The Relationship between Firm-Specific Characteristics and Board of Directors’ Diligence in Saudi Arabia*

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Abstract

This study investigates the relationships of energy firm-level characteristics, namely; firm size, firm leverage, and firm performance with board diligence among companies listed in Saudi Stock Exchange (Tadawul) for the periods ranging from 2012 to 2019. The final sample of this study consists of 32 firm-year observations. A quantitative approach was adopted to test 3 specific hypotheses developed for the board diligence model. Using the Pooled OLS regression, this study finds that firm size and firm performance are negatively associated with board diligence. The results of this study indicate an insignificant association of firm leverage with board diligence. Besides, firm performance is related negatively to board diligence. This indicates that the board of companies with poor performance increases the number of its meetings because of the increased pressure on the board to improve its oversight operations and address the severe performance challenges. The increased number of board meetings observe the daily management of the company, increase the chances for discussions concerning the performance challenges, and come up with solutions faster. The directors are also likely to encounter heightened pressure to appear more engaged during a company’s financial distress since lenders require a meeting of the board or with the board.

Keywords: Board Diligence, Firm-Level Characteristics, Saudi Arabia

JEL Classification Code: L20, G34

1. Introduction

Boards of directors are the topmost authority in the corporate world. During board meetings, the directors exercise power. Since boards select varied meeting frequencies, the absence of any guidance or instruction from outside parties makes the number of board meetings that an organization chooses to appear as unplanned events (Hahn & Lasfer, 2007). The firm value and the efficiency of board-monitoring have a significant influence on board meetings, making these meetings a crucial element of boards. Through board meetings, directors have a good opportunity to organize and carry out their tasks easily. Also, there are occasions through which directors can participate in observation of management officially (Baccouche et al., 2014; Jiraporn et al., 2009; Conger et al., 1998; Vafeas, 1999; Brick & Chidambaram, 2010; Ramos & Olalla, 2011; Januarti et al., 2020; Al-Absy et al., 2020; Astuti et al., 2020). In literature, the frequency of meetings is seen as an alternative measure for the level of monitoring activity carried out (Greco, 2011; Collier & Gregory, 1999; Vafeas, 1999; Brick & Chidambaram, 2010; Ramos & Olalla, 2011; Januarti et al., 2020; Al-Absy et al., 2020; Astuti et al., 2020). Based on the agency theory, the management might be resistant to frequent board meetings, which are favored by shareholders as a way to guard their investments, because of the incompatible interests of residual claimants and the management (Fama & Jensen, 1983; Hahn & Lasfer, 2007). According to Greco (2011), Vafeas (1999), Carcello et al. (2002), and Laksmana (2008), the frequency
of meetings can be seen as an alternative for the time allocated for directors to carry out their responsibilities and the amount of monitoring activity executed. Various shareholder benefits relate to the activity of the board, as observed in recent literature. The benefits are improved oversight levels concerning the process of financial reporting, more openness about the practices related to executive compensation, and an increased frequency of forecast earnings (Carcello et al., 2002; Laksmana, 2008; Greco, 2011). Contrary to these benefits, board meetings are linked with certain costs such as travel expenses, managerial time, and fees for the director’s meetings (Al-Daoud et al., 2016).

The relationship between the attributes of an organization and the frequency of board meetings has been assessed by various empirical studies. Studies by Vafeas (1999), Lin et al. (2014), Baccouche et al. (2014), and Hahn and Lasfer (2007) for example indicated a positive relationship between the size of an organization and the frequency of board meetings. Also, the study by Brick and Chidambaran (2010) indicated a positive association between board meetings and Tobin’s Q that is adjusted for the industry. In contrast to the positive findings, Hahn and Lasfer (2016) showed a negative relationship between the board meetings and the growth of an organization. Concerning company leverage, multiple studies indicate a substantial positive relationship between meeting frequency and leverage (Greco, 2010; Baccouche et al., 2014; Hahn & Lasfer, 2016). Lin et al. (2014), however, show that company leverage and the frequency of board meetings have an inverse relationship. Further, several studies show a substantially negative relationship between the frequency of meetings and the performance of an organization (Vafeas, 1999; Brick & Chidambaran, 2010; Hahn & Lasfer, 2007; Baccouche et al., 2014; Adams & Ferreira, 2007; Hahn & Lasfer, 2016). On the other hand, Lin et al. (2014) reported the relationship between the performance of an organization and the attendance of board meetings to be significantly positive. Greco (2011) reported an insignificant relationship between the performance of an organization and the frequency of meetings. It is crucial to note that the results from the research mentioned are neither harmonious nor conclusive. Also, the studies were carried out in both developing and developed countries.

Due to these inconsistencies, the issues surrounding the board of directors need more empirical examination. To the best of the researcher’s knowledge, empirical evidence that permits decisions to be made concerning the relationship between the attributes of an organization and the frequency of board meetings in Saudi Arabia is non-existent. More specifically, the difference between the Saudi market and the global market may result in different underlying relationships and examination of the matter, which will add more evidence to the discussion. The aim of this study, therefore, is to analyze the relationship between the attributes of an organization and the number of board meetings in Saudi Arabia.

The rest of the paper continues as follows. The next section briefly reviews the extant literature and formulates the hypotheses. The third section describes the research design and methodology. The empirical results and discussions of the study are reported in the fourth section while in the final section, conclusions and implications are drawn.

2. Literature Review and Hypotheses Development

The frequency of board meetings and the conduct of individuals during the meetings is influenced by various factors that surround the meeting like preparation before meetings, attentiveness and participation during meetings, and follow-up after the meetings. Among the publicly observable characteristics of board meetings is their frequency. Carcello et al. (2002) suggested that the frequency and duration of board meetings contribute to their success and enhances board oversight activities.

According to Vafeas (1999), board meeting frequency is related to corporate governance and ownership characteristics in a manner that is consistent with contracting and agency theory. Overall, the results suggested that board activity, measured by board meeting frequency, is an important dimension of board operations. Studies by Byrne (1996) and Lipton and Lorsch (1992) indicate that the likelihood of board members to execute their responsibilities increases when the members are determined to benefit the shareholders. Furthermore, Adams and Ferreira (2007, 2009) show that a board that is committed to performing its oversight responsibility increases its likelihood of improving the oversight on financial reporting (Haniffa et al., 2006). Hahn and Lasfer (2016) suggested that a trade-off between increased board diversity coupled with reduced monitoring through fewer meetings weakens the internal governance mechanism, reduces the advisory role benefits of directors who are likely to possess international expertise, and exacerbates significantly the agency conflicts.

2.1. Firm Size

According to the agency and contracting theories, the advisory and monitoring roles of the board are needed more in companies with more challenging business activities and complicated structures (Agrawal & Knoeber, 2001; Coles et al., 2008; Naveen et al., 2013). Since large companies are more complicated, decision-making and decision control processes take longer. In these companies, the workload for board members is increased. Consequently, the frequency of board meetings is likely to increase with the size of an organization to enable the board to make decisions and handle intricate financial information (Vafeas, 1999). Besides, intricate data in financial reports require more involvement of the audit
committee. Based on the findings of empirical research, a positive association exists between the size of a firm and the audit committee (Menon & Williams, 1994; Raghunandan & Rama, 2007; Mendez & Garcia, 2007). Generally, this shows that in larger companies with diverse business operations or more staff, frequent board meetings are required since the companies have increased advisory and observational needs (Hahn & Lasfer, 2016).

Empirical research by Greco (2011) documented a positive relationship between the frequency of audit committee meetings and the size of a company. Greco (2011) indicates that in larger and more complicated companies, it is expected for the audit committee to have an increased workload. Moreover, Hahn and Lasfer (2007) showed that the frequency of board meetings and the size of an organization have a direct relationship. They reported that this finding reinforces the framework of the agency theory, where more employees and market capitalization are representations of the complexity of an organization and its increased monitoring needs. Brick and Chidambaran (2010) also found a direct association between board meetings and Tobin’s Q that is adjusted for the industry. This submits that the advisory and monitoring roles of the board increase with an increased level of investment opportunities. Consequently, larger organizations with diverse operations and more staff are likely to require more advice and monitoring and, therefore, more board meetings.

Research by Lin et al. (2014) showed a substantially positive association between the size of an organization and the attendance of board meetings. Further, Baccouche et al. (2014) reported that the size of an organization directly influences the number of board meetings. According to this study, an increase in the size of an organization increases the possibility of frequent board meetings. As a result, the findings of this research are consistent with the hypothesis that large companies are more intricate and require more observation. The board members in these organizations have an increased workload. Moreover, companies have operations that require more attention and coordination between board members. The board, therefore, may have cause and motivation to make board meetings more frequent when the organization is large to enhance communication and synchronization between members and enable the performance of complex tasks. The existence of a negative relationship between the number of board meetings and the growth of a company is, however, documented by Hahn and Lasfer (2016). The relationship can be linked to the monitoring role of the board instead of the advisory one. Based on the above discussion evidencing the positive direction of the association between the firm size and board meeting frequency, we formulate the following hypothesis:

\[ H_1: \text{Ceteris paribus, there is a positive association between firm size and the board meeting frequency.} \]

### 2.2. Leverage

Due to leverage, a board might have the motivation to increase the number of meetings. Organizations with more debts representing risk are likely to incur more monitoring costs (Fama & Jensen, 1983). The higher costs result from a response to the risk level and monitoring demands from lenders (Greco, 2011; Al-Najjar, 2012). Findings from empirical research by Greco (2011), Baccouche et al. (2014), and Hahn and Lasfer (2016) showed that the board of indebted companies hold meetings more frequently due to increased leverage level. A possible explanation for this positive relationship is that directors of companies with higher levels of leverage have the motivation to meet often to fulfill the monitoring demands of creditors, decrease the organization’s debt costs, and cautiously monitor the risk of bankruptcy. The creditors’ monitoring demand, therefore, influences the activity of directors. On the contrary, Lin et al. (2014) showed a substantial negative relationship between a company’s leverage and attendance of board meetings. Based on the above discussion evidencing the positive direction of the association between the firm size and board meeting frequency, we formulate the following hypothesis:

\[ H_2: \text{Ceteris paribus, there is a positive association between leverage and the board meeting frequency.} \]

### 2.3. Performance

The agency, stewardship, and contracting theories posit that challenges are linked to the frequency of board meetings. The earnings of a company and its performance in the market are likely to influence the activity of the board, with this activity resulting in either more or fewer meetings (Hahn & Lasfer, 2016; Vafeas, 1999; Adams et al., 2010). Fama and Jensen (1983) suggested that in companies that function accordingly, the activities of directors are often limited to routine procedures. In the event of crises, the role of the board is more significant. Also, the activity of directors increases when the performance decreases so that a firm can cope with the situation (Vafeas, 1999). The demand for more board meetings increases when the prompt consent or approval of the board is required due to weakening company dynamics and the realization by members of the non-executive directors’ team of the direct impact on their professional reputation (Hahn & Lasfer, 2007).

Empirical studies documented a substantially negative relationship between the performance of an organization and the frequency of board meetings (Vafeas, 1999; Brick & Chidambaran, 2010; Hahn & Lasfer, 2007, 2016; Baccouche et al., 2014; Al-Najjar, 2012; Adams et al., 2010). These studies show that when the performance of an organization is poor, the board is likely to increase the number of its meetings because of the increased pressure on the board
to improve its oversight operations. More specifically, the board increases the frequency of its meetings due to poor organizational performance to enable the board to address the severe performance challenges. The increased number of board meetings is significant for the board to observe the daily management of the company, increase the chances for discussions concerning the performance challenges, and come up with solutions faster. The directors are also likely to encounter heightened pressure to appear more engaged during a company’s financial distress since lenders require a meeting of the board or with the board. In contrast, research by Lin et al. (2014) showed that a significant positive relationship exists between the performance of a company and the attendance of board meetings. Greco (2011) showed that the performance of a company and the frequency of board meetings have an insignificant relationship. Based on the above discussion evidencing the positive direction of the association between the firm performance and board meeting frequency, we formulate the following hypothesis:

\[ H_3: \text{Ceteris paribus, there is a negative association between firm performance and the board meeting frequency.} \]

3. Research Design and Methodology

3.1. Sample and Data

The sample of this study consists of energy companies listed on the Saudi Stock Exchange from 2012 to 2019 that disclose information about board meetings. The data was collected by hand from the financial statements. Our final sample comprises 4 energy companies with complete data, resulting in 32 firm-year observations.

3.2. Model Specification

Pooled Ordinary least square model OLS was specified to examine the association of energy firm characteristics, namely; firm size \( \text{LASSET} \), financial leverage \( \text{FLEV} \), and firm performance \( \text{PE} \) with board meeting frequency \( \text{BDMET} \). The functional equation of the pooled OLS regression model is utilized to determine the extent of the association of each of the independent variables on the \( \text{BDMET} \).

\[ \text{BDMET} = \beta_0 + \beta_1 \text{LASSET} + \beta_2 \text{LEV} + \beta_3 \text{PE} + e \quad \ldots \ldots (1) \]

Where:
- \( \text{BDMET} \) = Number of meetings held during the year
- \( \text{LASSET} \) = Total revenues
- \( \text{LEV} \) = Debt to equity ratio
- \( \text{PE} \) = Return on assets
- \( E \) = error term.

As for the measurements of the variables, Table 2 exhibits the dependent and test variables.

4. Empirical Results and Discussions

Table 3 shows the descriptive statistics of the variables. It depicts the mean, standard deviation, minimum and maximum of each variable in the sample data set. Table 3 displays that there is a significant range of variation among the considered sample of this study. It is shown that the mean of \( \text{BDMET} \) is 6 with a maximum of 10 and a minimum of 4 and a standard deviation of 0.146. The mean of \( \text{LASSET} \) is 16449172694 with a maximum of 62010877000 and a minimum of 62010877000 and a standard deviation of 19218443702. The mean of \( \text{FLEV} \) is 1.805 with a maximum of 6.37 and a minimum of .01 and a standard deviation of 1.961. The mean of \( \text{PE} \) is .042 with a maximum of .11 and a minimum of .00 and a standard deviation of .034.

Table 1: Sample Selection

<table>
<thead>
<tr>
<th></th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total listed companies</td>
<td>5 firms</td>
</tr>
<tr>
<td>Number of years observed</td>
<td>8 years</td>
</tr>
<tr>
<td>Total observation</td>
<td>40</td>
</tr>
<tr>
<td>Missing data</td>
<td>(8)</td>
</tr>
<tr>
<td>Final sample</td>
<td>32</td>
</tr>
</tbody>
</table>

Table 2: Summary of the Operationalization and the Expected Sign of the Research Variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>Acronym</th>
<th>Operationalization</th>
<th>Coefficient Predictions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Board meeting frequency</td>
<td>BDMET</td>
<td>Number of meetings held during the year</td>
<td>d.v</td>
</tr>
<tr>
<td>Firm size</td>
<td>LASSET</td>
<td>Total revenues</td>
<td>i.v</td>
</tr>
<tr>
<td>Financial leverage</td>
<td>LEV</td>
<td>Debt to equity ratio</td>
<td>i.v</td>
</tr>
<tr>
<td>Firm performance</td>
<td>PE</td>
<td>Return on assets</td>
<td>i.v</td>
</tr>
</tbody>
</table>

Note: d.v – dependent variable, i.v – independent variable.
As shown by Table 4, the correlation matrixes verify that no multicollinearity exists among the variables, as none of the variables correlates above 0.90. All the variables have a correlation of equal to or less than .670.

Pooled Ordinary-Least Square (OLS) was used to evaluate the level of effectiveness of the hypothesized variables on the board diligence using SPSS. Table 5 reports the estimated model coefficients, the associated significant test results, the adjusted $R^2$, and the $F$-value for the board diligence model. The $F$-value for the model is statistically significant at a 1% level, indicating that the overall model can be interpreted. The adjusted $R^2$ is 52.60%, indicating that the model has explained 52.60% of the variance in the board diligence. This indicates a good fit for the board diligence model.

Tables 5 displays that firm size $\text{LASSET}$ has a significant negative association with board diligence $\text{BDMEET}$ ($p$-value < 0.00, one-tailed significance). This result is consistent with Hahn and Lasfer (2016) who confirmed the monitoring role of the board rather than the advisory role. Thus, hypothesis $H_1$ is not supported. Besides, firm leverage $\text{LEV}$ is negatively and insignificantly associated with board diligence $\text{BDMEET}$ ($p$-value < 0.298, one-tailed significance). This result is inconsistent with the findings of the previous studies (Greco, 2011; Al-Najjar, 2012; Baccouche et al., 2014; Hahn & Lasfer, 2016). Therefore, hypothesis $H_2$ is not supported.

### Table 3: Descriptive statistics

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Std.Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>BDMEET</td>
<td>6</td>
<td>4</td>
<td>10</td>
<td>0.146</td>
</tr>
<tr>
<td>LASSET</td>
<td>1649172694</td>
<td>62010877000</td>
<td>62010877000</td>
<td>19218443702</td>
</tr>
<tr>
<td>LEV</td>
<td>1.805</td>
<td>.01</td>
<td>6.37</td>
<td>1.961</td>
</tr>
<tr>
<td>PE</td>
<td>.042</td>
<td>.00</td>
<td>.11</td>
<td>.034</td>
</tr>
</tbody>
</table>

### Table 4: Correlation matrix of independent variables

<table>
<thead>
<tr>
<th></th>
<th>LASSET</th>
<th>LEV</th>
<th>PE</th>
</tr>
</thead>
<tbody>
<tr>
<td>LASSET</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LEV</td>
<td>.655**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>PE</td>
<td>-.670-**</td>
<td>-.405-*</td>
<td>1</td>
</tr>
</tbody>
</table>

### Table 5: Pooled OLS Analysis Results

| Variables | Expected Sign | Coef. | t     | $P>|t|$ | Tolerance | VIF |
|-----------|---------------|-------|-------|---------|-----------|-----|
| Hypothesized Variables | | | | | | |
| $\text{LASSET}$ | + | -.789- | -3.769- | .001 | .471 | 2.124 |
| $\text{LEV}$ | + | -.221- | -1.068- | .298 | .480 | 2.082 |
| $\text{PE}$ | + | -.296- | -1.402- | .176 | .464 | 2.156 |

**Bold** = significance at 1%, 5% and 10% (one-tailed significance)

5. Conclusions and implications

The main objective of this study is to examine the associations of energy firm characteristics, namely; firm size, firm leverage, and firm performance with board meeting frequency among 32 firm-year observations in Saudi Arabia for the periods ranging from 2012 to 2019. A quantitative approach was adopted to test 3 specific hypotheses developed for the board diligence model. The results are in line with that reported by Hahn and Lasfer (2016), indicating the monitoring role of the board rather than the advisory role. Moreover, the results of this study indicate an insignificant association of firm leverage with board diligence. Unexpectedly, this result is not in line with the results reported by the majority of the previous studies. Besides, firm performance is related negatively to board diligence. This result is consistent with the findings reported by the majority of the extant studies (Vafeas, 1999; Brick & Chidambaran, 2010; Hahn & Lasfer, 2007; Baccouche et al., 2014; Hahn & Lasfer, 2016; Al-Najjar, 2012; Adams et al., 2010). This indicates that the board of companies with poor performance increases the number of its meetings because of the increased pressure on the board to improve its oversight operations and address the severe performance challenges. The increased number of board meetings observe the daily management of the
company, increase the chances for discussions concerning the performance challenges, and come up with solutions faster. The directors are also likely to encounter heightened pressure to appear more engaged during a company’s financial distress since lenders require a meeting of the board or with the board.

This study will hopefully contribute to the extent literature on the board diligence. It provides additional evidence to the literature examining the determinants of board diligence. Further, the findings reported by this study might have practical implications for the Saudi stock market (Tadawul) that would gain new insights from this study in terms of the extent to which board of energy companies is active in a manner to practice their monitoring role in protecting shareholders’ interests. Besides, the management of the companies and the external auditors would also get beneficial insights into understanding the factors influencing the board’s activity.

This study acknowledges several limitations. First, the sample of the study consists of energy companies. Future research could include other sector types such as the petrochemical sector, telecommunication sector and so far. Second, this study examines firm-level characteristics as independent variables. Future research could include corporate governance determinants such as other board of directors and audit committee attributes, ownership types, and audit quality. Finally, this study is carried out in the Saudi setting. Future research could replicate the same model in different GCC countries and other Middle East countries.

References


