Does Social Media Enhance Firm Value? Evidence from Turkish Firms Using Three Social Media Metrics

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Abstract: This study investigates the impact created upon firm value when social media, in an emerging market context. Social media enables communication with stakeholders in terms of financial and non-financial achievements, as well as issues of organization at low cost, in a direct and timely manner; thus, the study draws attention to the new phenomenon of enhanced value to firms through the use of social media. The sample consists of Turkish corporations listed on the BIST 100 Index of Borsa Istanbul for the year 2014, utilizing three metrics regarding social media usage: establishment of a social media account, the breadth of social media engagement, and the depth of social media engagement. The results demonstrate that depth of social media engagement has a significant positive association with firm value; whereas social media account ownership per se, and breadth of social media engagement do not show a viable statistical relationship. These findings imply that if social media accounts are opened and icons for several social media are placed on corporate websites, which is presently a fad and fashion, a benefit may not necessarily accrue. However, strong engagement for corporate purposes will generate the desired results and benefits. Thus, the study provides implications and guidance for firms which are using social media currently or thinking of using it in the future.

Keywords: Social media, metrics, account, performance, firm value, Turkey

1. Introduction

Social media is an important public relations tool enabling two-way communication with stakeholders (Alikilic and Atabek, 2012; Skaržauskienė et al., 2013; Alexander and Gentry, 2014; Kilgour, 2015; Uyar and Boyar, 2015), and is a mechanism for creating firm value (Berthon et al., 2012). It is used to communicate with primary and secondary stakeholders (Jurgens et al., 2016) as well as both internal and external stakeholders (Reilly and Hynan, 2014). However, a recent survey has demonstrated that the focus of most organizations in leveraging social media is to communicate with external stakeholders (Verheyden and Goeman, 2013). It assists firms with interacting and sharing information with stakeholders, marketing their products, obtaining feedback from customers, improving customer relations, and establishing investor relations. Within a company, social media is an effective tool for internal communication. However, in order to reap the full benefit of these tools for this purpose, organizations must transform their structure, processes, and culture in a such a way that they will create an open and horizontal structure with a culture of trust (McKinsey, 2012). Jiang et al. (2016) emphasize the significance of this new tool upon an organization's effectiveness and operation. According to Coursaris et al. (2016), social media are among the fastest growing marketing platforms world-wide. Hoeber et al. (2016) asserted that social media provides a valuable source of information for business organizations regarding public opinion. Even though the internet (i.e. web site) is utilized for corporate reporting purposes intensively (Abdelsalam and Street, 2007), it is no longer considered a source of competitive advantage in stakeholder relations in the same way as current social media (Veltri and Nardo, 2013).

This study examines the results obtained by social media adoption and use in relation to firm value within a sample of Turkish firms. This investigation is important since managers want to know whether the extra, incurred costs for social media usage generate value for their firms. Da et al. (2011) previously proved a significant positive association between media coverage, measured by Google Search Volume, and stock prices, concluding that online media coverage captures the attention of investors in a timely fashion. Furthermore, Dorminey et al. (2015) asserted that the utilization of social media to disclose information may lead to a wider market interest in company stocks. However, Parveen et al. (2015) pointed out the scarcity of studies investigating the impact of social media on organizational performance. According to Weller (2016),

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ten-year old social media research cannot provide sufficient information regarding its users and uses. Corporate users and uses are among the areas that need to be explored and expanded. Kim et al. (2015a) asserted that the aim of social media participation should be to maximize firm value, but that this aspect of social media utilization has not yet been extensively explored. Wasiuzzaman and Edalat (2016) asserted that the potential of social media as a financial tool has yet to be completely realized and exploited, although financial advisors have already used it as a marketing tool. Hence, this study contributes to the social media and finance literature by indicating whether social media has a value as it will extend the existing relevant literature. Unlike many prior studies based upon user perceptions via surveys (Schaupp and Be´langer, 2014; Ainin et al., 2015; Moreno et al., 2015; Parveen et al., 2015), our study takes into account the actual social media usage by firms and organizations. Furthermore, in line with Du and Jiang (2015), this study distinguishes itself from other studies by operationalizing three social media variables: the existence of the social media account (i.e. adoption), the breadth of social media activity (i.e. number of social media channels adopted), and the depth of social media engagement. In addition, our study extends prior studies that had been based upon particular sectors (i.e. restaurants, computer hardware and software) (Luo et al., 2013; Kim et al, 2015a; Kim et al, 2015b). Moreover, our study attempts to provide insights into the benefit of using social media which had been challenged or felt to be uncertain in prior studies (Culnan et al., 2010; DiStaso et al., 2011). Furthermore, unlike prior studies that had been conducted concerning developed markets (Du and Jiang, 2015; Kim et al., 2015a; Kim et al., 2015b), our study provides empirical evidence from the important emerging market within Turkey regarding the value created by social media adoption and usage. Global statistics show that Turkey is listed among the prominent countries in social media usage, being among those countries which have a higher mobile social media penetration (54%) than the world average compared to population as of January, 2018 (We Are Social, 2018). Turkish social media users spend, on average, 2 hours and 48 minutes per day on social media platforms (We Are Social, 2018). Despite this high individual interest in using social media, research on the topic and the adoption of social media technologies within companies is scarce. Only a limited number of studies reveal partial information regarding social media usage by organizations. In this respect, Mucan and Özeltürkay (2014) discovered that 38% of Turkish banks had a social media account as of July, 2013. Another study revealed that only 219 firms, among the 500 largest Turkish companies, publish a link to their social media accounts on corporate web sites (Salman and Eroğlu, 2017). However, those two studies are not represented in our sample (i.e. listed in Borsa Istanbul), nor on the topic we investigated in this research. Thus, we decided to examine to what extent Turkish firms are actually using social media for the purpose of driving their stock value.

In view of the arguments presented above, we proposed the following research questions:
R1. Do firms derive value from adopting social media?
R2. Do firms derive value through the breadth of their social media engagement?
R3. Do firms derive value through the depth of their social media engagement?

The following section provides the literature review and formulates the hypotheses. The third section explains the methodology of the study, the fourth section presents the results of the analyses and the fifth section discusses the findings compared to past literature. Finally, section six concludes the paper, followed by our perceived limitations and future research perspectives.

2. Literature review and hypotheses

Social media are defined as “a collection of online services that communicates and shares content with various stakeholder groups” (Crumpton, 2014). They refer to “web-based and mobile technologies able to turn communication into an interactive dialogue” (Alberghini et al., 2014). Currently, they might incorporate several forms, such as Facebook, Twitter, YouTube, LinkedIn, Google+, Pinterest, Instagram, internet forums, weblogs, etc.; however, the number of social media platforms tends to expand constantly with the development of new tools (Reilly and Hynan, 2014; Weller, 2015). Although the subject of social media is a topic incorporating various disciplines, it is particularly important for stakeholder relations within both profit and non-profit organizations. Social media are adopted by public relations or investor relations departments and professionals in order to achieve organizational goals (Curtis et al., 2010), create an organization’s identity, and establish relationships with its stakeholders (Hutt, 2012; Ozdora-Aksak and Atakan-Duman, 2015). The use of social media enable communication with stakeholders in terms of financial and non-financial achievements, as well as the various issues connected to organizing communication with a low cost, and in a direct and timely manner.

Both the internal and external use of social media can help organizations to derive value. Social media channels enable employees to connect, inform, inspire other employees, and help them share their knowledge and experiences (Alberghini et al., 2014). A growing number of companies are using the various social technologies to enhance business values, such as improving customer satisfaction, creating brand awareness and reputation, supporting marketing initiatives, and increasing sales and revenues (Alberghini et al., 2014). However, the adoption, implementation, and maintenance of social media come with the following costs (Crumpton, 2014):

- Content creation to be posted
- Implementation and posting of prepared materials
- Responding to users and interacting with them
- Software and equipment
- Alternative back-up systems needed in the event of system failure

Thus, it becomes imperative to assess whether the benefit derived from the adoption and utilization of these platforms justifies the relevant costs as highlighted above.

Prior studies have postulated advice regarding some of the critical issues of social media adoption, implementation, and maintenance. In order to generate value, social media should be incorporated into overall corporate strategy; relevant costs and resource usage need to be measured; and key performance indicators should be developed (Reilly and Hynan, 2014). The value derived is not simply about opening up social media accounts, putting icons on corporate web sites, and demonstrating to stakeholders that recent developments of communication have been adopted. Corporations derive value from the adoption and implementation of social media tools by following the best social media practices such as employment of good social media etiquette (Kietzmann et al., 2011); responding to queries promptly (Gottsman, 2013); creating interactive content in order to attract attention, engagement, and loyalty (Çiçek and Eren-Erdoğmuş, 2013)*;* updating the information frequently (Reilly and Hynan, 2014); and selecting the appropriate social media tools (Reilly and Hynan, 2014).

On the other hand, firms should be wary regarding the possible dangers regarding the risk to their reputations that may arise because of the wide range of users of this tool and the possibility of sharing information quickly. Social media makes it difficult to control the dissemination or leakage of information; the untimely release of information may trigger a huge number of reactions by social media users (Chaher and Spellman, 2012). External stakeholders of organizations are free to comment upon corporate messages--negatively as well as positively (Kaplan & Haenlein, 2010). Missteps or failures by firms could be transmitted quickly to large masses of users (Reilly and Hynan, 2014). For example, circulation of information regarding environmental disasters, cheating on regulations, data breaches, or endangering biodiversity by a reputable company could potentially cost millions, even billions, of dollars of devaluation in firm value due to a substantial decrease in share prices (World Finance, 2016). Therefore, managers of companies are well advised to approach social media risks differently than perceived financial, operational, strategic, and compliance risks since traditional risk management techniques may not be adequate to counter social media related risks (Chaher and Spellman, 2012). Companies taking a proactive approach towards social media and who then leverage it to their advantage can offset potential drawbacks and liabilities, and enhance their firm value (Chaher and Spellman, 2012).

There is a limited number of published studies regarding the effect of social media within business enterprises in the Turkish context. Alikilic and Atabek (2012) circulated a questionnaire amongst public relations professionals in February, 2011. The survey found that the respondents greatly valued social media outlets, although not all available channels were equally adopted. They assumed that social networks were the most important, taking into account all other available tools. Another study revealed that 38% of 45 banks have social media accounts, thus the researchers concluded that there was not enough social media usage by banks in Turkey as of July, 2013 (Mucan and Özeltürkay, 2014). Çiçek and Eren-Erdogmus (2013) drew attention to social media users, classifying them into clusters after circulating a questionnaire. This survey indicated that despite a high social media usage rate in Turkey, only a small percentage of the population actively engaged in the medium and that most users are either inactives or sporadics. Based upon thematic content analysis, Ozdora-Aksak and Atakan-Duman (2015) found that the eight largest banks in Turkey utilized social media for building their organizational identity through highlighting corporate social responsibility and sustainability themes. Our study has the objective of extending this current literature regarding social media within Turkish enterprises by sampling the listed corporations on the Turkish Stock Exchange (i.e. Borsa Istanbul) and examining how social media influence firm performance.

The motivation for corporations to disseminate information and maintain public relations through social media channels could be explained through several theoretical approaches such as agency theory, stakeholder theory, and legitimacy theory. However, we posit that agency theory is more relevant than the other theories to establish a link between social media usage and firm value, since in this study we linked voluntary information dissemination through social networks to stock market performance, which is directly connected to the investment decisions made by shareholders. Agency costs arise through conflicts of interest between managers (agents) and owners (principals) (Fama and Jensen, 1983). Information asymmetry between those two parties is one of the reasons for this problem. Management is expected to alleviate agency costs between these two parties by reducing information asymmetry. One of the primary ways to reduce such information asymmetry is to present information to the public through the platforms provided by social media. Thus, agency theory is relevant to this study in alleviating the information asymmetry between agents and principles. Prior studies have proven the positive effect of voluntary information dissemination in lessening information asymmetry, alleviating agency conflicts, and enabling investors to have more accurate assessments of financial statements, thereby leading to firm value (Brüggen et al., 2009; Orens et al., 2009; Gordon et al., 2010; Sheu et al., 2010; Uyar and Kılıç, 2012; Garay et al., 2013). It must be noted that these cited studies provided evidence on the issue by using other communication means such as corporate web pages and annual reports. Our study tested the association between information dissemination and firm value within the aspect of social media.

2.1 Hypotheses

Although the issue of whether social media impacts organizational performance is important, it has not been sufficiently investigated by past studies (Parveen et al., 2015), which demonstrated that the adoption of social media can significantly benefit organizations (Siamagka et al., 2015), and that investors could thereby expect to receive a good return on investment (Verheyden and Goeman, 2013). Social media are expected to generate value because they enable viral marketing; enhance customer loyalty, satisfaction and retention; help save costs; and improve sales revenue (Culnan et al., 2010). Some studies have provided empirical evidence that social media enhance financial performance (Schniederjans et al., 2013; Kim et al., 2015b), impact non-financial performance positively (Schaupp and Be´langer, 2014; Ainin et al., 2015; Parveen et al., 2015), improve firm value (Kim et al., 2015a), increase trading volume (Dorminey et al., 2015), create a stronger impact on firm stock performance than conventional media (Da et al., 2011; Yu et al., 2013), and produce a more predictive value than even conventional online media (Luo et al., 2013). In a qualitative research study, the majority of interviewees (i.e. public relations executives) emphasized the importance of social media in driving business results (DiStaso et al., 2011).

Previously, various social and online media channels were investigated by researchers such as Web blogs, consumer ratings, Google searches, and Web traffic (Da et al., 2011; Luo et al., 2013). In the current study, unlike some prior studies, we measured social media usage using the following three variables; the establishment of a social media account, the breadth of social media engagement, and the depth of social media effectiveness. Firstly, the presence of a social media account (i.e. adoption) is the initial step required in order to use social media. Secondly, many organizations often use several social media outlets simultaneously (i.e. Twitter, Facebook, Google+, YouTube, LinkedIn, Instagram, and Pinterest). Thirdly, effective deep engagement with social media for corporate purposes is important in driving value. We have undertaken this approach in the same way as Du and Jiang (2015). They provided empirical evidence that while the presence of social media with a high level of engagement translate into higher market value, using a number of social media outlets does not. In line with the theoretical approach highlighted in the preceding section and the literature review, we assumed a positive relationship between social media adoption and usage, and firm value. Thus, we formulated the following three hypotheses regarding the impact of social media on firm value:

H1. *The presence of a social media account has a positive association with firm value.*
H2. *The breadth of social media engagement (i.e. the number of social media platforms being used) has a positive association with firm value.*
H3. *The depth of social media effectiveness has a positive association with firm value.*

In line with prior studies (Du and Jiang, 2015; Uyar and Boyar, 2015), we have investigated the adoption of any social media account for the variable of "presence of social media account" (i.e. Twitter, Facebook, Google+, YouTube, LinkedIn, Instagram, and Pinterest) on corporate web sites. For the variable of "breadth of social media engagement", we have counted the number of social media account types used by firms (Du and Jiang, 2015; Uyar and Boyar, 2015). In depth of engagement analyses, in line with Lee et al. (2013) and Colleoni (2013), we selected Twitter for the following two reasons: Twitter has the highest frequency usage by Turkish listed firms at Borsa Istanbul (Uyar and Boyar, 2015), and it is one of the most frequently used social media tools listed in prior studies (Barnes and Jacobsen, 2013; Heggestuen and Danova, 2013; Nah and Saxton, 2013; Weller, 2015). The depth of engagement of social media was assessed by using a measurement unit called the "klout score" which keeps track of tweets posted by a company; this was developed by Klout.com (2015). Klout scores range between 1 and 100, with the higher score showing a greater level of effectiveness in spreading information through social media connections (Molinsky, 2012; Edwards et al., 2013; Rao et al., 2015). In the recent past, various researchers have used the Klout score to calculate the level of social media engagement (Edmiston, 2014; Ashley and Tuten, 2015; Rao et al., 2015).

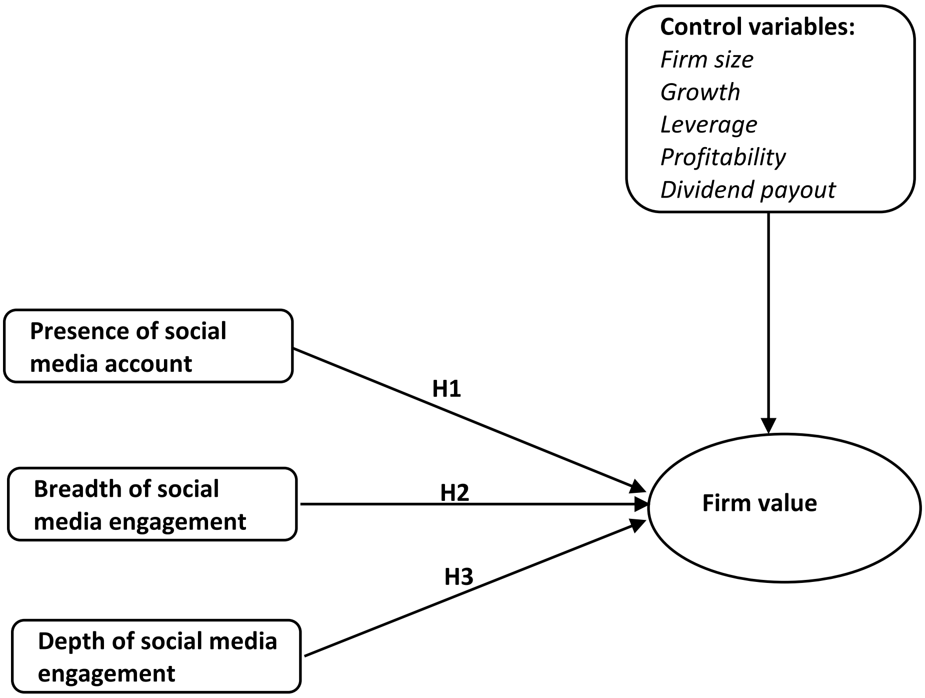

Figure 1: Research framework of the study

3. Method

3.1 Sample

The sample for this study was derived from the BIST 100 firms listed with Borsa Istanbul (i.e. Stock Market of Turkey) for the year 2014. The BIST 100 index is the main index for Borsa İstanbul Equity Market; it consists of 100 stocks selected from among the stocks of companies traded on the BIST Main Markets and BIST Stars, venture capital investment trusts and the stocks of real estate investment trusts traded on the Collective and Structured Products Market (BIST, 2018). The index includes firms with high market values and trading volumes (Şeffaflık, 2015). The sample firms were based upon the technology, service, financial, and manufacturing sectors; thus, the study examines the social media usage of firms from diverse industries, rather than focusing on only one. The data regarding the social media usage of corporations were manually collected from their corporate web sites. The financial data for the control variables were retrieved from the financial analysis tool of the Thomson Reuter Eikon database which is owned by Thomson Reuters. It incorporates a wide range of financial data such as equities, equity indices, bonds, bond indices, and other financial instruments traded in global markets. Financial values for a few of the firms were missing; therefore, they were replaced by using financial statements from corresponding individual firms. The data with no missing value was used for analysis after the preprocessing. Ultimately, the sample size for the study was 97.

The initial investigation regarding the existence of social media accounts by corporations revealed that 53 firms had a Twitter account, 45 had a Facebook account, 23 firms had a Google+ account, 20 had a YouTube account, 16 had a LinkedIn account, 8 firms had an Instagram account, and 5 had a Pinterest account. The Klout scores were obtained from Twitalyzer (2015). Because Twitter accounts ranked higher than all of the social media accounts, we selected it solely for further investigation.

3.2 Measurement of Variables

The measurement of dependent, independent and control variables are explained in Table 1.

Table 1: Measurement of variables

Firm value (Tobin Q)	Market value of equity plus book value of debt divided by book value of total assets (Brick and Chidambaran, 2010; Sami et al., 2011; Hamberg et al., 2013; O'Connor and Byrne, 2015).
Presence of social media account (SPRES)	Dichotomous variable which takes a value of 1 if firm has a social media account, otherwise 0
Breadth of social media engagement (SBREADTH)	The number of social media outlets used by firms
Depth of social media engagement (SDEPTH)	Klout scores have a range of 1–100
Size	Natural logarithm of total assets.
Leverage	Total liabilities divided by total assets
Profitability	Return on assets (ROA)
Growth	Revenue growth rate relative to previous year
Dividend payout ratio (DPAY)	Dividend payout per share

Other than the independent variables, we selected some control variables based on prior studies. These are variables that are likely to influence firm value. Among the most frequently used are firm size, leverage, profitability, growth, and dividend payout ratio (Uyar and Kılıç, 2012; Kim et al., 2015a; Kim et al., 2015b).

3.3 Model

In order to investigate the influence of social media adoption and usage on firm value, OLS regression analysis was employed. A similar approach had also been utilized to test the performance effect of social media in prior studies (Du and Jiang, 2015; Kim et al., 2015a; Kim et al., 2015b). The relationship between social media and firm value might imply a two-way causal relationship. However, we were particularly interested in finding the direction of causal links from social media to firm value. The reason for this is that we wanted to test whether firms were adopting social media merely to follow the trend of social media adoption or whether they used it to create value, which justifies the embedded costs. Indeed, most of the prior studies have been based upon the causal relationship between social media and firm value or performance (Du and Jiang, 2015; Luo et al., 2013; Schniederjans et al., 2013; Yu et al., 2013; Kim et al., 2015a; Kim et al., 2015b). Moreover, Du and Jiang (2015)'s finding corroborated this direction of causal relationship, cancelling the opposite perspective. Thus, in line with prior studies, the model of the study is presented below:

$$\text{TOBINQ} = \beta_0 + \beta_1\text{SPRES} + \beta_2\text{SBREADTH} + \beta_3\text{SDEPTH} + \beta_4\text{SIZE} + \beta_5\text{LEVERAGE} + \beta_6\text{PROFITABILITY} + \beta_7\text{GROWTH} + \beta_8\text{DPAY} + \varepsilon$$

4. Results

The correlation analysis results, as well as descriptive statistics, are presented in Table 2. More than half of the firms had a social media account with 55 %; the average number of social media types that firms used was 1.61; and the average Klout score was 22.79; thus, the level of social media engagement was low.

Table 2: Correlation analysis and descriptive statistics

Variables	1	2	3	4	5	6	7	8	9
1 TOBINQ	1								
2 SPRES	-.12	1							
3 SBREADTH	-.03	.79**	1						
4 SDEPTH	-.08	.76**	.80**	1					
5 SIZE	-.41**	.32**	.30**	.49**	1				
6 LEVERAGE	-.17	.44**	.37**	.41**	.53**	1			
7 PROFITABILITY	.32**	-.36**	-.26*	-.32**	-.28**	-.35**	1		
8 GROWTH	-.03	-.11	-.09	-.08	-.03	-.08	.71**	1	
9 DPAY	.25*	.01	.03	-.05	-.14	-.04	.11	-.06	1
Descriptive statistics									
Min	.10	.00	.00	.00	11.20	.00	-12.70	-1.00	.00
Max	7.00	1.00	7.00	86.00	19.40	1.00	78.50	64.67	103.60
Mean	1.14	.55	1.61	22.79	15.03	.51	8.07	.75	30.12
St. Deviation	.96	.50	1.87	26.42	1.73	.26	10.25	6.60	32.49

**p<.05; **p<.01*

The heteroskedasticity issue was checked using the Breusch-Pagan / Cook-Weisberg test, which indicated that the null hypothesis of constant variance was rejected at the 1% significance level *(χ^2 = 66.13; df:1; p = .0001)*. Therefore, OLS linear regression with a robust standard error method was employed. The variance inflation factors (VIF) of the independent variables ranged between 1.09 and 4.00, indicating no multicollinearity. In addition, the distribution of the residual was normal according to the Shapiro-Wilk W test. As a result of the preprocessing of the data, three firms were eliminated during checking because of the outlier issue.

The regression analysis results are shown in Table 3. We attempted to determine the individual effect of social media account presence (SPRES), the breadth of social media engagement (SBREADTH), and the depth of social media involvement (SDEPTH) in Models 1-3 with control variables, while Model 4 included all of the variables in order to test the hypothesis of the study. The results showed that SPRES had no significant effect on firm value in Model 1. On the other hand, SBREADTH had a statistically significant positive effect on firm value in Model 2. Moreover, SDEPTH had a significant and positive association with firm value in Model 3. In Model 4, when all the variables were included in the model, SDEPTH had a positive and statistically significant effect on firm value (β = .012, p<.05). On the other hand, there was no statistically significant relationship between SBREADTH and firm value, and between SPRES and firm value. Thus, the final results showed that H3 was supported while H1 and H2 were not.

Table 3: Regression analysis

Ind. Variables	Model 1	Model 2	Model 3	Model 4
SPRES	0.19 (1.22)			-0.26 (-1.27)
SBREADTH		0.072** (2.10)		-0.0061 (-0.12)
SDEPTH			0.0086*** (2.99)	0.012** (2.58)
SIZE	-0.20*** (-2.79)	-0.21*** (-2.88)	-0.24*** (-3.15)	-0.26*** (-3.04)
LEVERAGE	0.67* (1.74)	0.65* (1.79)	0.64* (1.85)	0.75* (1.91)
PROFITABILITY	0.059*** (3.50)	0.058*** (3.44)	0.061*** (3.55)	0.059*** (3.52)
GROWTH	-0.067***	-0.066***	-0.068***	-0.066***

Ind. Variables	**Model 1**	**Model 2**	**Model 3**	**Model 4**
	(-3.35)	(-3.29)	(-3.40)	(-3.37)
DPAY	0.0032	0.0030	0.0032	0.0034
	(0.97)	(0.93)	(0.98)	(1.09)
Constant	3.17***	3.27***	3.70***	3.94***
	(3.11)	(3.21)	(3.45)	(3.34)
N	97	97	97	97
adj. R2	0.313	0.324	0.348	0.341

*Note: t statistics in parentheses; * p < 0.10, ** p < 0.05, *** p < 0.01*

4.1 Robustness test

In order to demonstrate the robustness of the provided regression analysis results, PLS-SEM analysis was employed. PLS-SEM is recommended for various reasons including its efficiency with a wider range of sample sizes, increased model complexity and less restrictive assumptions regarding the data (Hair, Ringle, Sarstedt, 2011). The results are shown in Table 4, indicating that the results were consistent with the regression analysis results. Thus, there was no issue concerning the robustness of the obtained results.

Table 4: PLS- SEM results

Relationships			**BETA**	**T-statistics**
SPRES	→	TOBINQ	-0.0502	0.7804
SBREADTH	→	TOBINQ	0.0187	0.242
SDEPTH	→	TOBINQ	0.191*	1.6794
SIZE	→	TOBINQ	-0.2009***	2.7345
LEVERAGE	→	TOBINQ	0.0593	0.8527
PROFITABILITY	→	TOBINQ	0.696***	3.1598
GROWTH	→	TOBINQ	-0.5036*	1.7626
DPAY	→	TOBINQ	0.1259	1.1405

*Note: t statistics in parentheses; * p < 0.10, ** p < 0.05, *** p < 0.01*

5. Discussion

Our results contribute to an up-to-now insufficiently investigated topic, being the association between social media adoption and usage, and organizational performance (Parveen et al., 2015). The findings confirmed the results of previous studies which found that using social media increases firm performance (Da et al., 2011; Luo et al., 2013; Yu et al., 2013). However, our study sheds light on critical issues regarding this delicate communication tool. We have used three metrics regarding social media: account presence, breadth of engagement, and the effective depth of utilization. Although we predicted a significant positive relationship between these three metrics and firm value by formulating three hypotheses respectively, the first two were rejected, and the third was accepted. Thus, the answers to the first two research questions asked in the introduction are “NO”, and the third is “YES”. This implies both that the presence of social media account and increasing the variety of social media accounts is not a source of value, if they are not used effectively. This result confirms that simply creating an online presence does not guarantee that a company will reap business value through the use of social media (Culnan et al., 2010). The important point to keep in mind is to use these communication platforms as a bridge to reach customers, shareholders, and civil society, thereby benefitting the organization (Siamagka et al., 2015). Doing so might improve non-financial performance (Schaupp and Be´langer, 2014; Ainin et al., 2015; Parveen et al., 2015), enhance financial performance (Schniederjans et al., 2013; Kim et al., 2015b), attract investor attention, (Da et al., 2011), and eventually improve firm value (Kim et al., 2015a; Da et al., 2011; Luo et al., 2013; Yu et al., 2013; Du and Jiang, 2015). In summary, social media is becoming an indispensable tool for organizations to achieve both short-term and long-term goals; thus, firms should no longer perceive social media investments as a net cost but rather as a value creation tool (Luo et al., 2013).

6. Conclusion

This study investigated whether the adoption and use of social media impacted firm value in the Turkish context. The results are important since social media initiations require investment, and firms that undertake these initiations expect a return on their investment. Thus, the issue should be clarified empirically. For this purpose, we developed three hypotheses regarding the influence of social media on firm value that were tested with multivariate analyses.

The findings indicated that a high level of social media engagement has a significant association with market value; however, the presence of a social media account and the number of social media choices selected by a company does not. Therefore, it can be said that opening a social media account and increasing the number of social media tools will not necessarily increase the desired results. Given that the sample of the study consisted of the corporations listed in the primary index of the Turkish Stock Market (i.e. the BIST 100 index) which had a high market value and trading volume, the rate of firms having a social media account (i.e. 55%) by the time this data was collected is moderate. Moreover, the average number of social media types that firms used was 1.61, and the average Klout score was 22.79. These basic statistics reveal that social media is not yet sufficiently used by Turkish corporations in terms of adoption, the number of channels used, and the depth of utilization. Firms could benefit by utilizing different social media outlets simultaneously since this provides an opportunity to target different types of stakeholders by diversifying the various social media tools. Furthermore, the empirical findings proved that deep engagement with social media in the Turkish stock market is valued by the stockholders, which implies that this tool plays a strong role in alleviating information asymmetry and helps the marketplace operate efficiently.

The findings provide important implications for firms seeking to establish good public relations with their stakeholders. Initially, they should open up social media accounts for corporate communication purposes, setting up a corporate policy to prevent random usage of this delicate tool and avoid related risks. As Culnan et al. (2010) point out, the value does not come from the platform itself, but from the way in which a particular channel of social media is leveraged in order to generate corporate value. Secondly, firms should not view social media simply as an impressive management tool; on the contrary, they should use it rationally in order to obtain the utmost benefit such as enabling employees to connect, inform, inspire other employees, improving customer satisfaction, creating brand awareness and reputation, supporting marketing initiatives, and increasing sales and revenues (Alberghini et al., 2014). Companies that keep themselves up-to-date in terms of this new form of media in order to establish close public relations are assumed to have a competitive advantage by moving ahead of their competitors.

Our study is the first in the emerging market context, to the knowledge of authors, to use the three metrics highlighted throughout the study; it draws a clear line between the presence of social media accounts, the breadth of social media engagement, and the depth of social media effectiveness. In addition, the interdisciplinary nature of our study contributes to corporate communication, management, finance, and accounting. Indeed, rather than registration in social media regardless of the number of outlets, maintenance and usage for corporate purposes matters, and pays off. Among the benefits of effective utilization of social media channels are viral marketing, enhanced customer loyalty, satisfaction and retention, lowered costs, and improved sales revenue. Thus, the results provide empirical evidence and insights into the benefits and values for existing and potential organization-level users.

6.1 Theoretical implications

The findings of this study provide insights into whether social media adoption and usage alleviates agency conflicts between agents and principles. Although this theoretical approach was previously tested within the context of various information dissemination media (i.e. annual reports and web sites), it had not been examined within the social media context. We provided additional evidence regarding the value generating role of voluntary information dissemination, with a recently established tool, social media. The results confirmed that social media engagement plays a role in lessening information asymmetry between managers and shareholders, which in turn, contributes to the efficiency of the stock market by enabling the correct pricing of equities. Thus, it enables shareholders to make sound investment decisions since it meets their information requirements. In keeping with this theoretical discussion, an investment in social media platforms can be considered as a valuable resource for markets as well as investors; hence markets can reward firms by granting a higher market value (Du and Jiang, 2015). Regulators may also benefit from the results by encouraging corporations to leverage social media in generating value through active engagement.

6.2 Limitations and future research

We acknowledge that there are several limitations in generalizing the findings of the study. First, this study is confined to the year 2014. Given the fact that the behavior of social media users can change over time (Çiçek and Eren-Erdogmus, 2013), future studies can be extended to include multiple periods; as well, a multi-period analysis can be carried out with panel data analysis which would provide additional insights. Such a study will be eminently suitable for the dynamic nature of social media. Second, the investigation into the depth of social media was based exclusively upon Twitter usage; thus, the result of this investigation may not necessarily be used to generalize the results obtained by other social media tools. A future research study could be designed to overcome this limitation by covering other social media channels as well. Third, our investigation involved corporations listed in the specific index of Borsa Istanbul. Thus, the results might not be valid for all listed and/or non-listed firms. Finally, this study does not answer "why" and "how" questions. In order to address these queries and to gain more insights into social media usage and its benefits, a qualitative study might be implemented for Turkish enterprises.

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