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The use of social media to detect corporate fraud: A case study approach

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Abstract   Social media is a rapid and dynamic medium of communication that forms a crucial component of the modern business toolkit. It can be used to detect corporate fraud by tapping into collective user wisdom, also known as the wisdom of crowds. This article highlights both the potential and limitations of social media in detecting corporate fraud by examining information from traditional media and social media for a recent corporate fraud case (i.e., Empowered Products Inc.). Using text analysis of information posted on traditional media compared to social media, this article illustrates how social media provides an increased level of relevant information in a faster manner. By using wisdom of crowds in this way, social media platforms such as Twitter can improve organizational knowledge quality. We identify methods for managers to utilize social media to improve their organizational knowledge management.
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1. Identifying corporate disclosure fraud with social media

Corporate fraud is a popular topic in business as its occurrence is detrimental to the organization, its shareholders, and society as a whole. Managers, auditors, investors, and regulators alike seek to predict or detect corporate fraud in all forms. This article focuses on fraudulent disclosures and misstatements, arguing that corporate fraud may be predicted through the aggregation of dispersed information from the market (Johnson, Budescu, & Wallsten, 2001; Wolfers & Zitzewitz, 2004), which Surowiecki (2004) termed the *wisdom of crowds*.

The concept of wisdom of crowds implies that the independent valuation of a small crowd is usually

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more accurate than the evaluation of individual experts. According to Surowiecki (2004) and Fleenor (2006), there are four elements required to form a wise crowd: diversity of opinion, independence of thought, decentralization of knowledge, and aggregation of judgment into a collective decision. Social media users within the investment community come from diverse backgrounds, including sophisticated investors with deep levels of corporate knowledge, mom-and-dad investors who trade occasionally, and financial analysts mindful of their reputation. Social media aggregates a wide range of independent opinions utilizing local knowledge; its unique features make it possible to tap into the wisdom of crowds.

Corporate fraud detection is a knowledge management (KM) process by which stakeholders obtain information about a business and its operations relevant to decision making, including judgments about the existence or future occurrence of corporate fraud (Massingham, 2014; Teece, 1998; Uden & He, 2017). Over the past 2 decades, firms have proactively engaged in KM in hopes of improving performance through better management of information (Bharati, Zhang, & Chaudhury, 2015).

Bhatt (2002) noted that knowledge activities are difficult to monitor and control as only a proportion of knowledge is internalized by the organization, with the remainder held by individuals. While individuals have access to limited information, collective wisdom shapes business, economics, societies, and nations (Surowiecki, 2004). In applying the wisdom of crowds, individuals coordinate and cooperate to reach an accurate decision in a rapid and reliable manner (Bartov, Faurel, & Mohanram, 2017; Johnson et al., 2001; Wolfers & Zitzewitz, 2004).

Serving as an untapped resource for wisdom of crowds, social media is a collection of online services that encourages social interaction among users and allows them to co-create, find, share, and evaluate a repository of online information (Chua & Banerjee, 2013). The development of social media has transformed traditional static information dissemination channels into a more dynamic approach. It is now possible to build relationships with consumers via a range of social media platforms by promoting products and answering consumer enquiries (Hanna, Rohm, & Crittenden, 2011; Shin, Pang, & Kim, 2015). The social media platforms of Facebook, LinkedIn, and Twitter house millions of members who use these networks to keep track of each other and engage in commercial transactions (Kleinberg, 2008).

Since its inception, the number of social media users has grown exponentially (Huberman, Romero, & Wu, 2008). Social media has been shown to impact company performance through four channels: (1) social capital, (2) customers' revealed preferences (Grégoire, Salle, & Tripp, 2015), (3) social marketing, and (4) social corporate networking. These channels impact financial, operational, and corporate social performance (Paniagua & Sapena, 2014). The information on these platforms creates a rich landscape of content that draws on the wisdom of crowds.

Twitter is one of the most popular social media channels for business use (Zhou, Lei, Wang, Fan, & Wang, 2015). Twitter users come from diverse backgrounds (Bartov et al., 2017) and each tweet is restricted to 280 characters. In addition, Twitter tracks phrases, words, and hashtags and posts them under a relevant title for convenient user access. These features make it possible for users and readers to disseminate and capture business information efficiently.

One application of the wisdom of crowds is to use investors' opinions on social media platforms to predict stock/corporate performance, including future stock returns, earnings surprises (Chen, De, Hu, & Hwang, 2014), and firms' earnings and returns several days before the announcement period (Bartov et al., 2017). In addition, companies like Starbucks, Dell, and American Express use social media to improve their KM, especially customer knowledge (Chua & Banerjee, 2013).

Applying the wisdom of crowds within social media involves the convergence of outsiders for voluntary knowledge sharing in order to generate KM. In this article, we present a case study that details how individual opinions on social media can be used to detect corporate disclosure fraud; we then provide appropriate methods for managers to use this approach as a way to improve their organizational KM. By comparing the information environment within traditional media and social media, we show that crowd intelligence captured from social media can be used to detect corporate fraud. Such intelligence is not observed in traditional media. Our findings suggest that stakeholders and managers should implement both traditional media and social media monitoring pertaining to or within target organizations, or improve existing systems by developing a refined set of keywords. Calibrating the information levels between traditional media compared to social media facilitates the detection of exceptions and outliers. These findings are useful additions to KM for managers, investors, regulatory and investigatory authorities, and scholars.

2. Corporate disclosure fraud, undesired consequences, and detection

Corporate fraud is a broad term that covers a range of undesired business practices that are detrimen-