Firm Traits and Web Based Disclosures in Top Nigerian Firms

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Abstract: The use of the internet as a medium of dissemination of information to stakeholders is increasingly gaining grounds. This study extends existing literature on web disclosures by investigating the characteristics that predict the extent of web-based disclosures. In this study, corporate websites of top Nigerian firms are used as sources of data, while a regression analysis is employed to examine the extent of prediction. Results indicate that the firm size and industry type are significant determinants of web disclosures. However, other firm traits such as ownership dispersion and financial performance do not significantly explain the extent of internet disclosures. The study recommends that a regulatory template for corporate web disclosures be put in place by government regardless of the size or industry classification of the firm. This is with a view to considerably reduce agency conflicts arising from information asymmetry in publicly listed firms in Nigeria.

Keywords: Financial Reporting; IT management; Statistical methods

JEL Classification: M40; M15; C1

1. Introduction

Companies listed on the stock exchange are required to make more corporate information disclosure for the benefit of both potential and existing investors. The use of annual reporting is an indispensable means of disseminating financial and non-financial information with an objective of furnishing stakeholders with basic and useful information.

As required by the Companies and Allied Matters Act (1990), the board of directors of publicly traded companies must present statements of the company in general meetings at least once in a year. The essence is to show the extent to which shareholders' wealth has been maximized and basically the prowess of management in efficiently managing the resources of the firm. Firms have always presented their corporate reports through traditional methods in form of printed reports but of recent have adopted the use of websites in disclosing such information. According to Willis et al., (2003), the potential role of the internet as a

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means of communicating information has been identified to meet shareholders' demands for volume of information and greater speed most especially at a time when businesses have sought better ways of communicating. Internet reporting has become the norm, rather than the exception in most developed countries (Gowthorpe, 2004). Ettredge et al., (2001) document that most of the largest corporations in developed countries now have an internet website for financial reporting. Web based disclosure is the dissemination of corporate financial and non-financial information via the internet facility. It is quite obvious that not all information disclosed in annual reports is financial. There is certain important non-financial information which is usually strategic for investors in decision making. Web based disclosure is an umbrella term that encompasses both financial reports and non-financial reports such as social responsibility, corporate governance, environmental reports, etc. In other words, web-based disclosures envelope both internet financial reports and internet non-financial reports. Lymer (1999) argues that the web is an invaluable medium of disclosing both financial and non-financial information due to its ability to offer an interface between management and stakeholders without the dependence on press or analysts. Debreceny et al., (2002) demonstrate that web-based disclosures are cost effective, provide information in a timely manner, and cover a wide audience. The concept of web based disclosures became popular with the development of the world-wide-web (www) since 1994 (Allam & Lymer, 2003); and ever since, the internet has been progressively employed for corporate reporting (Lymer& Tallberg, 1997). Notwithstanding the growing use and acceptability of the internet as an unequalled medium for disseminating information, some firms in Nigeria still do not operate a corporate website or are not optimally utilizing existing websites. The disclosure of corporate information via the web is yet to be mandated by regulatory authorities; hence such disclosures are done voluntarily. This study is thus poised at examining certain firm characteristics that could potentially determine the extent to which firms disclose information on the web. The paper would provide interesting contributions to literature by filling existing gap in the knowledge of the subject particularly now that there are so many clamours for the digitalization of monetary and non-monetary transactions in the Nigerian corporate climate. In a study conducted by Salawu (2009) it was documented that of the 220 firms quoted on the Nigerian Stock Exchange, 54% (119) have official websites while 46% (101) do not have an official website at all. However only 14.1% (31) of these companies publish their annual reports online while 86% (189) do not publish their reports online. This is an appalling statistic despite the information technology era we find ourselves in.

2. Prior Literature

The corporate reporting to stakeholders will transport almost entirely from the current primarily print-based mode to using the web as the primary information dissemination channel, with the print-based mode to using the web as secondary channel (Lymer, 1999). Regardless of this envisaged position, the academic research into the use of the internet in financial disclosure is still in its infancy in developing countries. Most studies have concentrated on the extent of reporting and have not conducted research on the possible determinants. However, some studies in developed emerging economies exist. Debreceny et al., (2002) studied the information presentation of 660 large companies in 22 countries to ascertain firm and environmental determinants of web reporting. Firm characteristics of listing status, size, technological environment, leverage, growth prospects and systematic risk were used as independent variables of which firm specific traits of size, U.S listing, and technology environment were ascertained as significant determinants of varying levels of disclosures. Oyelere et al., (2003) concluded in their study that larger companies, internationalized, liquid and more profitable companies were found to engage in internet financial reporting. They identified size, liquidity, internationalization, share spread and industry as statistically significant predictors of corporate web disclosures while profitability and leverage were not significant determinants. Asbaugh et al., (1999) investigate the internet financial reporting (IFR) practices of U.S companies and find that firms operating websites are larger than firms without websites.

They employed a univariate analysis in their investigation and found profitability and percentage of equity shares held by individual investors as associated with IFR. However, when a multivariate logit regression was applied, only firm size was found to associate with IFR. Pirchegger & Wagenhofer (1999) examine internet disclosure practices by German and Austrian companies, and find that for Austrian companies, internet financial reporting is associated with firm size, measured by sales and dispersion of its equity ownership. However these findings did not extend to German companies. The study conducted by Xiao et al., (2004) investigates the determinants of 300 listed Chinese companies' web-disclosure practices.

They find that such internet disclosures are responsive to specific attributes of their environment. Size, auditor and industry type were ascertained to be significant predictors while profitability was negatively associated with IFR. It is strongly recommended that the paper should have an even number of pages, but no longer than 4 to 14 pages. In some cases papers with more than 14 pages will be accepted by the editorial board if they contain the report of a wider research activity which can not appear separated in two papers.

2.1. Underlying Theory

The signals theory offers an underpinning for this study. The theory registers that voluntary disclosure behaviors are a control mechanism from ownership. The theory demonstrates that voluntary information is signal aimed at reducing then information gap between insiders and outsiders. It also suggests that large and profitable firms will disclose more information to stakeholders with the aim of informing stakeholders about their performance and also to engender legitimacy and acceptability as public expectation demands. (Neysi et al., 2012)

2.2. Hypotheses Development

Previous studies document that the size of the company has a positive relationship with corporate web disclosures (Chow & Wong-Boren, 1987; Botosan, 1997; Frankel et al., 1999). According to Hossain et al., (1995), agency costs tend to increase with firm size. Larger firms are more visible and therefore may be more likely to disclose detailed information. Oyelere et al., (2003) argue that larger firms have a diverse product range and complex distribution network than smaller firms. This could trigger the demand for more complex management information systems and databases need for management control purposes. This position has been corroborated by a number of empirical studies (Bonson & Escobar, 2002; Ettredge et al., 2002; Xiao et al., 2004 and Al-Shammari, 2007). Nevertheless, some other studies have contravened this finding. These include Ahmed & Nicholls (1994) and Ahmed (1996). From the above literature, the following hypothesis is developed:

H_1 - There is a positive and significant relationship between the size of a firm and extent of corporate web-disclosures.

According to the tenets of the Agency theory, profitable firms have the likelihood to disseminate more corporate information on the web. Managers of such firms do this in order to obtain compensation justification (Haniffa & Cooke, 2002). Moreover, companies with better financial performance may disclose more information to signal their strength and opportunities. Alsaeed (2006) argues that promoting a positive sense of performance can be done through releasing more information to the public. Studies in this line have been conflicting with some reflecting a positive relationship (Owusu-Ansah, 1998; Pirchegger & Wagenhofer, 1999) while others such as Wallace and Naser (1995) document a negative relationship. Oyelere et al., (2003), Xiao et al., (2004) and Aljifri (2008) find no significant impact of profitability on disclosure levels. Based on the foregoing, we hypothesize that:

H_2 – There is a significant relationship between financial performance and extent of corporate web disclosures.

According to Raffournier (1995), the agency theory predicts that firms whose ownership is diffused tend to disclose more information to assist shareholders in monitoring their behavior. As such firms with widely held ownership have a greater likelihood to adopt web-based disclosures than firms with closely held ownership. Oyelere et al., (2003) document that the degree of financial reporting on internet increases with ownership dispersion thus supporting the agency theory. This explains that the more dispersed the shareholders, the higher the pressure for more disclosures. Agboola & Salawu (2012) argue that ownership diffusion is a signal of a good corporate governance mechanism. Akhtaruddin et al., (2009) examined the relationship between ownership concentration and disclosures and found a positive relationship between the level of disclosures and percentage of outside ownership. We hypothesize that:

H_3 - Ownership dispersion has a positive association with the extent of corporate web disclosures.

The signaling theory suggests that variation in the extent of disclosure could result from industrial classification. According to Cooke (1989), differences in disclosure levels between industries could be attributed to the high level of voluntary disclosure by a dominant firm within an industry which could trigger a bandwagon effect. When a firm within a particular industry does not conform to the disclosure practices within that industry (including web disclosures) then it may be interpreted that the firm is concealing unpalatable news (Craven & Marston, 1999). Empirical findings along this concern have been conflicting. Industry type has been identified as a significant determinant of disclosure levels (Xiao et al., 2004) while Wallace et al., (1994) provide evidence of no association between the two variables. We thus hypothesize that:

H_4 – Industry type has no significant association with the extent of corporate web disclosures.

3. Methodology

3.1 Sample

The sample used in this study is drawn from the Forbes Africa Top 25 companies (2012) in West Africa. Forbes Africa assessed these firms to have sustained excellence. They were ranked in terms of profit, revenue and market capitalization. The sample of this study consists of the twenty (20) Nigerian firms that made this list. These firms have as expected maintained robust and functional corporate websites and have disseminated corporate financial and non-financial information via the internet. The list is found in Appendix 1.

3.2. Variables

Dependent variable – We develop a disclosure index to represent the extent of web-based disclosures. The index covers financial and non-financial information expected to be disclosed on corporate websites by sample firms. The web based disclosure index (WBDI) is based on the information firms provide in their annual reports to shareholders which focuses on stakeholders' needs. An adapted Sharma (2013) disclosure index is employed. The disclosure index is anchored on five categories: financial items, strategy, production management, market and human capital. A total of 30 indicators have been identified within the five categories, the list is found in appendix 2. We employ an unweighted dichotomous rating system assigning a firm that discloses an item a score of '1' and where a disclosure of such item is absent on the website; a score of zero is assigned. The web based disclosure index is the ratio of the actual score attained by the firm divided by the maximum score.

Independent Variables

Size- Size is measured as the natural logarithm of total assets

Financial Performance- is captured as the return on capital employed (ROCE). This is measured as the profit before interests and tax to net capital employed. The choice of this performance measure is more preferred because it has evolved considerably over the past decade and has enjoyed periods of popularity (Oba & Fodio, 2013).

Ownership dispersion – Measured as proportion of shares held by the general public to total number of shares

Industry Type – This variable is also captured as a dummy. The industry grouping of the sample firms based on the Nigerian Stock Exchange classification is followed. An industry being examined is assigned '1' while other industries are assigned '0'.

3.3 Data Collection

Data was extracted from annual reports of sample firms posted on their corporate websites.

3.4 Model Specification

We address the hypotheses of this study using a multiple regression technique to assess the statistical impact of the various hypothesized determinants of web based disclosures in the sample firms. The model is specified as:

$$WBDI = \alpha_0 + \alpha_1 SIZ + \alpha_2 PERF + \alpha_3 OWND + \alpha_4 CG + \alpha_5 FIN + \alpha_6 IND + \alpha_7 OG + e \quad (1)$$

Where WBDI = web-based disclosure index

SIZ = Firm Size

PERF = Financial Performance

OWND = Ownership Dispersion

CG = Consumer Goods

FIN = Financial Services

IND = Industrial Goods

OG = Oil and Gas

4. Results and Discussion

We perform a normality test to determine that the dependent variable was normally distributed. The Kolmogorov-Smirnov and Shapiro-Wilk test of normality was conducted with emphasis on the results of the Shapiro-Wilk test since the sample of this study is not asymptotic.

Table 1. Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	Df	Sig.
WBDI	.0450	80	.000	.734	80	.001

a. Lilliefors Significance Correction

The conducted tests of normality show that the web-based disclosure index is not normally distributed with significant values appearing less than 0.05.

Basically, significant values above 0.05 are considered as reliable evidence that the data set is normally distributed. According to Brown (1997), a violation of the normality assumption invalidates other statistics such as t-test and related statistics. To address non-normality, a common treatment is to perform a logarithmic transformation (base 10).

$WBDI = Log_{10}WBDI$

Table 2. Tests of Normality after logarithmic transformation

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	Df	Sig.
WBDI	.112	74	.048	.325	74	.079

a. Lilliefors Significance Correction

The normality test above shows that the transformed values produce normal distribution. Significance values are reliably above 0.05.

Table 3. Results of the Ordinary Least Square Regression Model

Variables	Estimated coefficient	Standard Error	P-Value
Intercept	0.211	0.137	0.435
SIZ	0.095	0.041	0.024
PERF	0.014	0.016	0.372
OWND	0.087	0.162	0.590
CG	0.349	0.106	0.001
FIN	0.169	0.208	0.040
IND	0.107	0.105	0.010
OG	0.328	0.116	0.006
R^2 0.560	**Fstat(prob) 0.003**		

Source: Regression results using SPSS (Version 17)

The coefficient of determination R^2 (0.560) shows that over half the variation that exists in web-based disclosures is explained by the model. The F statistic goes to confirm the statistical significance of the model. This lends itself to the argument that the variables of the study have an aggregate significant impact on the extent of web-based disclosures. However, there is need to disaggregate the impact and examine the extent to which each of the regressors impact on the dependent. Firm size from the results of the regression has been clearly identified as a significant predictor of web-based disclosures. Results reveal that it has a positive significant impact on web-based disclosures. This goes to confirm our maintained hypothesis that there is a significant relationship between the size of a firm and extent of corporate web disclosures. Our findings corroborate the works of Ettredge et al., (2002) and Agboola and Salawu (2012) who document that larger firms were more probable to prepare financial information on the internet and utilize web disclosures more than their counterparts. Our findings however contravene the results of the study conducted by Agyei-Mensah (2012) who registers that firm size is not a significant explanatory variable for the internet reporting index.

This study finds financial performance (measured by return on capital employed) an insignificant predictor of web-based disclosures. Findings are consistent with Oyelere et al., (2003), who demonstrate in their study of 132 companies listed on the Abu Dhabi Securities Exchange and Dubai Financial Market that profitability has an insignificant impact on the levels of internet financial disclosure. Our results are similar. However this finding is not in line with the results of the research by Homayoun and Rahman (2010) who register that profitable companies have strong incentives to disclose information in order to stand out from their competitors.

Our results in this study also demonstrate that ownership dispersion has no link with web-based corporate reporting. This permits an empirical ground to reject hypothesis 3 which states that ownership dispersion has a positive association with the extent of corporate web disclosures. This finding is quite a contrast to the hypothesis of the agency theory that explains that managers of companies whose ownership is diffused usually have an incentive to disclose more information with a view to helping shareholders monitor their behavior. Our findings nevertheless are consistent with the results of Oyelere et al., (2003) who document no significant impact of ownership diffusion on internet financial reporting.

Finally, the findings of this study show that the industry type goes a long way to explain the extent of web disclosure. As such the kind of industry a firm operates in impacts on its action to disclose more information via the internet. This is in harmony with the results of the study conducted by Xiao et al., (2004) who empirically register that industry type is a significant determinant of the level of disclosure.

5. Conclusion

Web-based disclosures are yet to be mandated by regulatory authorities in Corporate Nigeria. Internet financial reporting has ipso facto been on voluntary basis. However, its potency in recent times as a tool of communication and information asymmetry reduction has been unparalleled; thus encouraging ‘information responsible’ firms to adopt this broad coverage of information reporting.

This study was undertaken to investigate firm traits that possibly predict the extent of web disclosures in quoted Nigerian firms. Our results show that firm size and industry type are the significant determinants of web-based disclosures in study firms. As such, the larger a firm is the more it disseminates corporate information via the web. A possible explanation for this is that since such large firms receive more focus from various stakeholders; they would inevitably be under much pressure to meet with global best practices and by so doing disclose their results via the internet so as to permit accessibility. We also document that the industry type is a key predictor of internet reporting by quoted Nigerian firms. High-tech industries such as the consumer goods, Industrial goods, oil and gas and financial services were found to aggressively impact the extent of web-based reporting. It is evidently clear that the industry exposure to which a firm operates in eventually affects its voluntary financial disclosure level. This goes to corroborate the signals theory that certain firms in order to sustain reputation and acceptability and in a bid to reduce information asymmetry will disclose more information so as to send signals to stakeholders regarding the firm’s position and visibility. The target is to meet with public expectation and usually when this begins with a dominant firm in an industry; it has a ripple effect on the industry. This study registers that financial performance and ownership dispersion have no statistically significant impact on web-based disclosures. We demonstrate that these variables do not trigger an increased disclosure of corporate information on the website.

The study recommends that the government puts in place a regulatory template for internet reporting regardless of the size or industry classification of a firm with a view to reducing agency conflicts arising from information asymmetry. This is most emphasized now that the world is in an information communications technology (ICT) age.

Future research in this direction is encouraged. Future studies could possibly examine the extent to which these firm determinants predict the web disclosure of voluntary and mandatory information items and if there is any significant difference in the web disclosure of these items across industries. The extent to which stakeholders access or prefer corporate information on the web as against published hard reports is also an interesting point of study and would add valuable contribution to existing literature.

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Appendix 1

List of twenty Nigerian firms that made the Forbes Africa top 25 companies (2012) in West Africa

1. Dangote Cement

2. Zenith Bank Plc

3. Ecobank Transnational Incorporated

4. Nigeria Breweries Plc

5. First Bank Plc

6. Guaranty Trust Bank Plc

7. United Bank for Africa

8. Guiness Nigeria

9. Nestle Nigeria

10. Access Bank

11. Flour Mills Nigeria
12. Union Bank of Nigeria
13. Stanbic IBTC
14. First City Monument Bank
15. Lafarge Cement WAPCO
16. Total Nigeria
17. Unilever Nigeria
18. PZ Cussons
19. UACN
20. Cadbury Nigeria Plc

Appendix 2

Web-Based Disclosure Index Items

Financial- Income statement of the year

- Balance sheet of the year
- Cash flow Statement
- Notes to Financial Statements
- Key Ratio Summary
- Five years Financial Summary
- Accounting Policies
- Dividend/ Share Price Movements
- Value Added Statement
- Chairman's Report

Strategy – Corporate Goals or Objectives

- Actions to undertake in achieving goals
- Corporate position to ethical and environmental issues
- Social and Environmental commitments
- Events of the year

Market/ Marketing- Major Markets

- Dimension of Markets
- Forecasted Market Growth
- Marketing Strategy
- Distribution Channels

- Customer Mix

Human Capital- Number of Staff

- Employment Policies
- Working Conditions
- Valuation of Human Capital

Production Management – Major Products/ Services

- Changes in Production Methods and product Materials
- Quality of materials Consumed/ Investment in Production
- Life Cycle of Product