Aljaaidi, Khaled Salmen; Hassan, Waddah Kamal

Article

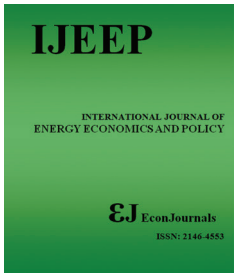
Energy industry performance in Saudi Arabia : empirical evidence

International Journal of Energy Economics and Policy

Provided in Cooperation with:
International Journal of Energy Economics and Policy (IJEEP)

Reference: Aljaaidi, Khaled Salmen/Hassan, Waddah Kamal (2020). Energy industry performance in Saudi Arabia : empirical evidence. In: International Journal of Energy Economics and Policy 10 (4), S. 271 - 277.
https://www.econjournals.com/index.php/ijeep/article/download/9003/5131.
doi:10.32479/ijeep.9003.

This Version is available at:
http://hdl.handle.net/11159/8418



International Journal of Energy Economics and Policy

ISSN: 2146-4553

available at http: www.econjournals.com

International Journal of Energy Economics and Policy, 2020, 10(4), 271-277.

Energy Industry Performance in Saudi Arabia: Empirical Evidence

Khaled Salmen Aljaaidi[1]*, Waddah Kamal Hassan[2]

[1]Department of Accounting, College of Business Administration, Prince Sattam Bin Abdulaziz University, Saudi Arabia, [2]Department of Accounting, College of Business, Administration, Northern Border University, Arar, Saudi Arabia.

Received: 20 December 2019 **Accepted:** 17 April 2020 **DOI:** https://doi.org/10.32479/ijeep.9003

ABSTRACT

This study aims at investigating the associations of board of directors' size, board of directors' meetings, firm size and firm leverage with firm performance among energy industry in Saudi Arabia for periods ranging from 2005 to 2018. The final sample in this study consists of 56 observations. The ordinary-least square regression shows that board size is associated positively with firm performance. Further, the results of this study repot that board meetings, firm size and firm leverage are associated negatively with firm performance in the context of Saudi Arabia. The results of this study are important for policy makers at the country and corporate levels on issues related to corporate performance. Further, the results of this study can be used in future research to gain a deeper understanding of the issues of corporate performance.

Keywords: Corporate Governance, Firm Size, Leverage and Performance, Energy Industry, Saudi Arabia
JEL Classifications: G34, L25, P23

1. INTRODUCTION

Recent research has demonstrated the issues or problems that exist in joint-stock companies. These are organizations where the shares can be bought or sold by the shareholders. The concerns are unsettled due to economic factors and issues in countries such as Asia and the Russian Federation. Moreover, the financial crisis in Brazil began in 1997. The relationship between the management of an organization and its performance is significant in facilitating the making of public regulatory policies, (Kao et al., 2019). The study is also concerned with the fall of well-known and reputable firms such as Xerox, WorldCom, Enron, and Parmalat. These organizations are in the United States of America. At the beginning of 2006, there was a crash on the Saudi Stock Exchange, and it is not an exception in this case. For a company to achieve enhanced performance, it needs to deal with the issues that originate from the crises, (Al-Abbas, 2008; Al-Hamidy, 2010; Al-Hussain, 2009; Al-Moataz and Basfar, 2010; Al-Twaijry, 2007; Cubbin and Leech, 1983; Aydin et al., 2007).

Minimizing conflicts of interest are essential. It can be achieved through the implementation of proper strategies to ensure that all parties are contented. Considering ownership as a different aspect of management is a source of agency issues. Another contributing factor is the conflicts of interests between ownership and control. The leading cause of the financial crisis in the world is ineffective governance in institutions, (Kao et al., 2019). It has come to the attention of many companies that investigating corporate governance practices is relevant. It is the case considering that there have been several instances of unethical practices or strategies and misconduct in the firms. It has led to falling of many large companies such as Xerox, WorldCom, Tyco, Enron, Adelphia Communications, and Global Crossing, (Porwal and Kumar, 2003; Teng et al., 2011).

The stakeholders in an organization are such as investors, regulators, managers, shareholders, and lenders. They primarily focus on company governance and look at the dissemination of rights and responsibilities in a company. The corporate governance

structure is significant, considering that it indicates strategies and the regulations to be followed when making marketing decisions. Furthermore, it directs the company into coming up with a plan of setting attainable objectives and goals. It also lays out a framework on the activities that the company should engage in for it to achieve those objectives. It means that a firm that embraces good corporate governance, it is in a position to point out the high levels of disclosures, transparency, and control. It ensures that the interests of the stakeholders and the company itself are well aligned, (Hawkamah and IFC, 2008). It ensures that they all have a common goal and therefore are ready to work well together to attain the set objectives. The corporate governance structure is significant, and all companies need to pay attention to this aspect. In the 1900s, the banks in the Japanese experienced a crisis, and the primary source of this issue was an ineffective corporate governance structure, (Kawaura, 2004). Concerning the agency theory, the differences between the interests of the managers and the owners result in the separation of control and ownership, (Fama and Jensen, 1983; Jensen and Meckling, 1976).

An agreement has not yet been reached concerning the association that exists between the organization of the board of a company and the financial performance (Berezinets et al. 2017). The Board members are a significant stakeholder of an organization, considering that they contribute to minimizing the marketing uncertainty. It achieves this by providing the necessary resources in performing specific tasks, (Sherman et al., 1998). Recognizing the relevance of the energy sector is essential since it is more extensive and spread as compared to the oil and gas industries. This study is intended to provide more insights into corporate governance, the attributes of the board, and the progress of the energy sector in Saudi Arabia. The majority of the developing nations prioritize having reliable energy, which companies and institutions can rely on in performing certain activities. Some of these activities are such as expanding the industry, trading tasks, and transportation. The vitality part in the creating nations must accomplish financial productivity in their venture choices and actions through the act of sound monetary standards. Besides, making the energy affordable eases the burden on people on paying the bills. Many investors are convinced that adopting alternative sources of energy is essential. It is because the energy industry affects the economy of the country where it uses resources such as capital and labor in its production. The energy sector assists individuals with getting away neediness and make better lives. The goals of development necessitate that the advancement of the energy area must happen in a way with the end goal that the welfare of society is boosted. This is regarding monetary variations that exist among the rich and the poor in the Third World (Ruti and De Felice, 2013; Yergin and Gross, 2012).

The progress of organizations and the development of agency issues may have resulted due to the existence of different policies. Saudi Arabia has made efforts to take part in a market economy. It has created numerous approaches, techniques, and regulations. The discoveries of this investigation ought to bear some significance with policymakers in Saudi Arabia. Similarly, this is the case to those developing markets in the Middle East in light of the likenesses in the institutional and economies, (La Porta et al., 1999). There is a high possibility that these investigations will result in having more questions arising about the existence of different corporate governance strategies. Many people will be interested to know why corporate administration systems fluctuate the level of firm performance. The outcomes may likewise bear some significance with different scientists who are exploring the firm execution issues and organizational administration components.

The following sections of the paper are organized as follows. The literature is reviewed and the hypotheses are developed in Section 2. The data collection and research design is highlighted in Section 3. Section 4 displays the results and discussions. Conclusions and implications were discussed in the final section, Section 5.

2. LITERATURE REVIEW AND DEVELOPMENT OF HYPOTHESES

According to the researches that have been done in the past, it is evident that the size of the board is a critical attribute in influencing firm performance, (Boone et al., 2007; Coles et al., 2008; Eisenberg et al., 1998; Larmou and Vafeas, 2008; Lipton and Lorsch, 1992; Yermack, 1996). Boards that are composed of more members are more efficient and active as compared to those that consist of a few members. The Resource Dependency Theory explains this. It is the case considering that the members have different ideas and perceptions, and they integrate them in coming up with an ultimate decision that will be beneficial to all the stakeholders of the firm, (Pearce and Zahra, 1992; Brown-Liburd et al., 2011). The members of the board of directors will have different skills, experience, and qualifications, which will enhance their managerial skills. The management and control of a large board are perceived to be more efficient and capable of making better decisions. It will be in a position to integrate all the necessary and relevant aspects of the corporation, which will lead to higher productivity. It is believed that having a larger board leads to a rise in the firm performance, (Alexander et al., 1993; Goodstein et al., 1994; Pfeffer, 1972). Furthermore, another research supports the same concept that an organization that has quite a good number of members in the board is likely to be performing very well in managing and controlling various activities within the firm, (Dalton et al., 1999).

Moreover, for the organizations in Russia, it is evident that board size is directly related to financial performance, (Berezinets et al., 2017). Following the research that has been done in Saudi Arabia, it is believed that large board size is linked to having minimized earning used in management, (Al-Abbas, 2008; Al-Ghamdi, 2012). This was concluded after the findings collected from the different companies in Saudi Arabia. In contrast, another research performed by Palaniappan (2017) found that there is no significant relationship between the board size and the performance of an organization. These conclusions were as per the research carried out in the Indian manufacturing industry. In the countries in the Gulf Cooperation Council (GCC), it is stated that the size of the board is between 6.7 in the United Arab Emirates (UAE) and 8.5 in Qatar. A lot of studies have been performed in the past, and they are in support of this concept. Many researchers engaged themselves in proving that it is correct that financial performance and board size are related. Some of these researchers are such as Muller-

Kahle et al. (2014), Zahra and Pearce (1989), Kyereboah-Coleman and Biekpe (2005), Bhatt and Bhattacharya (2017), Coles et al. (2008), and Rodriguez-Fernandez et al. (2014), Ahmed Sheikh et al. (2013) Mishra and Kapil (2017), Adams and Mehran (2005), Dalton and Dalton (2005), Pfeffer (1972) and Yasser et al. (2017). Thus, according on the aforementioned discussion the expected the sign for the effect of board of directors' size on firm performance is positive based on the direction of the extant research.

H_1: Ceteris paribus, board size is positively associated with firm performance.

The board of an organization has significant roles which it plays in keeping the business progressing successively. The board needs to meet regularly to discuss any issues in the company. It is a factor that leads to higher performance in the organization, (Vafeas, 1999; Jensen, 1993; Lipton and Lorsch, 1992). It should keep on reviewing the performance of the company to be informed of areas that they need to work on and direct their resources, (Letendre, 2004). The agency theory indicates that the bards in different companies demonstrate their functions by providing better advice on some issues and monitoring the management. Besides, the top managerial staff can be proactive through gatherings and be bound to handle any problem, as illustrated by the resource dependency theory, (AL Nasser, 2019). Brick and Chidambaran (2010) archived that one of the significant board's oversight work is board action. Vafeas (1999) performed empirical research, and the findings were based on 307 organizations. The conclusions were that the board meets mainly after a disaster has happened. In such a case, it calls for a meeting for the members to combine ideas and find a solution. It leads to improved overall performance. In Indian manufacturing industry, Palaniappan (2017) found that the board meetings influence the firm performance negatively. A local study carried out by Al-Ghamdi (2012) found that there is a negative relationship between executive gatherings and income management in Saudi Arabia. This outcome is following the preconceived idea that a more prominent recurrence of executive meetings brings about improved monitoring of activities. Moreover, research has demonstrated that the consequences of executive gatherings on the performance of an organization vary depending on the country-specific CG, legal practices, and firm-level attributes (Karamanou and Vafeas, 2005). Therefore, based on the above-mentioned the expected the sign for the effect of board of directors' meetings on firm performance is positive based on the direction of the extant research.

H_2: Ceteris paribus, board meeting is positively associated with firm performance.

Bigger firms have more number of employees and the executive. It indicates that the different personnel has various skills, experiences, and knowledge. It is one of the factors that make larger companies more effective than smaller companies, (Helmich, 1977; Kumar, 2004). The big organizations experience a lot of pressure from different areas and individuals, such as the external stakeholders or the employees, (Haniffa and Hudaib, 2006). Hannan and Freeman (1989) demonstrate that with regards to Saudi Arabia, littler firms are progressively imaginative and inventive. They embrace changes to influence improved qualities. According to Palaniappan (2017), a firm's size is significant for examining the execution of organizations in the manufacturing industry. Moreover, Pfeffer and Salancik (1978) archive that the firms that they work in are significantly influenced and affected more by the bigger firms than the emerging ones. Additionally, a positive association was seen between the firm size and its performance, (Aljifri and Moustafa, 2007; Kumar, 2004). Nevertheless, a negative relationship was demonstrated between the size of an organization and its performance in the public companies of Russia, (Berezinets et al., 2017). Thus, based on the precious discussion the expected the sign for the effect of firm size on firm performance is negative.

H_3: Ceteris paribus, firm size is negatively associated with firm performance.

Debt financing is known to control and restrict the incentives of the managers. It indicates that the behaviors and the actions that the managers engage in would be strictly followed, (Jensen and Meckling, 1976; Myers, 1990). Therefore, debt financing is regarded to be more effective than equity. Agency theory is in support of this fact. This is a concept that the managers would implement in making more profits and leading to higher productivity. Debt finance is known to make the managers more concerned about the decline in the value of an organization, (Grossman and Hart, 1982). This can be the case when the executive is not in a position to control the company activities effectively. It is an instance that can lead to losing reputation in the market hence losing potential customers.

Many companies take debts and use the money in funding massive projects that they assume will succeed. If the plans are completed successfully and bring out the results as expected, the company will be obtaining high-profit margins hence paying the debts and use the remaining amount in other relevant activities such as investments. On the other hand, if the project fails, the performance of the company may be affected for quite a long time, (Stiglitz and Weiss, 1981). There are studies which have illustrated a negative relation between leverage and firm performance, (Palaniappan, 2017; Dowen, 1995; McConnell and Servaes, 1990; Short and Keasey, 1999; Weir et al., 2002; Haniffa and Hudaib, 2006; Aljifri and Moustafa, 2007).

Berezinets et al. (2017) explained that when an organization has higher leverage, it demonstrates that the firm can experience growth by engaging in more projects. This is why the organization will have to borrow some capital to be used in funding these projects, (Black et al., 2006; Berezinets et al., 2017). It was evident that there exists a direct relation between firm performance and leverage. Different researchers have provided contradicting ideas about the relationship between leverage and firm performance. Some such as those performed by Hurdle (1974) indicate a positive association, while others such as Al-Matari et al. (2012), a study carried out on Saudi Arabia, show a negative association. In conclusion, on the relationship that exists between leverage and firm performance, no sufficient evidence is available for all researchers to come into a common agreement. Therefore, the direction of the empirical studies takes a negative direction of the association of leverage with firm performance. Accordingly, the expected sign for the relationship of leverage with firm performance is negative.

H_4: Ceteris paribus, leverage is negatively associated with firm performance.

3. DATA COLLECTION AND RESEARCH DESIGN

3.1. Sample Selection and Data Collection

The sample of this study consists of energy-listed companies on Saudi Stock Exchange (Tadawul) for the years ranging from 2005 to 2018. We conduct a cross-sectional review of financial reports of the sample companies as depicted in Table 1.

3.2. Regression Model and Definition of Variables

Ordinary-least square (OLS) regression is used to estimate the associations of board size, board meetings, firm size and firm leverage with firm performance of energy listed companies in Saudi Arabia for the period ranging from 2005 to 2018. The utilizing of the OLS regression is because the dependent variable in this study is a continuous measure. The functional equation of the OLS model is as follows:

$$PERFORMANCE = \beta 0 + \beta 1\ BD\_SIZE + \beta 2\ BD\_MEET + \beta 3\ FSIZE + \beta 4\ LEV + e \quad (1)$$

Where the dependent variable is:
PERFORMANCE=Return on Assets
Where the independent variables are:
BD_SIZE=the total number of directors sitting on the board,
BD_MEET=the number of board meetings during the year,
FSIZE=$\log_{10}$ of the total assets,
LEV=total debt to total assets,
e=error term.

4. RESULTS AND DISCUSSION

4.1. Descriptive Statistics and Correlation Analysis

Table 2 predicts the mean, standard deviation, minimum and maximum of each variable in the sample data set.

Table 2; panel A shows that there is a significant range of variation among the considered sample of this study. The range of board of directors DB_SIZE is from 4to 11 with a mean of 4 and a standard deviation of 1.822. The range of board meetings BD_MEET is from 3 to 10 with a mean of 6 and a standard deviation of 1.719. With respect to firm size FSIZE, it ranges from SR 4834197 to SR 1901984862 with a mean of SR 369776504 and standard deviation of SR 474353028. The range of firm leverage LEV is from 6.150 to 1.498 with a mean of 0.442 and standard deviation of 6.856. The range of firm age FAGE ranges from 1 to 63 years with a mean of 26.31 and a standard deviation of 1.788. Table 2; panel B shows that the range of firm performance PERFORMANCE, the dependent variable, ranges from (0.000) to 0.360 with a mean of 0.0581 and standard deviation of 0.066.

Table 3 displays the Pearson correlations among the hypothesized variables. The coefficients of correlation are small and the highest correlation was between BD_MEET and LEV (−0.428), indicating that the frequent the board meets the lower the company takes external financing sources.

The multicollinearity problem does not exist in this study as shown by the correlation matrix because none of the correlation is equal or above 0.80 or 0.90. All variables have a correlation of ≤0.428 (Myers, 1990).

Table 1: Sample Selection from 20005 to 2018

Sample	Totals
Total listed companies	4 firms
Number of years observed	14 years
Final sample	56

4.2. Regression Results and Discussion

OLS was used to evaluate the level of association of board size, board meeting, firm size and firm leverage on firm performance. Table 4 shows that the F-value for the model is statistically significant at the 1% level which means that the overall model can be interpreted. And, the R^2 is 0.341 which means that this model has explained 34.1% of the total variance in the firm performance.

As illustrated by Table 4, there is a significantly positive association between board size BD_SIZE and firm performance PERFORMANCE (β = 0.419, t = 3.348, P = 0.002, one-tailed significance). This result is consistent with resource dependence theory and it is inconsistent with the prediction of agency theory. This result is also consistent with the previous studies results such as Bhatt and Bhattacharya (2017), Muller-Kahle et al. (2014), Coles et al. (2008), and Rodriguez-Fernandez, et al. (2014), Kyereboah-Coleman and Biekpe (2005), Ahmed Sheikh et al. (2013), Mishra and Kapil (2017), Adams and Mehran (2005), Dalton and Dalton (2005), Zahra and Pearce (1989), Pfeffer (1972) and Yasser et al. (2017), (Brown-Liburd et al., 2011; 1993), (Goodstein et al., 1994), (Pfeffer, 1972; 1973), (Dalton et al., 1999), (Al-Abbas, 2008), (Al-Ghamdi, 2012). Thus, we accept hypothesis 1. In addition, this study finds that there is a significantly negative association between board meetings BD_MEET and firm performance

Table 2: Descriptive statistics (n=56 observations)

Panel A: Independent variables				
Variables	**Mean**	**Std. Deviation**	**Minimum**	**Maximum**
Hypothesized variables				
DB_SIZE	9	1.822	4	11
BD_MEET	6	1.719	3	10
FSIZE	369776504	474353028	4834197	1901984862
LEV	0.442	1.788	6.150	1.498
Panel B: Dependent variable				
PERFORMANCE	0.0581	0.066	(0.000)	0.360

Table 3: Pearson correlation analysis results (n=56 observations)

	BD_SIZE	BD_MMET	FSIZE	LEV
BD_SIZE	1			
BD_MEET	0.103	1		
FSIZE	0.171	−0.236	1	
LEV	0.142	−0.428**	−0.219	1

**Significant at 1% level (2-tailed). *Significant at 5% level (2-tailed)

Table 4: Pooled OLS regression (n=117)

Variables	Expected sign	Coeff.	t	P-value	Tolerance	VIF
(Constant)			1.649	0.106		
BD_SIZE	Positive		3.348	0.002	0.859	1.164
BD_MEET	Positive	−0.246	−1.674	0.101	0.621	1.610
FSIZE	Positive	−0.235	−0.719	0.092	0.716	1.396
LEV	Negative	−0.641	−4.390	0.000	0.630	1.588
Adjusted R^2	34.1					
Model F-stat.	6.350					
P-value	0.000					

PERFORMANCE (β =−0.246, t = −1.674, P = 0.101, one-tailed significance). This result is inconsistent with suggestions of agency theory, resource dependence theory and the previous research (Palaniappan, 2017; Vafeas, 1999; Jensen, 1993; Lipton And Lorsch, 1992; Karamanou and Vafeas, 2005; Al-Ghamdi, 2012). Thus, we reject hypothesis 2. Further, the results of this study indicate to a significantly negative association between firm size FSIZE and firm performance PERFORMANCE. This result supports the prediction of agency theory and the extant research (Hannan and Freeman, 1989). This result can be interpreted by the fact that smaller companies are more effective than larger ones. Thus, we accept hypothesis 3. Furthermore, this study reports that there is significantly negative association between firm leverage LEV and firm performance PERFORMANCE (β = −0.641, t = −4.390, P = 0.000, one-tailed significance). This result is in line with the previous studies such as (Palaniappan, 2017), McConnell and Servaes (1990), Short and Keasey (1999), Weir et al. (2002), Haniffa and Hudaib (2006) and Aljifri and Moustafa (2007). Thus, we accept hypothesis 4.

5. CONCLUSIONS AND IMPLICATIONS

Our study examines the associations of board of directors' size, board of directors' meetings, firm size and firm leverage with firm performance in Saudi Arabian energy industry for the period ranging from 2005 to 2018. The hypotheses of this study are based on the premise that there are positive associations of board size, board meetings and firm size with firm performance. Further, this study hypothesizes a significantly negative association of firm leverage with firm performance. In particular, only two of the hypotheses are accepted which are the relationships board size and firm leverage with firm performance as these hypotheses are in the same predicted direction.

The result shows a support to the resource dependence theory and agency perspective. Therefore, the findings reported by this study add empirical evidences to the theory and the extant research in the setting of Saudi Arabia and similar markets. In addition, important implications of this finding relate to the issues of firm performance, and corporate governance. Saudi government, stock market, companies and accounting and auditing regulators, banks, auditors, investors, financial analysts, researchers and academic community would gain some new insights from this study in terms of understanding the associations of board of directors' size, board of directors' meetings, firm size and firm leverage with firm performance. However, there several limitations relate to the corporate governance mechanisms such as ownership classifications, audit committee characteristics, and other firm-level determinants. Future researches should consider adding the omitted determinants. In addition, the model of this study may be replicated in other GCC countries to examine its validity and other Arab Middle Eastern markets.

REFERENCES

Adams, R.B., Mehran, H. (2005), Firm Value, Board Structure and its Determinants in the Banking Industry. Moscow: EFA 2005 Moscow Meetings.

Ahmed Sheikh, N., Wang, Z. (2012), Effects of corporate governance on capital structure: Empirical evidence from Pakistan. Corporate Governance: The International Journal of Business in Society, 12(5), 629-641.

AL Nasser, Z. (2019), The effect of royal family members on the board on firm performance in Saudi Arabia. Journal of Accounting in Emerging Economies, 5(2), 1-31.

Al-Abbas, M.A. (2008), Do Saudi Companies Underestimate us in the Application of Governance? Aleqtisadia Journal, 2008. Available from: http://www.aleqt.com/2008/02/29/article_11668.save.

Alexander, J.A., Fennell, M.L., Halpern, M.T. (1993), Leadership instability in hospitals: The influence of board-CEO relations and organizational growth and decline. Administrative Science Quarterly, 38(1), 74-99.

Al-Ghamdi, S.A. (2012), Investigation into Earnings Management Practices and the Role of Corporate Governance and External Audit in Emerging Markets: Empirical Evidence from Saudi Listed Companies. Durham, England: Doctoral Dissertation, Durham University.

Al-Hamidy, A. (2010), The global financial crisis: Impact on Saudi Arabia. This Volume BIS Papers, 54, 347-357.

Al-Hussain, A.H. (2009), Corporate Governance Structure Efficiency and Bank Performance in Saudi Arabia. Tempe, Arizona: Doctoral

Dissertation, University of Phoenix.
Aljifri, K., Moustafa, M. (2007), The impact of corporate governance mechanisms on the performance of UAE firms: An empirical analysis. Journal of Economic and Administrative Sciences, 23(2), 71-93.
Al-Moataz, E., Basfar, A. (2010), The role of audit committees in corporate governance: An empirical investigation on Saudi corporations. Journal of King Abdulaziz University: Economics and Administration, 24(2), 193-239.
Aydin, N., Sayim, M., Yalama, A. (2007), Foreign ownership and firm performance: Evidence from Turkey. International Research Journal of Finance and Economics, 11(1), 103-111.
Berezinets, I., Ilina, Y., Cherkasskaya, A. (2017), Board structure, board committees and corporate performance in Russia. Managerial Finance 43(10), 1073-1092.
Bhatt, R.R., Bhattacharya, S. (2017), Family firms, board structure and firm performance: Evidence from top Indian firms. International Journal of Law and Management, 59(5), 699-717.
Black, B.S., Jang, H., Kim, W. (2006), Does corporate governance predict firms' market values? Evidence from Korea. The Journal of Law Economics and Organization, 22(2), 366-413.
Boone, A.L., Field, L.C., Karpoff, J.M., Raheja, C.G. (2007), The determinants of corporate board size and composition: An empirical analysis. Journal of Financial Economics, 85(1), 66-101.
Brick, I.E., Chidambaran, N.K. (2010), Board meetings, committee structure, and firm value. Journal of Corporate Finance, 16(4), 533-553.
Brown-Liburd, H., Cohen, J., Zamora, V.L. (2011), The Effect of Corporate Social Responsibility Investment, Assurance, and Perceived Fairness on Investors' Judgments. Available from: https://www.digitalcommons.tacoma.uw.edu/clsr_academic/2011/pres/9
Coles, J., Daniel, N., Naveen, L. (2008), Boards: Does one size fit all? Journal of Financial Economics, 87(2), 329-356.
Cubbin, J., Leech, D. (1983), The effect of shareholding dispersion on the degree of control in British companies: Theory and measurement. The Economic Journal, 93(370), 351-369.
Dalton, C., Dalton, D. (2005), Boards of directors: Utilizing empirical evidence in developing practical prescriptions. British Journal of Management, 16(1), 1-97.
Dalton, D., Daily, C., Johnson, J., Ellstrand, A. (1999), Number of directors and financial performance: A meta-analysis. Academy of Management Journal, 42(6), 674-686.
Eisenberg, T., Sundgren, S., Wells, M. (1998), Larger board size and decreasing firm value in small firms. Journal of Financial Economics, 48(4), 35-54.
Fama, E.F., Jensen, M.C. (1983), Agency problems and residual claims. Journal of Law and Economics, 26(2), 327-349.
Goodstein, J., Gautam, K., Boeker, W. (1994), The effects of board size and diversity on strategic change. Strategic Management Journal, 15(3), 241-250.
Grossman, S.J., Hart, O.D. (1982), Corporate financial structure and managerial incentives. In: The Economics of Information and Uncertainty. United States: University of Chicago Press. p107-140.
Haniffa, R., Hudaib, M. (2006), Corporate governance structure and performance of Malaysian listed companies. Journal of Business Finance and Accounting, 33(7-8), 1034-1062.
Hannan, M.T., Freeman, J. (1989), Organizational Ecology. Cambridge, Massachusetts: Harvard University Press.
Hawkamah Institute for Corporate Governance and IFC. (2008), Corporate Governance Survey of Listed Companies and Banks Across the Middle East and North Africa. Available from: http://www.hawkamah.org.
Helmich, D. (1977), Executive succession in the corporate organization: A current integration. The Academy of Management Review, 2(2), 252-266.
Hurdle, G.J. (1974), Leverage, risk, market structure and profitability. The Review of Economics and Statistics, 56(4), 478-485.
Jensen, M., Meckling, W. (1976), Theory of the firm: Managerial behavior, agency costs, and capital structure. Journal of Financial Economics, 3(4), 305-360.
Jensen, M.C. (1993), The modern industrial revolution, exit, and the failure of internal control systems. The Journal of Finance, 48(3), 831-880.
Kao, M.F., Hodgkinson, L., Jaafar, A. (2019), Ownership structure, board of directors and firm performance: Evidence from Taiwan. Corporate Governance: The International Journal of Business in Society, 19(1), 189-216.
Karamanou, I., Vafeas, N. (2005), The association between corporate boards, audit committees, and management earnings forecasts: An empirical analysis. Journal of Accounting Research, 43(3), 453-486.
Kawaura, A. (2004), Deregulation and governance: Plight of Japanese banks in the 1990s. Applied Economics, 36(5), 479-484.
Kumar, J. (2004), Does ownership structure influence firm value? Evidence from India. The Journal of Entrepreneurial Finance and Business Ventures, 9(2), 61-93.
Kyereboah-Coleman, A., Biekpe, N. (2005), The Relationship Between Board Size, Board Composition CEO Duality and Firm Performance Experience from Ghana, Working Paper. South Africa: University of Stellenbosch Business School (USB).
La Porta, R., Lopez-de-Silanes, F., Shleifer, A., Vishny, R. (1999), Corporate ownership around the world. Journal of Finance, 54(2), 471-517.
Larmou, S., Vafeas, N. (2008), The relation between board size and firm performance in firms with a history of poor operating performance. Journal of Management and Governance, 14(1), 61-85.
Letendre, L. (2004), The dynamics of the boardroom. Academy of Management Perspectives, 18(1), 101-104.
Lipton, M., Lorsch, J. (1992), A modest proposal for improved corporate governance. Business Lawer, 48(1), 59-77.
McConnell, J.J., Servaes, H. (1990), Additional evidence on equity ownership and corporate value. Journal of Financial Economics, 27(2), 595-612.
Mishra, R., Kapil, S. (2017), Effect of ownership structure and board structure on firm value: Evidence from India. Corporate Governance: The International Journal of Business in Society, 17(4), 700-726.
Muller-Kahle, M.I., Wang, L., Wu, J. (2014), Board structure: An empirical study of firms in Anglo-American governance environments. Managerial Finance, 40(7), 681-699.
Myers, R. (1990), Classical and Modern Regression with Applications. Boston, MA: PWS-KENT.
Palaniappan, G. (2017), Determinants of corporate financial performance relating to board characteristics of corporate governance in Indian manufacturing industry: An empirical study. European Journal of Management and Business Economics, 26(1), 67-85.
Pearce, J.A., Zahra, S.A. (1992), Board composition from a strategic contingency perspective. Journal of Management Studies, 29(4), 411-438.
Pfeffer, J. (1972), Size and composition of corporate board of directors: The organization and its environment. Administrative Science Quarterly, 17, 218-29.
Pfeffer, J.S., Salancik, G. (1978), The External Control of Organizations: A Resource Dependence Perspective. New York: Stanford University Press.
Porwal, H., Kumar, S. (2003), Ethical culture in corporate accounting. Akauntan Nasional, 16, 18-23.
Rodriguez-Fernandez, M., Fernandez-Alonso, S., Rodriguez-

Rodriguez, J. (2014), Board characteristics and firm performance in Spain. Corporate Governance, 14(4), 485-503.

Ruti, P.M., De Felice, M. (2013), Climate and energy production-a climate services perspective. In: Climate Vulnerability: Understanding and Addressing Threats to Essential Resources. Amsterdam, Netherlands: Elsevier Inc.

Sheikh, N.A., Wang, Z., Khan, S. (2013), The impact of internal attributes of corporate governance on firm performance: Evidence from Pakistan. International Journal of Commerce and Management, 23(1), 38-55.

Sherman, H., Kashlak, R., Maheshkumar, J. (1998), The effect of the board and executives committee characteristics on the degree of internationalization. Journal of International Management, 4(4), 311-335.

Short, H., Keasey, K. (1999), Managerial ownership and the performance of firms: Evidence from the UK. Journal of Corporate Finance, 5(1), 79-101.

Stiglitz, J.E., Weiss, A. (1981), Credit rationing in markets with imperfect information. The American Economic Review, 71(3), 393-410.

Teng, L.L., Aun, L.K., Fook, O.S. (2011), Corporate governance assessment in company board structure. African Journal of Business Management, 5 (4), 1175-1183.

Vafeas, N. (1999), Board meeting frequency and firm performance. Journal of Financial Economics, 53(1), 113-142.

Weir, C., Laing, D., McKnight, P.J. (2002), Internal and external governance mechanisms: Their impact on the performance of large UK public companies. Journal of Business Finance and Accounting, 29(5-6), 579-611.

Yasser, Q.R., Mamun, A.A., Rodrigs, M. (2017), Impact of board structure on firm performance: Evidence from an emerging economy. Journal of Asia Business Studies, 11(2), 210-228.

Yergin, D., Gross, S. (2012), Energy for Economic Growth: Energy Vision Update 2012; Industry Agenda. Switzerland: World Economic Forum.

Yermack, D. (1996), Higher market valuation of companies with a small board of directors. Journal of Financial Economics, 40(2), 185-211.

Zahra, S.A., Pearce J.A. (1989), Boards of directors and corporate financial performance: A review and integrative model. Journal of Management, 15, 291-334.