, based on the metadata retrieved from the Scopus database. After a systematic screening process based on strict inclusion and exclusion criteria, a final sample of 360 peer-reviewed publications was analysed. Performance analysis, citation metrics, Bradford's Law, thematic mapping, and co-occurrence network models were performed by R-based Bibliometric tools. It was found that the literature grew at an annual growth rate of 5.36%, witnessing significant citation impact and publication peaks associated with accelerated digital adoption post-pandemic. The US is leading in the total volume of documents and citations, with strong contributions also from India, China, and countries with high collaboration such as Spain and Jordan. Thematic network analysis shows that the core operational concepts (CRM, public relations, sales) are progressively integrating with data-driven "motor themes" such as digital transformation, artificial intelligence, machine learning, and sentiment analysis. The findings offer practical implications for organisations interested in using SMM for e-CRM improvement, emphasizing real-time sentiment monitoring, hyper-personalized interaction, AI-enabled automation, integrated customer profiles, and privacy-sensitive marketing.

Keywords: Social Media Marketing, e-CRM, Bibliometric Analysis, Social Networking

INTRODUCTION

In the last decade, the insurance market has seen a drastic change due to fast digitalisation, increasing internet usage and proliferation of social media platforms. Social media marketing has shifted from a supplementary communication medium to a strategic resource for organisations, allowing real-time customer engagement, promotion of brand awareness and creation of long-term partnerships. Meanwhile, electronic customer relationship

management (e-CRM) has become a significant basis for managing client interactions through digital channels by applying data analytics to give personalised services (Arora et al., 2021; Payne and Frow, 2017; Stokić et al., 2019; Chaffey & Ellis-Chadwick, 2019). Social media marketing and e-CRM techniques are of special significance to the insurance business that has been long suffering from low client involvement and trust issues. The integration is transforming the way insurers engage with policyholders, increasing the customer experience

and boosting retention rates (Trainor et al., 2014)

The period 2016-2025 has been particularly disruptive for the global insurance ecosystem, with increasing digital adoption and the growing emphasis of customer-centric initiatives. The increased usage of platforms like Facebook, Twitter and LinkedIn has enabled insurance businesses to communicate with clients in a more transparent and responsive manner, hence improving engagement and confidence (Tuten & Solomon, 2020). Simultaneously, the development of the capabilities of e-CRM systems has been considerably improved through the application of big data analysis, artificial intelligence and cloud computing, which has helped insurers to better study customer behaviour, forecast needs and offer customised solutions (Kumar & Reinartz, 2018). These developments underscore the importance of social media as a way to improve the effectiveness of e-CRM practices in the insurance business.

There is plenty of evidence that digital engagement is on the rise in the insurance sector. As the number of Internet users worldwide increase, more and more companies are moving their operations to the Internet and communicating with customers via digital channels (Statista, 2024). Furthermore, the insurance sector has become much more efficient and customers are elated, due to digital channels (Lemon & Verhoef, 2016). Social media platforms are generating huge volumes of user created content, which can be used in e-CRM systems for understanding of consumer habits, sentiment and expectations (Agnihotri et al., 2016). This combination improves marketing efficacy, enables data-driven decision making, and facilitates relationship management tactics.

From a worldwide research viewpoint, studies have increasingly shown the interaction of social media, CRM and digital marketing. Social CRM is a customer relationship management strategy that offers contact through social media sites, such as Facebook and Twitter (Rouse, 2010). Social CRM helps organisations to improve their reputation by delivering clients the finest available solutions and suitable products. The result from the adoption of the Social CRM coupled with the consumer interaction model and the technology in social media enhanced trust, brand loyalty, co-creation and empowerment (Harrigan and Choudhury, 2012). Siakas et al. (2017) in a study concerning students' perception of using social media in education found that other factors important for social media adoption were infrastructure for using social media.

According to Davis (2011), an IBM poll in October 2010 found that about 80% of organisations have a social media presence, and most of them use social media for Customer Relationship Management objectives. Agnihotri et al. (2016) highlighted the role of social media in improving customer relationship performance and Trainor et al. (2014) highlighted the role of social CRM capabilities in improving business performance. Likewise, recent bibliometric studies in marketing and digital transformation research have shown the increasing academic interest in data-driven consumer engagement methods (Donthu et al., 2021). However, despite this expanding body of literature, research specifically focusing on the integration of social media marketing and

e-CRM practices in the insurance sector remains fragmented and lacks a comprehensive synthesis.

There is a research gap regarding holistic network-based bibliometric analyses in this area. The existing literature has concentrated largely on specific, stand-alone components, such as general digital marketing, stand-alone e-CRM adoption, or isolated client engagement metrics, with little insight into the function of social media marketing as a catalyst for e-CRM practices, especially in generating real-time relational dynamic outcomes. This constraint restricts the capacity of academics and practitioners to detect emerging trends, influential contributors, and collaborative networks. Moreover, it hampers the development of strategic knowledge to leverage social media as an efficient instrument for e-CRM improvement, especially in emerging economies with low insurance penetration.

The present study intends to fill this gap by performing an extensive bibliometric and network analysis of the research on social media marketing as a facilitator of e-CRM practices from 2016 to 2025. The objective of this study is to identify key research themes and emerging areas of interest, assess global research output and influential contributors, analyse patterns of institutional and international collaboration, and provide useful information for researchers, practitioners, and policymakers. This will be done by examining publication trends, citation patterns, collaboration networks, and thematic evolution. Specifically, the study attempts to answer following research questions:

RQ1 How has the volume and growth of research on social media marketing and e-CRM in the insurance sector evolved from 2016 to 2025?

RQ2 Which authors are most influential in terms of publication output and citation impact?

RQ3 Which journals contribute most significantly to this field?

RQ4 Which institutions lead in research productivity and impact?

RQ5 What are the most cited publications and their contributions?

RQ6 What patterns exist in international research collaboration?

RQ7 What are the dominant thematic clusters and how have they evolved over time?

RELATED WORK

Social media marketing and customer relationship management (CRM) have become the focus of academic research in recent years, which is a sign of the increasing importance of digital engagement in the current business environment. The first attempt to develop social CRM are from Trainor et al. (2014) that explored social media technologies to improve consumer relationship performance through improved interaction capabilities and data integration. Similarly, Agnihotri et al. (2016) also emphasised the role of social media in enhancing consumer engagement and satisfaction especially in business-to-business (B2B) contexts. The studies have laid the foundation to understand the ways how social media platforms can facilitate effective e-CRM practices. More broadly regarding digital marketing, Kumar and Reinartz (2018) highlighted the strategic

importance of CRM systems in leveraging customer data for tailored marketing and developing long-term relationships. In line with this view, Chaffey and Ellis-Chadwick et al. (2019) identified social media as a digital marketing channel which is part of integrated client engagement strategies. Moreover, Verhoef et al. (2016) developed a powerful framework to understand the customer experience in different interface and the importance of digital interactions in shaping customer experience. Overall, the studies provided both theoretical and practical insights into the significance of integrating social media marketing and e-CRM systems. In the past years research in the areas of marketing and digital transformation has been increasing from a theoretical perspective. The methodological guidelines for bibliometric analyses provided by Donthu et al. (2021) made it possible to systematically map research trends and intellectual structure. Ghorbani et al. (2021) in a similar study used bibliometric approaches to study the literature of digital marketing. The study covered many important topics. This included social media metrics, client engagement and analytics-based marketing strategies. Furthermore, Verhoef et al. (2021) investigated the potential of innovative technology to improve customer-centred procedures in marketing with a focus on digital transformation. In insurance and financial services, the application of digital technology to enhance operational performance and client engagement has been studied. Eckert and Osterrieder's 2020 study looked at how the insurance industry has been affected by the move to digital. Emphasis was laid on increasing importance of data analytics and consumer focused innovation. The main attention of the abilities concerning CRM large data analysis was paid to the work of Rialti et al. (2017). They emphasised that data-driven insights can improve company performance and customer relationship outcomes. The data suggest that industries with complex services and high consumer involvement like insurance are most likely to benefit from the convergence of e-CRM and social media marketing. However, these studies add to the body of knowledge but do not provide a full picture of the area of study on the intersection of insurance-related social media marketing and electronic customer relationship management. Most studies deal with conceptual frameworks or empirical evaluations rather than systematically addressing publishing trends, collaboration networks, or topic progression. This gap highlights the need to fill it, to provide a systematic review of the subject, to pinpoint possible research directions and to encourage academics and businesses to make decisions based on evidence, through a bibliometric and network-based study covering the years 2016–2025.

METHODOLOGY

In this paper authors have applied a comprehensive bibliometric and network analysis to examine research trends in social media marketing as a driver of e-CRM practices. Bibliometric analysis offers an in-depth analysis of the intellectual structure of a subject by studying academic output, citation effect, and collaboration patterns (Donthu et al., 2021). This study

uses performance analysis and scientific mapping approaches to better understand the trend of publications, key contributors, and subject progression between 2016–2025.

Database Selection

The Scopus database was chosen for its reliability and broad coverage for bibliometric studies. Scopus is the best source for research in business and marketing because it indexes articles and book chapters of peer-reviewed journals of high quality (Baas et al. 2020; Mongeon and Paul-Hus 2016). According to Prancutė (2021) the sophisticated search options and detailed bibliographic information, including references, affiliations and author biographies, allow for a precise and detailed data analysis. Moreover, Scopus is widely used in bibliometric analysis in the area of digital marketing and CRM, showing its relevance for the current study (Donthu et al., 2021).

Search Strategy and Keywords

A systematic and repetitive search strategy was employed to ensure comprehensive coverage of relevant literature. The final Boolean search string incorporated key terms related to social media marketing and e-CRM, applied to titles, abstracts, and keywords:

Search String

("social media" OR "social networking" OR "digital marketing" OR "SMM" OR "Digital Marketing" OR "Online Marketing")

AND

("e-CRM" OR "electronic customer relationship management" OR "customer relationship management" OR "CRM" OR "Electronic CRM" OR "Digital CRM" OR "Online CRM")

The time frame was narrowed to 2016–2025 to capture the most recent developments in digital transformation. To resolve the initial filtering issues, the contextual relevance and accuracy of the dataset were ensured by a combination of keyword-based retrieval and manual screening.

Inclusion and Exclusion Criteria

The first search yielded 1,133 records. After applying filters for subject areas (Business, Management and accounting, Economics, Econometrics and finance, Art and Humanities, and Social Sciences) and time filters (2016–2025) the dataset was narrowed down to 514 records.

A rigorous screening process was employed to assemble a high quality and contextually relevant dataset based on pre-defined inclusion and exclusion criteria. Studies included were restricted to peer-reviewed journal articles, books, and book chapters in English. In particular electronic CRM (e-CRM), media marketing and Customer Relationship Management (CRM) were the focus areas. By contrast, duplicate records, publications in a language other than English, articles in press, conference papers, reviews, notes and correspondence were systematically excluded. In total, 34 records were excluded as irrelevant following the first screening of titles and abstracts, resulting in a final data set of 360 publications.

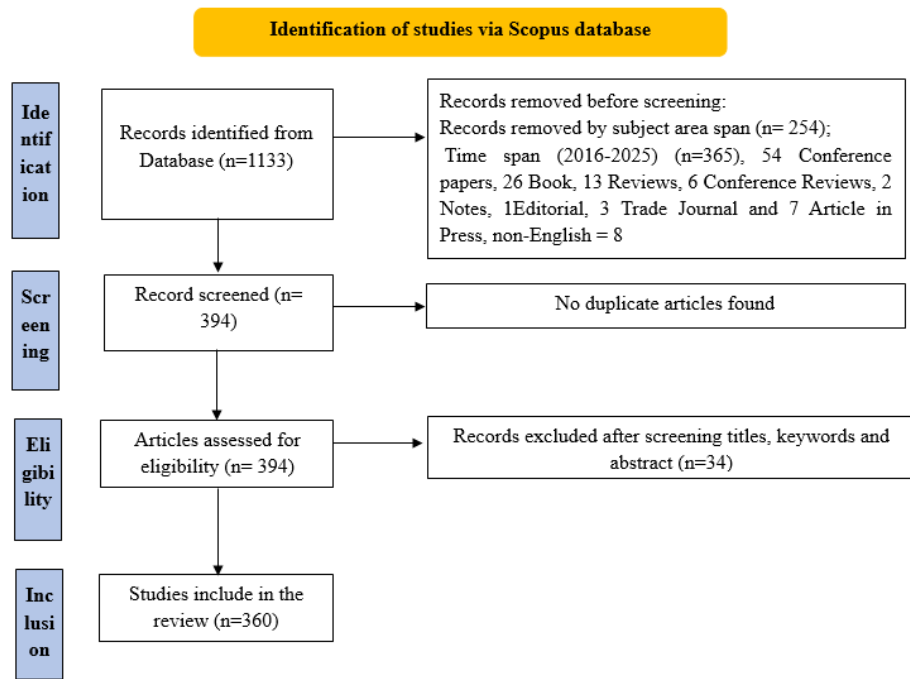


Figure 1. Search criteria and filtration process

ANALYSIS OF DATA AND DISCUSSION

Data summary

Bibliometric analysis of 360 documents for the period 2016-2025 show that social e-CRM adoption is an essential, vibrant, and emerging field with an impressive annual growth rate of 5.36%. The average number of citations per document is 22.43, which means the included

works are very relevant and influential. The dataset has 1,023 distinct keywords and 16,472 references, which shows the range of study topics covered in the discipline. The collection comprises of 52 single-authored texts. There is a mixture of individual and collaborative work, showing the growing interconnectedness in this area (See Table 1).

Table 1 Data information

DESCRIPTION	RESULTS
Time Period	2016–2025
Documents	360
Annual Growth Rate (%)	5.36
Average Citations per Document	22.43
References	16,472
Author's Keywords	1,023
Authors	925
Single-Authored Documents	52

Annual scientific production

The development trend of social media marketing as a catalyst in e-CRM practices is demonstrated in the annual study output, as shown in Figure 2. The number of publications grew from 25 in 2016 to a maximum of 54 in 2017, the first increase of attention from academics and companies who understood the potential of social media

to improve client engagement and relationship management. As the field temporarily saturated, this caused a sharp decline to about 30 papers in 2018 and 2019. Then the COVID-19 pandemic swept the world in 2020 and everything changed. For many companies the digital transformation of consumer contacts accelerated since the lockdowns and witnessed the growing

dependence on digital platforms. This is a direct consequence of the ongoing global health disaster. The increase of research articles for e-CRM improvements in 2020 and 2022 is directly related to the pandemic. In 2024 it increased to 45, and in 2025 there is a slight decline but

it was still at a pretty high level, which shows the continuing growth of research about the use of social media platforms for improving e-CRM strategies, customer happiness, brand loyalty and organisational success in the digital era.

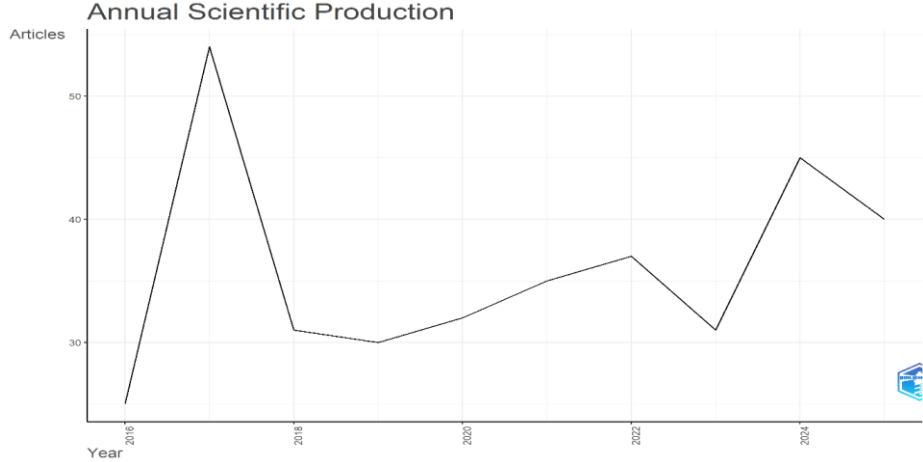


Figure 2. Annual scientific production.

Citations

The analysis of the annual average citations in Figure 3 shows the academic effect and the fluctuation of academic interest in social media marketing as a driver of e-CRM practices from 2016 to 2025. In the first years the average citations were 4.24 in 2016, demonstrating a considerable academic interest in the basic papers on social media marketing and e-CRM. A minor decline was seen in the period 2017-2018, a probable indicative of a stabilisation phase in literature with a decrease of substantial contributions. The trend has been increasing progressively since 2019, and peaked significantly in 2021 with an average of 7.26 citations per year. This considerable increase substantiates that studies published during this

period were well recognised and significant, probably due to rapid adoption of digital platforms, consumer engagement technologies, and online relationship management strategies during and after to the COVID-19 pandemic. However, the average citations showed a declining tendency from 2022 to 2025 after 2021. This decline in itself does not necessarily mean that the subject is becoming less important. This may be a consequence of citation lag, where newer publications take more time to accumulate their own citations. Also, the average number of citations varies somewhat from one year to the next. This shows that the research seems to have variable degrees of impact over the course of time.

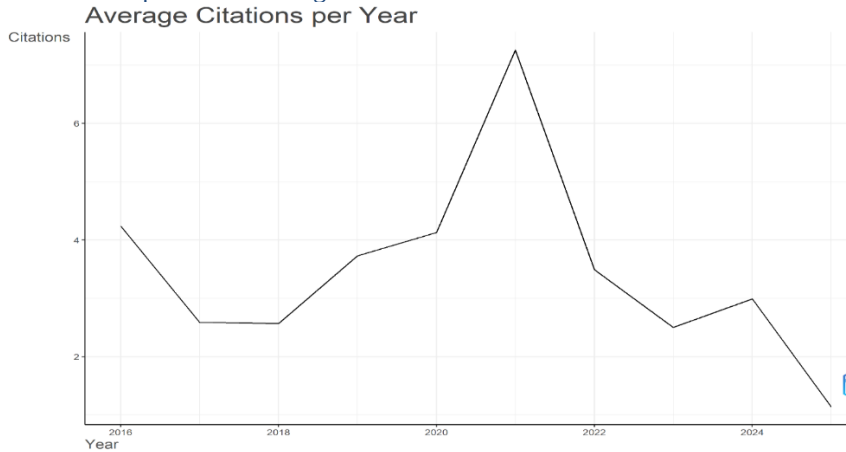


Figure 3. Average citation per year

Bradford's law

Bradford's Law states that most of the scholarly work in a given subject is published in a few specialist journals, with the remainder spread out among a much larger number of broad or peripheral periodicals. These sources are selected based on the distribution and popularity of the items they produced. The sources of this study are divided into three zones, according to the decreasing number of articles, each zone representing more than a third of the total number of publications. When moving from “one zone to another”, a large number of articles are added to each

subsequent zone. This rule favors a small set of sources (the First Zone) to publish the first third of articles, and highlights key sources that have a significant impact on the profession. The last third of the articles are in the third zone, which has the largest collection of sources. The third of the articles are in the second zone with a broader group of sources. Table II analyses a bibliometric dataset of 360 articles published in 224 source journals, and applies Bradford's Law of Scattering to demonstrate the hierarchical structure of literature in this field. The data is split into three zones, each accounting for around one-

third of the total publication output, falling within 33.06% to 33.88%. The Core Zone is a dense and prolific core where 20 main journals generated 122 articles (33.88%), making them the most important and high-density sources of the topic. In contrast, the Zone II has a large scattering with 119 articles (33.06%) with a larger collection of 85 publications. Zone III is characterised by a high degree of

peripheral dispersion. 119 articles are generated from 119 different periodicals. This means that the remaining content is scattered in multidisciplinary or low-yield journals, which tend to publish only one paper on the subject. This distribution confirms a classic Bradfordian pattern of a tight, dynamic core of speciality publications, and a broadly scattered periphery literature.

Table: II Journal Articles Distribution in Different Zones

Zones	Source Count	Publications Count	%
Core Zone	20	122	33.88
Zone II	85	119	33.06
Zone III	119	119	33.06
Total	224	360	100

source: author compilation

Most relevant authors and countries

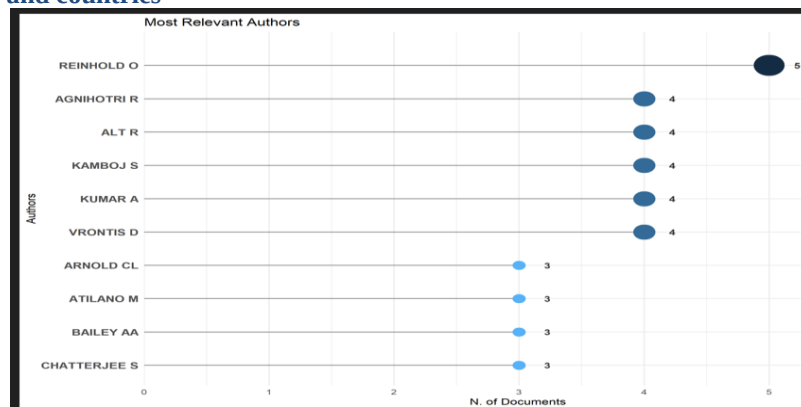


Figure 4: Most relevant authors

"Most Relevant Authors" represents the productivity or importance of notable authors based on the number of documents they have published(Fig 4). The largest and darkest data point at the apex represents Reinhold Olaf as the most prolific author with 5 documents. The subsequent level of importance is taken by a group of five authors i.e. Agnihotri Raj, AltRainer, Kamboj Shampy, Kumar Ashish and Vrontis Demetris each of them having

published exactly four documents. The last four writers Arnold Christa L, Atilano Maria, Bailey Ainsworth Anthony and Chatterjee Sheshadri, each contributing three documents. Fig 4 makes the order of importance of authorship obvious indicating the evolution from a single top contributor to high levels of high-performing researchers.

Table 3: MCP and SCP Country wise

Country	Articles %	MCP	Articles	SCP	MCP %
USA	9.722	8	35	27	22.8
India	7.222	5	26	21	19.2
China	5.000	6	18	12	33.3
United Kingdom	4.444	6	16	10	37.5
Indonesia	3.611	0	13	13	0
Australia	2.500	3	9	6	33.3

Germany	2.500	1	9	8	11.1
Malaysia	2.500	4	9	5	44.4
Spain	2.500	5	9	4	55.5
Jordan	1.944	4	7	3	57.1

Source: Author compilation

The USA is the largest contributor with 35 articles, accounting for 9.722% of the total articles (Table 3). Of these articles, 27 are Single Country Publications and 8 are Multiple Country Publications, giving a Multiple Country Publication share of 22.8%. India is second in productivity, accounting for 7.222% of the articles (26 in all, comprising 21 SCPs and 5 MCPs, an MCP rate of 19.2%). Third is China with 18 articles, which account for 5% of the sample. It shows a strong collaborative tendency with 33.3% MCP rate, 12 SCPs and 6 MCPs. Four countries tie for the next 2.5% of total articles: Australia, Germany, Malaysia, and Spain, each with 9

publications. However, their international partnership features are quite different from each other. Spain is the leader in the group in collaborative engagement with an MCP percentage of 55.5% (4 SCPs, 5 MCPs). Finally, Jordan comprises 1.944% of the study and is present in 7 publications. It has the highest intensity of international collaboration in the entire table, with an MCP rate of 57.1% (3 Single Country Publications and 4 Multiple Country Publications) yet its total volume is lower.

Leading Journals by Number of Publications

Table 4: Most Relevant Sources

Sources	Articles
Development in Marketing Science	43
Sustainability (Switzerland)	8
Management for Professionals	6
Emerald Emerging Markets Case Studies	5
International Journal of Business Information Systems	5
Journal of Business Research	5
Building Brand Image Through e-CRM	4
Industrial Marketing Management	4
Information Technology and People	4
International Journal of Hospitality Management	4

The bibliometric data as shown in table 4 depicts the main publications contributing to the field of social media marketing and e-CRM. The data shows an uneven distribution of literature with one source being the majority of the publication volume. Development in Marketing Science is top of the list with 43 articles. Sustainability (Switzerland) is at a distance with 8 articles and Management for Professionals with 6 articles. The rest of the core publications stagnate in terms of productivity. The dataset was composed of three journals, Emerald Emerging Markets Case Studies, International Journal of Business Information System, and Journal of Business Research, five papers from each journal. This distribution highlights that basic knowledge is mainly concentrated in a leading marketing science outlet, and

that the interdisciplinary nature of e-CRM and media marketing covers different fields, such as sustainability, information systems, business research and hospitality management.

Most relevant global cited documents

Table 5 presents a bibliometric study of the ten most international referenced articles in this research topic based on three main categories Total Citations, Total Citations per Year and Normalised Total Citations. The data shows that the distribution of citations is skewed, with Kumar's (2016) publication in the Journal of Marketing being the most impactful in absolute terms, The Normalised TC metric mitigates the intrinsic bias towards older publications, providing a more equitable assessment of academic influence in relation to the publication year.

Kumar (2016) is the most influential work in the collection, exhibiting a normalised score of 17.76. Wang (2017) ascends to the second position with a Normalised TC of 13.96, surpassing Li (2021), which records 11.11. This signifies that Wang (2017) has exerted an extraordinarily significant relative infototal citation: 828. Li (2021) published in Journal of the Academy of Marketing Science with 484 citations and Wang (2017) published in Journal of Interactive Marketing with 362 citations. These three key studies together provide a core of literature giving the theoretical basis. Conversely,

newer publications such as Fraccastoro (2021), although having a decent citation velocity of 25.7 per year, have the lowest normalised impact (3.53), showing that it is tracking more closely to the average citation baseline of its cohort. These highly-cited articles are published in highly-concentrated journals in the top marketing, business and behavioural science journals. The earliest research cited appear in top journals such as the Journal of Marketing (J MARK), Journal of the Academy of Marketing Science (J ACAD MARK SCI), and the Journal of Interactive Marketing (J INTERACT MARK).

Table 5: Citations No. of Global cited documents

Paper	TC	TCP	NTC
Kumar Ashish, 2016, Journal of Marketing	828	75.3	17.76
Li Fangfang, 2021, Journal of the Academy of Marketing Science	484	80.7	11.11
Wang Zhan, 2017, Journal of Research in Interactive Marketing	362	36.2	13.96
Saura Jose Roman, 2021, Industrial Marketing Management	244	40.7	5.60
Liu Xia, 2017, Journal of Advertising	221	22.1	8.52
Ahani Ali, 2017, Computers in Human Behavior	200	20.0	7.71
Foltean Florin Sabin, 2019, Journal of Business Research	193	24.1	6.46
Fraccastoro Sara, 2021, International Business Review	154	25.7	3.53
Behera Rajat Kumar, 2020, Journal of Retailing & Consumer Services	146	20.9	5.05
Dewnarain Senika, 2019, Journal of Hospitality Marketing & Management	131	16.4	4.39

Source: Author compilation

Table 6: Citation Statistics Country wise

Country	TC	Average Article Citation
USA	1,438	41.1
Finland	638	31.9
Spain	485	53.9
Australia	451	50.1
China	434	24.1
India	405	15.6
Malaysia	336	37.3
United Kingdom	288	18.0
Romania	263	131.5

Lebanon	158	79.0
---------	-----	------

The data in table 6 indicates that the form of the relationship between the volume of publications and the impact of an individual article varies significantly between research economies. The United States continues to be the number one intellectual center, both in volume and density, and number one in total citations (1,438) at a impressive average of 41.1 per paper. This systemic success, together with the high density of outputs from countries such as Spain (53.9 average citations) and Finland (31.9 average citations), is mainly due to an established research infrastructure, direct access to the best international journals, and extensive networks of global collaboration that maximise the visibility of papers. Conversely, the emerging research economies of China

and India give a significant number of citations (434 and 405), their much lower average number of citations (24.1 and 15.6) point to an institutional policy of rewarding the number of publications and not the impact of individual studies, as well as a large output that lowers the national citation average. Meanwhile, the extreme outliers, such as Romania (average citations 131.5) and Lebanon (average citations 79.0), are the opposite statistical phenomenon. These very high average rates do not reflect the presence of a broad academic infrastructure but rather a small publication footprint characterised by a few “blockbuster” papers or multi-center global collaborations that pull the average way up.

Table 7: Most relevant affiliations

Organisation	No. of Articles
ISLAMIC AZAD UNIVERSITY	7
LUTSK NATIONAL TECHNICAL UNIVERSITY	5
UNIVERSITY OF GRANADA	5
CURTIN UNIVERSITY	4
LEIPZIG UNIVERSITY	4
UNIVERSITY OF NICOSIA	4
AMITY UNIVERSITY	3
BINA NUSANTARA UNIVERSITY	3
CHRIST UNIVERSITY	3
INDIAN INSTITUTE OF MANAGEMENT MUMBAI	3

Source: Authors compilation

A bibliometric analysis of the most important institutional affiliations is shown in table 7. The affiliations are sorted in the descending order of the total number of papers published in this research area. Islamic Azad University has 7 articles published. University of Granada and Lutsk National Technical University have 5 articles published each. Curtin University, Leipzig University and University of Nicosia have 4 articles each and the list is completed by Amity University, Bina Nusantara University, Christ University and Indian Institute of Management Mumbai with 3 articles each. This build-up of research by authors is mainly a result of institutions setting up specialised research units and grant-funded projects, providing publication incentives to enhance world rankings, and participating in cross-border collaborative networks that tap into knowledge from a wide range of global entities.

Thematic network analysis

A co-occurrence theme network analysis of phrases is shown in Figure 5, which delineates the conceptual framework and the main research groups in this academic discipline. The network is constructed using specialised bibliometric software “Bibliometrix” by collecting metadata such as title, abstracts and keywords from Scopus. A co-occurrence matrix is built based on how frequently the terms appears together in the same document. The network indicates the two main theme pillars “customer relationship management” and “social media” because they have the biggest node size and the strongest connection between them. This important bridge underscores a highly integrated domain focus in which social technologies are tightly woven into corporate relationship-building strategies. The core themes are surrounded by specific colour coded sub-clusters to extend the study framework: a blue cluster relating to

operational business indicators like “sales”, “public relations” and “social networking (online)” a green cluster of technological execution and current macro trends such as ‘digital transformation’, ‘artificial intelligence’, ‘machine learning’ and ‘e-commerce’; and a purple cluster of wider strategic outcomes such as ‘consumption behaviour’, ‘brand loyalty’ and ‘sustainability’. The

presence of a dense network of crossing lines among the nodes indicates a highly integrated body of literature that blends advanced computing technologies, behavioural marketing and corporate communication metrics into a unified digital relationship management framework.

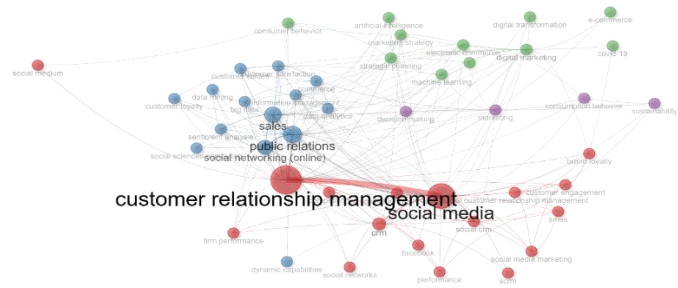


Figure 5: Thematic Network by Keywords

Analysis of keywords occurrence

Table 7: Relevant Keywords occurrences

Words	Occurrence
Customer Relationship Management	133
Social Media	107
CRM	42
Public Relations	39
Sales	37
Digital Marketing	33
Social Networking	33
Social CRM	32
Marketing	18
Social Engagement	16

Source: Author compilation

Table 7 shows the empirical measurement of the topic distribution in the data, giving the exact occurrences of the 10 most important keywords. With 133 mentions in the survey, “Customer Relationship Management” is the most conceptually central term, followed closely by “Social Media” with 107 mentions. The common occurrence of these two basic ideas suggests the main academic focus on the convergence of corporate relationship management and digital interaction networks. Beside these main foundations, the table specifies additional thematic domains that mark the scope of the literature’s operations. Conventional and strategic operational jargon such as

“CRM” (42 times), “Public Relations” (39 times) and “Sales” (37 times) suggests that key business activities are incorporated into this discourse. Modern digital categories such as “Social CRM” (32 times), “Digital Marketing” (33 times) and “Social Networking” (33 times) also help to emphasise the evolving paradigms of technology being studied. The distribution is rounded out by broad conceptual groups such as “Marketing” (18 occurrences) and “Social Engagement” (16 occurrences). This offers a full metric-based confirmation of the term hierarchy seen graphically in the previous word cloud. Thematic map by author’s keyword

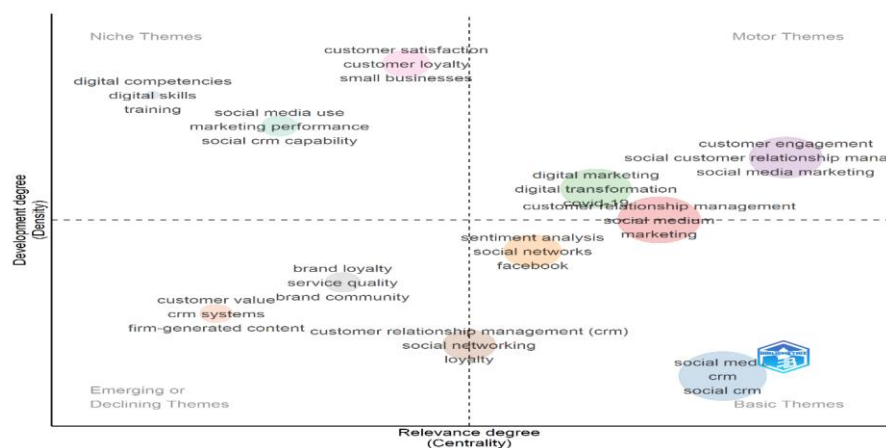


Figure:6 Thematic Map of Author's Keyword

Thematic map is a bibliometric visualisation created with R's Bibliometric package which maps the structure and maturity of research. The diagram analyses clusters of keywords according to two main axes: Degree of Relevance (Centrality) on the x-axis, which indicates the degree of connection of a theme with other research areas, and Degree of Development (Density) on the y-axis, which indicates the internal cohesion and level of development of the theme itself. The framework plot's themes along these two dimensions to identify four distinct research quadrants. The Motor Themes are found in the upper right quadrant and have high centrality and high density, indicating well-developed, highly structured themes and central to the overall domain. Key research areas include customer engagement, social customer relationship management, social media marketing, digital marketing and digital transformation. The upper-left quadrant is Niche Themes, defined by high density and low centrality. They are highly specialised, well-developed sub-fields with less connection compared to the

wider field, such as clusters on digital competencies, digital skills and training, social media use and marketing performance, and specialised work around customer satisfaction, customer loyalty and small business. The lower-left quadrant is for Emerging or Declining Themes, with low centrality and low density. These topics are either emerging concepts or older, peripheral research areas losing traction. They include clusters such as brand loyalty, service quality, and brand community, CRM systems and content created by the company. Finally, the lower right quadrant depicts Basic Themes, which are marked by high centrality and low density. These topics—centered on fundamental concepts like social media, CRM, and social CRM are fundamental building blocks for the whole discipline, and they remain relevant to a high degree across multiple sub-disciplines, even with a lower degree of internal specialization.

Country Collaboration World Map

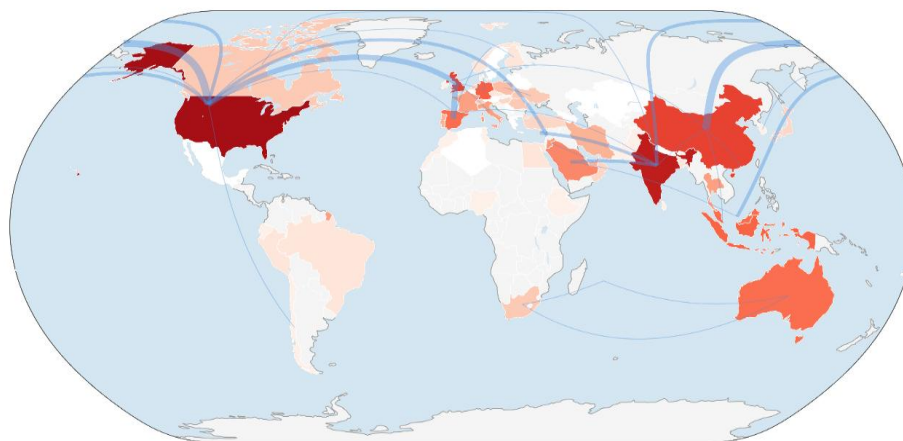


Figure: 7country collaboration maps

The map shows a analysis of international research collaborations between countries, based on the number of co-authored publications or collaborative efforts. The data defines directed or paired links named "From" and "To" together with the interaction volumes. The United States is a key hub in this network, most often partnered with China (5 times), followed by significant collaboration with the United Kingdom (4), India (3), Lebanon (3), and Malaysia (3). Other major collaboration lanes are United

Kingdom with Spain (4), India with Cyprus and Saudi Arabia (3 each) and Australia with Mauritius and South Africa (2 each). Such an organization of research data enables investigators to identify significant nodes, measure the strength of international knowledge flows, and identify leading worldwide collaborations in a given scientific domain.

CONCLUSION

The comprehensive bibliometric and network analysis of

research articles from 2016 to 2025 shows that social media marketing has become a major driver to improve electronic customer relationship management (e-CRM) methodologies. Academic production increased with a constant rate of 5.36 percent per year during the study period. This shows that professionals and educators especially in service industries such as insurance are beginning to realise the need to integrate social media into digital customer relationship strategies. The subject has slowly developed into a vibrant interconnected area, with research output having peaked in 2017 and continued to grow beyond the epidemic, both, in terms of volume of publication and citation impact. The core of the literature consists of a large number of seminal journals; the periphery consists of a wide variety of journals. This is a traditional Bradfordian distribution. The United States is at the top in terms of both the number of publications and the number of citations of these publications, but other major contributors to global production include emerging nations such as China and India and important high-collaboration partners such as Spain and Jordan. Moving beyond simple operational notions and into complicated data-driven implementation, tools such as thematic mapping, co-occurrence keyword analysis and Multiple Correspondence Analysis (MCA) help to illuminate the intellectual limits of the field. Digital transformation, AI, ML, sentiment analysis and big data are passing more and more to “motor themes” while public relations, social media and traditional CRM are still the fundamental themes. Today, entities are using interactive social platforms for more than transactional communication or brand presence. They use them to mine predictive data, provide personalised experiences and build loyal customers. Issues do exist when it comes to data protection and security, following the rules, and how well social media-based electronic customer relationship management strategies work in niche markets or rural areas. To improve the combination of social media tactics with modern customer relationship management methods, more research needs to be done on these practical and moral problems that have been ignored so far.

RECOMMENDATIONS

The business world is rapidly evolving into a smart and data-driven system. It is very important for businesses to use social media marketing not only as an additional means to communicate but also as a strong strategic tool to change the way they manage electronic customer relationship management (e-CRM). This bibliometric analysis provides some important suggestions for organisations, practitioners and researchers. Social networks should be used by businesses for more than just transactional purposes or as a basic brand presence. Instead, they should use them as smart data-driven communities where they are able to forecast customer data, personalise interactions and build long-term customer trust. The above Thematic analysis have identified technology as an important theme, for example artificial intelligence, machine learning and sentiment analysis. This means that businesses need to actively implement a real-time sentiment monitoring and AI-enabled automation tool into their day-to-day customer interaction. In addition to this, it is the responsibility of business organisations to deal with unresolved ethical and

practical blind spots that have been found in the literature review. These blind spots are particularly related to data protection and privacy-sensitive marketing, security compliance, and the application of social CRM tactics in niche markets or rural areas with potentially low service penetration as such insurance sector. Enterprises can independently collect feedback, suggestions, and complaints from social media sites using Natural Language Processing and sentiment analysis. To operate properly enterprises, need a mixed service system with both human and automatic contacts. Social sites and apps can quickly answer common questions by adding AI-powered Intelligent Virtual Assistants (IVA). Finally, institutional structures and practitioners should promote cross-border research relationships and data-driven decision-making to make digital transformation methods work better globally. This should help bridge the gap between a lot of publications and a few important single studies.

REFERENCES

1. Agnihotri, R., Dingus, R., Hu, M. Y., & Krush, M. T. (2016). Social media: Influencing customer satisfaction in B2B sales. *Industrial marketing management*, 53, 172-180.
2. Arora, L., Singh, P., Bhatt, V., & Sharma, B. (2021). Understanding and managing customer engagement through social customer relationship management. *Journal of Decision Systems*, 30(2-3), 215-234. <https://doi.org/10.1080/12460125.2021.1881272>.
3. Baas, J., Schotten, M., Plume, A., Côté, G., & Karimi, R. (2020). Scopus as a curated, high-quality bibliometric data source for academic research in quantitative science studies. *Quantitative science studies*, 1(1), 377-386.
4. Chaffey, D., & Ellis-Chadwick, F. (2019). *Digital Marketing: Strategy and Implementation*. Pearson Education.
5. Davis, J. (2011). *Social CRM: Winning the Battle of the Brands*. <http://evidencebasedmarketing.net/social-crm-winning-the-battle-of-the-brands>.
6. Donthu, N., Kumar, S., Mukherjee, D., Pandey, N., & Lim, W. M. (2021). Bibliometric analysis in marketing. *Journal of Business Research*, 133, 285-296.
7. Eckert, C., & Osterrieder, K. (2020). How digitalization affects insurance companies: overview and use cases of digital technologies. *Zeitschrift für die gesamte Versicherungswissenschaft*, 109(5), 333-360.
8. Ghorbani, Z., Kargaran, S., Saberi, A., Haghighinasab, M., Jamali, S. M., & Ale Ebrahim, N. (2022). Trends and patterns in digital marketing research: bibliometric analysis. *Journal of marketing analytics*, 10(2), 158-172.
9. Ghorbani, Z., Kargaran, S., Saberi, A., Haghighinasab, M., Jamali, S. M., & Ale Ebrahim, N. (2022). Trends and patterns in digital marketing research: bibliometric analysis. *Journal of marketing analytics*, 10(2), 158-172.
10. Harrigan, P., & Choudhury, M. M. (2012). Technology acceptance model and the social CRM: a

- model for customer engagement. In Academy of Marketing Conference 2012: Marketing: catching the technology wave. University of Southampton.
11. Kumar, V., & Reinartz, W. (2018). Customer relationship management.Recent Trends in Arts Science and Humanities-2024 (RTASH-2024)
 12. Lemon, K. N., & Verhoef, P. C. (2016). Customer journey. *Journal of Marketing*, 80(6), 69–96.
 13. Mongeon, P., & Paul-Hus, A. (2016). The journal coverage of Web of Science and Scopus: a comparative analysis. *Scientometrics*, 106(1), 213-228.
 14. Payne, A., & Frow, P. (2017). Relationship marketing: looking backwards towards the future. In *Journal of Services Marketing* (Vol. 31, Issue 1, pp. 11–15). Emerald Group Publishing Ltd. <https://doi.org/10.1108/JSM-11-2016-0380>.
 15. Prancutè, R. (2021). Web of Science (WoS) and Scopus: The titans of bibliographic information in today's academic world. *Publications*, 9(1), 12.
 16. Rialti, R., Zollo, L., Pellegrini, M. M., & Ciappei, C. (2017). Exploring the antecedents of brand loyalty and electronic word of mouth in social-media-based brand communities: do gender differences matter? *Journal of Global Marketing*, 30(3), 147-160.
 17. Rouse, M. (2010). What is Social CRM? (Accessed 16th Febr. 2017). <http://searchsalesforce.techtarget.com/definition/social-CRM>.
 18. Siakas, K., Makkonen, P., Siakas, E., Georgiadou, E., &Rahanu, H. (2017). Social media adoption in higher education: a case study involving IT/IS students. *International Journal of Social Media and Interactive Learning Environments*, 5(1), 62-78.
 19. Solomon, M. R., & Tuten, T. L. (2017). Social media marketing. *Social Media Marketing*, 1-448.
 20. Stokić, A., Stojanović, D., Bogdanović, Z., Despotović-Zrakić, M., & Radenković, B. (2019). Enhancing the customer relationship management in public libraries: Findings from three developing countries. *Library Hi Tech*, 37(2), 251–272. <https://doi.org/10.1108/LHT-07-2017-0138>.
 21. Trainor, K. J., Andzulis, J. M., Rapp, A., & Agnihotri, R. (2014). Social media technology usage and customer relationship performance: A capabilities-based examination of social CRM. *Journal of business research*, 67(6), 1201-1208.
 22. Verhoef, P. C., Broekhuizen, T., Bart, Y., Bhattacharya, A., Dong, J. Q., Fabian, N., & Haenlein, M. (2021). Digital transformation: A multidisciplinary reflection and research agenda. *Journal of business research*, 122, 889-901