Adoption of Social Media Platforms and Firm Performance: A Step Towards Economic Growth in India

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ABSTRACT

The advancement in information technology and cut-throat competition in the markets has transformed the methods by which corporations disseminate the information to their stakeholders. The social media has come up as a powerful mode for information disclosure because of its features like transparency, low cost and flexibility. The firms have now started turning towards this new expression of corporate disclosure that involves the use of social media as a platform for information disclosure. Unlike traditional methods of disclosure, social media based disclosure offers more opportunities for dissemination of timely information in large number of formats to large number of audience. The equal right to access the corporate information by large number of users further helps in minimizing information asymmetry problems, cost of capital and in increasing the firm performance. Considering the power of the social media as a disclosure medium to enhance firm performance, it is important to know the tradeoff between benefits and cost incurred. The examination of this tradeoff between benefits and costs helps to determine the firm value. In this light, the current research paper aims to study the influence of social media technologies on firms performance. To examine the relationship between firm performance and corporate presence on social media, BSE 500 companies have been examined. Regression analysis has been done and it has been found that corporate presence on social media has significant and positive impact on the firm performance.

Keywords: *Social Media, firm performance, corporate disclosure, cost of capital, tradeoff.*

Introduction

Advancement in information technology and popularity of social media among the consumers has changed the information disclosure methods of the corporation. The firms are adopting social media platforms to ensure transparency and equality in information access among the stakeholders which in turn boost their confidence and thereby increase the firm value. Djankov et al. (2003) argue that delivery of information in a transparent manner enhances firm performance.

Chen et al. (2008) stated that the use of internet technology has become a common practice in the workplace as it helps the organizations to carry out their business activities anytime from anywhere. Bhanot (2012) found that SMEs use social media platforms for marketing, communication, sales, advertising and innovation. Meske and Stieglitz (2013) indicated that small and medium enterprises use social media in order to communicate with their customers and to support internal communication. Social network has been used for advertisement purposes by the enterprises (Beloff and Pandya, 2010). Due to the features of minimal cost and requirement of low level of IT skills, platforms of social media can be used for routine transactions by the corporate houses (Derham et al., 2011). Bonson and Ratkai (2013), Sarosa (2012) and Wong (2012) stated that use of facebook can be made by any firm without incurring an extra cost. Business owners can make use of diverse functions of facebook such as sharing, tagging, messaging, commenting and notifying to promote their products, services and brands (Ainin et al., 2015).

Healy and Papelu (2001) suggested that provision of voluntary disclosure tends to address information asymmetry problems between managers and shareholders. Social media improves the performance of the organizations by providing a platform for marketing at a cheaper cost Nyambu (2013). Social networks have close relationship with financial, market and shareholder performance which ultimately leads to positive effect on organizational performance (Ferrer et al., 2012). Contrary to the view that social media improves firm performance, Aula and Pekka (2010) focused on the threat and risk of social media to the reputation of companies. It was stated that publicity may bring negative impact to the reputation of a company and thereby expand the scope of reputation risks and boosts risk dynamics.

Considering the power of the social media as a disclosure medium to enhance firm performance, it is important to know the tradeoff between benefits and cost incurred. The examination of this tradeoff between benefits and costs helps to determine the firm value.

Review of Literature

Corporate Presence on Social media has been gaining popularity in regular operations of many companies. Increased tangible benefits such as brand recognition, sales, web traffic, customer satisfaction and revenue have contributed to this popularity. The value of social media in the business has increased the interest of the researchers. Finance theory argues that dissemination of information increases the value of the firm. The literature contends that corporate presence on social media facilitates stakeholders and economy. Smits and Mogos (2013) investigated that use of social media and held that it could enhance business capabilities and business performance. He further stated that this impact was not confined to one social media tool but combines the six social media tools into one effective social media ecosystem which enabled coordination between internal and external business processes. Bhanot (2012) concluded that social media allow companies to reach out to more customers and to satisfy their needs better. Companies have seen an enhancement in their brand awareness and brand image by use of social media. Ainin et al. (2015) examined the impact of facebook usage on financial and non financial performance of the SMEs. Findings revealed that facebook usage has a strong positive impact on financial and non financial performance in terms of cost reduction on marketing and customer service. The literature reveals that corporate presence on social media affect the stakeholder's perception regarding the image of the company and their investment decision. Social media helps companies to sell more of their products which in turn increase their revenues and profits (Shih 2009).

There are very few studies (Smits and Mogos, 2013; Malhotra and Singh, 2015; Ainin et al., 2015; Tajvidi and Karami 2017; Pratono, 2018; Ampountolas et al., 2019) that tried to evaluate the impact of corporate presence on social media on firm performance. Due to the recent integration of social media into business world, not much literature has been written. So, there is hardly any study that evaluates the impact of social media on firm performance in the Indian context.

Research Design

To examine the relationship between firm performance and corporate presence on social media, BSE 500 companies have been examined. The sample size was reduced for Facebook, Twitter and YouTube according to the presence of social media on the Companies websites. It was further reduced due to non availability of data related to specific attributes assumed for companies. So, the final number of sample companies for this objective is 284, 248, and 190 for facebook, twitter and you tube

respectively. The data relating to firm attributes has been retrieved from PROWESS database maintained by CMIE (Centre for monitoring Indian Economy). Table 1.1 defines the variables used in the study.

Table 1.1 Variable Description

Abbreviated Name	Variable	Description
DEPENDENT VARIABLE		
ROA	**PROFITABILITY**	Return on assets
INDEPENDENT VARIABLES		
FACEBOOK	Facebook Score	Score of Facebook items.
TWITTER	Twitter Score	Score of Twitter items
YOU TUBE	You Tube Score	Score of You Tube items
CONTROL VARIABLES (Firm attributes)		
ASSETS	Firm Size	Natural logarithm of total assets
AGE	Firm Age	Number of years since the incorporation of the firm
LEV	Leverage	Ratio of long term debt to total equity
LIQ	Liquidity	Current ratio
GROWTH	Sales Growth	Increase in total sales divided by total sales in the previous year.
NOE	Total Employees	Natural logarithm of total employees
NOS	Ownership dispersion	The total number of shareholders on the board

To evaluate the impact of corporate presence on social media on firm performance, the following hypotheses were framed:

Hypothesis (H1): There is positive relationship between firm performance and facebook disclosure score.

Hypothesis (H2): There is positive relationship between firm performance and twitter disclosure score.

Hypothesis (H3): There is positive relationship between firm performance and you tube disclosure score.

To study the combined effect of all the independent and control variables taken together on the firm performance (measured by return on total assets) of facebook, twitter and you tube page of sample companies, three models have been employed:

$$FACEBOOK\ PROFITABILITY = \alpha + \beta_1 * Facebook\ score + \beta_2 * Firm\ assets + \beta_3 * Age + \beta_4 * Leverage + \beta_5 * Liquidity + \beta_6 * Growth + \beta_7 * Ownership\ dispersion + \beta_8 * No.\ of\ Employees + £$$

$$TWITTER\ PROFITABILITY = \alpha + \beta_1 * Twitter\ score + \beta_2 * Firm\ assets + \beta_3 * Age + \beta_4 * Leverage + \beta_5 * Liquidity + \beta_6 * Growth + \beta_7 * Ownership\ dispersion + \beta_8 * No.\ of\ Employees + £$$

$$YOUTUBE\ PROFITABILITY = \alpha + \beta_1 * You\ Tube\ score + \beta_2 * Firm\ assets + \beta_3 * Age + \beta_4 * Leverage + \beta_5 * Liquidity + \beta_6 * Growth + \beta_7 * Ownership\ Dispersion + \beta_8 * No.\ of\ Employees + £$$

Results and Findings

After examining the models for postulates, regression analysis has been run. To find out the effect on firm profitability due to the presence of corporate on social media, firstly pair-wise correlation for all independent variables and firm profitability owing to facebook, twitter, you tube page of sample companies have been calculated. The correlation results for facebook, twitter, you tube page have been shown in table 1.2, table 1.3 and table 1.4 respectively.

Table - 1.2 : Facebook Correlation Results

	Return	**Score**	**Age**	**Growth**	**Total Assets**	**Debt equity**	**Current ratio**	**Share-holders**	**Employees**
Return	1.000	.162***	-.101**	-.038	-.339***	-.354***	.132**	-.106**	.017
Score	.162***	1.000	.099**	-.112**	.414***	.124**	.194***	.393***	.332***
Age	-.101**	.099**	1.000	-.048	.287***	-.118**	.239***	.158***	.289***
Growth	-.038	-.112**	-.048	1.000	-.048	.009	-.052	.030	-.160***
Total Assets	-.339***	.414***	.287***	-.048	1.000	.266***	.089*	.688*	.522***
Debt Equity	-.354***	.124**	-.118**	.009	.266***	1.000	-.213***	.067	-.081***
Current Ratio	.132**	.194***	.239***	-.052	.089*	-.213***	1.000	.055	.093*
Shareholders	-.106**	.393***	.158***	.030	.688***	.067	.055	1.000	.351*
Employees	.017	.332***	.289***	-.160***	.522***	-.081*	.093*	.351***	1.000

****, **,* indicates significance level at one percent, five percent and ten percent respectively.*

Table 1.2 reveals that for Facebook, ROA is significantly and positively associated with facebook score, current ratio and number of employees. However ROA is negatively associated with age, growth, total assets, debt equity ratio and number of shareholders.

Table-1.3: Twitter Correlation Results

	Return	Score	Age	Growth	Total Assets	Debt Equity	Current Ratio	Share -holders	Employees
Return	1.000	.142**	-.075	-.037	-.323***	-.354***	.115**	-.105**	.014
Score	.142**	1.000	.158***	-.136*	.406***	.097*	.155***	.344***	.347***
Age	-.075	.158***	1.000	-.008	.283***	-.143**	.282***	.165***	.291***
Growth	-.037	-.136**	-.008	1.000	-.038	.064	-.053	-.007	-.133**
Total assets	-.323***	.406***	.283***	-.038	1.000	.264***	.129**	.713***	.538***
Debt equity	-.354***	.097*	-.143**	.064	.264***	1.000	-.193***	.091*	-.078
Current ratio	.115**	.155***	.282***	-.053	.129**	-.193***	1.000	.045	.148***
Share holders	-.105**	.344***	.165***	-.007	.713***	.091*	.045	1.000	.391***
Employees	.014	.347***	.291***	-.133*	.538***	-.078	.148***	.391***	1.000

****, **,* indicates significance level at one percent, five percent and ten percent respectively.*

Table 1.3 states that for Twitter, ROA is again significantly and positively associated with twitter Score, current Ratio and number of employees. On the other side, it is negatively and significantly associated with total assets, debt equity ratio and number of shareholders.

TABLE 1.4: You Tube Correlation Results

****, **,* indicates significance level at one percent, five percent and ten percent respectively.*

	Return	Score	Age	Growth	Total assets	Debt equity	Current ratio	Share-holders	Employees
Return	1.000	.105*	-.010	.012	-.364***	-.409***	.138**	-.158**	.027

Score	.105*	1.000	.096*	-.145**	.361***	.061	.162**	.368***	.245***
Age	-.010	.096*	1.000	-.013	.214***	-.154**	.194***	.104*	.306***
Growth	.012	-.145**	-.013	1.000	-.045	.030	-.053	.037	.204***
Total assets	-.364***	.361***	.214***	-.045	1.000	.253***	.123**	.705***	.558***
Debt equity	-.409***	.061	-.154**	.030	.253***	1.000	-.204***	.046	-.088
Current ratio	.138**	.162**	.194***	-.053	.123**	-.204***	1.000	.062	.084
Shareholders	-.158**	.368***	.104*	.037	.705***	.046	.062	1.000	.397***
Employees	.027	.245***	.306***	-.204***	.558***	-.088	.084	.397***	1.000

Table 1.4 reveals that in case of You Tube, ROA is significantly and positively associated with you tube score, current ratio, and number of employees. However, ROA is significantly and negatively associated with total assets, debt equity ratio and number of shareholders.

Multicollinearity exists only in multiple regression analysis where there is a strong association between two or more predictors (independent variables) in regression model (Field, 2000) and could cause problems (Cooke, 1989a). Therefore, prior to regression results, an analysis has been conducted to diagnose whether a problem of strong multicollinearity exists or not. Our test for the presence of multicollinearity using Pearson Correlation Coefficients eliminates the existence of multicollinearity. Collinearity statistics reported in table 1.5, confirm the absence of multicollinearity among independent variables individually in both tolerance and variance inflation factor (VIF). The VIF should be lower than 10 and tolerance should not reduce below to 0.2 (Field, 2005).

Table-1.5: Collinearity Statistics

Variables	**Facebook**		**Twitter**		**You-Tube**	
	Tolerance	**VIF**	**Tolerance**	**VIF**	**Tolerance**	**VIF**
Score	.741	1.350	.782	1.279	.806	1.240
Age	.826	1.211	.813	1.231	.851	1.176
Growth	.956	1.046	.962	1.040	.917	1.091
Total assets	.347	2.881	.329	3.035	.325	3.080

Debt equity	.757	1.321	.770	1.299	.750	1.333
Current ratio	.859	1.164	.866	1.154	.881	1.135
Shareholders	.482	2.074	.468	2.138	.451	2.218
Employees	.629	1.591	.625	1.600	.578	1.729

Table 1.6 reveals regression results. Model 1 reveals relationship between total facebook score and firm performance using return on assets as dependent variable. To understand the level of awareness among users regarding the value of corporate social media disclosure, three social media platforms of CPS facebook, twitter and you tube have been examined separately. Model 2 and model 3 presents results for relationship between twitter and you tube social media platforms respectively with firm performance using return on assets as dependent variable.

Table -1.6: Regression Results using ROA as Dependent Variable

Independent Variables	Model 1	Model 2	Model 3
C	9.890	1.535	9.901
	(2.332)**	(0.307)	(2.030)**
SCORE	0.736	1.440	1.019
	(5.481)***	(4.696)***	(3.606)***
ASSETS	-2.633	-2.683	-2.443
	(-6.627)***	(-6.091)***	(-5.576)***
AGE	-0.025	-0.028	-0.016
	(-1.505)	(-1.528)	(-0.862)
LEV	-1.110	-1.132	-0.910
	(-4.157)***	(-3.765)***	(-3.527)***
LIQ	0.328	0.474	0.490
	(1.287)	1.672*	(1.717)*
GROWTH	-0.001	0.004	0.015
	(-1.22)*	(0.378)	(1.375)
OWNERSHIP	0.910	1.312	0.445
	(1.731) *	(2.256)**	(0.773)
NO. OF EMPLOYEES	0.761	0.745	1.162
	(2.511)**	(2.194)**	(3.472)***

Independent Variables	Model 1	Model 2	Model 3
R squared	0.330	0.308	0.352
Adjusted R-squared	0.310	0.284	0.323
F-statistic	16.894	13.271	12.292
Prob(F-statistic)	0.000	0.000	0.000
No of Observations	284	248	190

Note: ***, **,* indicates level of significance at one percent, five percent and ten percent level of significance respectively. T statistics are provided in parenthesis.

Source: Own compilation

It is clear from table 1.6 that the model 1 has an explanatory power of 31 percent as indicated by adjusted R^2. The coefficients are positive and statistically significant at 1 percent significance level. With regard to summary of model 2 which relates to twitter, shows that the adjusted R^2 is 0.284. It implies that in this study, independent variables shows 28 percent of variation in profitability of sample companies. An examination of model 3 reveals that in case of you tube, the adjusted R^2 is 0.323 which infers that the independent variables have 32 percent explanatory power. The coefficients are positive and statistically significant at 1 percent significance level. The results are compatible with the studies of Smits and Mogos (2013); Malhotra and Singh (2015); Ainin et al. (2015); Tajvidi and Karami (2017); Pratono (2018); Ampountolas et al. (2019) . The findings help to reveal that corporate disclosure through web increases the firm performance. The result is in accordance with the recommendations of agency theory. The theory contends that disclosure of the information reduces the cost of capital. Corporate web disclosure increases the performance of the firms by increasing the confidence of the investors (Miller and Bahnson, 2002). As far as control variables are concerned, the results prove significant relationship with firm performance proxy by ROA.

Model 1 shows that firm age and liquidity have negative and insignificant relationship with firm performance supporting the view of Pant and Pattanayak (2007) in the Indian context. The variables leverage, total assets and growth have negative and statistically significant relationship with the firm performance. Both ownership and number of employees affect firm performance positively and significantly.

Model 2 reports that assets and leverage have negative and significant relationship with ROA. Variables like age and growth have insignificant relationship with ROA. All other control variables

like liquidity, ownership and number of employees effect firm performance positively and significantly.

Model 3 states that firm age, growth and ownership have insignificant relationship with ROA. Variables like liquidity and number of employees have positive and significant relationship with firm performance. With regard to total assets and leverage, they have negative and significant relationship with ROA.

Epilogue

This paper examines the relationship between corporate presence on social media and firm performance in the Indian context. Three models have been framed by taking return on assets as a proxy of firm performance. Using return on assets as a proxy of firm performance; facebook, twitter and you tube score shows positive relationship with the firm performance. All the measures of CPS i.e. facebook, twitter and you tube score have significant effect on firm performance. Therefore, it can be concluded that corporate presence on social media has significant and positive impact on the firm performance. The presence of weak association reflects due to the low values of coefficients. The positive relationship between firm performance and corporate presence on social media calls attention to using social media as a disclosure tool by the Indian firms. The results reveal that corporate disclosure through social media affect the investment decisions of the Indian stakeholders. The findings are consistent with the recommendations of agency theory which contends that online exposure point out information asymmetry issues which in turn helps in minimizing the uncertainty level of firm performance.

Limitation and Scope For Further Research

The time frame to carry out the study is limited to a period of one year and based on secondary data. Moreover the study considers only a sample of Indian companies. Future research can conduct longitudinal studies and a comparative analysis can be conducted between two different countries.

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