SOCIAL MEDIA ADOPTION BY CORPORATIONS: AN EXAMINATION BY PLATFORM, INDUSTRY, SIZE, AND FINANCIAL PERFORMANCE

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ABSTRACT

More than ever, companies are tweeting, posting, blogging, and generally using social media networks to communicate with their consumers, employees, and other stakeholders. With the emergence of new social networks, companies are in the process of testing which network works best for them. Since consumers have different preferences and needs that make one social media platform more desirable than another, many companies use multiple platforms. This study empirically charts the current adoption of social media by Fortune 500 companies. The purpose of this study is to analyze which social media platforms are being used by major corporations and whether adoption differs by industry, firm size, and growth opportunity. Company financial information is examined to determine if there is a relationship between higher use of social media and superior financial performance.

Key words: social media, marketing strategy, marketing mix, digital marketing, customer relationship management

INTRODUCTION

Today's marketplace is experiencing a torrent of online communications being transmitted through social media. Business managers are adapting to the reality that consumers are using social media platforms to spread information concerning companies and products. More than ever, companies are joining in on tweeting, posting, blogging, and generally using social networks to communicate with their consumers, employees, and other stakeholders. According to one study, over three-fourths of businesses are using social media to accomplish their business objectives (Alexander, 2011, September). Researchers predict that this trend of increasing social media adoption will continue (Barnes, 2010; Harris & Rae, 2009; Weinberg & Pehlivan, 2011). For some companies, social media may become the primary communication channel to connect with customers (Baird & Parasnis, 2011).

While firms cannot control the information that consumers disseminate through social media, it is essential for businesses to have a presence in the social media arena. Many researchers support the idea that social media should be part of a firm's marketing mix and included in standard marketing management practices (Li & Bernoff, 2008; Mangold & Faulds, 2009). Many corporations are following this advice by increasingly using social media as a marketing tool. In 2010, 69% of Fortune 2000 companies were using social media (McCorkindale, 2010). A study of Inc. 500 and Fortune 500 companies that same year showed that social media was becoming a vital part of a company's marketing strategy. With the emergence of new social networking sites, this study found a shift in which social media platforms are preferred by businesses (Barnes, 2010). Public relations practitioners considered Facebook to be the most important new communications venue in 2010. Next in line were Twitter, LinkedIn, and YouTube (Wright & Hinson, 2010).

In a study of Fortune 50 companies, most companies were utilizing social media, but not to its full extent. Some companies were not on Facebook, being uncertain how this platform fits into the marketing strategy. Companies were incorporating customer relationship management into their Web sites and blogs, but neglected the social networking sites (McCorkindale, 2010).

Measuring the effectiveness or return on investment (ROI) of social media remains a challenge. There is not an industry standard for measuring the value of social media. Public relations experts are making recommendations on how to measure to the effectiveness of social media campaigns, but studies indicate that practitioners are not actively tracking social media ROI (Briones, Kucha, Liua, & Jinb, 2011; Fisher, 2009; Solis & Breakenridge, 2009; Taylor & Kent, 2010). Many marketers do not measure social media campaigns because they do not have the personnel or financial resources to track and analyze coverage. Some marketers say that social media has value by simply engaging the public and providing the company with an online presence (Fitch, 2009, p. 11). Many researchers agree that businesses are still in the process of determining the best way to utilize social media (Fitch, 2009; Stelzner, 2010; Taylor & Kent, 2010).

Even though research suggests that large companies use mainstream social media channels, the adoption of social media is not universal. Further, there is little evidence about the extent to which social media has been adopted by business-to-business firms (Brennan & Croft, 2012). The purpose of this study is to empirically examine which social media platforms are being used by the Fortune 500 and to determine if there is a significant relationship between higher use of social media and superior financial performance. This study also examines differences in social media adoption by industry type and firm size.

WHO'S USING SOCIAL MEDIA?

Every day billions of people are engaged with social media, creating trillions of connections (Hansen, Shneiderman, & Smith, 2011). Social media is not only a tool for the exchange of information; it can be an influential component of the consumer's decision making process. Online messages from peers have become influential in shaping various aspects of consumer behavior such as awareness, attitudes, and purchasing (Mangold & Faulds, 2009; Mangold & Smith, 2011). According to one survey, sixty percent of people on social networks either write a review or share an existing review with friends (Johnson, 2011). Consumers are using reviews on social media sites to reduce their cognitive costs in purchasing decisions. In this way, social media is providing product and company information that helps make the purchasing decision easier (Liu, Karahanna, & Watson, 2011). Social media has expanded the Internet not only to be a source of information, but also a source of influence (Hanna, Rohma, & Crittendenb, 2011).

There are literally hundreds of different social media platforms available, these include social networking, wikis, podcasts, shared photos and videos, and discussion groups. Social networks, including blogs, have grown in usage by people and companies. Whereas, message boards, wikis, and podcasting have leveled off or declined in usage (Barnes, 2010). Research suggests that 80 percent of active Internet users visit either social networks or blogs (Johnson, 2011).

Facebook has the largest user base of any social media platform in the world, with over 700 million users (Alexander, 2011, November). More than 700,000 businesses have active pages on Facebook (Briones et al., 2011). Companies can create "business pages" on Facebook with which to promote their brands. Some business-to-business (B2B) firms are endeavoring to use social media, thus positioning themselves as pioneers in being market-driven and building relationships with stakeholders (Brennan & Croft, 2012).

Of all the sites on the World Wide Web, social media networks are among the most popular. Facebook is ranked as the second most popular website, YouTube ranks third, Twitter is tenth, and LinkedIn is number thirteen. What is the most popular website? That spot is held by the Web's highly regarded search engine, Google (Alexa, 2012).

Marketers have begun using social media 'mission control' centers for monitoring and responding to social media activity in real time (Weinberg & Pehlivan, 2011). Some companies call this their 'war room.' Some of these war rooms are generated for special events, such as the Super Bowl. Several advertisers of Super Bowl 2013, such as Coke and Oreo, had mission control centers operating during the game in order to engage in real time game-related conversations through social media. A team of company marketers along with ad agency personnel monitored conversations, analyzed them, and crafted responses in the matter of minutes. Oreo even made use of the power outage experienced in the middle of the Super Bowl by tweeting that you can still "dunk in the dark."

However, not all companies are welcoming the use of social media. According to Barnes (2010), the most cited reasons for not using any form of social media were limited resources and legal restrictions. Some companies may choose to avoid social media because they cannot control the content and they do not want to risk ethical or legal repercussions for publicly made statements. Social media may not be compatible with the marketing strategy of some companies. For companies whose revenues come from just a few customers, personal selling is a better communication tool than social media. Another reason for not using social media may be a combative working environment wherein employees use the platform to lambast management (Barnes, 2010).

PURPOSE OF SOCIAL MEDIA

Besides dialogue and interaction with consumers, the array of social media venues can be used to meet specific needs and purposes. Companies have incorporated social media into their marketing mix in order to accomplish an array of goals including communicating with stakeholders and marketing their brands. Some companies use social media internally to facilitate an open and collaborative style of management (Harris & Rae, 2009). Approximately 80% of companies are using social media to recruit employees (Alexander, 2011, September; Barnes, 2010). Other possible purposes for using social media include engaging consumers, creating brand awareness, adding value to a brand, and staying abreast of consumer opinions. Social media can also be used to influence consumer attitude about a brand or company (Weinberg & Pehlivan, 2011).

Since there is an abundance of social media available, marketers are testing out several major social networking sites (Crittenden, Peterson, & Albaum, 2010). Many companies use multiple forms of social media. This is because consumers use and respond to these media in different ways. Consumers have personal preferences and different needs that make one platform more desirable than another. The platforms also vary in terms of functionality, for instance, Twitter posts are not longer than 140 characters, whereas blogs tend to be up to a page in length (Bernoff & Li, 2008).

Weinberg and Pehlivan (2011) identify two factors for classifying social media: depth of information and half-life of information. A company may choose a social media platform depending on how well these two factors comply with their marketing objectives. Information depth refers to rich content along with the amount and diversity of perspectives. Social networks like Facebook provide depth of information due to many users providing an array of information and opinions. The second factor, half-life of information, refers to the longevity of the information online. For example, blogs have a long life, whereas tweets are short-lived. A company may choose to use Twitter if its objective is to increase brand awareness or stay top-of-mind through short conversations. On the other hand, a company will choose a social network like Facebook if the objective is to convey a significant amount of information, pictures, or product reviews.

VALUE OF SOCIAL MEDIA

According to one study, the number-one benefit of using social media is that it helps the company stand out in a noisy world. A significant 88% of marketers indicated that their social media efforts have generated more exposure for their businesses. Nearly two-thirds of marketers indicated a rise in search engine rankings as a benefit of social media marketing. As search engine rankings improve, so will business exposure (Stelzner, 2011). Consumers perceive social media as a trustworthy source of product information, more trustworthy than corporate-sponsored marketing messages via the traditional venues (Foux, 2006).

Some think that it is a proven fact that social media returns a positive ROI for businesses (Alexander, 2011, September). However, other researchers say there is too much ambiguity in measuring the effectiveness of social media to give any absolutes. In one study, a third of the respondents felt they were still waiting on their social media efforts to provide any measureable benefits (Culnan, McHugh, & Zubillaga, 2010). Some of the discrepancy here can be attributed to how the user is measuring value. There is growing corporate interest in using social media to create online customer communities. Value is derived from online customer communities who are so engaged with the company that they become loyal customers and even champions for the brand. These types of customers are instrumental in facilitating viral marketing and driving traffic to the company site.

Due to consumers creating and sharing product and company information via social media, they have more muscle in the marketplace. This "groundswell" (Li & Bernhoff, 2008) is impacting consumer perception of a company. Consumers have the ability to reposition companies and products (Fournier & Avery, 2011; Gerzema & D'Antonio, 2011). In other words, consumers can alter the image of a brand by creating and sharing information amongst themselves. This alteration may be positive or negative. Regardless, consumers are increasing brand awareness. Brand research acknowledges the active role that consumers play in defining the meaning of a brand (Vallaster & von Wallpach, 2013). Companies who do not have a presence in social networking may be at a disadvantage in competing for the consumer's attention.

Besides using social media to engage with the consumer, companies may benefit from the mere exposure effect, where consumers prefer a company or product to which they have already been exposed. This familiarity with the brand that comes through social media can influence the consumer's purchase decision (Mangold & Smith, 2011). Social media facilitates online word-of-mouth, or viral marketing. Information related to a company or product can be transmitted in an exponentially growing way (Kaplan & Haelein, 2011). According to Keller (2007), word-of-mouth has become the most influential communication channel.

According to Baird and Parasnis (2011), IBM consultants, companies need to integrate social media and customer relationship management into a new paradigm – Social Customer Relationship Management (Social CRM). Under Social CRM, the firm facilitates collaborative social experiences and dialogues through which the customer can find value. Social media is most effective when aligned with traditional marketing activities that encourage an open relationship with customers (Wymer, 2010). Relying on the traditional promotional mix to create integrated marketing communications is giving way to this new paradigm that includes multiple social media platforms as tools in designing and implementing marketing strategies. Marketers cannot ignore social media because it is becoming the de facto modus operandi for disseminating product information (Mangold and Faulds, 2009).

Value can also be derived through additional sales and consumer-generated ideas for product development (Culnan, McHugh, & Zubillaga, 2010). Within this search for information, consumers are also providing their ideas for products and services. Companies that are receptive to consumer comments can gain insight into consumer preferences and, perhaps, innovative ideas for new products (Mangold & Smith, 2011). Interactive social media platforms have contributed to a 24/7 collaborative marketplace that have fundamentally changed the way marketers engage with their consumers (Hanna, Rohma, & Crittendenb, 2011). Since the benefits and value derived from using social media remains unclear, measuring the payback is also ambiguous. There are multiple potential benefits from using social media, and the value derived may be seen in the long-term rather than short-term.

METHODOLOGY AND RESEARCH QUESTIONS

This paper examines social networking platforms used by Fortune 500 companies. A sample of 250 companies was randomly selected in February 2013 from CNN's list of these largest American corporations (CNN, 2011). Any social media platform, including company blogs, was eligible for inclusion in the study. If the company website had a link to the social networking site, then it was included in the analysis.

The Fortune 500 is composed of leading companies that drive the American economy and, to a large extent, the world economy. Research has shown a continued steady adoption of social media by the Fortune 500; this reveals the mounting importance of social media in the world of business (Barnes, 2010; McCorkindale, 2010). With the emergence of additional social media platforms and companies still exploring which platforms work best for them, the ranking of preferred social media continues to shift for corporate usage. Many companies use multiple forms of social media since consumers utilize various platforms for different purposes. Determining the current status of corporate social media adoption is the motivation behind the first two research questions:

RQ1 W*hich social media platforms are being used by corporations?*

RQ2 *Are there differences in social media adoption by (a) industry type, (b) firm size (i.e., total assets, total sales, and market value of equity), or (c) growth opportunity (i.e., market to book ratio)?*

Since the benefits and value derived from using social media remains unclear, measuring the payback is also ambiguous. However, it is worth investigating whether social media adoption is linked to corporate financial performance, thus the third research question follows:

RQ3 Is social media adoption by companies connected to superior financial performance?

For the second and third research questions, financial and industry data supplement the social media outlet data. These supplemental data were obtained from the Compustat North America Fundamental Annual database (Compustat, 2013) for each of the Fortune 500 firms included in the sample (Fortune, 2011). Compustat data are routinely used for financial analysis in finance and accounting research. The Compustat database contains more than 300 financial statement data items for each of the publicly held companies in the United States and Canada.

The following variables were collected: standard industry classification code, total assets, total sales revenue, fiscal-yearend common stock price, number of common shares outstanding, and total liabilities. Assets and sales revenue were selected because they are indicators of firm size (Reineking, Chamberlain, Rudolph, & Smith, 2012). The amount of total assets shows the total economic resources of the company. The amount of total sales revenue indicates the total value of goods or services sold by the company to its customers. Fiscal-yearend common stock price and the number of common shares outstanding were selected to compute market value of equity. Market value of equity, computed as fiscal-yearend common stock price multiplied by the number of common shares outstanding, is also generally regarded as an indicator of firm size and it is a key measure of a firm's financial performance (Blazovich, Smith, & Smith, 2013; Smith, Huang, & Smith, 2012).

Variables fiscal-yearend common stock price, number of common shares outstanding, total assets, and total liabilities were used to compute the market-to-book ratio (MTB), a common indicator of company growth opportunities (Huang, Pereira, & Zhang, 2011). MTB is computed as market value of equity (i.e., fiscal-year-end common stock price multiplied by the number of common shares outstanding) divided by total stockholders' equity (i.e., total assets less total liabilities). In addition to market value of equity, several financial performance measures are examined, including sales divided by total assets, return on total assets (computed as net income divided by total assets), and return on equity (computed as net income divided by total equity) (Blazovich & Smith, 2011).

Two industry classification systems are used in this study. The first broadly categorizes companies as manufacturing, retail or service. The second industry classification system groups companies by more specific industry classifications, specifically their two digit standard industry classification (SIC) code.

Listed below are descriptions of the social media platforms that were found in this study's sample of company websites.

1. *Facebook*: an online social networking service. Users may create a personal profile, add other users as friends, and exchange messages, including automatic notifications when they update their profile. Additionally, users may join common-interest user groups, organized by workplace, school or college, or other characteristics (Facebook, 2013).

2. *Twitter:* an online social networking service and microblogging service that enables its users to send and read text-based messages of up to 140 characters (Twitter, 2013).
3. *YouTube*: a video-sharing website where users can upload and view videos (YouTube, 2013).
4. *LinkedIn*: a social networking website for people in professional occupations (LinkedIn, 2013).
5. *Instagram*: an online photo-sharing and social networking service that enables its users to take pictures and share them on a variety of social networking services, including Facebook or Twitter (Instagram, 2013).
6. *Google+*: a social networking service. Unlike other social networks which are generally accessed through a single website, Google has described Google+ as a "social layer" consisting of not just a single site, but rather an overarching "layer" which covers many of its online properties (Google+, 2013).
7. *Foursquare*: a social networking website for mobile devices. Users can interact with their environment by "check in" at venues using a mobile website, text messaging or a device-specific application by selecting from a list of venues the application locates nearby (Foursquare, 2013).
8. *Pinterest*: a photo sharing website that allows users to create and manage theme-based image collections such as events, interests, hobbies, and more. Users can browse other people's pinboards (Pinterest, 2013).
9. *Tumblr***:** a microblogging platform and social networking website. The service allows users to post multimedia and other content to a short-form blog. Users can follow other users' blogs (Tumblr, 2013).
10. *Company Blog*: a discussion or informational site. Blogging is a form of social networking because it is interactive, allowing visitors to leave comments. Companies may use it for online brand advertising (Blog, 2013).

FINDINGS

This study finds that over 80% of Fortune 500 firms use social media. The average firm uses nearly three (mean = 2.9) social media platforms, as shown in Table 1. However, this average includes all the firms who do not use social media. Nearly 20% of the sample (49 firms) use no social media. If these firms are excluded from the computation, then the average firm that actively engages with social media uses 3.6 different platforms.

Table 1
MEAN NUMBER OF SOCIAL MEDIA PLATFORMS USED BY A FIRM

Mean	2.92
Maximum	9
Minimum	0
Standard Deviation	1.96
N	250

The number of social media platforms used by a firm ranged from 0 to 9. The one firm using the largest number of social media platforms is AT&T with 9 different social networks. Only 6 percent of firms use a singular form of social media. Almost 43 percent of the firms use either 3 or 4 social media platforms. The percentage of firms using various numbers of social media platforms are shown in Table 2.

Table 2
NUMBER OF SOCIAL MEDIA PLATFORMS USED BY FIRMS

Number of Platforms	Used by % of Firms
0	19.6%
1	6.4%
2	11.2%
3	20.4%
4	22.4%
5	12.4%
6	5.2%
7	2.0%
8	0.0%
9	0.4%

Test of Research Question 1

Research Question 1 asks which social media platforms are being adopted by corporations. Over 70% of firms are using Twitter and Facebook, as shown in Table 3. YouTube is the next most commonly adopted social media, with almost 60% of firms using it. The interesting point about these findings is that they may show a shift from former social media rankings cited in the literature review. Public relations practitioners considered Facebook to be the most important communications venue in 2010. Next in line was Twitter, LinkedIn, and YouTube (Wright & Hinson, 2010). Our current study found that Twitter is equal to Facebook in terms of corporate adoption. Firms may be using Twitter's format of ongoing short conversations to increase brand awareness and keep their brands uppermost on consumer's minds.

Table 3
SPECIFIC SOCIAL MEDIA PLATFORMS USED BY FIRMS

Social Media	Used by % of Firms
Twitter	73.2%
Facebook	72.0%
YouTube	58.8%
LinkedIn	28.8%
Company Blog	27.2%
Google+	15.2%
Pinterest	10.8%
FourSquare	2.0%
Instagram	3.6%
Tumblr	0.4%

An interesting finding is that YouTube is in third place in corporate adoption. YouTube's immense popularity as a search engine may be a factor. Some may be surprised that LinkedIn is a distant fourth with less than 30% of firms using it.

Test of Research Question 2

Research Question 2 asks if there are differences in social media adoption by industry type, firm size, or growth opportunity. Firms were categorized into manufacturing, retail, and service. There is not a significant difference in the mean adoption of social media among industry types, with the firms in each industry using nearly three social media platforms. However, there are differences in which platforms are being used, as shown in Table 4. For manufacturing firms, Facebook and Twitter are tied as the most used platforms, with YouTube in second place. For retail firms, Facebook has a commanding lead as the most used platform, while Twitter and YouTube are in second and third place respectively. With about one-fourth of retail firms using Pinterest, this industry is the heaviest user of that platform. However, relatively few retailers use LinkedIn, while a third of manufacturing and service firms use that platform.

Table 4
FIRM USE OF SOCIAL MEDIA BY INDUSTRY TYPE

Industry	N	Mean Outlets	Twitter	Facebook	You Tube	Linked In	Blogs	Google+	Pinterest	Four Square	Instagram	Tumblr
Manufacturing	117	2.73	**68.4%**	**68.4%**	58.1%	31.6%	23.9%	12.8%	6.8%	-	2.6%	-
Retail	49	3.08	75.5%	**85.7%**	63.3%	16.3%	16.3%	10.2%	**26.5%**	4.1%	8.2%	2.0%
Service	84	3.10	**78.6%**	69.0%	57.1%	32.1%	**38.1%**	21.4%	7.1%	3.6%	2.4%	-
Total Number of Sample Firms	250	2.92	73.2%	72.0%	58.8%	28.8%	27.2%	15.2%	10.8%	2.0%	3.6%	0.4%

For service firms, Twitter has a commanding lead as the most used platform. Facebook and YouTube are in second and third place respectively. The service industry is the heaviest user of company blogs. Almost 40% of service firms have a blog.

Table 5 provides details regarding the number of social media platforms used according to firm size, as measured by total assets, total sales, and market value of equity. Firms were categorized into four quartiles with each quartile containing approximately sixty companies. For each measure, the quartile with the largest firms (Q4) used the most social media platforms; the mean number of platforms used ranged from 3.5 to 3.7. The mean number of platforms used the smallest firms (Q1) ranged from 2.2 to 2.7. In general, larger firms, as measured by total assets, sales, and market value of equity, use more social media platforms than do smaller firms. To determine whether significant differences in use of social media platforms among firms categorized by total assets, sales, and market value of equity, ANOVA was used. In all three measures of size, total assets sales, and MVE, a significant difference was found ($p<.05$).

Table 5 MEAN FIRM USE OF SOCIAL MEDIA BY VARIOUS MEASURES OF FIRM SIZE						
Quartile	**Mean Total Assets (in thousands)**	**Mean Platforms**	**Mean Total Sales (in thousands)**	**Mean Platforms**	**Mean Market Value of Equity (MVE)**	**Mean Platforms**
Q1	4,218.46	2.7	5,128.49	2.6	2,759.32	2.2
Q2	10,913.94	2.5	9,057.03	2.6	8,095.38	3.2
Q3	25,046.77	2.9	17,189.14	2.9	17,901.79	2.7
Q4	211,511.37	3.5	71,803.27	3.6	79,471.34	3.7

Quartile categories are defined as follows:

Q1 represents the smallest firms in our sample. Q1 includes firms with the lowest quartile as defined by mean total assets (sales, MVE) ratio; firms with mean total assets (sales, MVE) ratios less than or equal to 6,839.91 (7,066.00, 4,872.68).

Q2 includes firms within the 2nd quartile as defined by mean total assets (sales, MVE) ratio; firms with mean total assets (sales, MVE) ratios greater than 6,839.91 (7,066.00, 4,872.68) and less than or equal to 16,111.63 (11,202.00, 11,512.30).

Q3 includes firms within the 3nd quartile as defined by mean total assets (sales, MVE) ratio; firms with mean total assets (sales, MVE) ratios greater than 16,111.63 (11,202.00, 11,512.30) and less than or equal to 35,067.00 (26,662.00, 28,321.80).

Q4 represents the largest firms in our sample. Q4 includes firms within the highest quartile as defined by mean total assets (sales, MVE) ratio; firms with mean total assets (sales, MVE) ratios higher than 35,067.00 (26,662.00, 28,321.80).

Firms were categorized according to growth opportunity, as measured by market-to-book ratio. Again, four quartiles were used with each quartile containing approximately sixty companies. Quartile 4 (Q4) represents the highest growth firms in the sample, while quartile 1 (Q1) represents the lowest growth firms. There was no notable difference in social media adoption among the market-to-book quartiles, as shown in Table 6.

Table 6 MEAN FIRM USE OF SOCIAL MEDIA BY GROWTH OPPORTUNITY, AS MEASURED BY MARKET-TO-BOOK RATIO QUARTILES		
Quartile	**Mean Market-to-Book**	**Mean Platforms**
Q1	(1.0)	2.6
Q2	1.6	2.8
Q3	2.4	3.2
Q4	23.9	3.1

Quartile categories are defined as follows:

Q1 represents the lowest growth firms in our sample. Q1 includes firms with the lowest quartile as defined by mean market-to-book ratio; firms with mean market-to-book ratios less than or equal to 1.2833899.

Q2 includes firms within the 2nd quartile as defined by mean market-to-book ratio; firms with mean market-to-book ratios higher than 1.2833899 and less than or equal to 1.924420

Q3 includes firms within the 3nd quartile as defined by mean market-to-book ratio; firms with mean market-to-book ratios higher than 1.9244209 and less than or equal to 3.179605

Q4 represents the highest growth firms in our sample. Q4 includes firms within the highest quartile as defined by mean market-to-book ratio; firms with mean market-to-book ratios higher than 3.1796055.

Test of Research Question 3

Research Question 3 asks if social media adoption is connected to superior financial performance. To answer this question, a composite of variables commonly used to measure financial performance are examined; specifically return on assets, return on equity, sales to assets, and market value of equity are tested. For the analysis, firms are classified into one of three categories: no social media outlets used, one to three different outlets, or four or more social media outlets used. One-way ANOVAs (Kruskal-Wallis one-way ANOVAs) are conducted to test for an association between the mean (median) financial performance measure (i.e., return on assets, return on equity, sales to assets, market value of equity) and the number of social media outlets used. All four (three of the four) parametric ANOVA (Kruskal-Wallis one-way ANOVA) tests resulted in a failure to reject the null hypothesis, as shown in Table 7. Thus, for this sample, increased adoption of social media platforms is not related to differences in financial performance overall. This corresponds to the earlier study by Culnan, McHugh, and Zubillaga (2010). At the same time, there may be benefits other than these specific financial performance indicators, and there may even by financial performance benefits that are observable over the long-term. Further, the current study does not distinguish quality of social media platforms. For example, a well-maintained Facebook page might have a financial impact, whereas a poorly-maintained Facebook page would not.

Table 7
MEAN FIRM FINANCIAL PERFORMANCE BY SOCIAL MEDIA USE

Measure of Financial Performance	Firms use of Social Media Outlets	N	Mean [a]	Standard Deviation	Median [b]
Return on Assets	0 outlets	49	0.043	0.045	0.044
	1 - 3 outlets	94	0.062	0.054	0.056
	4 or more	107	0.058	0.058	0.051
Return on Equity	0 outlets	49	0.984	4.937	0.191
	1 - 3 outlets	94	0.427	2.381	0.153
	4 or more	107	(0.057)	1.395	0.144
Sales to Asssets	0 outlets	49	1.293	1.415	0.884
	1 - 3 outlets	94	1.349	1.147	1.058
	4 or more	107	1.000	0.738	0.783
Market Value of Equity	0 outlets	47	20,476.740	46,346.700	5,182.480 †
	1 - 3 outlets	90	25,387.750	48,793.260	11,194.690 †
	4 or more	104	31,335.880	42,421.860	14,138.460 †

Variables are defined as follows :
All financial variables are obtained from Compustat North America Fundamental Annual database

Return on assets = Net income / Total assets
Return on equtiy = Net Income / Total equity
Sales to assets = Sales / Total assets
Market value of equity = Price per share x Shares outstanding

† The non-parametric Kruskal-Wallis test results indicate that the null hypothesis should be rejected ($p = 0.0066$) for MVE. Thus the conclusion is that MVE is associated with the number of social media outlets.

[a] For each measure of financial performance analysis of variance results indicate that the null hypothesis cannot be rejected ($F > 0.05$). Thus the conclusion is that financial performance is not associated with the number of social media outlets.

[b] The non-parametric Kruskal-Wallis test results indicate that the null hypotheses cannot be rejected ($p > 0.05$) for ROA, ROE and Sales/Assets. Thus the conclusion is that ROA, ROE, and Sales/Assets are not associated with the number of social media outlets.The Kruskal-Wallis test results require we reject the null hypothesis for MVE.

CONCLUSIONS, LIMITATIONS, AND FUTURE RESEARCH

Businesses are increasingly using social media to communicate with consumers and stakeholders. Social media has expanded the Internet not only to be a source of information, but also a source of influence. There is growing corporate interest in using social media to create online customer communities. Value is derived from online customer communities who are so engaged with the company that they become loyal customers and even champions for the brand. There are multiple potential benefits from using social media, and the value derived may be seen in the long-term rather than short-term.

Dialogue and interaction with consumers is what social media is all about, however, different platforms can be used to accomplish specific purposes. With an abundance of social media platforms available, marketers are using multiple social networking sites to reach their constituents. The purpose of this study is to analyze which social media platforms are being adopted by the Fortune 500 and whether there is a significant relationship between higher adoption of social media and superior financial performance. This study also examines differences in social media adoption by industry type, firm size, and firm growth potential.

Over 80% of Fortune 500 firms use social media, with the average firm using nearly three (mean = 2.9) social media platforms. Over 70% of firms are using Twitter and Facebook. Almost 60% of firms use YouTube. LinkedIn is a distant fourth with less than 30% of firms using it.

There is not a significant difference in the mean adoption of social media between industry types; however, there are differences in which platforms are being used. For manufacturing firms, Facebook and Twitter are tied as the most used platforms, with YouTube in second place. For retail firms, Facebook has a commanding lead as the most used platform, while Twitter and YouTube are in second and third place respectively. With one fourth of retail firms using Pinterest, this industry is the heaviest user of that platform. Relatively few retailers use LinkedIn, while a third of manufacturing and service firms use that platform. For service firms, Twitter has a commanding lead as the most used platform. Facebook and YouTube are in second and third place respectively. The service industry is the heaviest user of company blogs and Google+.

The findings of the financial performance analysis revealed no significant benefit related to greater adoption of social media platforms. This corresponds to earlier research. However, the current study was limited to just one year of data. There may be long-term benefits that would be observable in a future longitudinal study. In addition, future studies might investigate how quality of social media sites affects financial performance. Quality could be measured in various ways, such as the number of times the site is updated, the number of followers, or the type of content that is contained on the site.

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