Social Media Marketing: A Scientific Framework

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Abstract

Social media plays an important role in rapid propagation of marketing. Identifying the important themes of Social media marketing is important for the community of scientific scholars and business professorial. Hence the purpose of this article is to answer the above demand by introducing a practical framework for SMM domain in academic literatures.

Introduction

Social Media is a hot topic between scholars and business professionals which has been involved in marketing strategies in recent years (Gainsbury et al, 2016). Social media marketing (SMM) is recognized as a new phenome for several brands since last ten years. For business professionals, SMM represents an opportunity which customers can connect easily to business companies (Berthon et al, 2012). This is the reason why most of the data-driven companies are looking for social media marketing opportunities.
Bibliometric methods, which involve the aggregation of large amounts of scientific documents (Corrall et al, 2013) and are therefore deemed to be objective. In our study, we applied the method of bibliographic (Alfonzo, 2014), which shifts attention for trends in the scientific literature. Next, text clustering has been applied which have so far been used predominately for visualization purposes.
In this article, we introduce a practical framework for identifying the pioneer countries, authors and journals as well as important scientific themes in SMM.

Methodology

We introduced a framework (Fig1) for identifying the influential journal, authors, countries and the trends of SMM based on the studies. In following of the paper, we first introduce the way of gathering data. Next, Bibliometric technique has been applied for recognizing the pioneer journals, authors and countries. Finally cluster analysis has been implemented on the network of keywords for identifying the trend of SMM based on the years of publications.

| Data Gathering from WoS |
| Applying Bibliometric for identifying the influential journals, aurhors and countries |
| Applying Cluster Analysis for identifying the trend of SMM |
| Discussion |
| Conclusion |

Figure 1- Steps of Research Framework

Data Gathering

In 7th April 2016, Data for this research study has been gathered from Web of Science (WOS) the authoritative data set covering academic documents in the scientific community worldwide. We searched this query (("social media" AND "marketing") OR "Social media marketing") for covering the related papers of social media marketing domain in a time-span of 1900 (for not losing any related papers) to 2015 (because the papers were published). In this regards, after searching the above query, 577 research articles have been gathered in a data set. Figure 2 demonstrates the statistics and growth trends of articles relating to the two keywords. Overall, social media marketing had a short history. This is consistent with the evolution of social media websites namely Facebook, YouTube, Twitter, Digg, MySpace, StumbleUpon, Delicious, Scribd, Flickr etc, as the subject appeared first in the early 2009 which marketing companies had investigated more financial resources to social media (Winpenny et al, 2014). The Social media marketing articles have seen a faster growth pattern in recent years According to figure 1.
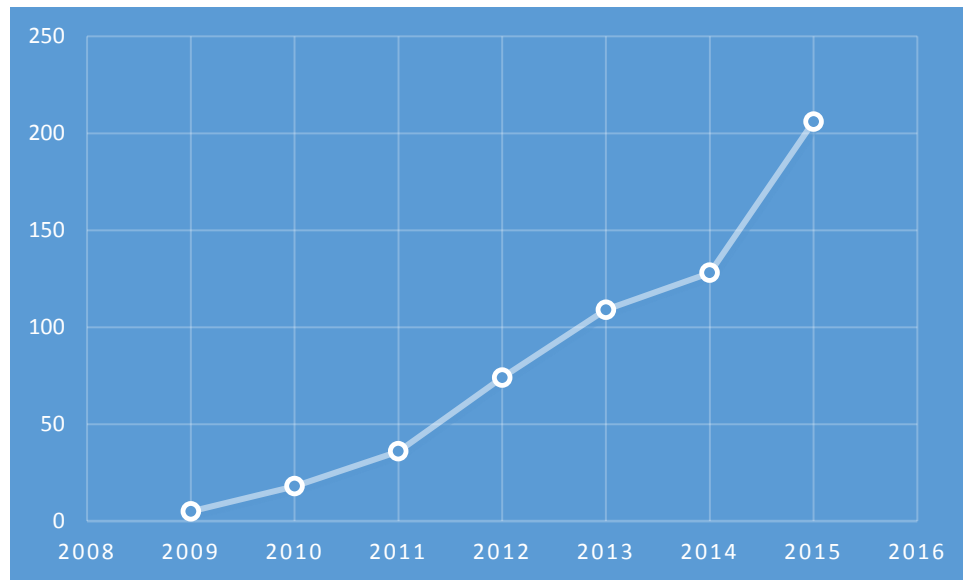
Figure 2 - Publications per Year

Bibliometric

The bibliometrics method means applying the statistical analysis of scholarly communication through publications (Bornmann and Williams, 2013; Sharma et al, 2013). By applying this method, we identified the pioneer journals, authors and countries. We brought them in table 1, 2 and 3 respectively. Table 1 summarizes the most popular twenty journals in SMM have been identified which are beneficial for understanding an emerging research discipline.

Table 1 - Top 20 Journals

Source Titles	records
JOURNAL OF INTERACTIVE MARKETING	27
BUSINESS HORIZONS	25
CHANDOS PUBLISHING SOCIAL MEDIA SERIES	12
PUBLIC RELATIONS REVIEW	8
DECISION SUPPORT SYSTEMS	8
JOURNAL OF MARKETING EDUCATION	7
INDUSTRIAL MARKETING MANAGEMENT	7
JOURNAL OF TRAVEL TOURISM MARKETING	6
JOURNAL OF DESTINATION MARKETING MANAGEMENT	6
JOURNAL OF BUSINESS RESEARCH	6
INTERNATIONAL JOURNAL OF INFORMATION MANAGEMENT	6
TOURISM MANAGEMENT	5
SOCIAL MEDIA AUDITS ACHIEVING DEEP IMPACT WITHOUT SACRIFICING THE BOTTOM LINE	5
PROFESIONAL DE LA INFORMACION	5

JOURNAL OF RESEARCH IN INTERACTIVE MARKETING	5
JOURNAL OF BUSINESS INDUSTRIAL MARKETING	5
JOURNAL OF ADVERTISING RESEARCH	5
INTERNATIONAL JOURNAL OF CONTEMPORARY HOSPITALITY MANAGEMENT	5
INTEGRATING SOCIAL MEDIA INTO BUSINESS PRACTICE APPLICATIONS MANAGEMENT AND MODELS	5
INFORMATION COMMUNICATION SOCIETY	5

The journal of interactive marketing and business horizons are specialized academic journals devoted to Social media marketing. The IS journals like Decision Support Systems are among the top journals (Ranked #5) which cover data, web and text analytics. Journals of tourism industry namely JOURNAL OF TRAVEL TOURISM MARKETING and TOURISM MANAGEMENT are among the top twenty journals which indicates the tourism concept has been entered into the field which recognizes SMM as a multidisciplinary domain.
Table 2 indicates the top twenty pioneer scholars in SMM.As it can be seen, Mackey is recognized as the pioneer scholar. Laing and Kaplan are addressed in the second and third places respectively.

Table 2- Top 20 Authors

Authors	records	% of 577
MACKEY TK	8	1.386
LIANG BA	7	1.213
KAPLAN AM	6	1.04
LEE I	5	0.867
HAENLEIN M	5	0.867
GATTIKER UE	5	0.867
GRETZEL U	4	0.693
DE RUYTER K	4	0.693
CAMBRIA E	4	0.693
BUHALIS D	4	0.693
ANDERSON E	4	0.693
WOOD NT	3	0.52
PLANGGER K	3	0.52
LABRECQUE LI	3	0.52
KUMAR V	3	0.52
KLAUS P	3	0.52

HUDSON S	3	0.52
GREWAL D	3	0.52
FREEMAN B	3	0.52
DE VALCK K	3	0.52

The Top 20 pioneer countries in SMM are brought in Table 3.United states of America (USA) is the pioneer country and England as well as Australia are placed in the next places respectively. Most of the next places are devoted to European countries.

Table 3- Top 20 Countries

Countries/Territories	records	% of 577
USA	256	44.367
ENGLAND	66	11.438
AUSTRALIA	45	7.799
PEOPLES R CHINA	40	6.932
SPAIN	35	6.066
GERMANY	28	4.853
CANADA	28	4.853
FRANCE	26	4.506
NETHERLANDS	20	3.466
ITALY	18	3.12
TAIWAN	14	2.426
SWITZERLAND	14	2.426
SOUTH KOREA	14	2.426
FINLAND	14	2.426
NORWAY	11	1.906
SWEDEN	10	1.733
GREECE	9	1.56
TURKEY	8	1.386
SOUTH AFRICA	7	1.213
SINGAPORE	7	1.213

Cluster Analysis

Clustering the academic documents is recognized for identifying important themes of a scientific field (). After constructing the keyword co-occurrence network, we have applied a text mining cluster analysis on the network. Next, we did not consider the terms such as social and market which do not gain any benefit to our study. The results of clusters are brought in figure 3. For visualization, it has been used the VOSviewer for visualizing the clusters.
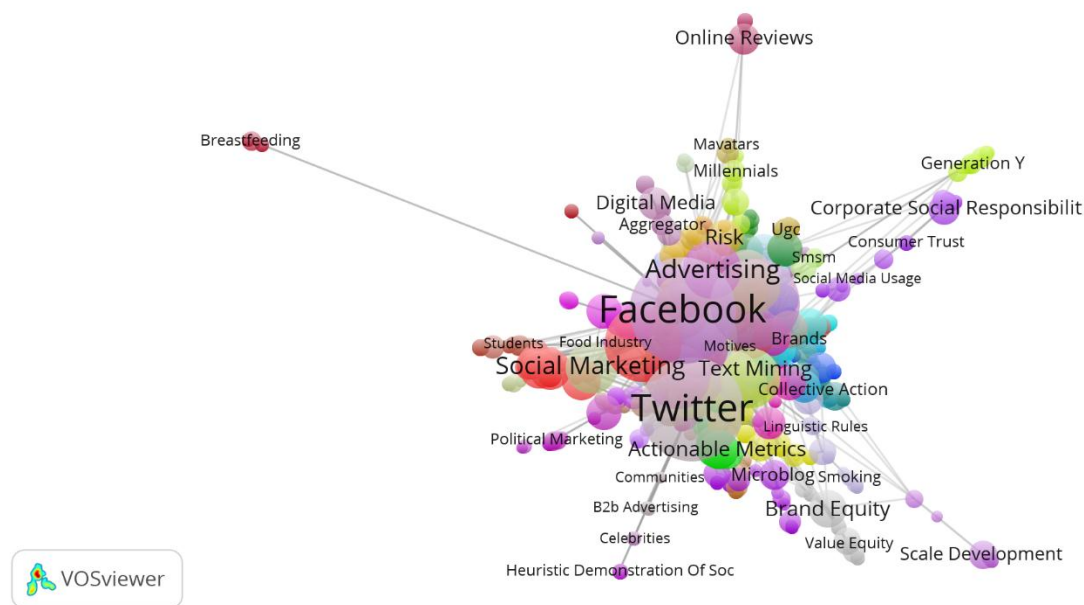
Figure 3- Cluster Analysis of Keywords

Discussion & Conclusion

In this study, the techniques of bibliometrics and text mining cluster have been applied for detecting the pioneer journals, authors, countries and the important themes of SMM. The important themes of SMM in clustering analysis are recognized for Social network sites namely Facebook and Twitter which are two of the most usable social networks using by the marketing users. This means that in SMM, Twitter and Facebook are the important social networks in marketing domain. The next results are devoted to infrastructures of SMM which are Internet, Web 2.0 and advertising. The most important technique in SMM for identifying the patterns is text mining. The other domains involve in SMM are E-Commerce, Big data and Digital Marketing.

To sum up, this paper is useful for the scholars who are willing to understand the important themes of Social media marketing and provide them a valuable insight for them.

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