Corporate Governance, Capital Structure and Moderating Effect of Women on Board of Directors in Malaysia's Energy Firm

CHAI SIEW JOO[1], LING SIEW CING[1], LYSANDRA GABRIEL STORIE[1], TANG SHINN HUOY[1] and JOSEPHINE TAN-HWANG YAU[1,2]

[1]Faculty of Economics and Business, Universiti Malaysia Sarawak, 94300 Kota Samarahan, Sarawak, Malaysia
[2]corresponding author, email: ythjosephine@unimas.my

ABSTRACT

It is undeniable that corporate governance is an important element towards the capital structure across industries as it affects the financial decision which drives the companies' reputation and revenue. However, the big question is what drives the relationship of corporate governance and capital structure within the industry. As we move into the twenty-first century, diversity and inclusion has been discussed globally. This shift can differentiate the board decision on financial strategy in terms of capital structure. Hence, the motivation behind this research is to investigate the moderating role of women on board towards the relationship of corporate governance and capital structure. Data is collected from annual report of 24 listed energy firms in Bursa Malaysia over the period of 2015 to 2019. As a result, to determine the research objectives, this study employs descriptive statistical analysis, correlation coefficient, and random effects regression models. Moreover, the Generalized Method of Moments (GMM) estimate is used for robustness, and the results obtained differed from the random effect models. According to the findings of this study, board size and the proportion of women on boards of directors have a negative and substantial link with capital structure in terms of leverage level. Meanwhile, there is a positive and significant association between CEO duality and firm leverage, but no relationship exists between board independence and leverage. Additionally, when there is a large proportion of female directors on the board, the influence of board size on the firm's leverage level is beneficial.

Key words: Corporate Governance, Capital Structure, Women on Board, Energy Listed Firms

INTRODUCTION

The energy sector has seen remarkable expansion in recent years, as energy demand has skyrocketed, making it the most important sector in the Malaysia economy. This energy industry has been growing for its high capital mandates. It has been fuelled by technological advancements and inventions as among the most crucial parts of a company's strength to compete in the industry. According to Energy Watch (2021), Malaysia is on track to have 31% renewable energy within the energy mix by 2025, as well as a 45 percent reduction in carbon intensity in 2025 and a 50 percent reduction in 2035. This put pressure on the energy sector, which should invest heavily in new and more costly technologies, energy efficiency, and green energy breakthroughs to be competitive in the business. The issue might arise when energy companies are unable to generate adequate earnings or obtain financing to meet the costs of new technologies and investments in energy efficiency, putting financial strain on the company (Hamzah & Marimuthu, 2019). As a result, the energy sector's capital structure is a major area of concern in needed to shield the industry.

Capital structure of a company is made up of both equity and debt finance. Capital structure management is critical in ensuring the company's financial health while also increasing shareholder value by effectively utilizing capital costs (Purag, Abdullah & Bujang, 2016). Besides, corporate governance is made up of policies that have an impact on management's ability to make successful decisions and contribute to how a company is perceived by current and prospective stakeholders in order to maximise shareholder value (Balagobei, 2018; Feng, Hassan & Elamer, 2020). Corporate governance is examined in this paper as the prime motivating force of capital structure, which has a considerable influence on business finance decisions. Grabinska, Kedzior, Kedzior and Grabinski (2021) stated that an effective corporate governance can help to alleviate agency issues involving managers, stockholders, and other parties. Moreover, appropriate corporate governance fosters higher trust among stakeholders, particularly debtholders, who believe that the firm will not make the decisions that harm their rights, thereby attracting more capital. On the other hand, managers who manage under inadequate corporate governance may would prioritise their own personal goals by retrenching debt methods, as a large amount of debt will prevent managers from attempting to make the most of available resources, hence exacerbating agency conflict (Bradley & Chen, 2011; Zaid et al., 2020). In other words, weak corporate governance will fail to supervise and dissuade managers from making reasonable and good decisions, resulting in poor capital structure decisions.

The Asian Financial Crisis, which happened in 1997, prompted Malaysia to strengthen its corporate governance (Zabri, Yusoff, Ramin & Ling, 2016). This occurrence is mostly due to the excessive use of debt which because of poor corporate governance, hence has resulted in a loss of confidence among local and global investors (Khatib, Abdullah, Hendrawaty & Yahaya, 2020). As a result, the Malaysian government launched an initiative in March 1998 to form a high-level "Finance Committee on Corporate Governance" (FCCG) comprised of senior government officials, regulators, and professional societies, with the goal of reviewing corporate governance practises and recommending legal reforms for the industry. The Malaysian Code of Corporate Governance (MCCG) was then established by the FCCG in March 2000. Not only that, several government agencies, including the Kuala Lumpur Stock Exchange (KLSE), the Ministry of Finance, the Securities Commission (SC), and also Registrar of Companies, will focus on corporate governance by conducting extensive research on macroeconomics, systemic stability, and international investor regulations in order to improve the industry's corporate management practises (Haniffa & Hudaib, 2006; Ghazali, 2010).

According to Securities Commission Malaysia (2021), the MCCG was reviewed and revised a few times in 2007, 2012, 2017, and 2021, in order to strengthen its system and maintain its position highly congruent with internationally recognized guidelines and principles. MCCG 2021 incorporates a number of important modifications, including two new corporate governance practises that should be followed in order to make an appropriate capital structure decision. For starters, the MCCG 2021 has asked for independent director nominations after the SC discovered that certain independent directors were elected for over than 12 years. Thus, MCCG 2021 has proposed that publicly traded companies' boards of directors adopt a policy limiting independent directors' terms to 9 years with no additional renewals. This is to make it easy to replace board members every few years so that fair and good capital structure decisions may be made. Non-independent directors may continue to serve on the board after serving as independent directors for more than nine years. Secondly, the MCCG 2021 has established a requirement that listed firms have at least 30% female directors. With 30% women on the board of directors, there will be a greater diversity of talents, experiences, viewpoints, and tactics, which will improve the board's performance and corporate governance's effectiveness (Shahari & Chia, 2021).

Despite the fact that the MCCG reforms frequently and appropriate quantitative and advice to revive market confidence, capital structure decisions based on corporate governance continue to be a source of concern. As a result of this concern, several scholars have centred into how corporate governance drives capital structure decisions, yielding inconclusive results. Furthermore, it has been recognised that an increase in leverage ratio due to poor corporate governance has a substantial influence on the occurrence of the Asian Financial Crisis (Lim, Das & Das, 2009). This implies that if a company has too much debt, a crisis similar to the one that occurred in 1997 could arise in the near future (Khatib et al., 2020). Thus, maintaining a low leverage ratio is critical for ensuring best practises in corporate governance because it is the most important component in corporate financing decisions. According to the research studies of Alabdullah et al. (2018), inadequate corporate governance practises such as the presence of a small board size would result in increased degree of financial strain and weakened effectiveness of internal controls, leading to greater levels of agency conflict. However, Md. Aris et al. (2021) observed that while there was no link between corporate governance, such as size and independence of the board, and financial leverage, but large companies with strong managerial ownership adopt a high debt policy.

Furthermore, the growth of high-profile business scandals has resulted in a problem with corporate governance such as Enron in 2001 and WorldCom in 2002. In Malaysia, one example of a scandal is Malaysia Airlines System (MAS), which lost RM 260 million in 1999 (Fauzan, Rahman & Ibrahim, 2020). These scandals have highlighted the necessity of improving corporate governance, as bad corporate governance leads to poor financing decisions and performance. According to Coleman and Wu (2020), their studies revealed that good corporate governance processes as well as board compliance have a favourable impact on firm performance. Their findings were further backed by Saleh, Latif, Bakar and Maigoshi (2020) as well as Wijethilake and Ekanayake (2020), as they discovered that the widespread practise of holding numerous directorships had a detrimental impact on the performance of the company. This means that if the company has effective corporate governance, it is less likely to make bad judgments, particularly when it comes to capital structure decisions that harm the interests of shareholders.

Additionally, the energy sector, which is Malaysia's booming industry as mentioned earlier, has long been dominated by men and has come under fire for underperforming behind other sector in terms of female board presence. According to Cottle (2019), Malaysia only has about 23% of female members on boards of directors and senior management positions in energy corporations, falling short of the MCCG 2021 requirement of at least 30% women on boards of directors. Thus, it is critical to choose women board members as the moderating role in order to extract fresh insights on corporate governance and capital structure literatures. According to several studies, having more women on boards will improve corporate governance procedures. In the studies of Usman, Farooq, Zhang, Makki and Khan (2019), they discovered that firms with a greater level of gender diversity on their boards make better corporate governance decisions, including financing decisions, because the inclusion of female members on the board decreases managerial opportunism and debt costs. Zaid et al. (2020) highlighted that the influence of board composition and independence on a company's financing is more advantageous when there are more women on the board. They went on to say that when a company has women on its board of directors, the board's characteristics are more likely to impact the firm's capital structure.

Despite the availability of corporate governance and capital structure research, no empirical studies on Malaysian publicly traded firms in the energy industry are accessible. As a result, the goal of this research is to fill a knowledge gap by exploring the effect of corporate governance on capital structure of publicly traded firms in Malaysia's energy industry. Furthermore, the second objective of the research is to

investigate the moderating effect of women on board of directors on the aforementioned relationship. The independent factors are board size, board independence, and CEO duality, the dependent variable is the firm's leverage level, and the proportion of female directors in board acts as a moderator variable.
The rest of the paper is structured as follows. The following part examines relevant theories and literatures on corporate governance, capital structure, and moderating influence, as well as the development of hypotheses. Section 3 discusses the proposed framework, study's data and sample. The results are discussed in the next section. In the final section, the report concludes with a summary, limitations, and recommendations for future research.

LITERATURE REVIEW

Theoretical Background of Corporate Governance, Capital Structure and Moderating Effect

The review of the previous analysis paper and also the theory used that is said to the present study are bestowed in section 2.1. the primary theory could be agency theory which is outlined by Sherman (2020) in terms of the interaction between business principals and their subordinates. one among the foremost cited theories employed by previous researchers for analyzing the connection between company governance and capital structure is that the agency theory. in line with the notion of agency, gender diversity on board in corporate governance is an important corporate governance approach (Gallego-Álvarez, García-Sánchez & Rodríguez-Dominguez, 2010). within the early 1970s, agency theory was initial established by Stephen Ross and Barry Mitnick (Mitnick, 2006). Mitnick is attributable with establishing the institutional theory of agency, despite the actual fact that Ross is credited with inventing the theory of agency (Mitnick, 2006). As a result, the main focus of this theory is on the obstacles that fill in the means of gender equality within the workplace.

There are two frequently used theoretical models of capital structure: the trade-off theory and the pecking order theory. The following theory is the pecking order theory, which was applied in this research. Myers and Majluf (1984) proposed the pecking order theory, which claims that there is no well-defined goal debt level that firms aim to accomplish. However, this theory was further developed by Shyam-Sunder and Myers (1999) which states that if a corporation requires funding from outside sources, it would utilise debt rather than equity. Firms confront a tactical decision to fund their investments, according to the pecking order hypothesis. Due to the adverse problem, corporations prefer internal 'retained earnings' over external financing in this respect (Zaid, Wang & Abuhijleh, 2019).

According to the trade-off theory of capital structure, on the other hand, companies have an optimal debt-equity ratio. A firm would always want to stay near the optimal debt level, and if there is a difference, it will eventually return to it. This optimal amount is achieved by balancing the gains from debt or equity against the losses from them. Benefits include tax exemption on interest, while costs include bankruptcy fees and brokerage costs.

Another theory used in this study is the free cash flow theory. According to Jensen (1986), free cash flow (FCF) is the cash flow generated in excess of the cash flow required to fund all projects with positive net present value (NPV). Harbula (2001) argues that free cash flow theory has critical implications for the impact of leverage on investment or financing decisions. According to the free cash flow model, increasing debt should lead to a decrease in unproductive capital expenditures for an over investor (Harbula, 2001).

The token status theory was the next hypothesis employed in this research. Usman et al. (2019) employed this idea in their investigation of board gender diversity. Tokenism, according to Zimmer (1988), describes in numbers women's job experiences and behavioural responses to those experiences. Furthermore, research suggests that hiring more women in organisations with high male-to-female ratios might minimise the barriers women face in achieving complete career equality. Borrowers with a single female director on the board of directors also pay less interest on their debt. Token status theory holds that a single female board member is a token with little economic worth, contradicting critical mass theory. According to critical mass theory, organisations with two female board members benefit from lower borrowing rates than organisations with a single female board member, and lenders charge borrowers with more than two female board members reduced interest rates. Boards with a critical mass of female board members, on average, pay less for debt financing than boards with only one or two female members (Usman et al., 2019). Harris (2014) findings has a similar result on low debt financing decision in the presence of women in the boardroom.

Finally, this analysis employs Pfeffer and Salancik's (1978) resource dependency theory, which was first proposed in the 1930s. Boards with more female members, according to resource dependency theory, have access to a greater range of viewpoints, expertise, and connections. Women, according to Robinson and Dechant (1997), have a superior grasp of markets and customers. Due of the diverse viewpoints, knowledge, and networks afforded by a gender-mixed board, an all-male board may make different strategic decisions (Yang, Riepe, Moser, Pull, & Terjesen, 2019). Furthermore, increased board diversity increases performance according to resource dependency theory, and investors see gender diversity as a means to boost board oversight efficacy (Simionescu, Gherghina, Tawil & Sheikha, 2021).

In summary, although pecking order, trade-off, and free cash flows are the primary theories that describe how firms choose their sources of funding, agency theory is accepted as one of the most widely used theories to illustrate the relationship between corporate governance characteristics and a firm's capital structure (Chow et al., 2018; Berger et al., 1997; Jiraporn and Gleason, 2007; Bonn et al., 2004). In addition, token status, critical mass, and resource dependence are mostly used to highlight the characteristics researched based on women on boards.

Corporate Governance, Capital Structure and Moderating Effect Research

According to Jensen and Meckling (1976), this term refers to the fact that a firm's capital structure is determined by the agency cost resulting from agency conflict. Additionally, they claim that debt financing may be used to control in excessive investing activities. Despite these claims, the author of Kester (1986) claims that increasing financial leverage will relieve agency costs adequately since senior management is legally required to repay loans with interest in order to handle the agency issue. Additionally, Berger and Di Patti (2006) argue that company capital sources may assist reduce and decrease the agency cost. Besides, Zaid et al. (2020) studied 33 of listed firms on (PEX) between 2013 to 2018, they found that nationality and gender diversity had a favourable and minor impact on company sustainability-related initiatives. In a nutshell, agency conflict has a significant impact on corporate funding practises. However, in other instances, board diversity may be desirable. The topic of whether more women on board of directors helps corporate performance becomes evident in light of these theoretical reasons.

Aside from that, prior study by Myers and Majluf (1984) found that enterprises in need of external finance regard debt to be a better alternative than equity since debt issuing has lower information costs. As can be seen, the pecking order hypothesis is inextricably linked to this outcome. A value-maximizing business

would seek the optimal capital structure by calculating the marginal cost and marginal benefit of each new unit of finance, which drives enterprises to pick the financing structure that balances marginal cost and marginal benefit, according to the trade-off theory (Tong & Green, 2005). Interest payments on debt provide a tax benefit (Miller, 1977). It also includes expenses related to financial difficulties, such as bankruptcy fees (Kraus & Litzenberger, 1973). Pecking order theory, according to Shyam-Sunder and Myers (1999), better characterises business behaviour than trade-off theory. Other writers, such as Chirinko and Singha, have questioned the methodological validity of the study (2000). Fama and French (2002) discovered that certain businesses followed the pecking-order hypothesis while others followed the trade-off model, and that neither could be rejected.

Brush, Bromiley and Hendrickx (2000) highlight that it is unsurprising that a weak corporate governance results in inefficiency in the allocation of free cash flows, since the firm's board of directors would act in management's favour at the cost of shareholder value in such circumstances. Another research examined free cash flows and found that the findings were highly statistically significant for the majority of companies and free cash flows, with the exception of two (Holder, Langrehr & Hexter, 1998; Hossain, Prevost & Rao, 2001; Adjaoud & Ben, 2010).

According to Usman et al. (2019), their research suggests that the presence of female board members reduces opportunistic management behaviour and information asymmetries and, consequently, creditors' perceptions of the probability of default and the cost of debt. In addition, their results show that lenders charge borrowers who have at least one female board member 4% less than borrowers who do not have female board members. In addition, the authors find that borrowers can obtain more favourable debt financing by diversifying their boards. From a regulatory perspective, the findings complement recent global legislative initiatives aimed at increasing female board representation. Based on token status theory, the results also show that firms with a female director on their boards are able to borrow at lower interest rates than firms without female directors. However, consistent with critical mass theory, firms with at least three female board members are able to borrow at a lower interest rate than firms with only two board members.

Yang et al. (2019) found that a more gender-balanced board of directors behaves differently as a consequence of unique aims and the pursuit of strategically divergent options in another study. Furthermore, it is highlighted that when faced with a potential trade-off between short-term performance and risk, gender-diverse boards make different decisions, which is consistent with resource dependence theory (Pfeffer & Salancik, 1978), which implies that more women on boards benefit from broader viewpoints, expertise, and networks. A gender diverse board may make different strategic decisions than an all-male board due to the variety of opinions. This statement is in line with the research by Badru, Ahmad-Zaluki and Wan-Hussin (2018), implying that the participation of women on boards has an essential influence in board involvement in a company's strategic decisions at the time of the IPO. Similarly, the studies conducted by Khidmat, Khan, and Ullah (2020), Mohsni and Shata (2021), and Simionescu et al. (2021) examined that according to resource dependence theory, increasing board diversity improves performance. Based on these theoretical arguments, the question of whether women on board of directors improves company performance becomes clear.

Hypothesis Development

Several studies have shown that a large board is associated with high corporate leverage. According to Usman et al. (2019), a large board of directors is associated with high borrowing costs; therefore, the costs

of inefficient communication associated with larger boards exceed their benefits. Alabdullah et al. (2018) examined the relationship between board size and capital leverage among 100 non-financial firms in Jordan. The conclusion is that the size of the board of directors has a strong negative impact on capital leverage. Thus, the presence of a tiny board of directors leads to higher financial leverage. However, Liao, Lin, and Zhang (2018) found that board size, defined as the number of board members, generally has a significant positive relationship with financial performance. Based on this research, the following research hypothesis was developed:

H1: There is a positive relationship between the board size and firm's leverage level.

The board of directors plays a key role in safeguarding shareholders' interests and ensuring that internal management runs smoothly. Numerous studies have discovered a positive relationship between corporate leverage and the board of directors (Purag et al., 2016; Tarus & Ayabei, 2016; Alabdullah et al., 2018). Boateng, Cai, Borgia, Gang Bi and Ngwu (2017) stated that the board independence rises as a company's long-term debt surges especially in an emerging nation scenario where corporate governance appears to be lacking. Companies with independent boards of directors, according to Usman et al. (2019), pay less for debt financing. The negative link between independent boards and debt, according to Tarus and Ayabei (2016), is most likely owing to worries over their reputation as competent and independent decision makers. As a result, a lower debt level was established in order to avoid the expenses of bankruptcy. We hypothesised that the following relationship exists between independent nonexecutive directors and corporate leverage in this study:

H2: There is a positive relationship between the percentage of independent non-executive directors and firm's leverage level.

Naciti (2019) studied if the structure of a company's board of directors has an impact on its long-term sustainability performance. It discovered that organisations with a more diverse board of directors and a separation of the chair and CEO positions perform better in terms of sustainability. As a result, having a larger number of independent directors has a negative impact on sustainability. According to Usman et al. (2019), organisations with CEOs who are also board chairmen have reduced borrowing costs. Separating the positions of CEO and chairman of the board has a considerable favourable influence on corporate performance, according to Azeez (2015). When a CEO has too much power, whether formal or informal, he or she is more inclined to pursue personal interests, which hurts the company's success. Moreover, Alves and Francisco (2015) evidenced that external financing increases when there are a larger proportion of board independency. As a result, professional lenders will not invest in such companies because they are concerned about the risks of CEO duality (Zaid et al., 2019). Therefore, the following research hypothesis was developed:

H3: There is a positive relationship between the separation of roles of CEO and chairman and firm's leverage level.

The inclusion of female board members mitigates opportunistic management behaviour and information asymmetry, which in turn influences lenders' assessments of the borrower's capacity to repay loans with interest (Usman et al., 2019). Reguera-Alvarado, de Fuentes, and Laffarga (2017) looked at data from the Madrid Stock Exchange from 2005 to 2009. They indicated that required law offers an appropriate foundation for implementing the recommendations of the Spanish Codes of Good Governance by encouraging women's representation on company boards as a result of this favourable judgement (Reguera-Alvarado et al., 2017). The importance of women's participation on the board that is essential to

achieve good corporate governance (Lincoln & Adedoyin, 2012; Al-Jaifi, 2020). Therefore, the impact of board characteristics such as board size, board independence, and CEO duality on the firm's capital structure would be greater if the board consisted of an equal number of female and male directors, implying an equal distribution. (Zaid et al., 2020). Thus, the following research hypothesis was developed:

H4a: Increased women on board of director will strengthen the positive relationship between the board size and firm's leverage level.
H4b: Increased women on board will strengthen the positive relationship between the board independence and firm's leverage level.
H4c: Women on board's moderating effect on CEO duality has a positive impact on the firm's leverage level.

METHODOLOGY

Data and Sample

Secondary data is primarily used in the analysis of this research, which is obtained from the firm's annual reports. According to Bursa Malaysia, this research includes 936 publicly traded companies in Malaysia. Data on study variables are gathered from the annual reports of 33 energy companies listed on the Bursa Malaysia over a five-year period (2015-2019). To justify, energy firm is used as the research sample because energy firm is male dominant. Christine Lins, Executive Director of GWNET, the Global Women's Network for Energy Transition, agrees with this statement. She stated that it is a well-known fact that the energy sector is still dominated by men (Green Industry Platform, 2019). Gender inequality can be found in both developed and emerging and developing countries. As a consequence, this research aims further into moderating effect of women on boards of directors on the relationship between corporate governance and capital structure in the energy industry. Hence, this sample selected in Malaysia is active companies have data ranging from 2015 to 2019 to be one of the requirements. The company must have continuous data for five fiscal years. However, nine of the energy companies' data is unavailable, therefore they were removed from the sample. The total number of firms in the final sample is 24.

The independent variable in this study is corporate governance, which includes board size, board independence, and CEO duality, as well as the moderating role of women on boards of directors, which has an impact on firm's capital structure as the dependent variable. The capital structure is evaluated using leverage ratio. On the other hand, multiple influencing factors, such as firm size, firm age, growth, and profitability, are taken into account.

Research Methods

The multiple regression analysis on panel data is used in this study to test the developed hypothesis. Model 1 and Model 2 are the two regression models. Model 1 is used to investigate the direct relationship between corporate governance and women on the board of directors and capital structure. Meanwhile, Model 2 is being utilized to explore the moderating influence of female directors on the relationship between corporate governance and capital structure in the energy business. The two models are shown below:

Model 1:

$$LEV_{i,t} = \propto + \beta_1 BSIZE_{it} + \beta_2 BIND_{it} + \beta_3 DUAL_{it} + \beta_4 WBOD_{it} + \beta_5 FSIZE_{it} + \beta_6 FAGE_{it} + \beta_7 ROA_{it} + \beta_8 GRO_{it} + \varepsilon_{it}$$

Model 2a:

$LEV_{i,t} = \propto + \beta_1 BSIZE_{it} + \beta_2 WBOD_{it} + \beta_3 WBOD\ X\ BSIZE + \beta_4 FSIZE_{it} + \beta_5 FAGE_{it} + \beta_6 ROA_{it} + \beta_7 GRO_{it} + \varepsilon_{it}$

Model 2b:

$LEV_{it} = \propto + \beta_1 BIND_{it} + \beta_2 WBOD_{it} + \beta_3 WBOD\ X\ BIND + \beta_4 FSIZE_{it} + \beta_5 FAGE_{it} + \beta_6 ROA_{it} + \beta_7 GRO_{it} + \varepsilon_{it}$

Model 2c:

$LEV_{it} = \propto + \beta_1 DUAL_{it} + \beta_2 WBOD_{it} + \beta_3 WBOD\ X\ DUAL + \beta_4 FSIZE_{it} + \beta_5 FAGE_{it} + \beta_6 ROA_{it} + \beta_7 GRO_{it} + \varepsilon_{it}$

Furthermore, this research uses descriptive analysis, Pearson correlation coefficient, pooled OLS, fixed effects (FE) and random effect (RE) models, several diagnostic tests in the section of empirical findings and discussion. In addition, the one-step generalized method of moments system (GMM) is used.

Variables Descriptions and Measurements

Table 1: Measurements of variables

Variables	Acronym	Measurement
Dependent variable:		
Leverage	LEV	The ratio of total debt to total assets.
Independent variables:		
Board size	BSIZE	The total number of board directors.
Board independence	BIND	The proportion of independent directors to the total number of board members.
CEO duality	DUAL	If the board chairman is also the CEO, the dummy variable is set to 1; otherwise, it is set to 0.
Moderator variable:		
Women on BOD	WBOD	The ratio of female directors on the board of directors.
Control variables:		
Firm size	FSIZE	The natural logarithm of total assets.
Firm age	FAGE	The number of years since the company was listed.
Profitability	ROA	The proportion of net income to total assets.
Growth	GRO	Change in net sales.

EMPIRICAL FINDINGS AND DISCUSSION

Descriptive Analysis

Table 2: Descriptive statistics

Variables	Mean	Std. Dev.	Min	Max
LEV	0.52532	0.19945	0.07132	1.41119
BSIZE	7.64167	1.59725	4.00000	12.00000
BIND	0.51792	0.11429	0.14286	1.00000
DUAL	0.06667	0.25049	0	1.00000
WBOD	0.18345	0.11199	0	0.42857
FSIZE (RM million)	4256.59398	7292.10312	172	37449.26100
FAGE	15.00000	13.32843	2.00000	58.00000
ROA	-0.04127	0.15052	-0.63203	0.25459
GRO	0.49587	2.90035	-0.85019	21.26538

The final sample includes 24 publicly traded energy companies over a period of 5 years (2015-2019) with a total of 120 observations. According to Table 2, the mean value of LEV is 0.5253 and the standard

deviation is 0.1995. This means that debt financing accounts for 52.53 % of the capital structure of sampled energy firms. In this study, four control variables are used which are FSIZE, FAGE, ROA, and GRO. The mean FSIZE measured in total assets is RM 4257 million, with a standard deviation of RM 7292 million. FAGE has a mean age of 15 and a standard deviation of 13.3284 years. Meanwhile, the ROA has a mean value of -4.127% and a standard deviation of 15.052% respectively. The mean of GRO is 0.4959, while the standard deviation is 2.9004.

There are four explanatory variables, one of which is a moderated variable called WBOD. The mean value of BSIZE is 7.6417, with a standard deviation of 1.5973. The average level of BIND is 51.79 %, meaning that nearly half of the board of directors in the sample are independent non-executive directors. Furthermore, the mean and standard deviation of DUAL are 0.0667 and 0.2505, respectively, implying that 6.67 % board's chairman are CEOs on average. Finally, WBOD has a mean value of 0.1835, indicating that on average, 18.35 % of the studied energy firms' boards' members are female directors.

Correlation Analysis

Table 3: Pearson correlation matrix of variables

Variables	VIF	LEV	BSIZE	BIND	DUAL	WBOD	FSIZE	FAGE	ROA	GRO
LEV		1.000								
BSIZE	1.21	-0.093	1.000							
BIND	1.10	0.258 ***	-0.135	1.000						
DUAL	1.12	-0.155 *	0.060	-0.106	1.000					
WBOD	1.26	-0.290 ***	0.131	0.104	0.220 **	1.000				
FSIZE	1.36	0.166 *	0.363 ***	-0.184 **	-0.027	0.256 ***	1.000			
FAGE	1.18	0.046	0.015	0.014	0.081	0.284 ***	0.131	1.000		
ROA	1.32	-0.103	0.188 **	-0.131	0.182 **	0.181 **	0.267 ***	0.298 ***	1.000	
GRO	1.15	0.158 *	-0.181 **	-0.035	-0.027	-0.134	-0.184 **	-0.047	0.166 *	1.000
Notes	* Denotes significance at 10% level ** Denotes significance at 5% level *** Denotes significance at 1% level									

In this study, leverage (LEV) is employed as a measurement to assess the capital structure of Malaysian energy companies. Based on the findings in Table 3, LEV has a positive correlation with BIND at the 1% significance level. LEV, on the other hand, is adversely correlated with DUAL and WBOD at 10% and 1% significance levels, respectively. However, there is no connection between LEV and BSIZE. In terms of control factors, LEV is positively and significantly correlated with FSIZE and GRO at the 10% significance level. Meanwhile, LEV has an insignificant correlation with FAGE and ROA.

Besides, the Variance Inflation Factors (VIF) is used to test the hypothesis that there is no multicollinearity among the explanatory variables. According to Gujarati (2009), if VIF is larger than 10, there is likely substantial collinearity. It should be highlighted that the "interaction term" has the potential to produce a high correlation and a high value of VIF greater than 10. Hence, anchoring variables at their means before

estimating an association helps to lessen and prevent multicollinearity (Zaid et al., 2020). As shown in Table 3, the VIF value varies from 1.10 to 1.36, indicating that there is no multicollinearity problem.

Regression Analysis

In order to determine the suitable model of static panel data, numerous diagnostic tests are performed before starting regression, as indicated in Table 4. To begin, the Hausman test was used to determine whether fixed or random effects should be used in both models. Based on the results, the Hausman test has an insignificant probability in all models, implying that the random effect mode is the best model. Next, to choose between a random effects model and a pooled OLS, the Breusch–Pagan Lagrangian multiplier (LM) test for random effects was used. All models have significant p-values for the LM test. Hence, the RE model's outcomes were considered in the following discussion. Furthermore, the Wooldridge Serial Correlation test is used to do the autocorrelation test. According to Table 4, the outcomes in all models have a significant probability, implying that all models have a serial correlation. Standard errors should be robusted to control the autocorrelation problem and to deal with the other potential issues such as heteroscedasticity. The findings of panel regression models' analysis employing the RE model with robust standard errors are presented in Table 4.

Table 4: Regression analysis using the RE models

Variables	Direct Relationship		Indirect Relationship					
	Model 1		Model 2a		Model 2b		Model 2c	
	Coefficients	Robust Std. Errors	Coefficients	Robust Std. Errors	Coefficients	Robust Std. Errors	Coefficients	Robust Std. Errors
Dependent variable	LEV							
Independent variables:								
BSIZE	- 0.0315**	0.0142	- 0.0391	0.0258				
BIND	0.4706**	0.2063			0.6083*	0.3415		
DUAL	0.0500***	0.0165					0.0455	0.0691
WBOD	- 0.5717***	0.1959	- 0.8312	0.8765	0.2040	0.7626	- 0.5590**	0.2689
Moderated variables:								
WBOD x BSIZE			0.0370	0.0969				
WBOD x BIND					- 1.4216	1.4274		
WBOD x DUAL							- 0.0700	0.3509
Control variables:								
FSIZE	0.0351	0.0363	0.0181	0.0406	0.0266	0.0310	0.0053	0.0461
FAGE	0.0030*	0.0018	0.0032*	0.0017	0.0034**	0.0017	0.0038*	0.0020
ROA	- 0.1796**	0.0794	- 0.1798**	0.0882	- 0.2302**	0.0944	- 0.2353**	0.1113
GRO	0.0125	0.0093	0.0106	0.0087	0.0135	0.0094	0.0116	0.0085
Constant	0.0570	0.4983	0.6006	0.6821	- 0.1420	0.4618	0.4773	0.6839
Observations	120		120		120		120	
F-statistics (p-value)	36.42 (0.000)		11.47 (0.119)		25.70 (0.001)		87.84 (0.000)	
R-squared	0.2526		0.1436		0.3076		0.1351	
Hausman test (p-value)	15.07 (0.058)		12.85 (0.076)		2.94 (0.891)		12.82 (0.077)	
Breusch Pagan LM test (p-value)	56.35 (0.000)		69.28 (0.000)		48.79 (0.000)		63.97 (0.000)	
Wooldridge Serial Correlation test (p-value)	60.81 (0.000)		70.99 (0.000)		52.92 (0.000)		73.96 (0.000)	
Notes	* Denotes significance at 10% level ** Denotes significance at 5% level *** Denotes significance at 1% level							

In line with the hypotheses developed, BSIZE, BIND, CEO DUAL are taken as independent variables whereas WBOD as moderator. Model 1 is used to investigate the direct relationship between explanatory variables and the dependent variable. In model 1, the results show a significant negative relation between BSIZE and LEV, which significant to 5% level of significance. This finding is consistent with the results of Alabdullah et al. (2018), who mentioned that the size of the board of directors has a strong negative impact on capital leverage. However, this result is stated to contradict the findings of Zaid et al. (2020), which suggest that a larger board size results in a higher amount of debt.

Next, BIND and LEV show a significance relationship at 5% level of significance. This denotes a positive and significant relationship between board independence and corporate leverage level. This is inconsistent with the results of studies conducted by Tarus and Ayabei (2016) that pointed out the negative link between independent boards and debt. Meanwhile, this result is conforming to the studies of Boateng et al. (2017) that shows the positive relationship between board independence and leverage. Their study stated that the board independence rises as a company's long-term debt surges especially in an emerging nation scenario where corporate governance appears to be lacking.

Additionally, the result imposes a significant positive association between DUAL and LEV which significance to all level of significance. This denotes a positive and significant relationship between CEO duality and corporate leverage level. The result is inconsistent with the hypothesis that developed earlier, which is there is a negative relationship between CEO duality and corporate leverage level. This finding is inconsistent with the studies of other researchers such as Azeez (2015) and (Zaid et al., 2020) which argued that separating the positions of CEO and chairman of the board has a considerable favourable influence on corporate performance and when a CEO has too much power, whether formal or informal, he or she is more inclined to pursue personal interests, which hurts the company's success. As a result, professional lenders will not invest in such companies because they are concerned about the risks of CEO duality. As a result, their mentioned that there is a negative relationship between the CEO duality and corporate leverage level.

Moreover, there is a significance negative relationship between WBOD and LEV at 1% level of significance. In order to test the hypotheses H4a to H4c, this study has run the regression analysis using WBOD as a moderator in Model 2. WBOD has individual influence with leverage level, however the result shows that there is no relationship when the moderating effect of WBOD on three measures of corporate governance such as board size, board independence and CEO Duality. There is no relationship because the p-value is not statistically significant at any level of significance which is inconsistent with the studies of Lincoln & Adedoyin (2012), Al-Jaifi (2020) and Zaid et al. (2019). Their studies highlighted that the importance of women's participation on the board is essential to achieve good corporate governance. Another reason influences the results of moderating effect of WBOD on the three corporate governance indicators is that women board of directors 's voice might be lower as the percentage of female directors in the sampled energy firms is relatively low.

In terms of control variable, the result shows that FSIZE has no relationship on the LEV. Next, the result reveals that the FAGE contributes significantly positively to the LEV at 10% significance level. This finding could be related to the fact that older and more established firms require more debt to continue operating. Meanwhile, another control variable, ROA is statistically significance negative to LEV at 5% level of significance. Lastly, the results stated that there is no relationship between the GRO and LEV.

Table 5: Robustness check using GMM system

Variables	Direct Relationship		Indirect Relationship					
	Model 1		Model 2a		Model 2b		Model 2c	
	Coefficients	Robust Std. Errors	Coefficients	Robust Std. Errors	Coefficients	Robust Std. Errors	Coefficients	Robust Std. Errors
Dependent variable	LEV							
Independent variables:								
LEV (t-1)	0.9988***	0.1430	1.0547***	0.1524	1.0384***	0.1006	1.0394***	0.0959
BSIZE	- 0.0231**	0.0091	- 0.0429***	0.0135				
BIND	0.0712	0.1106			0.1891	0.1770		
DUAL	0.0774***	0.0240					0.0345	0.0318
WBOD	- 0.2689**	0.1192	- 0.9339**	0.3970	0.2676	0.4423	- 0.2711**	0.1075
Moderated variables:								
WBOD x BSIZE			0.0974*	0.0506				
WBOD x BIND					- 0.9692	0.8697		
WBOD x DUAL							0.1608	0.1212
Control variables:								
FSIZE	0.0215**	0.0107	0.0172	0.0105	0.0102	0.0089	0.0098	0.0086
FAGE	0.0008	0.0009	0.0007	0.0008	0.0009	0.0007	0.0009	0.0007
ROA	- 0.4070***	0.1120	- 0.4001***	0.1111	- 0.4239***	0.1076	- 0.4487***	0.1182
GRO	0.0050	0.0034	0.0044	0.0037	0.0054	0.0041	0.0052	0.0047
Constant	- 0.1494	0.1285	0.0601	0.1346	- 0.2451*	0.1486	- 0.1428	0.1302
Observations	96		96		96		96	
F-statistics (p-value)	8470.5 (0.00)		5594.0 (0.00)		9449.7 (0.00)		5940.1 (0.00)	
Arellano–Bond test for AR (2) (p-value)	1.19 (0.233)		1.52 (0.129)		1.03 (0.305)		1.06 (0.290)	
Hansen test of over id. (p-value)	0.46 (0.928)		0.67 (0.879)		1.34 (0.720)		1.78 (0.620)	
Difference-in-Hansen test (p-value)	0.18 (0.913)		0.04 (0.980)		0.54 (0.762)		0.59 (0.746)	
Notes	1. Model 1: $LEV_{it} = \propto + \beta_1 LEV\ (t\text{-}1) + \beta_2 BSIZE_{it} + \beta_3 BIND_{it} + \beta_4 DUAL_{it} + \beta_5 WBOD_{it} + \beta_6 FSIZE_{it} + \beta_7 FAGE_{it} + \beta_8 ROA_{it} + \beta_9 GRO_{it} + \varepsilon_{it}$ Model 2a: $LEV_{i,t} = \propto + \beta_1 LEV\ (t\text{-}1) + \beta_2 BSIZE_{it} + \beta_3 WBOD_{it} + \beta_4 WBOD\ X\ BSIZE + \beta_5 FSIZE_{it} + \beta_6 FAGE_{it} + \beta_7 ROA_{it} + \beta_8 GRO_{it} + \varepsilon_{it}$ Model 2b: $LEV_{i,t} = \propto + \beta_1 LEV\ (t\text{-}1) + \beta_2 BIND_{it} + \beta_3 WBOD_{it} + \beta_4 WBOD\ X\ BIND + \beta_5 FSIZE_{it} + \beta_6 FAGE_{it} + \beta_7 ROA_{it} + \beta_8 GRO_{it} + \varepsilon_{it}$ Model 2c: $LEV_{i,t} = \propto + \beta_1 LEV\ (t\text{-}1) + \beta_2 DUAL_{it} + \beta_3 WBOD_{it} + \beta_4 WBOD\ X\ DUAL + \beta_5 FSIZE_{it} + \beta_6 FAGE_{it} + \beta_7 ROA_{it} + \beta_8 GRO_{it} + \varepsilon_{it}$ 2. The autocorrelation was tested using the Arellano–Bond test in the first-differenced residuals. 3. The validity of the entire instrument set was tested using the Hansen test of over-identification.								

	4. The difference-in-Hansen test was used to assess the validity of a subset of instruments 5. * Denotes significance at 10% level ** Denotes significance at 5% level *** Denotes significance at 1% level

Robustness Checking

To assess the robustness of the results, the one-step generalised method of moments (GMM) is applied to all models. Zaid et al. (2020) stated that for small sample sizes, one-step GMM is preferable to two-step GMM. As a result, as shown in the notes in Table 5, a lagged value of the dependent variable LEV (t-1) is included as an explanatory variable in all models. Table 5 presents the results of employing one-step GMM to examine the effect of corporate governance on capital structure as well as the moderating effect of women on boards of directors on the aforementioned connection.

The findings differ from the prior results after correcting for endogeneity issues. The results reveal that there is no association between BIND and LEV, in contrast to the prior results, which show a positive and significant relationship between them. This outcome differs significantly from the majority of earlier studies since independent directors were thought to boost lenders' confidence and increase the firm's leverage. The result, however, shows that the boards independence has no bearing on the total debt of energy corporations in Malaysia. Meanwhile, even after the endogeneity issue has been addressed, the findings on the relationships between the other independent variables, such as BSIZE, DUAL, and WBOD, are agreement with the findings in Table 4.

In terms of the moderated variables, only the interaction between BSIZE and LEV, which changes from the previous result's absence of a relationship, is moderated by WBOD. Based on Table 5, the findings showed that, at a 10% level of significance, WBOD had a favourable and significant impact on the interaction between BSIZE and LEV. This result is in line with researches by Reguera-Alvarado et al. (2017) and Lincoln and Adedoyin (2012), who suggested that the effect of board size on the firm's debt level will be more favourable as the share of female directors increases. Nevertheless, WBOD still has no moderating influence on the link between the BIND, DUAL, and LEV even after the endogeneity issue has been addressed.

Moving on to the control variables, only ROA has a substantial and negative effect on LEV in all models, which is comparable to previous results in Table 4. This finding is similar to the findings of Zaid et al. (2020), who found that profitable firms inclined to loan less as they have sufficient funds for their operations. Furthermore, in Model 1, FSIZE has a strong positive connection with LEV, whereas the other control variables do not.

CONCLUSION AND RECOMMENDATIONS

Generally, this study aims to investigate the moderating roles of women on board of directors in strengthening the positive relationship of corporate governance and leverage level within 24 listed energy sectors in Malaysia. This study is aligned with the theories related within the context of women representation on boardroom, board characteristics and financing decision. In essence, Malaysia's listed energy companies shows that increased in women on board of director strengthen the relationship of board size and firm's leverage (H4a) as the results indicated that H4a reject null hypothesis while H1, H2, H3, H4b and H4c do not reject null hypothesis. Accordingly, it is evidenced that board size of Malaysian's listed energy companies has a negative relationship with the firm's leverage level (H1). Meanwhile, there is no direct relationship of board independence on the leverage level (H2). In contrast, there is CEO duality is negatively related to the decision on firm's leverage level where the presence of CEO duality will lead to an increase in the firm's leverage level (H3). On the other hand, the moderating women on board of

directors has no weight on the relationship on both board independence and CEO duality towards the firm's leverage level (H4b & H4c). Hence, the overall result shows that only one hypothesis is significantly positive.

We concede that the study has a few drawbacks that leave room for future research despite the effort in for this study to provide a comprehensive view of the moderating role of women representation on director's board on the relationship between corporate governance mechanisms and strategic financing decisions of the firms. The main limitation is this study comprises of a small sample of 24 energy listed companies. A larger sample will represent a more holistic view on the moderating role of the study. Therefore, endogeneity issues exist in this study and GMM one step is used to control the issue with robust standard errors. Another drawback that is recognized in this study is it focuses on only one sector which is energy sector. In the study, we found that energy sector is still male dominated sector where they are lesser women representation within the boardroom. As discovered from the previous study, Malaysia only has about 23% of female members in the boardroom and top management positions in energy firms, falling short of the MCCG 2021 requirement of at least 30% women on boards of directors (Cottle, 2019).

Taking into consideration of the findings, we have gathered theoretical and practical implications for the on the literature on the moderating role in the relationship of corporate governance and financing decision. Firstly, our research implies that managers should exercise caution when choosing the best capital structure for the company and avoid acting in a way that increases risk. Furthermore, lenders place an important role on corporate governance dimensions and related policies. As a result, businesses may need to expand the size of their boards to access more debt. A board with a relatively larger membership increasing the amount of pressure on executive management to pursue a high debt policy and, as a result, increase the value of the firm through a strict and efficient monitoring mechanism. In the legal context, the expansion of the board should coincide with the addition of more independent board members. The monitoring process will most likely improve as a result of this strategy, and businesses will be better able to attract resources. The concerns about modernising good governance practices across the world should also be given more consideration by governing agencies, lawmakers, and practitioners. Hence it is important to review the corporate governance laws in order to keep up with the rapid changes in the choppy business climate of today. Such laws as those that prohibit gender bias and require quotas for women in boardrooms are examples of mandated by law legislation. On top of that, it's critical to use persuasion to increase the representation of women in executive positions abiding to the MCCG of having at least 30% of women in the board of directors.

Theoretically, the study should include a larger sample on various sectors, not only restricting the study on investigating the male dominated sectors of energy in Malaysia. The research may result in significant findings on the variables by selecting the sample of top 100 listed company that emphasizes on the corporate governance mechanisms, maintaining the reputation of companies. With that, the study may imply a strategic financing decision with good governance practices including the views of a more diverse director's backgrounds.

Conclusively, future research on this study is encouraged in the context of developing countries to build on the findings of this study. In order to gain deeper insights, other corporate governance factors can be utilized in investigating the affect capital structure. Theoretically, the study can be improved by exploring other significant interaction variables, such as the moderating effect of a female CEO on the strategic firm financing decision, capital structure. In addition, external financing factor with more multiple rations can also be used to determine the capital structure of the firm.

REFERENCES

Adjaoud, F., & Ben-Amar, W. (2010). Corporate governance and dividend policy: shareholders' protection or expropriation? *Journal of Business Finance & Accounting, 37*(5-6), 648-667.

Al-Jaifi, H. A. (2020). Board gender diversity and environmental, social and corporate governance performance: evidence from ASEAN banks. *Asia-Pacific Journal of Business Administration, 12*(3–4), 269-281.

Alabdullah, T. T. Y., Laadjal, A., Ries, E., & Al-Asadi, Y. A. A. (2018). Board features and capital structure in emerging markets. *Journal of Advanced Management Science, 6*(2), 74-80.

Alves, P., Couto, E. B., & Francisco, P. M. (2015). Board of directors' composition and capital structure. *Research in International Business and Finance, 35*, 1-32.

Azeez, A. A. (2015). Corporate governance and firm performance: evidence from Sri Lanka. *Journal of Finance, 3*(1), 180-189.

Badru, B. O., Ahmad-Zaluki, N. A., & Wan-Hussin, W. N. (2018). Women on corporate boards and allocation of capital raised through IPOs. *Management Decision*.

Balagobei, S. (2018). Corporate Governance and Firm Performance: Empirical Evidence from Emerging Market. *Asian Economic and Financial Review, 8*(12), 1415–1421.

Berger, P. G., Ofek, E., & Yermack, D. L. (1997). Managerial Entrenchment and Capital Structure Decisions. *The Journal of Finance, 52*(4), 1411–1438.

Berger, A. N., & Di Patti, E. B. (2006). Capital structure and firm performance: A new approach to testing agency theory and an application to the banking industry. *Journal of Banking & Finance, 30*(4), 1065-1102.

Boateng, A., Cai, H., Borgia, D., Gang Bi, X., & Ngwu, F. N. (2017). The influence of internal corporate governance mechanisms on capital structure decisions of Chinese listed firms. *Review of Accounting and Finance, 16*(4), 444–461.

Bonn, I. (2004). Board structure and firm performance: Evidence from Australia. *Journal of Management & Organization, 10*(1), 14-24.

Bradley, M., & Chen, D. (2011). Corporate governance and the cost of debt: Evidence from director limited liability and indemnification provisions. *Journal of Corporate Finance, 17*(1), 83-107.

Brush, T. H., Bromiley, P., & Hendrickx, M. (2000). The free cash flow hypothesis for sales growth and firm performance. *Strategic management journal, 21*(4), 455-472.

Chirinko, R. S., & Singha, A. R. (2000). Testing static tradeoff against pecking order models of capital structure: a critical comment. *Journal of Financial Economics, 58*(3), 417–25.

Chow, Y. P., Muhammad, J., Bany-Ariffin, A. N., & Cheng, F. F. (2018). Macroeconomic uncertainty, corporate governance and corporate capital structure. *International Journal of Managerial Finance, 14*(3), 301–321.

Coleman, M., & Wu, M. (2020). Corporate governance mechanisms and corporate performance of firms in Nigeria and Ghana. *International Journal of Productivity and Performance Management*.

Cottle, S. (2019, September 18). Gender parity a work in progress in energy sector. *New Straits Times.* Retrieved from https://www.nst.com.my/opinion/columnists/2019/09/522447/gender-parity-work-progress-energy-sector

Elmagrhi, M. H., Ntim, C. G., Malagila, J., Fosu, S., & Tunyi, A. A. (2018). Trustee board diversity, governance mechanisms, capital structure and performance in UK charities. *Corporate Governance: The international journal of business in society, 18*(3).

Energy Watch. (2021). *Energy sector, playing a crucial role in the midst of a pandemic.* Retrieved from https://www.energywatch.com.my/blog/2021/04/23/energy-sector-playing-a-crucial-role-in-the-midst-of-a-pandemic/

Fama, E. F., & French, K. R. (2002). Testing trade-off and pecking order predictions about dividends and debt. *The review of financial studies, 15*(1), 1-33.

Fauzan, Rahman, A. B. A., & Ibrahim, M. B. (2020). Effect of corporate governance and capital structure on corporate performance in malaysian listed companies: A conceptual approach. *Sustainable Business and Society in Emerging Economies, 2*(1), 37-46.

Feng, Y., Hassan, A., & Elamer, A. A. (2020). Corporate governance, ownership structure and capital structure: evidence from Chinese real estate listed companies. *International Journal of Accounting & Information Management*.

Gallego-Álvarez, I., García-Sánchez, I. M., & Rodríguez-Dominguez, L. (2010). The influence of gender diversity on corporate performance: La influencia de la diversidad de género en el rendimiento empresarial. *Revista de Contabilidad-Spanish Accounting Review, 13*(1), 53-88.

Ghazali, N. A. M. (2010). Ownership structure, corporate governance and corporate performance in Malaysia. *International Journal of Commerce and Management, 20*(2), 109 – 119.

Grabinska, B., Kedzior, M., Kedzior, D., & Grabinski, K. (2021). The impact of corporate governance on the capital structure of companies from the energy industry. *The Case of Poland. Energies, 14*(21), 7412.

Green Industry Platform. (2019). The role of gender in the energy sector. *GWNET*. Retrieved from https://www.globalwomennet.org/the-role-of-gender-in-the-energy-sector/#:~:text=It%20is%20a%20well%2Dknown,and%20emerging%20and%20developing%20countries

Gujarati, D. N. (2009). Basic econometrics Tata McGraw-Hill Education.

Hamzah, H. H., & Marimuthu, M. (2019). An Overview: Oil and Gas Capital Structure. *International Journal of Academic Research in Accounting, Finance and Management Sciences, 9*(4), 330-334.

Haniffa, R., & Hudaib, M. (2006). Corporate governance structure and performance of malaysian listed companies. *Journal of Business Finance Accounting, 33*(7-8), 1034–1062.

Harbula, P. (2001). The free cash-flow theory versus financial constraints, investments, corporate governance and soft budgeting problems. *Acta Oeconomica, 51*(4), 489–512.

Harris, C. K. (2014). Women directors on public company boards: does a critical mass affect leverage?

Holder, M. E., Langrehr, F. W., & Hexter, J. L. (1998). Dividend policy determinants: An investigation of the influences of stakeholder theory. *Financial management, 27*(3), 73-82.

Hossain, M., Prevost, A. K., & Rao, R. P. (2001). Corporate governance in New Zealand: The effect of the 1993 Companies Act on the relation between board composition and firm performance. *Pacific-Basin Finance Journal, 9*(2), 119-145.

Jensen, M. C. (1986). Agency costs of free cash flow, corporate finance, and takeovers. *The American economic review, 76*(2), 323-329.

Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of financial economics, 3*(4), 305-360.

Jiraporn, P., & Gleason, K. C. (2007). Capital structure, shareholder rights, and corporate governance. *Journal of Financial Research, 30*(1), 21-33.

Kester, W. C. (1986). Capital and ownership structure: A comparison of United States and Japanese manufacturing corporations. *Financial management, 15*(1), 5-16.

Khatib, S. F. A., Abdullah, D. F., Hendrawaty, E., & Yahaya, I. S. (2020). Corporate governance mechanisms and capital structure. *International Journal of Advanced Science and Technology, 29*(10S), 993-1003.

Khidmat, W. B., Khan, M. A., & Ullah, H. (2020). The effect of board diversity on firm performance: Evidence from Chinese l listed companies. *Indian Journal of Corporate Governance, 13*(1), 9-33.

Kraus, A., & Litzenberger, R. H. (1973). A state-preference model of optimal financial leverage. *The journal of finance, 28*(4), 911-922.

Liao, L., Lin, T. P., & Zhang, Y. (2018). Corporate Board and Corporate Social Responsibility Assurance: Evidence from China. *Journal of Business Ethics, 150*(1), 211–225.

Lim, E. N. K., Das, S. S., & Das, A. (2009). Diversification strategy, capital structure, and the Asian financial crisis (1997-1998): evidence from Singapore firms. *Strategic Management Journal, 30*(6), 577–594.

Lincoln, A., & Adedoyin, O. (2012). Corporate governance and gender diversity in Nigerian boardrooms. *World Academy of Science, Engineering and Technology, 6*(11), 3286–3292.

Md. Aris, N. B., Yusof, S. B. M., Xuan, K. Y., Zaidi, N. S. B., & Mohamed, A. S. B. (2021). Corporate Governance Practices and Capital Structure: Evidence from Malaysian Capital Market. *International Journal of Academic Research in Business and Social Sciences. 11*(14), 71-94.

Miller, E. M. (1977). Risk, uncertainty, and divergence of opinion. *The Journal of finance, 32*(4), 1151-1168.

Mitnick, B. M. (2006). Origin of the theory of agency: *An account of one of the theory originators.* University of Pittsburgh, Pittsburgh.

Mohsni, S., & Shata, A. (2021). Board gender diversity and firm performance: The role of firm size.

Myers, S. C., & Majluf, N. S. (1984). Corporate financing and investment decisions when firms have information that investors do not have. *Journal of financial economics, 13*(2), 187-221.

Naciti, V. (2019). Corporate governance and board of directors: The effect of a board composition on firm sustainability performance. *Journal of Cleaner Production, 237*, 117727.

Pfeffer, J., & Salancik, G. (1978). *The External Control of Organizations: A Resource Dependence Perspective.* Harper & Row, New York.

Purag, M. B., Abdullah, A. B., & Bujang, I. (2016). Corporate governance and capital structure of Malaysian family-owned companies. *Journal of Business and Retail Management Research, 11*(1), 18-30.

Reguera-Alvarado, N., de Fuentes, P., & Laffarga, J. (2017). Does board gender diversity influence financial performance? Evidence from Spain. *Journal of Business Ethics, 141*(2), 337-350.

Robinson, G., & Dechant, K. (1997). Building a business case for diversity. *Academy of Management Perspectives, 11*(3), 21-31.

Saleh, M. W., Latif, R. A., Bakar, F. A., & Maigoshi, Z. S. (2020). The impact of multiple directorships, board characteristics, and ownership on the performance of Palestinian listed companies. *International Journal of Accounting, Auditing and Performance Evaluation, 16*(1), 63-80.

Securities Commission Malaysia. (2021). *Malaysian code on corporate governance (as at 28 april 2021).* Retrieved from https://www.sc.com.my/api/documentms/download.ashx?id=239e5ea1-a258-4db8-a9e2-41c215bdb776

Shahari, Z. M., & Chia, S. (2021). Malaysia: Key updates: malaysian code of corporate governance 2021 (MCCG 2021). *Mondaq.* Retrieved from https://www.mondaq.com/corporate-governance/1092134/key-updates-malaysian-code-of-corporate-governance-2021-mccg-2021

Sherman, F. (2020). *The agency theory in financial management*. Retrieved from https://smallbusiness.chron.com/agency-theory-financial-management-81899.html

Shyam-Sunder, L., & Myers, S. C. (1999). Testing static trade off against pecking order models of capital structure. *Journal of financial economics, 51*(2), 219-244.

Simionescu, L. N., Gherghina, Ş. C., Tawil, H., & Sheikha, Z. (2021). Does board gender diversity affect firm performance? Empirical evidence from Standard & Poor's 500 Information Technology Sector. *Financial Innovation, 7*(1), 1-45.

Tarus, K. D., & Ayabei, E. (2016). Board composition and capital structure: Evidence from Kenya. *Management Research Review, 39*(9), 1056-1079.

Tong, G., & Green, C. J. (2005). Pecking order or trade-off hypothesis? Evidence on the capital structure of Chinese companies. *Applied Economics, 37*(19), 2179–2189.

Usman, M., Farooq, M. U., Zhang, J., Makki, M. A. M., & Khan, M. K. (2019). Female directors and the cost of debt: does gender diversity in the boardroom matter to lenders? *Managerial Auditing Journal, 34*(4), 374-392.

Wijethilake, C., & Ekanayake, A. (2020). CEO duality and firm performance: the moderating roles of CEO informal power and board involvements. *Social Responsibility Journal.*

Yang, P., Riepe, J., Moser, K., Pull, K., & Terjesen, S. (2019). Women directors, firm performance, and firm risk: A causal perspective. *The Leadership Quarterly, 30*(5), 101297.

Zabri, S. M., Yusoff, W. F. W., Ramin, A. K., & Ling, K. S. S. (2016). Corporate Governance Practices and Firm's Capital Structure. *International Business Management, 10*(17), 3973-3981.

Zaid, M. A. A., Wang, M., & Abuhijleh, S. T. F. (2019). The effect of corporate governance practices on corporate social responsibility disclosure: Evidence from Palestine. *Journal of Global Responsibility, 10*(2), 134-160.

Zaid, M. A., Wang, M., Abuhijleh, S. T., Issa, A., Saleh, M. W., & Ali, F. (2020). Corporate governance practices and capital structure decisions: the moderating effect of gender diversity. *Corporate Governance: The International Journal of Business in Society, 20*(5), 939-964.

Zimmer, L. (1988). Tokenism and women in the workplace: The limits of gender-neutral theory. *Social problems, 35*(1), 64-77.