How does Social Media Analytics Create Value?

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ABSTRACT

The surge of interest in big social data has led to growing demand for social media analytics (SMA). Having robust SMA can help firms create value and achieve competitive advantages. However, most firms do not always know how to embrace big social data to establish a path to value. This study addresses this key question to deepen our understanding of how different types of SMA can be applied to create value. Specifically, the findings show the significant uses of opinion mining or sentiment analysis, topic modeling, engagement analysis, predictive analysis, social network analysis, and trend analysis. Finally, the study provides directions for the challenges and opportunities of SMA to maximize value.

KEYWORDS

Engagement Analysis, Opinion Mining, Predictive Analysis, Sentiment Analysis, Social Media Analytics, Social Network Analysis, Topic Modeling, Trend Analysis

1. INTRODUCTION

Social media now affects virtually every aspect of social sciences and business research by changing the dynamics of relationship between firms, employees, customers, and stakeholders. The scale of social media phenomenon is reflected by 1490 million Facebook users, 316 million Twitter users, 300 million Google+ and Instagram users, 230 million Tumblr users, and 832 million QQ users (mostly in China) (Statistica, 2015). A recent study by the Pew Research Centre reports that 65% of adults in the U.S. now use social networking sites, which is a nearly tenfold jump in the past decade (Perrin, 2015). According to the Nielsen’s Digital consumer report (2014), almost two-thirds (64%) of overall social media users use social media sites at least once a day via their computer, and almost half (47%) of smartphone owners visit social networks every day. Social media applications or platforms range from social networks, micro blogs, discussion forums, wikis to podcast networks, picture and video sharing platforms, ratings and reviews communities, social bookmarking sites, and avatar based virtual reality spaces (Stieglitz, Dang-Xuan, Bruns, & Neuberger, 2014). This massive penetration of social media paves the path for firms to derive value by capturing, understanding and presenting information on customer tastes and preferences, relationship managements, promotions, new product developments, crisis management and competitive intelligence (Fan & Gordon, 2014).

In the past few years, an explosion of interest in “big social data” has occurred from both academia and the industry due to large-scale empirical datasets from popular online social networking platforms (Burgess & Bruns, 2012; Manovich, 2011). Firms across the world are interested to tap into this opportunity to design their promotional campaigns, customer relationship management, public...
relations activities etc. Although big social data represents immense opportunity, many firms still struggle to design and create value from their big social data analytics (Kiron, Prentice, & Ferguson, 2014). Motivated by this challenge, this paper synthesizes evidences using a systematic review on how social media analytics (SMA) can be used to create business value in the big social data environment.

SMA is defined as “a conversational, distributed mode of content generation, dissemination, and communication among communities” (Zeng, Chen, Lusch, & Li, 2010). The fundamental challenge of SMA is to generate value from this explosion of the big social data. The value implies producing cost effective and commercially worth insights that can benefit organizations from analysis of those data. The value also indicates increasing profitability and or enhancing other non-financial benefits for both profit and non-profit organizations. While value from SMA is emerging as an important field of research (S. Fosso Wamba & Carter, 2014), very few studies have shed light on different analytical tools that create value for firms. Thus the objective of this position paper is to show evidences of how organizations across the world use SMA to create value.

2. METHODS

In this study, a systematic literature review was conducted. Social media analytics research still being at its infancy, this methodology is appropriate for this exploratory study. We used an approach similar to the one used by Chai, Liu, & Ngai (2013) and Ngai, Moon, Riggins, & Yi (2008). The approach consists of developing a classification framework to organize all relevant articles identified through the literature review. Consistent with prior studies using a similar approach (Samuel Fosso Wamba, Akter, Edwards, Chopin, & Gnanzou, 2015; Ngai & Wat, 2002), this study uses peer-reviewed journal articles and seminal conference proceedings. Our classification framework has 6 dimensions through which a firm can create and/or co-create value via social media analytics: opinion mining or sentiment analysis, topic modeling, engagement analysis, predictive analysis, social network analysis and trend analysis. All these dimensions are discussed below. Table 1 shows a summary of social media analytics tools used by firms and the values across critical business functions.

3. TOOLS OF SOCIAL MEDIA ANALYTICS TO CREATE VALUE

3.1. Opinion Mining or Sentiment Analysis

Opinion mining or sentiment analysis is an important tool of SMA that analyzes people’s opinion, sentiment, evaluation, attitude, judgment and emotions towards tangible or intangible objects, issues or attributes, such as, product, service, organizations, individuals, events, topics etc. (Liu, 2012). For example, Bank of America used sentiment analysis to recognize and control key issues by gathering 41,000 comments from social media platforms (Purcell, 2011). Twitter based sentiment analysis plays a critical role in forecasting the election results (Tumasjan, Sprenger, Sandner, & Welpe, 2010) and the public opinion polls (Cardie, Farina, & Bruce, 2006). Similarly, in business research, Livingston (2005) found that a seller can earn an additional $45.76, that is more than 10% of the mean selling price with the help of more than 675 positive opinions. On the other hand, Lucking-Reiley, Bryan, Prasad, & Reeves (2007) reported negative opinion could reduce price as much as 11%, about $19 from a mean price of $173. These findings have also been reflected in various online products and services, such as movies, music and games which are hugely influenced by social media reviews, comments, and public opinion or sentiment in Facebook, Twitter etc. Bollen et al., (2011), Bar-Haim, Dinur, Feldman, Fresko, & Goldstein, (2011) and Feldman, Rosenfeld, Bar-Haim, and Fresko (2011) described how investors could utilize social media sentiment to predict market performance. In a similar spirit, Zhang and Skiena, 2010 reported that blog and news can be a source of sentiment analysis to utilize those data and to formulate investment strategies. Using sentiment analysis, KIA motors and The Royal Bank of Canada, has been able to innovate new products and improve their customer service (Kite, 2011).
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