

# The Use of Social Media for Corporate Disclosure by Companies Listed in the GCC

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## Abstract

This paper investigates whether corporations in the Gulf Cooperation Council (GCC) Countries are availing themselves of the opportunity provided by the internet to communicate financial information to their stakeholders. Therefore, the objective of this paper is to examine the determinants and characteristics of corporate internet disclosure via the companies' websites and social networks & media websites by listed companies in five GCC stock markets. A corporate internet disclosure index is developed and used to examine the degree of internet disclosure among the companies. OLS Regression analysis is used to examine the determinants of corporate internet disclosure. The results of this study reveal that profitability, leverage, firm size and audit type are the major influencing factors that impact corporate internet reporting.

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**Keywords:** Internet, Financial Reporting, Disclosure, Social Networks, Social Media, Gulf Cooperation Council (GCC).

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## 1. Introduction

**T**HE purpose of this paper is to investigate and report on the extent, nature and determinants of corporate internet reporting (CIR) among companies listed on the stock exchanges in five Gulf Cooperation Council countries. While CIR is fast becoming the norm in most western countries, there is little empirical evidence of the phenomenon in GCC countries. Until recently, hard copies (paper) have been the primary means for communicating financial information to shareholders and other interested corporate stakeholders. Technological advances have made the internet a useful, timely and cost-effective tool for the communication of this information to stakeholders. The internet has the potential to revolutionize financial reporting. Companies can include the traditional annual reports together with additional financial and

non-financial information in multiple formats [1]. In recent years, the use of social media and networks has spread dramatically providing companies with a new platform for provision of corporate information.

Evidence of CIR practices in various countries have been presented by a number of academic and professional studies see, for example, [2, 3] UK, [4] US, UK and Germany, [5] Spain, [6] Sweden, [7] International Comparison, [7] Austria and Germany, [8] Germany, [9] US and Canada, [10–12] New Zealand, [13] Japan, [14] China, [15] Ireland, [16] Malaysia, [17] Australia, [18] Oman, [19] Egypt, [20] Oman, [21] Middle East. They indicate the growing use of the Internet for the corporate dissemination of information, including providing annual reports on the Internet, and that the extent and sophistication of CIR practices varies across countries. Prior studies focus mainly on disclosure practices using companies' own websites, however no prior literature exists that examine corporate disclosure practices via social media sites (SMS) and social networks sites (SNS).

Very little, if any, evidence exists on the extent and nature of

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CIR practices in the GCC countries. Therefore, considering the importance of CIR in disseminating financial information and the little research of these practices in emerging economies, the objective of this paper is to study the extent and determinants of CIR via companies' websites as well via social media and networks sites in five GCC countries, namely Saudi Arabia (KSA), Oman, United Arab Emirates (UAE), Qatar and Bahrain.

The rest of this paper is structured as follows. A review of relevant literature is provided in the next section. The proposed research methodology is discussed in Section three. Section four provides analyses and discussions on the extent, nature and determinants of CIR by companies listed in the fivestock exchanges. Summary and conclusions are presented in the final section.

## 2. Literature Review

### 2.1. Background

The Internet provides a useful communication tool for corporate organizations. One of the main benefits of CIR is the potential for large savings in the cost of production and distribution of financial information. The Internet allows companies to reach a much wider range of stakeholders at a relatively lower cost. The use of CIR also leads to a reduction in incidental requests from non-shareholder financial statement users [16, 22–25].

The literature also documents a number of other benefits that may accrue from CIR [1, 26–32]. These include more equitable information dissemination among stakeholders as a result of the improved accessibility of the information. With CIR users can choose to access information that meets their specific needs as the Internet allows non-sequential access to information through the use of hyperlinks, interactivity and search facilities. CIR also presents companies with the opportunity to provide more information than is available in annual reports. The internet provides an opportunity for going beyond what is available in hard copy corporate financial statements to communicate additional financial information to users, possibly in real-time and on an interactive basis [9, 33–38]. CIR provides corporate organizations with a real opportunity to extend financial disclosure beyond the reproduction of a hard copy annual report and improve on the timeliness, scope, and interactivity of financial reporting, with multimedia, such as sound, animation and video, being used to potentially increase the understanding of information [34].

### 2.2. Hypotheses Development

#### 2.2.1. Firm Size

Several studies examine the relationship between firm size and voluntary disclosure [39–41]. It is argued that stock market pressure forces large corporations to disclose more information on their websites to assist them in increasing their outside capital to enhance their performance. Hence, large corporations are more

able to access financial markets through disclosing more information online [42]. Large corporations can disclose information on the internet for lower costs as they have the resources to do so. Agency theory implies that large firms exhibit higher agency costs due to the information asymmetry between market participants [43]. To reduce these agency costs, larger firms disclose a large flow of corporate information. While, according to the political cost hypothesis, large firms attract more financial analysts putting firms under higher pressure because they are more publicly visible [44]. Due to the industrial competition between companies, smaller firms tend to hide their important information [13, 40]. Moreover, large companies always have a larger number of products and their distribution networks are very complex than smaller firms. Thus, information disclosure is required more in large companies [13, 41].

Empirical findings suggest a significant relationship between firm size and online disclosure [2, 8, 10, 14, 28, 38, 45–52]. This prompts the second research hypothesis:

$H_1$ : There is a significant relationship between firm size and CIR.

#### 2.2.2. Profitability

It is suggested that firm profitability can be regarded as an indicator to good management, as management tends to disclose more information when the rate of return is high. Hence, profitable companies have extra financial resources to disseminate financial information voluntarily and have more incentives to disclose to both the stakeholders and public that they are more profitable than their counterparts in the same industry. This can be justified by the agency theory, where managers of the highly profitable companies disseminate more information on their companies' website to achieve personal advantages such as the maintaining their positions and justifying compensations [39, 53, 54].

Furthermore, signaling theory suggests that profitable companies have an incentive to disclose more information, to signal the firm's profitability to investors and to raise capital at the lowest price [8, 10].

However, there are mixed results with some studies revealing significant relationship between firm profitability and internet financial disclosure [55, 56], while other studies find no significant relationship between profitability and online financial disclosure [8, 10, 14, 48]. Thus, the third hypothesis is:

$H_2$ : There is a significant relationship between profitability and CIR

#### 2.2.3. Leverage

Based on the agency theory, the agency costs of loan capital depend on the nature of claims held by outsiders. It suggests that the costs are higher for firms with proportionally more debt in the capital structure [57].

Voluntary disclosure can reduce the agency costs by facilitating debt supplier's assessment of a firm's ability to meet its debts [58].

Thus, it is suggested that firms that are highly leveraged are more inclined to try and satisfy debt suppliers by disseminating reliable information on the website to make these creditors more confident about the ability of the companies to pay their debts. Though this dissemination results in extra disclosure costs, providing reliable information to debt suppliers reduces agency costs. Likewise, shareholders demand more information to assess the firm's financial ability [10, 14, 48, 59].

Nonetheless, the literature offers inconclusive evidence on the relationship between leverage and internet financial disclosure. Some studies show a significant positive relationship [14, 42, 46], other studies show a significant negative relationship [48], while others show an insignificant relationship [10, 28, 47, 48, 50]. Hence, the fourth hypothesis is:

$H_3$ : There is a significant relationship between leverage and CIR.

#### 2.2.4. Industry Type

According to the signalling theory, companies within the same industry tend to adopt the same level of disclosure. When a company within an industry tends not to follow the same disclosure practices, including internet disclosures, as others in the same industry, then it may be interpreted as a signal that the company is hiding bad news [2]. The difference in disclosure practices between different industries may be due to different industries having different proprietary costs of disclosure and some may be more technologically advanced than others [59].

Several studies examine the relationship between the type of business activity and internet financial disclosure. The findings are mixed with some studies revealing a significant relationship between internet financial disclosure and industry type [2, 10, 41, 45, 47, 49, 59].

However, others show insignificant relationship [44, 48, 55]. This leads us to the fifth research hypothesis:

$H_4$ : There is a significant relationship between industry type and CIR.

#### 2.2.5. Audit Type

It is suggested that audit quality is an important factor in improving firms' overall reporting practices. International audit firms are more likely to facilitate the diffusion of innovative practices, such as the internet financial reporting [14, 60]. Agency theory suggests that auditing helps mitigate agency costs due to the interest conflicts between manager and shareholders. Big auditors are likely to be independent and could constrain managers to maintain more stringent disclosure standards [61]. Large international audit firms are likely to demand high-quality disclosure. This could be explained by the signaling theory because managers that hire large auditing firms signal to the market that they are willing to provide quality disclosures [62].

The findings of some prior studies reveal a positive relationship between audit type and internet financial disclosure [14, 63].

Though, other studies no significant relationship between audit type and disclosure [41, 46, 54]. Therefore, the sixth research hypothesis is:

$H_5$ : There is a significant relationship between audit type and CIR

### 3. Methodology

The population of the study consists of firms that are publicly listed in the stock exchanges of Saudi Arabia (KSA), Oman, United Arab Emirate (UAE), Qatar and Bahrain.

Tables 1 and 2 show the population and samples selected for each of stock exchanges.

The paper uses a disclosure index to measure the extent of online corporate disclosure as the dependent variable. This approach is widely used in the literature [3, 8, 14, 28, 41].

The index comprises of a set of items that capture the extent of online information disclosure. These items encompass two facets of online disclosure, namely disclosure via companies own websites (17 items) and disclosure via social networks and media sites (10 items). This index utilizes a dichotomous scoring approach to capture the level of disclosure. An item is scored 1 if it is disclosed and 0 if otherwise. The disclosure index for each company was calculated by dividing the actual scores awarded by the maximum possible scores appropriate for the company.

Table 2 shows the definition and measurement of these variables.

Table 1. Sample by Country.

Country	Number of Companies	%
1. KSA	153	38.25
2. UAE	55	13.75
3. Oman	113	28.25
4. Qatar	39	9.75
5. Bahrain	40	10.00
Total	400	100.00

### 4. Results and Discussion

The following equations are used to test hypotheses one to five:

$$WFDI = \alpha + \beta_1 \cdot FrmSize + \beta_2 \cdot ROA + \beta_3 \cdot Lvg + \beta_4 \cdot IndTyp + \beta_5 \cdot AudTyp + \varepsilon \quad (1)$$

$$WCDI = \alpha + \beta_1 \cdot FrmSize + \beta_2 \cdot ROA + \beta_3 \cdot Lvg + \beta_4 \cdot IndTyp + \beta_5 \cdot AudTyp + \varepsilon \quad (2)$$

Table 2. Definition and Measurement of Variables.

Variable Type	Symbol	Variable Definition	Measurement
Dependent Variables	<i>WFDI</i>	Website Format Disclosure Index	The actual score awarded by the maximum possible
	<i>WCDI</i>	Website Content Disclosure Index	The actual score awarded by the maximum possible
	<i>WTDI</i>	Website Total Disclosure Index	The actual score awarded by the maximum possible
	<i>SMDI</i>	Social Networks and Media Disclosure Index	The actual score awarded by the maximum possible
	<i>TDI</i>	Total Disclosure Index	The actual score awarded by the maximum possible
Independent Variables (Determinants)	<i>FrmSize</i>	Firm Size	Natural log of total assets
	<i>ROA</i>	Return on Assets	Net Income / Total Assets
	<i>Lvg</i>	Leverage	Total Equity/ Total Assets
	<i>IndTyp</i>	Industry Type	Manufacturing=1; Non-financial Services=2; Financial Services=3
	<i>AudTyp</i>	Auditor Type	If Big 4 = 1; Otherwise = 0

Table 3. OLS Regression Results.

Variable	Model 1 (WFDI)		Model 2 (WCTDI)		Model 3 (WTDI)		Model 4 (SMDI)		Model 5 (TDI)	
	Coeff.	t	Coeff.	t	Coeff.	t	Coeff.	t	Coeff.	t
Const.	-	-5.164***	-	-4.689***	-	-5.275***	-	4.361***	-	-6.184***
<i>ROE</i>	0.081	1.824*	0.081	1.707*	0.086	1.899*	0.030	0.604	0.084	1.895*
<i>Audtyp</i>	0.069	1.532	0.038	0.790	0.053	1.143	0.087	1.708*	0.072	1.601
<i>Indtyp</i>	-0.012	-0.256	0.029	0.569	0.014	0.301	0.082	1.534	0.037	0.793
<i>Lvg</i>	-0.144	-2.996***	-0.054	-1.068	-0.093	-1.901*	-0.102	-1.877*	-0.112	-2.333**
<i>FirmSize</i>	0.528	10.996***	0.421	8.261***	0.491	10.021***	0.259	4.772***	0.507	10.546***
<i>F</i> -statistics	32.580		19.859		28.092		8.265		32.035	
<i>p</i> -value for <i>F</i> -test	0.000		0.000		0.000		0.000		0.000	
<i>R</i> <sup>2</sup>	0.293		0.201		0.263		0.095		0.289	
adjusted <i>R</i> <sup>2</sup>	0.284		0.191		0.253		0.093		0.280	
Max <i>VIF</i>	1.282		1.282		1.282		1.282		1.282	

Note: \* = Statistically significant at the 0.10 level;  
 \*\* = Statistically significant at the 0.05 level;  
 \*\*\* = Statistically significant at the 0.01 level.

$$WTDI = \alpha + \beta_1 \cdot FrmSize + \beta_2 \cdot ROA + \beta_3 \cdot Lvg + \beta_4 \cdot IndTyp + \beta_5 \cdot AudTyp + \varepsilon \quad (3)$$

$$SMDI = \alpha + \beta_1 \cdot FrmSize + \beta_2 \cdot ROA + \beta_3 \cdot Lvg + \beta_4 \cdot IndTyp + \beta_5 \cdot AudTyp + \varepsilon \quad (4)$$

$$TDI = \alpha + \beta_1 \cdot FrmSize + \beta_2 \cdot ROA + \beta_3 \cdot Lvg + \beta_4 \cdot IndTyp + \beta_5 \cdot AudTyp + \varepsilon \quad (5)$$

Using OLS regression to examine the determinants of CIR in the GCC countries; Table 3 shows that all five models are highly significant. Model 1 investigates the determinants of the format of corporate disclosure on companies' own websites. The *R*<sup>2</sup> is 0.293 and the model appears highly significant (*F* = 32.580, *p* = 0.000). The results show that the factors that significantly impact the format of CIR in the GCC countries are firm size, leverage and profitability. Model 2 on the other hand examines the determinants of the content of CIR on companies' own websites. The model is also highly significant with *R*<sup>2</sup> of 0.201 (*F* = 19.859, *p* = 0.000). However, only firm size and profitability appear to sig-

nificantly influence the content of CIR. Furthermore, model 3 examines the determinants of the total disclosure index using companies' own websites. The model is also highly significant with *R*<sup>2</sup> of 0.263 (*F* = 28.092, *p* = 0.000). Again, firm size, leverage and profitability seem to be the main factors that impact corporate disclosure via companies' website among companies listed in the five GCC countries.

The results are consistent with the findings of previous studies [2, 10, 17, 28, 32, 38]. The results can be justified by the fact that to reduce these agency costs, larger firms disclose a large flow of corporate information [58]. The relative cost of disclosing information may also be lower than smaller ones [10]. Furthermore, according to the political cost hypothesis it is argued that larger firms face more demands for information from analysts than smaller firms [52, 63]. Moreover, firms that are highly leveraged are more inclined to try and satisfy debt suppliers by disclosing information on their websites to make enhance creditors' confidence in the companies' ability to pay their debts. Providing reliable information to debt suppliers reduces agency costs, while shareholders demand more information to assess the firm's financial ability [10, 14, 48, 59]. Similarly, signaling theory suggests that profitable companies have an incentive to disclose more

information, to signal the firm's profitability to investors, and to raise capital at the lowest [8, 10]. Additionally, the agency theory suggests that managers of highly profitable companies tend to disclose more information on their companies' websites to achieve personal advantages such as maintaining their positions and justifying compensations [39, 53, 54].

On the other hand, model 4 looks more specifically at the determinants of disclosing corporate financial information on social networks and media website. The model is also highly significant with  $R^2$  of 0.095 ( $F = 8.265$ ,  $p = 0.000$ ). The results shown in table 11 reveal that the main factors that influence CIR on social networks and media websites are firm size, leverage and audit type. Finally, model 5 examines the determinants of the overall disclosure index, using both companies own websites and social networks and media websites. The model is significant at 1% with  $R^2$  of 0.289 ( $F = 32.035$ ,  $p = 0.000$ ). As mentioned previously, this paper is one of the first attempts to examine the characteristics and determinants of corporate disclosure via social networks and media website. However, the findings are consistent with the general literature of corporate disclosure via the internet. Once again, the results can be justified by both the agency and signalling theory as discussed above. Furthermore, the fact that firms that are audited by one of the big 4 audit firms seems to significantly disclose more information via SNS and SMS than audit firms can be due to large international demanding high-quality disclosure.

## 5. Conclusions

This paper investigates and reports on the extent, nature and determinants of CIR practices among companies listed on five stock markets in GCC countries. The paper goes beyond the traditional studies that examine internet disclosure via the mean of corporate websites by extending the examination to the attributes and determinants of corporate disclosure using social networks and social media websites. As there is little empirical study on CIR practices in the Middle East region and even less empirical evidence on the use of social networks and media websites for corporate disclosure; this paper is an important contribution to filling the gap the literature. The paper provides insights into CIR in the Middle East that will benefit all stakeholders with an interest in corporate. Data has been collected and analyzed on 400 companies listed on the stock markets in Saudi Arabia, Oman, United Arab Emirates, Qatar and Bahrain.

The results show that large firms tend to disclose more financial information in order to reduce information asymmetry and also reduce agency costs. Also, the more exposure large firms are subjected to leads to the firms being under higher pressure to disclose information. The findings also reveal that there is a significant relationship between corporate internet disclosure and leverage and profitability. This can be due to the fact that firms that are highly leverages attempt to disclose reliable information

to debt suppliers to reduce agency costs; while profitable companies attempt to disclose more information to signal the firm's profitability to investors and to raise capital at the lowest price.

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