The effect of Islamic values on voluntary corporate governance disclosure: The case of Saudi listed firms

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Please note: Accepted for Publication in the Journal of Islamic Accounting and Business Research, January 2016. *(DOI: 10.1108/JIABR-09-2015-0046).*

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Abstract

Purpose – The study examines the effect of Islamic values on the extent of voluntary corporate governance (CG) disclosure. In addition, we investigate the effect of traditional ownership structure and CG mechanisms on the extent of voluntary CG disclosure.

Design/methodology/approach – We distinctively construct Islamic values and voluntary CG disclosure indices using a sample of 75 Saudi listed firms over a seven-year period in conducting multivariate regressions of the effect of Islamic values on the extent of voluntary CG disclosure. Our analyses are robust to controlling for firm-level characteristics, fixed-effects, endogeneities and alternative measures.

Findings – We find that corporations that depict greater commitment towards incorporating Islamic values into their operations through high Islamic values disclosure index score engage in higher voluntary CG disclosures than those that are not. Additionally, we find that audit firm size, board size, government ownership, institutional ownership and the presence of a CG committee are positively associated with the level of voluntary CG disclosure, whilst block ownership is negatively associated with the extent of voluntary CG disclosure.

Practical implications – Our study has clear practical implications for future research, practice and broader society by demonstrating empirically that corporations that voluntarily incorporate Islamic values into their operations are more likely to be transparent about their CG practices, and thereby providing new crucial insights on the effect of Islamic values on voluntary CG compliance and disclosure.

Originality – To the best of our knowledge, this is the first empirical attempt at explicitly examining the effect of Islamic values on the extent of voluntary CG disclosure. We also offer evidence on the effect of traditional CG and ownership structures on the extent of voluntary CG disclosure.

Keywords: Islamic values, corporate governance, Ownership structure, Voluntary disclosure, Saudi Arabia

Paper type: Research paper

1. Introduction

The collapse of major public corporations, such as Barings Bank, Enron, and WorldCom in the developed economies, such as UK and US in the 1990s/2000s, which were attributed primarily to poor corporate governance (CG) practices (Hussainey and Al-Najjar, 2012; Ntim *et al.*, 2012b, 2015a, b), generally highlighted the need for good CG practices (MacNeil and Li, 2006; Mallin and Ow-Yong, 2012). Similarly, global interest in CG was further heightened by the 1997/1998 Asian economic crisis, which demonstrated that macro-economic problems could be exacerbated by systematic CG failures in developing countries (Haniffa and Hudaib, 2006; Ntim *et al*., 2012a)[1]. Consequently, CG codes and policy reforms have been pursued in a considerable number of countries (Conyon and Mallin, 1997; Aguilera and Cuervo-Cazurra, 2009). Generally, such reforms seek to enhance the way in which public corporations are governed by encouraging greater board accountability, discipline, fairness, independence, responsibility, transparency and disclosure (Filatotchev and Boyd, 2009; Samaha *et al*., 2012).

Observably, and despite apparent differences in corporate settings, such CG codes, including those that have been issued in most developing countries do not only follow the 1992 UK-style voluntary compliance regime, but also are primarily focused narrowly on enhancing shareholder-related protections (Conyon, 1994; Ntim *et al.*, 2012a; Albassam et al., 2015). However, the capacity of CG codes to achieve good governance depends on the extent to which companies are willing to engage in effective voluntary compliance and disclosure (Core, 2001; Collett and Hrasky, 2005). Therefore, this study seeks to investigate whether Islamic values can explain discernible differences in the extent of voluntary CG disclosures by Saudi listed firms. Specifically, we seek to ascertain whether corporate commitment to voluntarily/explicitly embrace and incorporate Islamic values into business operations, along with traditional ownership structure and CG mechanisms can explain observable differences in the levels of voluntary CG disclosures.

Our decision to investigate the relationship between Islamic values and the extent of voluntary CG disclosure in Saudi Arabia is motivated by the following factors. First, and similar to a number of Islamic/Arabic countries, but distinct from most developed and developing countries is that governance of public corporations is strongly influenced by Islamic values that emanate mainly from '*Shariah*' (Islamic law) (Grais and Pellegrini, 2006; Safieddine, 2009; Judge, 2010). '*Shariah*' is inherently holistic in orientation, providing comprehensive guidance for practicing Muslims in every reasonably conceivable aspect of day-to-day life, including business, law, economics, environment, politics, religion, and society (Abu-Tapanjeh, 2009; Kamla, 2009)[2]. Consequently, trade, commerce, business and financial transactions are expected to generally reflect Islamic principles. For example, '*Shariah'* prohibits ex-ante charging/offering of interest (*riba*) on loans and deposits, uniquely requiring banks to instead engage in '*mudarabah*' (profit-sharing) and '*musharakah*' (joint-venture) forms of Islamic banking/financing that often necessitates the appointment of '*Shariah*' compliant supervisory boards (Lewis, 2005; Chong and Liu, 2009)[3]. The governance implication is that the distinctiveness of these Islamic corporate/financing forms also creates unique CG challenges, and thus requires separate examination (Lewis, 2005; Safieddine, 2009). For instance and in theory, '*mudarabah*' does not only increases adverse selection, moral hazard and monitoring costs of borrowers (Choudhury and Hoque, 2006; Chong and Liu, 2009), but also exacerbates agency problems by increasing opportunities for managerial expropriation of corporate assets (Safieddine, 2009; Vinnicombe, 2010).

Second, as explained by Albassam (2014), globally, Saudi Arabia is one of the important economies. More specifically, Saudi GDP represents 25% of the total Arab GDP in 2010 (SFG, 2009; Hearn et al., 2011). As important 'G-20' country, the Saudi economy has experienced extensive neo-liberal economic reforms and as such, has attracted significant foreign investments. Moreover, the Saudi government makes significant investments in both developed and developing countries (Al-Filali and Gallarotti, 2012). For example, foreign investments in Saudi Arabia was estimated to be around $170bn (USD) in 2011 in the fields of energy, petrochemicals and finance, which are spread in over 50 countries around the world (Alriyadh, 2011), including in the US, Europe and Asia (MOF, 2011). Therefore, any CG failures will arguably have major negative implications for the global economy.

Third, and despite the relative uniqueness of the Saudi context and the voluntary nature of the Saudi code, there is a paucity of empirical studies examining the code's effectiveness in improving CG standards in Saudi public corporations (Al-Nodel and Hussainey, 2010; Alshehri and Solomon, 2012). However, there are a limited number of prior studies on Saudi that need to be explicitly acknowledged. A group of past studies (Al-Razeen and Karbhari, 2004; Alsaeed, 2006) have investigated how firm-specific characteristics influence voluntary disclosure in Saudi and generally report that larger firms tend to voluntarily disclose more information in their annual reports than their smaller counterparts. Another group of prior Saudi studies (Safieddine, 2009; Al-Nodel and Hussainey, 2010; Soliman, 2012a, b) have examined the association between CG structures and financial performance with their findings suggesting that, on average, better-governed corporations tend to generate higher performance than their poorly-governed counterparts. A third group of prior Saudi studies, such as Hussainey and Al-Nodel (2008), Alshehri and Solomon (2012), Al-Moataz and Hussainey (2012), Piesse *et al*. (2012) and Albassam et al. (2015), have examined CG practices. For example, Hussainey and Al-Nodel (2008) examine the extent to which 64 Saudi listed corporations report information about their CG practices on their websites between October 2005 and January 2006. They report that the level of online reporting of CG differs between industries with banking firms disclosing more information on their CG practices than firms in other industries. Similarly, using 45 Saudi listed corporations from 2006 to 2007, Al-Moataz and Hussainey (2012) investigate the connection between CG mechanisms and the level of information disclosed on 9 CG practices. Their results suggest that board independence, audit committee size, liquidity, gearing and profitability are the main determinants of CG disclosure in Saudi listed corporations. By contrast, both Alshehri and Solomon (2012), and Piesse *et al*. (2012) use questionnaires and interviews to explore stakeholders' perceptions of CG practices in Saudi, and report that there is a strong stakeholder support for the introduction of the Saudi CG code, whereas shareholder activism is weak. In a recent study, Albassam et al. (2015) report significant association between ownership and board characteristics on voluntary disclosure of CG practices using a sample of 80 Saudi listed firms from 2004 to 2010. Observably, Albasam et al. (2015) do not study the effect of Islamic values on voluntary CG disclosure.

The current study, therefore, differs from existing ones in a number of ways. First, while our study investigates how Islamic values drive the extent to which Saudi listed firms voluntarily comply with and disclose CG provisions contained in the 2006 Saudi code. Existing studies mainly: (i) examine the determinants of general voluntary disclosures (Al-Razeen and Karbhari, 2004; Alsaeed, 2006); and (ii) investigate the effect CG mechanisms on performance (Al-Nodel and Hussainey, 2010; Soliman, 2012a, b), which are differently focused. Second, and apart from differences in focus, the samples used by existing related studies (Hussainey and Al-Nodel, 2008; Al-Moataz and Hussainey, 2012) are noticeably smaller in comparison to the size of the current sample, as well as investigate a limited number of CG provisions. Arguably, this impairs the generalisation of their findings for Saudi listed firms. Finally, our study investigates a large set of CG disclosures (65 provisions) using the constructed CG index by Albassam (2014) over a very recent and longer period (2004-2010) compared with the periods investigated by existing studies and thus, the current examination can also be considered as an extension to prior studies.

Given this background, the main objective of this paper is to examine the extent to which corporate commitment to incorporate Islamic values in their operations, as well as conventional ownership structure and CG mechanisms influence the level of information that Saudi listed firms disclose on their CG practices. First and to the best of our knowledge, we provide for the first time empirical evidence on the extent and level to which Islamic values are voluntarily embraced and incorporated into corporate operations by constructing a broad disclosure index containing 10 Islamic values using a sample of 75 Saudi listed corporations from 2004 to 2010. Second, we provide for the first (to the best of our knowledge) time evidence on the extent to which Islamic values drive the level of voluntary compliance and disclosure of good CG practices among Saudi listed corporations[4]. Third, we provide evidence on the effect of traditional ownership and CG mechanisms on the extent voluntary CG disclosure. This can improve our understanding of the main factors that influence the level of voluntary compliance and disclosure of CG practices in a major developing Islamic/Arabic country in which various stakeholders, such as the Saudi government, the Saudi Capital Market Authority (CMA) and the Saudi Stock Exchange (Tadawul) take a keen interest in CG and stakeholder issues.

Our findings are two-fold. First, our analysis of the factors influencing voluntary CG compliance and disclosure suggests that Islamic values are generally significant in explaining variations in voluntary CG disclosures. Specifically, we find that corporations that depict greater commitment towards incorporating Islamic values into their operations through high Islamic values score engage in higher CG disclosures than those that are not. Second, we find that audit firm size, board size, government ownership, institutional ownership and the presence of a CG committee are positively associated with the level of voluntary CG disclosure, whilst block ownership is negatively associated with the extent of voluntary CG disclosure. Our analyses are robust to controlling for firm-level characteristics, fixed-effects, endogeneities and alternative measures.

The rest of the paper is organised as follows: The following sections review the prior literature and hypotheses development, present the research design and methodology, and report data and empirical results, whilst the final section concludes the study.

2. Prior literature and hypothesis development

Existing CG studies have focused mainly on: (i) general voluntary disclosures (Haniffa and Cooke, 2002; Eng and Mak, 2003; Barako et. al., 2006; Cheng and Courtenay, 2006; Abdelsalam and Street, 2007; Rouf, 2011; Taylor *et al*., 2011; Ntim et al., 2015c); (ii) CSR disclosures (Ntim and Soobaroyen, 2013a, b; Soobaroyen and Ntim, 2013; Ntim, 2015a); (iii) performance (Ntim, 2012; Ntim, 2015b; Ntim *et al*., 2015a, b); (iv) risk disclosure (Ntim *et al*., 2013); and (v) voluntary CG disclosures (Collett and Hrasky, 2005; Tsamenyi *et al*., 2007; Hussainey and Al-Najjar, 2012; Ntim *et al*., 2012a; Albassam et al., 2015). However, studies examining the effect of Islamic values on the extent of voluntary CG disclosure are rare and therefore, offer opportunities to contribute to the extant literature by investigating the effect of Islamic values on the extent of voluntary disclosure. Thus, we draw from these strands extant literature and the Saudi CG reforms to develop our central hypothesis relating to the effect of Islamic values on voluntary disclosure of CG practices. Mainly, the study examines the extent to which Islamic values are voluntarily embraced and incorporated into business operations, as measured by a broad Islamic values disclosure index affect voluntary disclosure of CG practices. We also examine the effect of traditional ownership (block ownership, government ownership and institutional ownership) and CG (audit firm size, board size and the presence of a CG committee) on the extent of voluntary disclosure. However, as these traditional ownership and CG variables have been examined in the prior literature (e.g., Collett and Hrasky, 2005; Tsamenyi *et al*., 2007; Hussainey and Al-Najjar, 2012; Ntim *et al*., 2012a, b), we do not develop specific hypotheses for each of them, but they are included in the regression analyses and discussed as part of our findings.

2.1. Islamic values, transparency and voluntary CG disclosure

As previously noted, '*Shariah*' is holistic in orientation providing guidance for every aspect of practicing Muslims day-to-day life activities (Abu-Tapanjeh, 2009; Vinnicombe, 2010). Thus, and in effect, '*Shariah*' acknowledges that practicing Muslims will inevitably have to engage in secular/material transactions, but specifies that such dealings must be guided by religious/spiritual/Islamic values of accountability, equity, fairness, morality, responsibility and social justice (Kamla, 2009; Maali and Napier, 2010). In the context of modern large 'Islamic public corporations', a major way of ensuring that business transactions are '*Shariah*' compliant are: (i) providing independent reports to shareholders as to the compliance of management with Islamic business principles/values; and (ii) auditing corporate accounts to verify accurate payments of the Islamic religious tax (*zakah*) and using Islamic loans (Lewis, 2005). However, and to be effective in monitoring and advising managers, the company must depict accountability, independence, confidentiality, competence, consistency and disclosure (Lewis, 2005; Grais and Pellegrini, 2006). In this context and although in Islam, accountability, for example, is first and foremost to God (*Allah*), it nonetheless explicitly requires corporations to make true, fair, timely and transparent disclosure of financial facts and information not only to shareholders, but also to other stakeholders (Abu-Tapanjeh, 2009; Sarker, 2012). Thus, 'Islamic corporations' are arguably subject to greater monitoring and scrutiny than their non-Islamic counterparts[5]. Therefore, and from an agency theoretical perspective, corporations that voluntarily embrace and incorporate Islamic values into business operations signal their intention to commit to good governance standards. One way by which 'Islamic corporations' can display their good governance qualities is to engage in greater transparency and disclosure with respect to their CG practices.

Empirical studies that examine the extent to which Islamic values are incorporated into business operations and voluntary disclosure of CG practices are rare, and thus provide opportunities to contribute to the literature. The only exception is a study by Vinnicombe (2010). Using 15 Islamic banks in Bahrain from 2004 to 2007, she measures the level of compliance with accounting and governance standards issued by the Accounting and Auditing Organisation for Islamic Financial Institutions (AAOIFI). She reports that compliance with AAOIFI's disclosure guidelines regarding SSBs and '*murabahah*' contracts are high, but low with respect to AAOIFI's disclosure requirements on the '*zakah*' and '*mudarabah*' contracts. With specific reference to the Saudi context, and given that the decision to incorporate Islamic principles into business operations is a voluntary one, our expectation is that 'Islamic public corporations' are more likely to commit to good governance, including engaging in increased disclosure of their CG practices. Thus, our central or main hypothesis that we test in this study is that:

H1: *There is a statistically significant positive association between Islamic values disclosure index and the level of voluntary compliance and disclosure of good CG practices.*

3. Research Design and Methodology

As it has been explained previously, the study aims to examine the effect of Islamic values on the extent of voluntary CG disclosure. The index is developed by using different CG provisions. Specifically, to examine our main hypothesis (*H1*), we employ a binary [6] Saudi CG disclosure index (*GINDX*), as our main dependent variable. The index has been constructed to measure the four main disclosure areas contained in the 2006 Saudi CG code. In particular, the index is divided into areas as: (i) board of director (*BDIR*); (ii) disclosure and transparency (*DTRA*); (iii) internal control and risk management (*INCR*); and (iv) shareholders' right (*SHAR*). This index has been constructed by Albassam (2014). For brevity, the detailed provisions are presented in Appendix 2 of Albassam (2014, pp.341-348).

Insert Table I about here

Second, and to test our main hypothesis (*H1*), our main independent variable is a binary Islamic values disclosure index (*IVDI*), containing 10 Islamic values covering broad areas of Islamic business and financial principles. The detailed provisions are contained in the Appendix. The *IVDI* seeks to measure the extent to which Saudi listed firms voluntarily and explicitly incorporate Islamic values into their business operations. These provisions were selected based on extensive examination of the prior literature that explores CG from an Islamic perspective (Rahman, 1998; Lewis, 2005; Choudhury and Hoque, 2006; Grais and Pellegrini, 2006; Abu-Tapanjeh, 2009; Safieddine, 2009; Vinnicombe, 2010; Sarker, 2012) and the annual reports of the sampled Saudi listed firms.

Third, and since several studies suggest that ownership and board structure variables can affect disclosure (Haniffa and Cooke, 2002, 2005; Ntim *et al*., 2012b), we collect data on ownership structure, including block ownership (*BLON*), government ownership (*GVTR*), and institutional ownership (*INON*) and board/CG characteristics, including board size (*BODZ*), audit firm size (*AUFZ*), and the presence of a CG committee (*CORG*) and include in our models as control variables. Finally, and to control for potential firm-level omitted variables bias (Gujarati, 2003; Petersen, 2009), number of firms' characteristics were included as control variables. These include risk (*BETA*), return on assets (*PROF*), sales growth (*SAGR*), leverage (*LEVG*), firm size (*FIMZ*), capital expenditure (*CEXP*), dividend payment status (*DVPS*), industry dummies (*IDUM*), and year dummies (*YDUM*). These variables are chosen, particularly, because a number of theoretical and empirical studies suggest that these variables can affect the extent of voluntary CG disclosure (e.g., Botosan, 1997; Haniffa and Cooke, 2002; Abdelsalam and Street, 2007; Rouf, 2011; Hooghiemstra, 2012; Hussainey and Al-Najjar, 2012; Mallin and Ow-Yong, 2012; Samaha *et al*., 2012; Fifka, 2013; Ntim and Soobaroyen, 2013a, b; Albassam et al., 2015).

Thus, the main equation to be estimated is presented as follows:

$$GINDX_{it} = \alpha_0 + \beta_1 IVDI_{it} + \sum_{i=1}^{n} \beta_i CG_{it} + \sum_{i=1}^{n} \beta_i OWN_{it} + \sum_{i=1}^{n} \beta_i CONTROLS_{it} + \varepsilon_{it} \qquad (1)$$

where variables are defined as follows: Saudi corporate governance disclosure index (*GINDX*); Islamic values disclosure index (*IVDI*); CG refers to board size (*BODZ*); audit firm size (*AUFZ*); and the presence of a CG committee (*CORG*); OWN refers to block ownership (*BLON*); institutional ownership (*INON*); and government ownership (*GVTR*), whereas *CONTROLS* refers to all the control variables, including dividend payment status (*DVPS*), sales growth (*SAGR*), capital expenditure (*CEXP*), leverage (*LEVG*), firm size (*FIMZ*), profitability (*PROF*), risk (*BETA*), 8 industry dummies (*IDUM*), and 7 year dummies (*YDUM*).

4. Data and empirical results

4.1. Data

The study mainly focused on Saudi firms those are listed in the stock market. The Saudi Stock Exchange (Tadawul) has 145 firms listed at the end of 2010. Thus, the study basically targeted all corporations listed on the Tadawul. After excluding corporations that had been suspended, merged, newly listed and with no/missing data, the complete data needed is obtained for a total of 75 corporations for seven firm-years (525 firm observations). These firms follow 8 different industries; include services 12 firms, building and construction 11 firms, financial 11 firms, agriculture 9 firms, petrochemical 8 firms, manufacturing 10 firms, cement 8 firms and others 6 firms. The firms' annual reports and firm stock information have to be available for all seven years. This helps to overcome any problems that may be caused by unobserved firm-level heterogeneity (Henry, 2008).

The study mainly focused on collecting data from the two main sources: (i) the firms' annual reports in order to obtain the voluntary disclosure, Islamic values and ownership structure; (ii) the firms' financial statements as well as the Tadawul to collect financial data, particularly financial and accounting information. The sample used data from 2004 to 2010 for two reasons (i) the Saudi corporate governance code issued in 2006. Thus, this helps to examine pre- and post-2006 issuance of the Saudi CG code as a part of sensitivity analysis; and (ii) following the previous literature (Barako *et al*, 2006; Henry, 2008), this sample helps to fulfil the requirement of a balanced panel dataset in which both time series and cross-sectional observations are included to minimise multi-collinearity and provide more degrees of freedom among the variables (Gujarati, 2003; Ntim*et al*., 2012a).

4.2 Empirical Findings

4.2.1 Descriptive statistics summary

Table II presents the summary descriptive statistics relating to the level of compliance with the *GINDX* and *IVDI*. First, the analyses suggest that there is substantial degree of dispersion in the distribution of both indices. For example, the *GINDX* (*IVDI*) ranges from a minimum of 1.54% (9.09%) to a maximum of 92.31% (86.36%) with the average corporation complying with 45.94% (29.01%) of the 65 (10) CG (Islamic values) provisions investigated. Second, and in line with the findings of previous studies (Patel *et al*., 2002; Barako *et al*., 2006; Henry, 2008; Ntim *et al*., 2012a; Albassam et al., 2015), the results in Table II suggest that compliance with the *GINDX* (*IVDI*) provisions generally improves over time, with the median aggregate compliance levels increasing from 18.46% (22.73%) in 2004 to 76.92% (31.82%) in 2010.

Insert Table II about here

On the other hand, the descriptive statistics for the other explanatory and control variables are shown in Table III. Similar to the *GINDX* and *IVDI*, the distribution of all the variables generally display wide variations. For example, *BODZ* ranges from a minimum of 4 to a maximum of 12 with a median of 8 board members. In line with the findings of past studies (Alsaeed, 2006; Piesse *et al*., 2012; Soliman, 2012a, b; Albassam et al., 2015), *BLON* is between 5.00% and 85.21% with a mean of 33.99%. The figures for *AUFZ*, *CORG*, *GVTR*, and *INON*, as well as the control variables in Table III suggest substantial variation in our sample, and thus reducing any possibilities of sample selection bias.

Insert Table III about here

4.2.2 OLS and multivariate analyses

In this study, the OLS technique has been used to examine the influence of Islamic value on good CG practices. To make sure that there is no serious violation of OLS assumptions and it can be applied in this study, a number of OLS assumptions such as multicollinearity, autocorrelation, normality, homoscedasticity and linearity are examined. To test for possible multicollinearities, Table IV presents the correlation matrix of all the variables employed in this study. The direction and magnitude of both test's the Spearman's non-parametric and Pearson's parametric coefficients are almost similar which shows that there is no serious non-normalities in the data. Further, both of the matrices suggest that there is no serious problem of multicollinearity as the correlations among all the variables used in the analysis is fairly low.

Insert Table IV about here

As shown in Table IV the relationship between the *GINDX*, *IVDI* and the explanatory variables, and also between the *GINDX* and the control variables is statistically significant. More specifically, *IVDI*, *AUFZ*, *BODZ*, *CORG*, *GVTR*, and *INON* are statistically significant and positively associated with the *GINDX*, whereas *BLON* is statistically significant and negatively related to the *GINDX*. With reference to the control variables, the findings suggest that larger, highly geared, and dividend paying corporations make significantly more voluntary CG disclosures, whereas capital intensive, growing and risky corporations make significantly less voluntary CG disclosures. There is, however, no evidence to suggest that profitable Saudi corporations make significantly less or more voluntary CG disclosures.

Table V reports the findings of the OLS analysis of the effect of Islamic values, ownership structure and board characteristics on the extent of voluntary disclosure of CG practices. Column 2 reports the results of a pooled OLS regression of the *GINDX* on the independent and control variables. Our findings generally suggest that the independent variables are significant in explaining cross-sectional variations in voluntary CG disclosures.

Insert Table V about here

First, the results suggest that the coefficients on *IVDI*, statistically significant and positively related to *GINDX*, implying that Saudi corporations with high *IVDI*, generally make significantly more voluntary CG disclosures. The positive connection between *IVDI* and *GINDX* is consistent with theoretical suggestions that corporations that voluntarily incorporating Islamic values into their operations subject themselves to greater managerial monitoring and scrutiny (Choudhury and Hoque, 2006; Grais and

Pellegrini, 2006) and as such, they are more likely to have better CG and disclosure standards. In fact, and apart from being independent, competent and consistent in executing its functions (Rahman, 1998; Lewis, 2005; Sarker, 2012), commitment to espouse Islamic values will be associated with the expectation making true, fair and transparent disclosures not only to shareholders, but also to other stakeholders (Abu-Tapanjeh, 2009; Safieddine, 2009; Vinnicombe, 2010). Observably, our results also offer empirical support for our main hypothesis (*H1*) and thus provide new empirical insights on the link between Islamic values and the extent of voluntary disclosure with particular focus on the disclosure of CG practices.

Second, to explore the link between each of the voluntary CG disclosure mechanisms, the main equation of the study is re-estimated by substituting *GINDX* with the right of shareholders' rights (*SHAR)*, board of directors (*BDIR*), internal control and risk management *(INCR)*, and disclosure and transparency (*DTRA)* sub-indices. The outcomes of the equations are reported in the Columns 3 to 6 of Table V, respectively, with the results remaining essentially as those reported for the main *GINDX*. Third and although treated as control variables (not the main focus of this study), the findings from Table V suggest that audit firm size, board size, government ownership, institutional ownership and the presence of a CG committee are positively associated with the level of voluntary CG disclosure, whilst block ownership is negatively associated with the extent of voluntary CG disclosure, and thereby extending the findings of prior studies that were specifically conducted within the Saudi corporate context, such as Hussainey and Al-Nodel (2008), Alshehri and Solomon (2012), Al-Moataz and Hussainey (2012), Piesse *et al*. (2012) and Albassam *et al.* (2015), which reported similar results.

Finally, the results of the control variables are also presented in the Table V and are largely similar to the expectations of the study. For instance, the *LEVG*, *DVPS* and *FIMZ* are statistically significant and positively related to the *GINDX*, while the *BETA* is statistically significant and negatively associated with the *GINDX*. On the other hand, the *SAGR*, *CEXP* and *PROF* are not generally statistically significant.

4.2.3. Robustness analyses

In this section, the authors conduct extra tests to examine the sensitivity of their results. First, as explained above, the Saudi CG code was first issued in 2006. However, our sample time-frame starts from 2004 to 2010. Thus, the sample was divided into two groups: *Pre*- and *Post*-2006 to check whether there are variations in our findings in terms of the period of investigation. As shown in Table VI, the findings are essentially the same. Specifically, the statistical significance of the results between samples (*Pre*- and Post-2006) indicates that the publication of the 2006 Saudi CG Code have led to observable improvement in CG practices among firms, and hence, a decrease in the cross-sectional differences in the *Post-2006* CG ratings.

Second, and as discussed above, the adopted *GINDX* is un-weighted. However, the number of CG rules employed differs across the four categories, leading to different weights being allocated to each category: *BDIR* (54%); *DTRA* (25%); *INCR* (9%); and *SHAR* (12%). Therefore, to check whether our findings are insensitive to the weighting of the four categories, each category in the *GINDX* is allocated equal weight of 25%, as a weighted *GINDX*. Although there are minor differences with regard to the magnitude of the coefficients, our findings presented in Table VI are largely similar to those reported in Table V, and hence the central tenor of our findings is the same.

Insert Table VI about here

Finally, and as has been discussed in Albassam (2014), the voluntary CG disclosure behaviour may be jointly and dynamically influenced by unobserved company-specific hetereogeneities (Henry, 2008; Ntim *et al*., 2012b), which simple OLS regression may fail to ascertain (Gujarati, 2003; Petersen, 2009). Thus, given the panel nature of our dataset, we estimate a fixed-effects model to account for the potential unobserved company-specific characteristic. This involves re-running equation (1), with the inclusion of 74 dummies to represent the 75 sampled firms. As shown in Table VI, the fixed-effects findings are essentially the same as before, indicating that our results are robust to potential unobserved company-specific feature.

5. Conclusion

Saudi Arabia has pursued close to a decade of corporate governance (CG) reforms in the form of the 2006 Saudi CG Code. However, in a strong conservative Islamic country, such as Saudi Arabia, it can be argued that compliance with CG standards is equivalent to applying a number of Islamic values (Abu-Tapanjeh, 2009). Specifically, the wealth of individuals and companies are expected to be consistent with the broader expectations of stakeholders and society (Abu-Tapanjeh, 2009). Specifically, the context of Saudi business is formally influenced by Islamic values, such as prohibition of "*riba*" *or* "*usury*". In addition, there is increasing trend of companies using different forms of Islamic finance, such as "*Musharakah*" and "*Murabaha*". Moreover, there are professionals (Shariah scholars), whose primary role is to assess whether a company's transactions are compliant with Islamic values or not. Thus, Islamic values can be expected to play a key role in Saudi businesses' and corporations' decision-making, including voluntary CG disclosure ones.

Consequently, this study examines the effect of voluntarily complying with Islamic values by Saudi corporations on the extent of voluntary CG practices and disclosures. Specifically, it sought to explore whether a voluntary commitment by public corporations to incorporate Islamic values in their operations can improve corporate disclosure and transparency with a specific focus on the compliance and disclosure of voluntary CG practices. In doing so, the main independent variable is a binary Islamic values disclosure index (*IVDI*), containing 10 Islamic values; whereas the Saudi CG disclosure index (*GINDX*) is used as a dependent variable. The study used a sample consisting 75 Saudi listed companies over a seven-year period (525 firm observations).

We find that corporations that depict greater commitment towards incorporating Islamic values into their operations through high Islamic values disclosure index score engage in higher voluntary CG disclosures than those that are not. Additionally, we find that audit firm size, board size, government ownership, institutional ownership and the presence of a CG committee are positively associated with the level of voluntary CG disclosure, whilst block ownership is negatively associated with the extent of voluntary CG disclosure. Our analyses are robust to controlling for firm-level characteristics, fixed-effects, endogeneities and alternative measures. It was noticeable from the data that there are other important provisions that may affect the practice of CG. Also, the study adopted un-weighted Islamic index; therefore, it did not take into account the variation in the level of importance among the different provisions. Finally, our study has clear practical implications for future research, practice and broader society by showing that corporations that voluntarily incorporate Islamic values into their operations are more likely to be transparent about their CG practices, and thereby providing new crucial insights on Islamic values and their impact on CG compliance and disclosure.

Notes

1. It should be noted that the recent (2007 to 2009) global financial crisis that has resulted in the collapse and/or government bailouts of major public corporations, such as Fannie Mae, Freddie Mac, Lehman Brothers, Lloyds TSB and Royal Bank of Scotland has further re-ignited the debate regarding the effectiveness of CG mechanisms in resolving agency problems associated with excessive risk-taking, executive pay and incentives, transparency and disclosure in public corporations worldwide (Guidry and Patten, 2012; Hrasky, 2012; Ntim et al., 2015b).
2. Noticeably, such guidance is explicitly underpinned by positive values/principles of accountability, equality, fairness, generosity, morality, justice, philanthropy, social responsibility, transparency, and truthfulness (Rahman, 1998; Sarker, 2012). By contrast, negative practices, such as exploitation, profiteering, and gambling, are strongly prohibited (Lewis, 2005; Choudhury and Hoque, 2006).
3. Although there are slight differences in these Islamic corporate/financing forms, the central tenet is mutual profit-and-loss sharing (PLS) underpinned by Islamic values that require business dealings and transactions to be ethical, fair, just and moral (Dekmejian, 1994; Chong and Liu, 2009). For example, '*musharakah*' contracts operate primarily like joint-ventures in which a bank and an entrepreneur make joint contributions of capital and management expertise to a business project. Any profit and loss emanating from the project is shared in a pre-determined ratio (Archer *et al*., 1998; Chong and Liu, 2009). By contrast, '*mudarabah*' contracts are profit-sharing agreements, in which the whole capital required to finance a project is provided by a bank, whilst the borrower provides the managerial expertise and labour. Any profit from the project is shared by both parties in a pre-determined ratio, but any losses are borne solely by the bank (Karim, 2001; Chong and Liu, 2009). Further, and although most theoretical forms of Islamic banking/financing are modeled around the '*musharakah*' and/or '*mudarabah*' concepts of PLS (Archer *et al*., 2010; Boytsun et al., 2011), there are other financing forms that '*Shariah*' does not prohibit, but may not be necessarily PLS in nature, such as '*murabaha*' (cost plus), '*ijarah*' (leasing), '*bai muajjal*' (deferred payment sale), '*bai salam*' (forward sale), and '*istisna*' (contract manufacturing) (see Chong amd Liu, 2009, p.129 for a detailed overview of these Islamic financing forms).
4. We note that although a considerable number of past studies have explored accounting, CG and disclosure from an Islamic perspective ((Rahman, 1998; Lewis, 2005; Choudhury and Hoque, 2006; Abu-Tapanjeh, 2009; Kamla, 2009; Kamla and Roberts, 2010; Sarker, 2012), most of these studies have been largely descriptive/normative (Rahman, 1998; Lewis, 2005; Choudhury and Hoque, 2006; Grais and Pellegrini, 2006; Sarker, 2012) and/or critical (Abu-Tapanjeh, 2009; Kamla, 2009) in nature, resulting in acute lack of studies that provide empirical insights on the extent to which Islamic values might influence voluntary disclosure in general, but CG disclosure in particular (Safieddine, 2009; Vinnicombe, 2010).
5. The need for closer monitoring and scrutiny is also consistent with the distinctive nature of Islamic banking/financing, such as '*mudarabah*', which does not only result in greater adverse selection and moral hazard problems, but also exacerbates agency conflicts by increasing avenues by which opportunistic managers can expropriate corporate resources (Grais and Pellegrini, 2006; Safieddine, 2009). Thus, greater pressure can be expected to be applied especially by the SSB on managers to engage in increased corporate disclosures, including those relating to CG practices.
6. Even though binary scoring scheme may fail to capture the relative importance of the various CG provisions (Unerman, 2000; Beattie et al., 2004; Barako et al., 2006), we adopt it for a number of reasons. First, there is a general lack of a rigorously developed theoretical framework on which weights could be correctly assigned to different CG provisions, and thus using dichotomous scoring scheme obviates a situation whereby our disclosure indices are excessively dominated by a particular set of CG provisions (Botosan, 1997; Owusu-Ansah, 1998). Second, the findings of past studies suggest that the use of weighted and un-weighted indices tend to give similar results (Owusu-Ansah, 1998; Barako et al., 2006). Fourth, binary scoring scheme is less subjective and easy to replicate (Henry, 2008; Ntim et al., 2012a, b). Finally, using a binary scheme to score disclosures in annual reports is supported by a rigorously established theoretical and empirical literature (Botosan, 1997; Haniffa and Cooke, 2002; Meek et al., 1995; Collett and Hrasky, 2005; Alsaeed, 2006; Tsamenyi et al., 2007; Vinnicombe, 2010; Rouf, 2011; Mallin and Ow-Yong, 2012).

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Appendix

Full list of the Islamic values disclosure index provisions based on 'Shariah' principles

Islamic values disclosure index (IVDI)				
IVDI theme/type		**IVDI item: information on or reference to**	**Range of scores**	**Total score per them**
	1.	Whether a 'Shariah' supervisory board/committee has been established.	0-1	
	2.	Whether the firm provides explicit/formal statement regarding its willingness to voluntarily apply/incorporate Islamic values into business operations and/or investment transactions.	0-1	
	3.	Whether a narrative regarding the fact that the firm's funds and loans are on the basis of interest-free (*riba*) is disclosed.	0-1	
	4.	Whether the firm discloses any Islamic and conventional finance separately on its financial accounts.	0-1	
	5.	Whether firm's directors provide a clear narrative as to whether the firms' transactions are consistent with Islamic law.	0-1	
	6.	Whether a narrative regarding the appropriate calculation and payment of the Islamic religious tax (*zaka*t) for the financial year is disclosed.	0-1	10
	7.	Whether there is a due amount of Zakat for previous years.	0-1	
	8.	Whether the firm is classified as '*Nagi*' (i.e., the firm's business transactions and/or investments are 'Shariah' compliant) by Shariah scholars.	0-1	
	9.	Whether a narrative regarding the existence of a 'Shariah' review and monitoring unit that implements the Islamic values is disclosed.	0-1	
	10.	Whether the firm has a code of ethics.	0-1	
Total		**10 IVDI items**		10

Scoring procedure

0: If a particular Islamic value/principle item is not disclosed

1: If a particular Islamic value/principle item is disclosed

Table I
Summary definition of variables

Dependent variables	
GINDX	Saudi corporate governance index constructed by Albassam (2014) (see Appendix 2, pages 341 to 348). It takes a value of 1 if each of the 65 CG provisions is disclosed, 0 otherwise.
BDIR	Sub-index of GINDX related to the board of directors consisting of 35 provisions. It takes a value of 1 if each of the 35 CG provisions is disclosed, 0 otherwise.
DTRA	Sub-index of GINDX related to disclosure and transparency consisting of 14 provisions. It takes a value of 1 if each of the 16 CG provisions is disclosed, 0 otherwise.
INCR	Sub-index of GINDX related to internal control and risk management consisting of 6 provisions. It takes a value of 1 if each of the 6 CG provisions is disclosed, 0 otherwise.
SHAR	Sub-index of GINDX related to right of shareholders and General Assembly consisting of 8 provisions. It takes a value of 1 if each of the 8 CG provisions is disclosed, 0 otherwise.
Independent variable	
IVDI	Islamic values (IV) voluntary compliance and disclosure index (IVDI) consisting of 10 provisions that takes a value of 1 if each of the 10 IV provisions is disclosed, 0 otherwise; scaled to a value between 0% and 100%.
Other explanatory variables	
AUFZ	1, if a firm is audited by a big-four audit firm (PricewaterhouseCoopers, Deloitte & Touché, Ernst & Young, and KPMG), 0 otherwise.
BLON	Percentage of shares held by shareholders with at least 5% of the total company shareholdings.
BODZ	Natural log of the total number of directors on the board of a company.
CORG	1, if a firm has set up a corporate governance committee, 0 otherwise.
GVTR	Percentage of government ownership to total company ordinary shareholdings
INON	Percentage of shares held by institutional shareholders.
Control variables: Firm-level characteristics	
CEXP	Percentage of total capital expenditure to total assets.
DVPS	1, if a firm paid dividends during the financial year, 0 otherwise.
FIMZ	Natural log of the book value of a firm's total assets.
IDUM	Dummies for each of the 8 main industries: banks and financial; services; building and construction; agriculture; petrochemical; industrials/manufacturing; cement; and others.
LEVG	Percentage of total debt to total assets.
BETA	Standard deviation of the PROF variable.
PROF	Percentage of operating profit to total assets.
SAGR	Percentage of current year's sales minus previous year's sales to previous year's sales.
YDUM	Dummies for each of the seven years from 2004 to 2010 inclusive.

Table II
Summary descriptive statistics of levels of compliance with IVDI and GINDX (%)

	All	2004	2005	2006	2007	2008	2009	2010
Panel A: Levels of compliance with Islamic values disclosure index (*IVDI*)								
Mean	29.01	24.61	25.58	27.88	28.36	31.76	31.88	33.03
Median	27.27	22.73	22.73	22.73	22.73	27.27	27.27	31.82
STD	11.68	8.65	9.18	11.68	12.37	13.15	11.35	12.26
Min	9.09	9.09	13.64	13.64	13.64	18.18	18.18	18.18
Max	86.36	54.55	63.64	81.82	86.36	86.36	81.82	86.36
Panel B: Levels of compliance with corporate governance disclosure index (*GINDX*) and sub-indices								
All provisions contained in the Saudi corporate governance index (GINDX)								
Mean	45.94	17.75	22.44	35.44	46.83	56.69	66.75	75.67
Median	47.69	18.46	23.08	38.46	47.69	55.38	67.69	76.92
STD	22.86	4.98	7.23	12.17	14.16	12.15	11.06	8.61
Min	1.54	1.54	6.15	4.61	9.23	16.92	40.00	49.23
Max	92.31	29.23	38.46	63.08	84.61	89.23	92.31	92.31
Board of directors (BDIR)								
Mean	39.57	8.63	11.53	26.94	38.90	49.84	64.47	76.71
Median	37.14	8.57	11.43	31.43	37.14	40.00	65.71	77.14
STD	28.22	5.60	8.36	16.89	18.62	18.64	17.79	13.40
Min	0.00	0.00	0.00	0.00	0.00	5.71	34.29	37.14
Max	100.00	25.71	31.43	65.71	82.86	100.00	100.00	100.00
Disclosure and transparency (DTRA)								
Mean	55.25	21.92	29.58	44.08	60.50	71.83	76.83	82.00
Median	56.25	18.75	31.25	43.75	62.50	75.00	75.00	81.25
STD	25.49	9.10	13.64	15.68	17.89	11.69	11.57	8.47
Min	6.25	6.25	6.25	6.25	6.25	43.75	43.75	56.25
Max	100.00	50.00	62.50	81.25	100.00	100.00	100.00	100.00
Internal control and risk management (INCR)								
Mean	26.22	1.78	8.00	13.56	24.22	35.33	45.56	55.11
Median	16.67	0.00	0.00	16.67	16.67	33.33	50.00	50.00
STD	25.06	5.18	12.66	14.68	19.04	19.37	20.93	21.22
Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.67
Max	100.00	16.67	50.00	50.00	66.67	83.33	100.00	100.00
Rights of shareholders and the general assembly (SHAR)								
Mean	69.14	60.17	65.33	70.67	70.17	71.50	72.17	74.00
Median	75.00	62.50	62.50	75.00	75.00	75.00	75.00	75.00
STD	13.25	19.35	15.73	10.17	9.39	11.17	8.86	9.36
Min	0.00	0.00	0.00	25.00	37.50	12.50	50.00	37.50
Max	87.50	87.50	87.50	87.50	87.50	87.50	87.50	87.50

Notes: This Table reports descriptive statistics of the aggregate levels of compliance with both Islamic values disclosure index (*IVDI*) and Saudi corporate governance index (*GINDX*) from 2004 to 2010. Panel *A* of the table reports descriptive statistics on the levels of compliance with the *IVDI*, whilst Panel *B* contains descriptive statistics on the levels of compliance with the *GINDX* and sub-indices.

Table III
Summary descriptive statistics of the other explanatory and control variables for all (525) firm years

Variables	**Mean**	**Median**	**Std. Dev.**	**Minimum**	**Maximum**
Other explanatory variables					
AUFZ%	56.00	100.00	50.00	0.00	100.00
BLON%	33.99	30.17	25.09	5.00	85.21
BODZ	8.32	8.00	1.71	4.00	12.00
CORG%	10.00	0.00	30.20	0.00	100.00
GVTR%	12.96	3.05	20.15	0.00	83.69
INON%	5.68	0.00	10.94	0.00	40.00
Control variables					
CEXP%	59.30	0.84	153.46	00.00	82.00
DVPS%	63.00	100.00	48.00	0.00	100.00
FIMZ	14.05	13.97	1.60	10.42	18.93
LEVG%	22.33	8.31	27.99	0.00	86.00
BETA	1.70	1.14	1.91	0.00	15.94
PROF%	6.53	4.55	7.64	-8.00	26.75
SAGR%	15.58	9.30	35.44	-46.05	140.00

Notes: Variables are defined as follows: Audit firm size (*AUFZ*); block ownership (*BLON*); board size (*BODZ*); presence of a corporate governance committee (*CORG*); government ownership (*GVTR*); institutional ownership (*INON*); capital expenditure (*CEXP*); dividend payment status (*DVPS*); firm size (*FIMZ*); leverage (*LEVG*); risk (*BETA*); return on assets (*PROF*); and sales growth (*SAGR*). Table **I** fully defines all the variables used.

Table IV
Pearson and Spearman correlation matrices of all variables for all (525) firm year

Variable	GIDX	IVDI	AUFZ	BLON	BODZ	CORG	GVTR	INON	CEXP	DVPS	FIMZ	BETA	LEVG	PROF	SAGR
GINDX		.435***	.195***	-.119***	.142***	.333***	.128***	.196***	-.090**	.094**	.215***	-.065*	.142***	-.008	-.183***
IVDI	.376***		-.095**	-.028	.125***	.169***	-.079*	.040	-.091**	-.002	.044	-.064	-.037	-.097**	-.114***
AUFZ	.190***	.008		.511***	.274***	.069	.324***	.279***	.044	.209***	.507***	.008	.411***	.119***	.087**
BLON	-.109**	.040	.497***		.341***	.056	.629***	.333***	.034	.420***	.682***	-.039	.386***	.282***	.096**
BODZ	.118***	.193***	.274***	.324***		.105**	.334***	.173***	-.032	.246***	.553***	-.175***	.231***	.101**	.007
CORG	.336***	.248***	.114*	.131*	.103**		.091**	-.0015	-.028	-.008	.104**	.110**	.038	-.021	-.074
GVTR	.181***	-.140***	.253***	.618***	.148***	.031		.001	.011	.477***	.684***	-.068	.184***	.272***	-.007
INON	.187***	.037	.307***	.355***	.138***	-.018	-.089**		-.017	.083*	.220***	-.189***	.282***	-.123**	.033
CEXP	-.075*	-.112***	.013	-.027	-.010	-.040	-.032	.005		.060	-.023	-.077*	-.041	.036	.101**
DVPS	.087**	-.035	.209***	.409***	.254***	-.008	.347***	.089**	.045		.491***	-.090**	.015	.532***	.039
FIMZ	.206***	.096**	.497***	.689***	.492***	.106**	.605***	.228***	-.057	.486***		-.115***	.462***	.274***	.101**
BETA	-.074*	-.083*	-.005	.015	-.155***	.154***	.035	-.139***	.022	-.030	-.049		-.093*	.153***	.003
LEVG	.111**	.199***	.451***	.433***	.338***	.014	.109**	.491***	-.081*	.058	.539***	-.141***		-.102**	.109**
PROF	-.020	-.109**	.116***	.273***	.107**	-.041	.231***	-.146***	.050	.481***	.256***	-.187***	-.187**		.195***
SAGR	-.131***	-.025	.061	.034	.001	-.118***	-.049	.044	.096**	-.023	.045	.076	.065	.104**	

Notes: The bottom left half of the table contains Person's parametric correlation coefficients, whereas the upper right half of the table shows Spearman's non-parametric correlation coefficients. ***, **, and * indicate that correlation is significant at the 1%, 5%, and 10% levels, respectively. Variables are defined as follows: The Saudi corporate governance disclosure index (*GINDX*); Islamic values disclosure index (*IVDI*); audit firm size (*AUFZ*); block ownership (*BLON*); board size (*BODZ*); presence of a corporate governance committee (*CORG*); government ownership (*GVTR*); institutional ownership (*INON*); capital expenditure (*CEXP*); dividend payment status (*DVPS*); firm size (*FIMZ*); risk (*BETA*); leverage (*LEVG*); return on assets (*PROF*); and sales growth (*SAGR*). Table **I** fully defines all the variables used.

Table V

The effect of Islamic values on the extent of voluntary disclosure of good corporate governance practices

Model	*GINDX main-index*		*BDIR sub-index*		*DTRA sub-index*		*INCR sub-index*		*SHAR sub-index.*	
Independent variable	Coeff.	*P*-values	Coeff.	*P*-values	Coeff.	*P*-values	Coeff.	*P*-values	Coeff.	*P*-values
Islamic values disclosure index:										
IVDI	0.186	(.000)***	0.135	(.000)***	0.149	(.000)***	0.096	(.040)**	0.128	(.000)***
Control variables: *Ownership structure variables:*										
BLON	-0.118	(.026)**	-0.110	(.049)**	-0.105	(.058)*	-0.010	(.745)	-0.113	(.034)**
GVTR	0.164	(.000)***	0.189	(.000)***	0.146	(.000)***	0.109	(.010)***	0.155	(.000)***
INON	0.125	(.000)***	0.018	(.654)	0.073	(.055)*	0.064	(.067)*	0.104	(.050)**
Control variables: *Corporate governance variables:*										
BODZ	0.123	(.014)**	0.105	(.086)*	0.012	(.869)	0.110	(.019)**	0.120	(.015)**
AUFZ	0.134	(.000)***	0.128	(.000)***	0.116	(.000)***	0.124	(.000)***	0.011	(.739)
CORG	0.296	(.000)***	0.187	(.000)***	0.165	(.000)***	0.249	(.000)***	0.178	(.000)***
Control variables: Firm-level characteristics										
CEXP	-0.048	(.186)	-0.039	(.195)	-0.070	(.064)*	-0.020	(.267)	-0.040	(.190)
DVPS	0.149	(.000)***	0.130	(.000)***	0.124	(.000)***	0.116	(.000)***	0.137	(.000)***
FIMZ	0.284	(.000)***	0.265	(.000)***	0.243	(.000)***	0.228	(.000)***	0.254	(.000)***
RISK	-0.106	(.045)**	-0.093	(.054)*	-0.085	(.066)*	-0.072	(.089)*	-0.090	(.058)*
LEVG	0.175	(.000)***	0.160	(.000)***	0.153	(.000)***	0.176	(.000)***	0.150	(.000)***
PROF	-0.018	(.740)	-0.011	(.798)	-0.008	(.832)	-0.003	(.874)	-0.009	(.810)
SAGR	-0.032	(.259)	-0.025	(.296)	-0.020	(.330)	-0.015	(.440)	-0.022	(.329)
Industry dummies	Included		Included		Included		Included		Included	
Year dummies	Included		Included		Included		Included		Included	
Constant	-0.659	(.000)***	-0.570	(.000)***	-0.468	(.000)***	-0.440	(.000)***	-0.614	(.000)***
Durbin-Watson statistics	1.950		1.746		1.685		1.643		1.860	
F- value	16.820***		14.965***		13.683***		12.862***		15.297***	
Adjusted R^2	0.498		0.462		0.456		0.440		0.475	
No. of observations	525		525		525		525		525	

Notes: *P*-values are in parentheses. Following Peterson (2009), the coefficients are estimated by using the robust *Clustered Standard Errors* technique. ***, **, and * denote significant at the 1%, 5%, and 10% levels, respectively. Variables are defined as follows: Saudi corporate governance disclosure index (*GINDX*); board and directors sub-index (*BDIR*); disclosure and transparency sub-index (*DTRA*); internal control and risk management sub-index (*INCR*); rights of shareholders and the general assembly sub-index (*SHAR*); Islamic values disclosure index (*IVDI*); block ownership (*BLON*); government ownership (*GVTR*); institutional ownership (*INON*); board size (*BODZ*); audit firm size (*AUFZ*); presence of a corporate governance committee (*CORG*); capital expenditure (*CEXP*); dividend payment status (*DVPS*); firm size (*FIMZ*); risk (*BETA*); leverage (*LEVG*); return on assets (*PROF*); and sales growth (*SAGR*). Table **I** fully defines all the variables used.

Table VI
Robustness analyses of the effects of Islamic values on the extent of voluntary disclosure of good corporate governance practices

Model	*Pre-2006 GINDX*		*Post-2006 GINDX*		*Weighted-GINDX*		*Fixed-effects (GINDX)*	
Independent variable	Coeff.	*P*-values	Coeff.	*P*-values	Coeff.	*P*-values	Coeff.	*P*-values
Islamic values disclosure index:								
IVDI	0.152	(.014)**	0.120	(.025)**	0.210	(.000)***	0.235	(.000)***
Control variables: Ownership structure variables:								
BLON	-0.075	(.096)*	-0.019	(.643)	-0.089	(.070)*	-0.098	(.065)*
GVTR	0.126	(.034)**	0.138	(.027)**	0.153	(.000)***	0.162	(.000)***
INON	0.008	(.685)	0.079	(.060)*	0.125	(.033)**	0.134	(.029)**
Control variables: Corporate governance variables:								
BODZ	0.102	(.058)*	0.040	(.154)	0.136	(.000)***	0.145	(.000)***
AUFZ	0.130	(.020)**	0.085	(.067)*	0.210	(.000) ***	0.228	(.000)***
CORG	0.137	(.000)***	0.111	(.029)**	0.189	(.000)***	0.195	(.000)***
Control variables: Firm-level characteristics								
CEXP	-0.005	(.795)	-0.002	(.823)	-0.026	(.587)	-0.103	(.080)*
DVPS	0.138	(.000)***	0.140	(.000)***	0.210	(.000)***	0.208	(.000)***
FIMZ	0.186	(.000)***	0.194	(.000)***	0.253	(.000)***	0.265	(.000)***
BETA	-0.079	(.072)*	-0.080	(.065)*	-0.124	(.000)***	-0.130	(.000)***
LEVG	0.139	(.000)***	0.134	(.000)***	0.153	(.000)***	0.164	(.000)***
PROF	-0.002	(.872)	-0.008	(.814)	-0.011	(.780)	-0.009	(.810)
SAGR	-0.004	(.853)	-0.006	(.792)	-0.009	(.765)	-0.011	(.744)
Industry dummies	Included		Included		Included		Included	
Year dummies	Included		Included		Included		Included	
Firm dummies	Excluded		Excluded		Excluded		Included	
Constant	-0.643	(.000)***	-0.685	(.000)***	-0.876	(.000)***	-0.930	(.000)***
Durbin-Watson statistics	1.694		1.713		1.890		1.965	
F- value	8.340***		8.657***		14.749***		18.410***	
Adjusted R^2	0.362		0.390		0.576		0.689	
No. of observations	150		375		525		525	

Notes: *P*-values are in parentheses. Following Peterson (2009), the coefficients are estimated by using the robust *Clustered Standard Errors* technique. ***, **, and * denote significant at the 1%, 5%, and 10% levels, respectively. Variables are defined as follows: Saudi corporate governance disclosure index (*GINDX*): Pre-2006 *GINDX* and Post-2006 *GINDX* and Weighted-*GINDX*; *Fixed-effects* model; Islamic values disclosure index (*IVDI*); block ownership (*BLON*); government ownership (*GVTR*); institutional ownership (*INON*); board size (*BODZ*); audit firm size (*AUFZ*); presence of a corporate governance committee (*CORG*); capital expenditure (*CEXP*); dividend payment status (*DVPS*); firm size (*FIMZ*); risk (*BETA*); leverage (*LEVG*); return on assets (*PROF*); and sales growth (*SAGR*). Table **I** fully defines all the variables used.