RETURN ON INVESTMENT IN SOCIAL MEDIA MARKETING: BIBLIOMETRIC ANALYSIS

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Abstract

Return on investment (ROI) from social media marketing activities has attracted significant attention from academics and practitioners resulting in an increasing number of studies on this important topic. The current study conducted a bibliometric analysis to provide a consolidated view on the topic of ROI in social media marketing. By using 115 outputs from the Web of Science database and employing software CiteSpace the study presents and discusses the analysis of temporal distribution, cited countries, cited journals, cited authors, and research hotspots from 2009 till 2020. A holistic picture of this topic will help researchers to get an overview of this field and develop directions for future studies.

Keywords: Social media marketing, ROI, Return on investment, Bibliometric analysis

1.0 Introduction

Usage of social media is one of the most popular online activities. The number of social media users is significantly increasing every year, resulting in over 3.6 billion social media users in 2020 (Statista, 2021). Social media provides benefits to consumers and companies. Social media helps companies to engage with consumers and get valuable insights (Cuomo et al., 2016; Hennig-Turau et al., 2010; Wang et al., 2017). The dynamic and interconnectedness of social media platforms make them different from other digital advertising tools, allowing precise targeting of the audience, interactive exchange of the information, and sharing various types of content (e Silva et al., 2020). The growing number of companies investing in social media marketing. As with all types of investments, companies need a guarantee that they make a return on their investment. However, many companies struggle to measure ROI from social media marketing activities (Lal et al., 2020). It is argued that problems with measuring ROI

can be one of the biggest challenges of the adoption of social media marketing strategies by companies (Kietzmann et al., 2011).

The topic of ROI in social media marketing has attracted significant attention from the academic community. The studies investigated various ways to measure ROI and the challenges associated with it (Solis, 2010; e Silva, 2020). Several studies conducted a review of the literature on ROI in the context of social media marketing (e.g. Lal et al., 2020; Stergiopoulos et al., 2020). In order to show the development of research and research hotspots in global knowledge on ROI in Social Media Marketing, this study has conducted a bibliometric analysis of the retrieved articles/papers from 2009 to 2020 from the Web of Science database. It is argued that a thorough analysis and review of the key topics can offer researchers and practitioners a consolidated view on this topic (Peng et al., 2020; Ye et al., 2020).

The rest of the paper is organised as follows. Details of the data collection and software used are discussed in section 2. After, the statistical analysis is presented followed by cluster analysis. Section 5 provides future research directions. Finally, the paper is concluded in section 6.

2.0 Methodology

For this study articles/papers focusing on ROI in Social media marketing were retrieved from the Web of Science database. Web of Science was selected for this study because it covers a wide range of publications on overall academic fields and includes necessary information for bibliometric analysis (e.g. authors, citations, journals, countries). The following keywords were used: TOPIC: ("Social media" OR "Social media marketing") AND TOPIC: ("ROI" or "Return on Investment" or “KPI” or “Key performance indicator”). As a result, a dataset of 115 articles with a period of 2009 to 2020.

This study used CiteSpace to analyse the data. CiteSpace is the analytical tool that uses Java for visualizing and analysing patterns and trends in the scientific literature (Chen et al., 2010). This tool was applied by several studies from various fields (Chen et al., 2012; Ismagiloiva et al., 2020).

3.0 Research Overview

3.1 Number of Publications by Year

To provide a picture of development in the area of ROI, the number of publications over years is presented in Figure 1. The first article was published in this area in 2009, which can be connected to the increased use of social media by companies in their marketing activities (Armano, 2009).

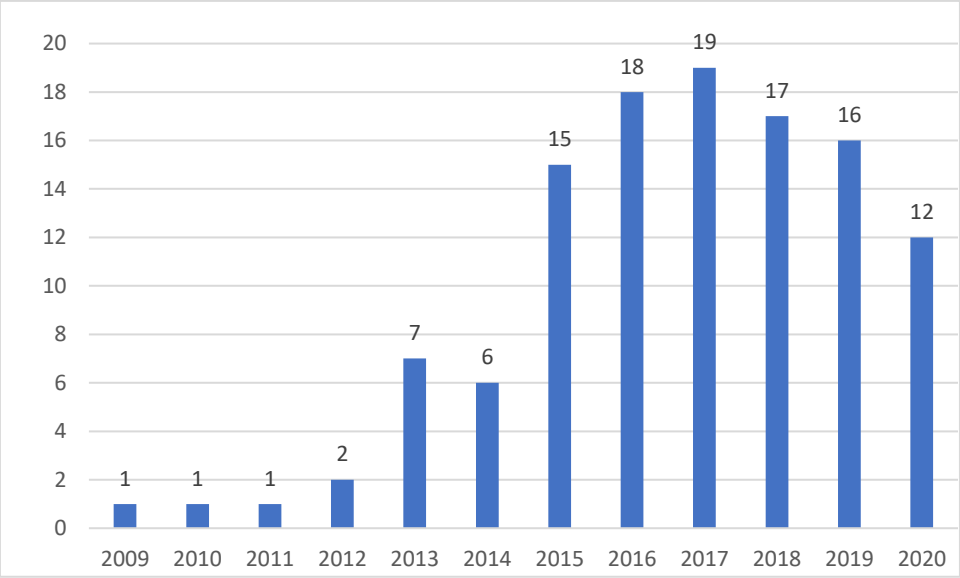

Figure 1. Number of publications of articles on ROI in the context of social media 2009-2020

3.2 Source of publications

Table 1 presents the top 10 sources which published research outputs in the field of ROI in social media marketing. It was found that the most productive sources were Proceedings of the European conference on social media (15 outputs) and Therapeutic innovation regulatory science (3 outputs).

Journal Name	Number of articles
Proceedings Of The European Conference On Social Media	15
Therapeutic Innovation Regulatory Science	3
Bmj Open	2
Bottom Line	2
Inted Proceedings	2
Journal Of Business Industrial Marketing	2
Journal Of Interactive Marketing	2
Marketing Intelligence Planning	2
Mit Sloan Management Review	2
Procedia Computer Science	2

Table 1. Top 10 sources on ROI in Social Media marketing

3.2 Source of publications

The top 10 countries of publications in the field of ROI in social media context are presented in Table 2. The USA, England, and Australia rank the top three and cover 54% of total publications in the dataset. From the list of countries, it can be observed that most of the countries are economically developed countries with high spending on social media marketing (Teahan, 2015).

Rank	Research countries	Centrality	Number of publications
1	Usa	0.3	38
2	England	0.2	14
3	Australia	0.21	10
4	Portugal	0	8
5	China	0.29	7
6	Spain	0.06	7
7	Italy	0.14	7
8	France	0.17	6
9	Canada	0	5
10	India	0	5

Table 2. Top 10 countries/regions with most publications in ROI in Social Media marketing.

To examine the collaboration between countries node type “Country” was used in CiteSpace. Figure 2 depicts the collaborated network between the countries. The network has 43 Nodes, 51 links, and a density of 0.0565. It can be seen from the output that strong cooperation exists in groups.

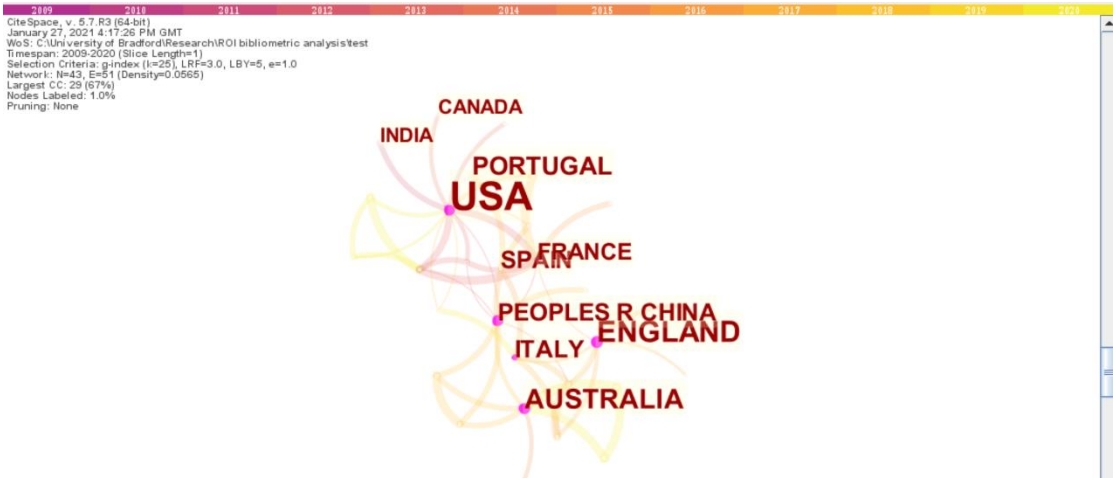

Figure 2. Country collaboration network analysis

3.4 Author Analysis

The frequency of citations on a specific author can be used to measure the level of influence in the field. To do it, an author citation analysis was performed using CiteSpace. Figure 3 provides a knowledge map of highly cited authors and their collaboration network. Table 3 outlines the list of highly cited authors in the field.

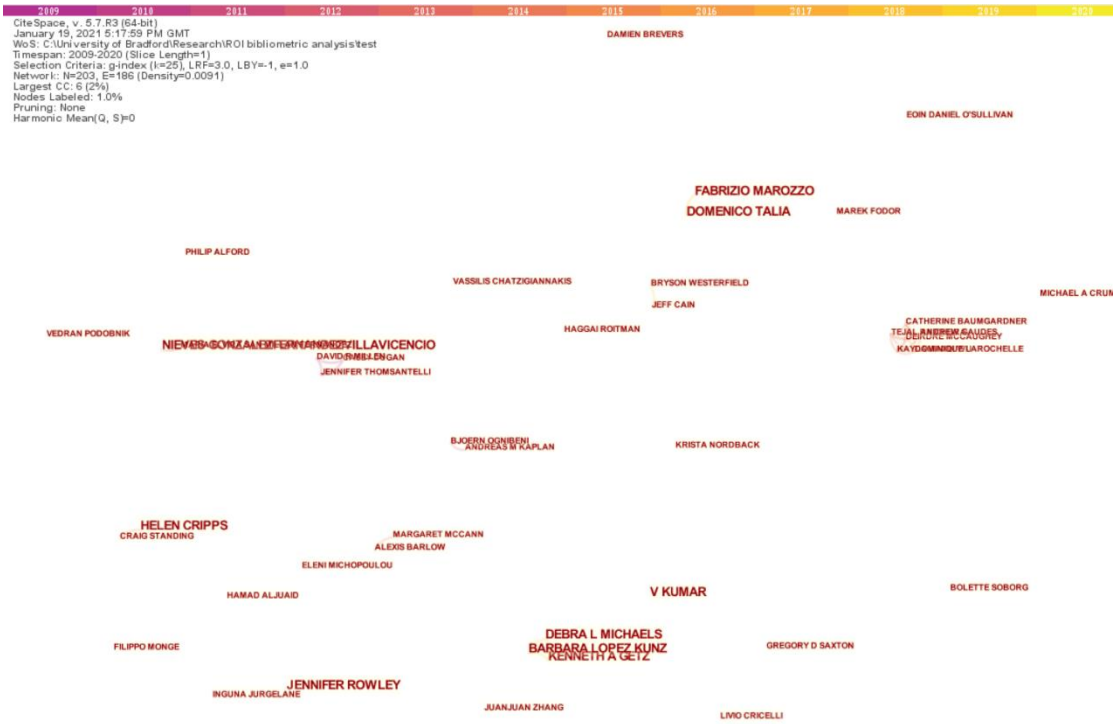

Figure 3. Author collaboration network

The author network has 203 nodes and 186 links (co-author relationships). Network density is very small, 0.0091 indicating that most of the research outputs were done independently with no long-term high-intensity co-operations between authors.

Number of publications	Author
2	Jennifer Rowley
2	Nieves Gonzalezfernandezvillavicencio
2	Alvaro Figueira
2	Barbara Lopez Kunz
2	Domenico Talia
2	Debra L Michaels
2	Kenneth A Getz
2	V Kumar
2	Helen Cripps
2	Fabrizio Marozzo

Table 3. Most highly cited authors.

3.0 Analysis of Research Hotspots

Research hotspots in the research field can be identified by the analysis of keywords and refer to the problems referred by a large number of related studies in a time period (Li et al., 2018; Peng et al., 2020). Research hotspots are used to summarise the development trends in the field (Li et al., 2018). A knowledge map of keywords on ROI in Social media marketing is presented in Figure 4. The keywords network has 237 nodes and 763 links.

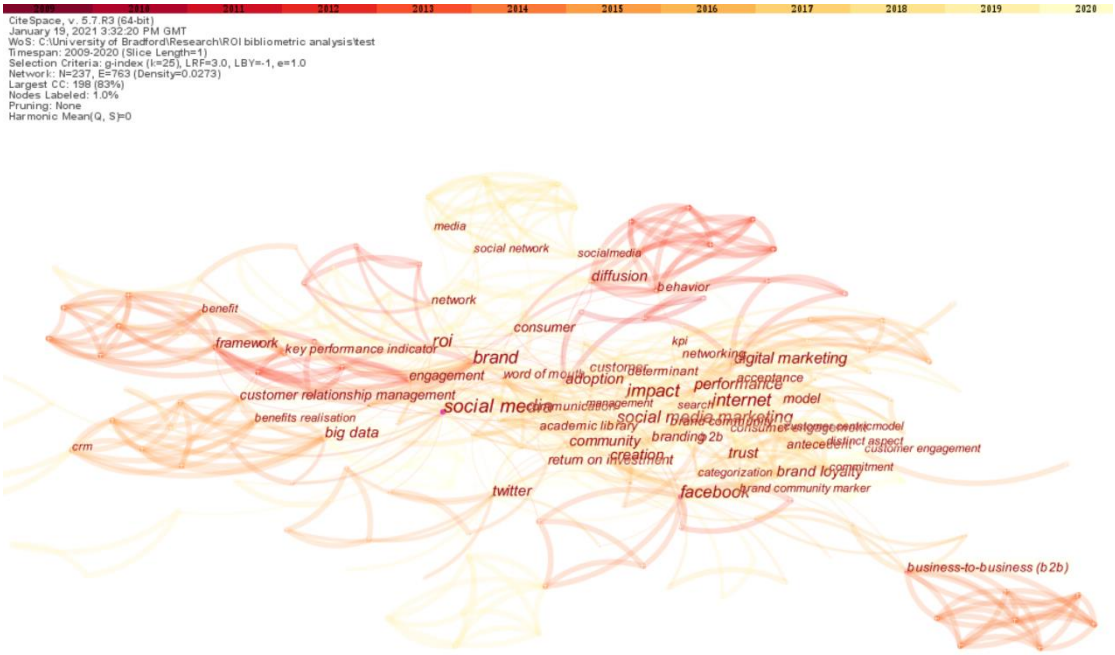

Figure 4. Co-occurrence analysis of keywords

Table 4 depicts the top 10 keywords according to frequency and centrality.

Keyword	Frequency	Keyword	Centrality
Impact	16	Facebook	0.23
Facebook	13	Brand	0.17
Performance	8	Impact	0.15
Twitter	7	Business-To-Business (B2b)	0.1
Internet	7	Internet	0.08
Model	6	Performance	0.07
Digital Marketing	6	Twitter	0.07

Brand	6	Digital Marketing	0.06
Word Of Mouth	5	Adoption	0.05
Trust	5	Big Data	0.05

Table 4. Top 10 keywords according to frequency and centrality

Log-likelihood ratio (LLR) was used to cluster the keywords. The network was divided into 9 co-citation clusters. Four major clusters will be discussed in more detail below.

Figure 5. Cluster analysis of keywords

The largest cluster (0) which is label "Digital marketing environment" has 29 members. Studies in this cluster investigate ways for companies to understand and evaluate decision-making in the digital marketing environment. For example, a study by Saura et al. (2017) argues that companies should use various types of indicators to assess digital marketing activities. The first type is quantitative analytical indicators which allow working on real data, quantifying different goals or conversions. Examples of quantitative analytical indicators are impressions, traffic, unique users, lead, and conversion. The second type is qualitative analytical indicators which allow seeing how the users understand a website and on-line buying process, providing insights into the user behaviour. The examples of qualitative indicators are A/B testing, Call to action, user experience, rating systems, surveys and forms, and the flow of users.

Another study by Keegan and Rowley (2017) conducted interviews with 18 professionals working in Marketing and proposed a digital marketing evaluation framework that identifies stages in the decision-making process associated with social media marketing and management. The stages included setting evaluation objectives, identifying KPIs, identifying metrics, data collection, report generation, and management decision making. Additionally, the study found that companies struggle to understand analytics created by social media platforms and integrate these analytics from different social media platforms together.

The second-largest cluster (#1) called "Technology-led marketing change" has 27 members. This cluster is focusing on the changes introduced by the use of social media by companies, including consumer relationships and knowledge creation (e.g. Aluri et al., 2015; Malthouse et al., 2013). For example, a study by Aluri et al. (2015) by conducting experiments with 378 participants found that embedding social media channels on the website of the hotel can increase perceived social interactions of the website visitors resulting in increased social gratification. It is recommended that companies should use embedded social media on their website for customer engagement and participation, which will help customers to get social gratification.

Cluster #2 is named as "Social media based brand communities" and has 26 members. The studies in this cluster focus on consumer engagement in brand communities and ways to measure it (Fernandes & Castro, 2020; Habibi et al., 2016). For example, a study by Habibi et al. (2016) developed and tested a model of brand community engagement. It was found that brand communities on social media can have a positive influence on brand relationship quality and brand loyalty, both of which are important marketing variables.

Cluster #3 is named "Best practice" and has 26 active members. The studies in this cluster are focusing on best practices of measuring ROI across different platforms (McCaughey et al., 2014; Stergiopoulos et al., 2020). For example, Stergiopoulos et al. (2020) conducted an extensive literature review and interviews with working group members (The Drug Information Association (DIA), the Tufts Center for the Study of Drug Development (Tufts CSDD), and 17 other stakeholder organizations) design a toolkit which can be employed to evaluate the impact of patient engagement. The measure types include the impact to the patient, cost measure, speed measure, and quality measure.

5.0 Future Research Directions

Even though the number of research outputs on ROI in social media marketing is growing, still future studies are required in developing and modifying metrics on ROI (Dwivedi et al., 2020). Some studies suggest that companies should focus on return on engagement (ROE), instead of ROI to measure the effectiveness of their social media (Aluri et al., 2015; Burg, 2013; Solis, 2010). Solis (2010) defines ROE as the "duration of time spent either in conversation or interacting with social objects, and in turn, what transpired that's worthy of measurement". Future research should advance the measure of return on engagement (ROE) and investigate the relationship between ROE and ROI. Additionally, future research should investigate how measuring ROI influences the companies in the long run in various industry settings (e.g. b2b, b2c) by conducting longitudinal studies.

6.0 Conclusion

This study identified the knowledge domain in the field of ROI in social media marketing using the analysis of temporal distribution, cited countries, cited journals, cited authors, and hotspots from 2009 till 2020. Current research employed the CiteSpace software for quantitative analysis and visualsing the knowledge gap in ROI in social media marketing research. As a result, a holistic picture of this domain is provided helping to get an overview of this field to academics and practitioners.

The current study has several limitations. Web of Science database was used to collect the study which could result in a limited number of outputs. Future research is advised to use additional databases such as Scopus and Google Scholar. Additionally, all retrieved research outputs were English-based, which could lead to neglecting publications written in other languages.

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