Enhancing Financial Performance with Social Media: An Impression Management Perspective

Dara Schniederjans, Edita S. Cao, and Marc Schniederjans

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Enhancing Financial Performance with Social Media: An Impression Management Perspective

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Abstract

The growing plethora of social media outlets have sparked both opportunity and concern in how organizations manage their corporate image. While previous research has examined the various problems associated with negative, word-of-mouth transference of information occurring simultaneously throughout many networks in social media, this paper seeks to address social media usage in impression management (IM). Specifically, we seek to answer two questions: Do IM direct-assertive strategies in social media impact a firm’s financial performance? And which social media strategies impact a firm’s financial performance? To analyze these questions in depth, we use text mining to collect and analyze text from a variety of social network platforms, including blogs, forums, and corporate websites, to assess how such IM strategies impact financial performance. Our results provide text mining validation that social media have a

¹ Corresponding author
positive impact on IM. We also provide further understanding of how social media strengthens organizations’ communication with various internal and external stakeholders. Lastly, we provide future research ideas concerning social media’s usage in IM.

**Keywords:** Impression Management, Direct-Assertive/Assertive Strategy, Social Media, Financial Performance
1. Introduction

There are an estimated 1 billion people using social networks as of 2012, and it is projected to grow continuously in years to come [17]. An increasing number of organizations and individuals are using social media to find either an audience or find individuals who complement their own talents [10]. While previous literature indicates the problems associated with growing social media usage, including negative word-of-mouth information proliferation across networks due to isolated events, as well as mistrust and reduction of social capital [29; 27; 49], these concerns have not stopped companies from using social media as a way to enhance, sustain, and defend corporate image. IBM estimates that during 2015-2018, the number of companies that use social media to interact with customers will more than triple [12]. Despite concerns, social media users in business and consumer markets are increasingly employing social media to advertise and communicate. In this paper we aim to analyze how social media impacts the relationship that IM has on financial performance.

Before social media existed, previous research in IM focused on tactics, including annual reports, mass media publicity, and special organizational programs to maintain the support of external and internal audiences critical of an organization’s actions [18, 39]. However, the emergence of social media has changed the way firms manage relationships and impressions of their audiences. Social media in the forms of online word-of-mouth forums, blogs, discussion boards, e-mail, chat rooms, product or service review websites and social networking websites like Twitter and Facebook provide an inexpensive and easy way to increase the flow of information to a variety of internal and external stakeholders [25]. This perpetuates both transparency and accountability, which are vital to building, maintaining, and defending a corporate image in an environment where individuals are actively engaging in online
conversations [25]. Furthermore, social media platforms, including social networking site users, are expected to grow with an estimated 1.43 billion social network users in 2012[3]. With the emergence and growth of social media, it is essential that organizations understand the dynamics of not only how it can be used as a platform to sustain a corporate image (i.e., IM), but also how it may impact financial performance.

Thus, in this paper we focus on two research questions: Do IM direct-assertive strategies in social media impact a firm’s financial performance? And which social media strategies impact a firm’s financial performance? Currently, there is research that explores defensive strategies and their impact on user satisfaction and repeat business [13], but there is little to no research investigating direct-assertive strategies on financial performance. Additionally, while there are a variety of positive and negative implications for using social media as a platform in IM, little to no research exists on its importance in IM and whether this promotes financial performance. The results of this study provide support for using social media as a platform for optimizing the impact of IM strategies on financial performance.

This paper provides implications useful for both managers and researchers alike. Managers can use it for insight into how organizations currently employ social media in building corporate image. The paper also provides researchers and managers a validated model depicting the relationships between direct-assertive strategies and financial performance, as well as how social media impact this relationship. We also provide researchers text mining results that validate these relationships.

To present the managerial and research implications, we have organized the paper as follows. First, we provide background information on IM and social media. Next, we discuss text
mining methodology, as well as the results. Finally, we offer discussions, conclusions, and future research directions.

2. Literature Review

2.1. Impression Management

First introduced by Goffman in the 1950s, and rooted in dramaturgical and symbolic interactionist sociology theory [47], IM theory describes efforts by an actor (i.e., a person engaging in IM behavior) to create, protect, maintain or alter an image held by an audience (i.e., an individual or group interacting with the actor) [47, 7, 18, 6]. These images are of any character or demeanor that an actor seeks to project to an audience [16], keeping in mind the goal for the actor is to control an audience’s opinion or impression through control of information during social situations [15]. IM behaviors are vital during the influence process, which consists of two stages: (1) identity is established; (2) influence is attempted to enhance, sustain or defend an image [47].

The motive to engage in IM arises from the motivational source of all behavior: firstly, to maximize expected rewards and secondly, to minimize expected punishments [42]. At an individual level individuals attempt to control images of themselves to the audience. This is also referred to as self-presentation, which occurs when projected images are self-relevant [42, 43, 20]. Usually, this occurs through the use of verbal, non-verbal and artificial behaviors in the pursuit of an actor’s objective to establish a desirable identity or repair a damaged identity [15, 43, 20]. However, IM is broader and more encompassing, occurring at both an individual and organizational level. In fact, a growing body of literature in IM is arising at an organizational level [4; 35]. In organizational impression management (OIM) organizations use IM tactics to
enhance, sustain, and defend a positive image with a variety of stakeholders outside and inside the organization [6; 18].

Previous research has identified various classes of IM/OIM tactics. Most IM literature agrees there are four primary strategies: assertive/proactive, defensive/protective, direct and indirect [15; 35]. An assertive/proactive strategy occurs when an actor, individual or organization tries to establish a given, desirable identity [15], whereas a defensive/protective strategy is used to repair damaged identities [15]. These two strategies can be either direct or indirect. Direct strategies involve presenting information about an organization’s accomplishments or abilities to either establish a desirable identity (assertive/proactive) or repair a damaged identity (defensive/protective) [6; 35]. An indirect strategy attempts to manage information about other associated entities or activities for purposes of maintaining an assertive/proactive strategy or a defensive/protective strategy [6, 35]. In this study we borrow from Mohamed et al.’s [35] taxonomy of behaviors within IM and assess how social media usage can be employed as a platform to promote financial performance. Specifically, we focus on direct-assertive behaviors using text mining to assess how social media is employed in this context to optimize or degrade financial performance.

IM can be useful for enhancing an organization’s corporate image and performance. Organizations that accommodate and provide explanations that lead to endorsement and judgment of rationality and responsibility instill goodwill among the audience and provide justification for an unusual or uncommon event [18]. Further, a company strategy that can combine the humility of an apology and the assertiveness of a justification, as well as acceptance of responsibility, will enhance results of the defensiveness/protective strategy by improving the likelihood of repeat business and customer satisfaction [13]. However, previous research
suggests the use of two or more IM tactics can be more effective than the use of just one [5]. For example, further improvements in customer satisfaction and repeat business can be made via a company’s fast response, coupons or other forms of compensation [13]. However, new research needs to focus on platforms that can optimize IM by providing an efficient and cost effective means for enhancing, sustaining, and defending corporate image.

Before Web 2.0, research in OIM focused on tactics, including annual reports, mass media publicity, and special organizational programs to maintain the support of external and internal audiences critical of an organization’s actions [18; 39]. However, the emergence of Web 2.0 facilitated a variety of interactive information sharing and collaborative web platforms [26] that introduced a multiplicity of platforms useful to OIM, including social media.

2.2. Social Media

Social media are Internet platforms used to disseminate information through social interactions that provide decentralized user level content, social interaction and public membership [29; 1]. Most social media are highly accessible and scalable and allow for a variety of options, including intimate community engagement and social viral activity [29]. Examples of social media mechanisms include online or word-of-mouth forums such as product or service review websites and forums, blogs, discussion boards, chat rooms, e-mail, and social networking websites like Facebook, Pinterest, Instagram, Tumblr, YouTube, and Twitter [26; 30]. In this paper we will analyze the usage of specific social media, including, forums, blogs, and company websites.

These social media outlets provide users with a platform to share and receive information, as well as give organizations an opportunity to diffuse information through a variety
of populations [29]. Previous research has identified various benefits and services that social media provide stakeholders, including complementary services, location based recommendations [55], user reviews, and internal information among managers to engage in collective interpretation [22]. Other common benefits include promotion of new products or services, involvement in brand communities, and enhanced customer service availability [48; 51; 53; 38].

Companies can also gain information about individuals, including preferences, social influence, and social interactions [29]. Additional information assessing opportunities include customer reviews, news articles, and product reviews. External sources such as social media can provide access to this information via news feeds, blog posts, and tweets (messages displayed to those subscribed that are less than 140 characters in lengths) [9]. Furthermore, social media allow for this exchange of information in a fast, low cost, and efficient manner [30]. These benefits provided by various social media have zero sign-up fees and can be managed by anyone with little Internet surfing ability. Whereas marketers once had to exert a large amount of effort to gain feedback from customers, they now exert effort to keep up with vast amounts of feedback coming from numerous social media platforms [14].

Social media usage to facilitate communication between organizations and stakeholders continues to provide positive results. For example, Stelzner [46] found approximately 81% of marketers indicate their efforts in social media have generated effective exposure for their organizations. Moreover, Zhao & Lu (In press) found social interactivity using social media between an organization and its stakeholders seems to have a greater effect on users’ satisfaction than machine interactivity. The banking industry, which is wrought with security concerns, continues to incorporate social media into their e-banking strategies as do the travel, tourism, hospitality, and service industries [48; 51; 53; 22].
Table 1 presents behaviors, descriptions, and examples of how social media facilitate OIM in direct-assertive strategies. Adapted from Mohamed et al.’s [35] 2x2 matrix, we can see that social media present various examples of opportunities. Further, it does so in a way that is more cost effective, easier, and less time consuming than traditional examples expressed in the matrix.

<table>
<thead>
<tr>
<th>Behavior</th>
<th>Definition</th>
<th>Social Media Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ingratiation</td>
<td>Behaviors used by organizations to make them look more attractive to an audience</td>
<td>Word-of-mouth marketing through blogs and social networking targeted toward a market in need of a particular service (i.e., students-books)</td>
</tr>
<tr>
<td>Intimidation</td>
<td>Behaviors presenting the organizations as powerful and dangerous, which can inflict harm on individuals who impede efforts and objectives</td>
<td>Corporate websites suggesting their power over similar competitors.</td>
</tr>
<tr>
<td>Organizational Promotion</td>
<td>Behaviors presenting the organization as highly effective, successful, and competent</td>
<td>Promotion campaigns via tweets Blogs and forums dedicated to promoting the company and website</td>
</tr>
<tr>
<td>Exemplification</td>
<td>Behaviors used by an organization to project integrity, social responsibility, and moral worthiness</td>
<td>Social media (websites, blogs, forums and social networking sites) used as a tool to promote socially responsible activities Also used as a socially responsible method of reducing paper waste</td>
</tr>
<tr>
<td>Supplication</td>
<td>Behavior to portray an image of dependency and vulnerability in soliciting assistance from others</td>
<td>Company websites and emails used to lobby for forms of assistance</td>
</tr>
</tbody>
</table>

2.3. Financial Performance

Financial performance is a multifaceted construct measured in several ways. For example, previous research using text mining/data mining have borrowed from the Center of Research in Security Prices (CRSP), a raw data set with over 160 financial variables available for
In this study we use stock response modeling, which provides evidence related to stock returns as a measure of financial value \[34\]. Specifically, we use quarterly earnings per share (EPS) to reflect the value and financial impact of IM strategies. This measurement provides valuable information with regard to how IM impacts market value and stock response. Additionally, EPS can be used as a measurement of profitable investment portfolios, as well as a host for decisions regarding operational budgeting, capital investment, and resource allocation \[54\].

While previous research looks into the impact of IM on user satisfaction and repeat business \[e.g. 13\], no study to our knowledge has assessed the impact of IM on financial indicators of performance, or the usage of social media as a platform to promote or hinder this relationship.

### 3. Model and Theory

Our study attempts to analyze the relationships between six constructs, including social media’s usage in direct-assertive IM strategies (i.e., ingratiation, intimidation, organizational promotion, exemplification, and supplication), and financial performance. The relationships between our constructs are depicted in Figure 1.

In this study we use IM theory to explain the relationships between our constructs. More specifically, we focus on OIM direct-assertive strategies, which are used to maintain and build positive impressions of organizations among both internal and external stakeholders. Our model also has elements of relationship communication theory, which suggests that neither person in an exchange (i.e., organization or internal/external stakeholder) is the sender or the receiver, since the roles are constantly changing \[6; 40; 50\]. This is especially true where the organization can portray an image through social media. In return users can send information back with similar or
different images that may impact the impression an organization leaves with other stakeholders. While different messages may be detrimental to the image an organization wishes to portray, we focus specifically on direct-assertive IM strategies employed to build an image as opposed to direct-defensive strategies used to defend a portrayed image. Even if consumer or internal stakeholder responses differ from an organization’s message, the organization can employ social media to respond directly or indirectly to those or different stakeholders to improve communication flow in a cost-efficient and effective manner. This enhances IM speed and reduces costs associated with more traditional IM media, including print, phone, and television, impacting financial performance.

Based on a combination of IM and relationship communication theories, we have formulated the conceptual model depicted in Figure 1, which will later be analyzed using text mining. Before our simulation, we will further analyze these intricate relationships with past literature.

3.1. Social Media and Direct-Assertive IM Strategy

As mentioned previously, direct-assertive IM strategy involves five behaviors: ingratiation, intimidation, organizational promotion, exemplification, and supplication, according to Mohamed et al. [35].

*Ingratiation* is behavior that involves organizational actors that make the organization seem more attractive to an audience [35]. According to this definition, if ingratiation is successful, it will evoke attitudes of attraction in an organization’s stakeholders. Attraction to any organization in turn will improve the likelihood of future business [13], perhaps leading to greater financial performance in the long run. Social media can enhance this relationship by providing a cost effective means for conducting promotional campaigns to portray a company as
providing a service that is attractive to consumers. For example, companies can tweet new products to their followers based on consumers’ particular preferences. Further, this may enhance word-of-mouth advertising through blogs and forums that is significantly less expensive than traditional, promotional campaigns involving mail, phone calls, and other means of communication.

*Intimidation* behaviors are those that present the organization as a powerful and dangerous entity able to inflict harm on an audience [35]. Previous research has identified intimidation as a harmful tactic in overall user satisfaction, because it tends to provoke fear [18]. Based on the benefits described in previous sections, social media can provide a cost efficient and effective means of conducting intimidation tactics. Although an intimidation strategy is not preferable for companies, especially when dealing with internal or external entities, we will assess whether social media perpetuate or reduce the negative association between intimidation and financial performance.

*Organizational promotion* behaviors present an organization as being highly competent and successful [35]. Previous research has tied successful promotion (one that leads to customer interaction and action) to financial success [28]. Social media, including social networking sites and blogs, can provide effective platforms for any type of organizational promotion that involves getting the word out about a new product or service. Furthermore, the cost of using social media in comparison to traditional advertising methods is substantially lower.

*Exemplification* occurs when an organization projects images of integrity, social responsibility, and moral worthiness [35]. Although there are a variety of studies assessing the impact of corporate social responsibility and integrity on financial performance, all of which find positive, negative, and neutral impacts given the variety of moderating and mediating variables
[33], the positive impact of integrity to social capital or B2B relations is hard to deny [41]. Social media not only provide a platform to project information about corporate social responsibility activities via B2B and B2C communications, but also have the potential to foster trust through greater information sharing capabilities increased via ease and cost efficient means.

*Supplication* occurs when an organization portrays an image of dependency or vulnerability in order to solicit assistance [35]. Currently, there is limited research targeted toward addressing the connection between supplication and financial performance. Dependency and vulnerability can be attributed to an organization in need. However, social media can enhance communications to external entities, regardless of whether the external entity is in the immediate network of the organization. For example, blogs, statements from company websites, and forums can generate word-of-mouth information to reach organizations that may be able to remedy the problem quickly and efficiently. This is yet another example of social media and the benefits they provide in delivering information in a fast and cost efficient manner.

Based on previous research in social media and IM we formulate the following hypotheses represented in Figure 1.

**H1.** Social media usage in IM strategy has a positive association with financial performance.

**H1a.** Social media usage in ingratiation has a positive association with financial performance.

**H1b.** Social media usage in intimidation has a positive association with financial performance.

**H1c.** Social media usage in organizational promotion has a positive association with financial performance.

**H1d.** Social media usage in exemplification has a positive association with financial performance.
H1e. Social media usage in supplication has a positive association with financial performance.

Overall, social media provide a cost-effective and efficient means of communicating to a variety of external and internal stakeholders. To the best of our knowledge, little research has examined the impact of direct-assertive strategies on financial performance. Moreover, little to no research has examined social media’s influence on this relationship, despite the potential advantages of maximizing the utility of these strategies and tactics. We will use text mining to analyze these relationships in detail using text from organization websites, blogs, and forums in order to assess the direct-assertive strategies’ influence on performance and how social media impact this relationship.

4. Methodology
4.1. Automated Text Classification

For the past decade, substantial research has been conducted on text classification through supervised machine learning techniques [45; 37]. However, most studies in this area focus on classification by topic, where bag-of-words model turns out to be very effective. Recently, there has also been increasing interest in automated classification by overall sentiment, degree of subjectivity, authorship, and other dimensions. These classifications must rely on abstract, topic-independent features. Popular choices of features have been function words, textual statistics, and part-of-speech (POS) information [19]. There are a variety of techniques for supervised machine learning algorithms that have demonstrated reasonable performance for text classification, including naïve bayes [32], maximum entropy [31], support vector machines (SVM) [24], and k-nearest neighbor [52].

Recent studies reveal that SVM performs consistently better than other classification algorithms [2; 23] and as such, we employ SVM in the current study to explore firms’ direct-
assertive IM strategies employed in their social media involving five behaviors: ingratiation, intimidation, organizational promotion, exemplification, and supplication as classification criteria. We then model the effect of firms’ direct-assertive IM strategies displayed in their social media on the firms’ performance using an ordinal logistic regression (OLR) model.

4.2. Text Classification Procedure

Figure 2 shows the procedural flowchart of SVM text mining. In the flowchart each dotted line box refers to a key process, and the double bordered box is designated as a support system, which includes machine learning algorithm set, training corpus, and domain knowledge database. There are three key steps involved in sentiment analysis: Step 1 – pretreatment, Step 2 – multi-dimension classification, and Step 3 – construct validity. The support system is applied in the sub-topics classification and sentiment classification processes.

In the first step we clean up the raw corpus (i.e., raw documents) and then store it in a computable format in the refined corpus (i.e., processed documents). Next, we divide the refined corpus (processed documents) into several dimensions (five dimensions in our case), employing the machine learning algorithm (SVM) in the support system. Finally, in Step 3, we validate Step 2 by measuring the accuracy of the classifiers of sub-topics classifications.

Accuracy is measured as follows:

\[
\text{Accuracy} = \frac{TP+TN}{TP+TN+FP+FN},
\]

where \(TP\) is the number of true positives, \(TN\) is the number of true negatives, \(FP\) is the number of false positives, and \(FN\) is the number of false negatives. Alternatively, accuracy can be defined as the ratio of the number of correct classifications to the number of all classifications.

4.3. Support Vector Machine
Support Vector Machine (SVM) is a classification technique that was first applied to text classification by Joachims [23; 24]. It is a powerful, supervised learning paradigm based on the structured risk minimization principle. During training for binary-dimension classification, this algorithm constructs a hyperplane that maximally separates the positive and negative instances in the training set. Classification of new instances is then performed by determining which side of the hyperplane they fall on [for details on SVM, please see 8]. A training algorithm of multi-dimension SVM (in our case) can be described as the task of constructing a number of binary SVMs. Most of the previous studies that apply SVM to text classification use all the words in the document collection without any attempt to identify the important keywords [44]. In our research, keyword selection is conducted with the help of the IM domain experts (IM practitioners) for text classification of the direct assertive dimensions in IM (see Table 1 for the key words selected).

5. Results

We randomly selected 150 publicly traded companies in the pharmaceutical industry (NAICS – 325412). These companies’ social media data were gathered from blogs, forums, and corporate websites between January 1 and March 31, 2012. In this study the SVM-based text mining method is employed to analyze social media data. In the pretreatment process three sub-processes were applied: 1) noise cleaning in which some unnecessary data (i.e. HTML tags, tables, and graphs) are removed; 2) sentences splitter in which each sentence in the document is recognized and stored as a basic unit for further analysis; 3) sentence filter in which only IM relevant sentences were used. Then, we classified these sentences into five IM dimensions (i.e., ingratiation, intimidation, organizational promotion, exemplification, and supplication) using a multi-dimensional text classification algorithm (SVM). Next, the IM score matrix is derived (i.e.,
we calculate the score of dimension $i$ for company $j$ using $N_{nij}/N_{tij}$, where $N_{ni}$ denotes the number of sentences in dimension $i$ and $N_{ti}$ denotes the total number of sentences in dimension $i$ for all companies) to show firms’ emphasis on each dimension (a score from 0 to 1). A score of 1 means the firm has the strongest view toward that respective IM dimension, while 0 means the firm pays no attention to the respective IM dimension. Finally, we conducted the construct validation by assessing the accuracy of the SVM classification method.

To formally test $H_1$, we employed a multiple regression (MR) model. Altogether, we have five different SVM classifiers, each employed a ten-fold cross validation using 1 month (January, 2012) of social media data. The results of the multi-dimensional classification across three types of social media are shown in Table 2. Table 3 shows the accuracy of the multi-dimensional classification. We also apply the Naive Bayes method to classify the same data to compare with the SVM method. The multi-dimensional classification algorithm (SVM) automatically labeled sentences of the five dimensions of IM with 75.28% accuracy compared to 70.91% accuracy from using the Naive Bayes method. Generally, accuracy of five-dimension classification is around 60%.

Variance inflation factor (VIF) for each variable is shown in Table 4 and all VIF values are less than 5 indicating no multicollinearity issue [21]. Multiple regression results are also shown in Table 4. We find the model is significant with F value of 49.69 and p value < 0.001. The proportion of the variance accounted for by the model is 51.4%. The coefficient of ingratiation (0.267, p-value = 0.015), intimidation (0.761, p-value = 0.003), organizational promotion (0.453, p-value = 0.009) and supplication (0.540, p-value = 0.005) were all found to be statistically significant since p < 0.5. Based on these results $H_{1a}$, $H_{1b}$, $H_{1c}$ and $H_{1e}$ were all supported.
However, the coefficient of exemplification (coefficient = 0.048, SE = 0.481, t-statistic = 0.101, p = 0.516) was not significant (p > 0.5). Based on these results Hypothesis 1, which suggests social media usage in IM strategies has a positive association with financial performance, is only partially supported.

Table 2. Result of Multi-Dimensional Classification (Sentences)

<table>
<thead>
<tr>
<th>Source Dimension</th>
<th>Blogs</th>
<th>Forums</th>
<th>Websites</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ingratiation</td>
<td>2,474</td>
<td>1,950</td>
<td>4,538</td>
<td>8,962</td>
</tr>
<tr>
<td>Intimidation</td>
<td>7,423</td>
<td>5,623</td>
<td>12,345</td>
<td>25,391</td>
</tr>
<tr>
<td>Organizational Promotion</td>
<td>3,876</td>
<td>2,892</td>
<td>7,821</td>
<td>14,589</td>
</tr>
<tr>
<td>Exemplification</td>
<td>1,549</td>
<td>1,323</td>
<td>3,512</td>
<td>6,384</td>
</tr>
<tr>
<td>Supplication</td>
<td>4,059</td>
<td>3,267</td>
<td>8,924</td>
<td>16,250</td>
</tr>
</tbody>
</table>

Table 3. Classification Accuracy

<table>
<thead>
<tr>
<th>Source Dimension</th>
<th>Naive Bayes</th>
<th>SVM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ingratiation</td>
<td>71.37%</td>
<td>75.23%</td>
</tr>
<tr>
<td>Intimidation</td>
<td>72.23%</td>
<td>74.67%</td>
</tr>
<tr>
<td>Organizational Promotion</td>
<td>69.52%</td>
<td>72.39%</td>
</tr>
<tr>
<td>Exemplification</td>
<td>64.46%</td>
<td>76.81%</td>
</tr>
<tr>
<td>Supplication</td>
<td>66.34%</td>
<td>70.56%</td>
</tr>
<tr>
<td>Overall</td>
<td>70.91%</td>
<td>75.28%</td>
</tr>
</tbody>
</table>

Table 4. Multiple Regression Results

<table>
<thead>
<tr>
<th></th>
<th>Coefficients</th>
<th>Standard Error</th>
<th>t Stat</th>
<th>p-value</th>
<th>VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>0.385</td>
<td>3.775</td>
<td>0.102</td>
<td>0.031</td>
<td>1.000</td>
</tr>
<tr>
<td>Ingratiation</td>
<td>0.267</td>
<td>0.246</td>
<td>1.089</td>
<td>0.015</td>
<td>1.347</td>
</tr>
<tr>
<td>Intimidation</td>
<td>0.761</td>
<td>0.295</td>
<td>2.582</td>
<td>0.003</td>
<td>1.205</td>
</tr>
<tr>
<td>Organizational Promotion</td>
<td>0.453</td>
<td>0.276</td>
<td>1.64</td>
<td>0.009</td>
<td>1.714</td>
</tr>
<tr>
<td>Exemplification</td>
<td>0.048</td>
<td>0.481</td>
<td>0.101</td>
<td>0.516</td>
<td>2.130</td>
</tr>
<tr>
<td>Supplication</td>
<td>0.540</td>
<td>0.207</td>
<td>2.608</td>
<td>0.005</td>
<td>1.862</td>
</tr>
<tr>
<td>Number of employees</td>
<td>0.031</td>
<td>0.634</td>
<td>0.093</td>
<td>0.738</td>
<td></td>
</tr>
</tbody>
</table>
6. Discussion

Impression management (IM) means to manage the impressions of a firm that customers and other stakeholders possess. In this paper we proposed social media as an important IM platform that relates a firm’s financial performance as a function of a firm’s communicated impressions. The implications of this study are significant for organizations that plan to employ social media in IM. Simply stated, there are financial performance enhancement opportunities heretofore never reported in the literature for firms that utilize social media using the appropriate IM strategy. Specifically, social media usage in direct-assertive IM strategies of ingratiation, intimidation, organizational promotion and supplication will result in positive improvement of a firm’s financial performance.

While Elsbach et al. [18] found intimidation to be a harmful tactic, the results in this study have shown it is actually a helpful tactic when channeled through corporation websites to achieve a sense or perception of power of one firm over another. What is suggested here is if a firm dominates its competitors by being more powerful in some way, it can financially benefit from this type of IM. A firm that currently possesses competitive advantages can communicate these competitive strengths to customers and other stakeholders through corporation websites and other IM means. In turn, the communication should translate into improved financial performance.
We have a different situation with the IM strategy of supplication that helps to validate the reasoning of what the respondents have reported. On the other side of strength there is weakness. While intimidation is connected to strength, supplication is connected to weakness. As if to counter the significance of intimidation and financial performance, the significant relationship between supplication and financial performance achieves a positive outcome by the appearance of vulnerability or weakness. How can it be that an organization experiences a positive financial performance communicating two diametrically opposed IM strategies representing differing points of view? This apparent inconsistency can be explained with an athletic sporting analogy relating fans (customers) with their teams (companies). On one hand many fans root for teams because the teams are powerful, and they know such teams will put up a dominating fight. Fans actually want to see situations where their team dominates an opponent and will overwhelm when the game is played. On the other hand, fans demonstrate loyalty by rooting for a team that is a clear underdog to a more dominant team. These extremes of strength and weakness bring out significant support from fans in the same way that the statistical results demonstrate statistical significance from the sample of respondents in our survey. Business organizations that either portray themselves as powerful or that seek assistance because they have a weakness should financially benefit from those communications.

The statistically insignificant result of exemplification in this study also reveals an opportunity to avoid unnecessary effort. The IM strategy of exemplification is characteristic of aggrandizement. It is commonplace for firms to speak well of themselves. That IM perspective is expected by customers and other stakeholders. As such, efforts of self-promotion seeking to promote the firm to be perceived as attractive, highly effective, successful or socially responsible will not necessarily cause any financial impact. This is not to say that a firm should stop
exemplification through social media platforms, but rather, substantial, additional efforts are not likely to result in significant improvements in financial performance.

7. Conclusions

The data for this study were collected utilizing a support vector machine (SVM) for text mining that incorporates a learning algorithm set, training corpus, and domain knowledge database. In addition, a validation step to ensure its accuracy was undertaken. Using 150 randomly selected, publicly traded companies in the pharmaceutical industry, social media data were gathered from blogs, forums, and corporate websites. Based on this data, a multiple regression model was developed to test the hypotheses presented in this study. We believe the modeling approach used in this paper makes a contribution to literature in that it provides a valid means of capturing and transforming the social media data for research purposes.

From the analysis using our methodological approach we conclude social media’s usage in IM strategies have only a partial, positive connection to financial performance. More precisely, ingratiation, intimidation, organizational promotion and supplication are social media IM strategies that are significantly related to financial performance, while exemplification is not. These conclusions are based on the direct-assertive organizational impression management social media data. Suggestions on the social media usage in IM strategies were also discussed.

Primary limitations of this study are related to the sample size and the methodological approach used to test the hypotheses. It can always be argued that sample size is not sufficient to accurately capture the behavior sought in a study. In this research the added step of assessing the accuracy of the data was undertaken to demonstrate some degree of accuracy in the resulting findings. We believe the 150 organizations and tens of thousands of sentences (i.e., data) used
in this study and combined with the accuracy measurement provides a reasonable degree of certainty regarding the findings.

Another possible limitation is the use of the particular set of five dimensions of IM. We acknowledge that others could have been selected, but these five were chosen and suggested by Mohamed et al. [35] and were a logical set for the exploratory nature of this study. We suggest other IM strategies, including indirect ones, should be considered in future studies, since they might relate to financial performance. By using the modeling approach presented in this paper researchers have a valid means of exploring this suggested research path.
Appendix

Figure 2: Text Mining Procedure

Figure 1: Social Media Use in IM and Its Impact on Financial Performance
References


Founded in 1892, the University of Rhode Island is one of eight land, urban, and sea grant universities in the United States. The 1,200-acre rural campus is less than ten miles from Narragansett Bay and highlights its traditions of natural resource, marine and urban related research. There are over 14,000 undergraduate and graduate students enrolled in seven degree-granting colleges representing 48 states and the District of Columbia. More than 500 international students represent 59 different countries. Eighteen percent of the freshman class graduated in the top ten percent of their high school classes. The teaching and research faculty numbers over 600 and the University offers 101 undergraduate programs and 86 advanced degree programs. URI students have received Rhodes, Fulbright, Truman, Goldwater, and Udall scholarships. There are over 80,000 active alumnae.

The University of Rhode Island started to offer undergraduate business administration courses in 1923. In 1962, the MBA program was introduced and the PhD program began in the mid 1980s. The College of Business Administration is accredited by The AACSB International - The Association to Advance Collegiate Schools of Business in 1969. The College of Business enrolls over 1400 undergraduate students and more than 300 graduate students.

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The creation of this working paper series has been funded by an endowment established by William A. Orme, URI College of Business Administration, Class of 1949 and former head of the General Electric Foundation. This working paper series is intended to permit faculty members to obtain feedback on research activities before the research is submitted to academic and professional journals and professional associations for presentations.

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