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Women Energized: Pre- and Post-Quota of Women Directorship in The Malaysian Energy Industry

* Jannatul Ferdous
Universiti Tunku Abdul Rahman
Kampar, Perak Malaysia. Email: jannattushti2828@gmail.com

Nurul Afidah Mohamad Yusof
Assistant Professor, Department of Finance, Faculty of Business and Finance
Universiti Tunku Abdul Rahman
Kampar, Perak Malaysia. Email: afidahj@utar.edu.my

Zuriawati Binti Zakaria
Assistant Professor, Department of Finance, Faculty of Business and Finance
Universiti Tunku Abdul Rahman
Kampar, Perak Malaysia. Email: zuriawatiz@utar.edu.my

Abstract
Despite the upsurging number of women in the Malaysian workforce, their presence on the corporate board level is still not up to the mark. The Malaysian government has imposed a 30% women quota in the corporate sector which is in line with the Malaysian Code on Corporate Governance-2017. This paper outlined the trend of women directorship in the energy sector during the pre- and post-quota implementation, along with the impacts of women directorship on firm performance in Malaysia. The trend of women directorship was examined from the perspectives of percentage of women directors, quota achievement, Shannon index, and women director's qualification. Panel data model is used on a sample of 31 energy companies listed on Bursa Malaysia over the period 2013-2019 using random effect Generalised Least Square regression analysis to test the proposed hypothesis. Quota achievement, firm size and leverage were found to have significant impact on firm performance. The findings suggest that the imposition of 30% women quota has positively contributed to the firm performance in the Malaysian energy industry. Furthermore, this study also considers sustainable development goals to ensure gender equality by implementing quota

Key words: Board gender diversity, Women directorship, Quota, Glass-ceiling, Energy industry, Shannon index

* Corresponding author

Introduction

In the era of equity, competition and inclusion, diversity earns many concerns and critiques. Different demographic and cognitive attributes of diversity should be integrated to form a strategic alliance among corporations. Among the diversity-related issues, gender diversity is always regarded as the jewel in the crown.

Diversity in the boardroom has gotten a lot of attention lately, and it's causing a lot of tension. The debate about the board's gender composition is still going on, and it's basically about two things: economical and ethical (Campbell & Mnguez-Vera, 2008). When women are under-represented on boards solely owing to gender difficulties, ethical considerations are taken into account (Campbell & Mnguez-Vera, 2008). Gender diversity on corporate boards has been widely debated in policy studies and academic literature in order to promote adequate gender equality in the business sector at all levels.

Everyone is entitled to an equal opportunity to demonstrate their contribution and talent in their respective sector. In order to achieve good corporate governance and better performance, firms need a more balanced male and female board of directors who own the right aptitudes i.e., knowledge, skills, experience and professionalism. A balanced board is crucial for firms to make better decisions especially related to high-risk business ventures, innovation and growth. A board is deemed to be well balanced if its board members are from diverse backgrounds of gender, age, experience, ethnicity, et cetera.

When women remain to be under-represented on the corporate board merely because of gender bias, it raises some ethical concerns. The glass-ceiling phenomenon has often barred women from climbing the corporate ladder while the broken rung phenomenon discourages women to be promoted, hence causing women to refrain themselves from becoming successful at work (Forde, 2019). S&P Global Indices stated if the growth of women participation continues at the current rate, a 50-50 gender-balanced board will only be achieved in 2058 (Cottle, 2019).Women's quotas on corporate boards have gotten a lot of attention in the previous few decades. Implementing quotas can help to mitigate the negative effects of a male-dominated culture while also promoting gender diversity in the workplace. Implementing quotas is suggested in order to reduce the impact of a male-dominated culture and promote gender diversity in the workplace. This was also designed to address the enormous gender inequality in the business world.

The implications of quotas will throw light on government policy, demonstrating how this 30% quota on board would benefit not only women but the whole economy. This study will show that women are needed not just for director roles, but also for field and officer jobs in this industry. If women do not participate in this area, they will be unable to contribute to the future by demonstrating their aptitude, innovative leadership, and expertise. There is relatively little research on the impact of women's quotas on directorship in Malaysia from the implementation of MCCG 12 to MCCG 2021. This study will shed light on this sector and open up new avenues for research, particularly in the energy industry. Goal 5 of the Sustainable Development Goals (SDGs) calls for equitable and active engagement of women in leadership positions in all aspects of political, economic, intellectual, and public life. The purpose of this study is to achieve a gender-balanced board in the energy industry that enables broad involvement of women. Quota guarantees that female workers will no longer be denied the opportunity to occupy a chosen position because of their gender. This research will give useful information so that young women may enter the energy field with confidence and pave their own route to become industry leaders.

Malaysia is not an exception as a country that progresses towards women empowerment, especially when it comes to gender-balanced board. In 2004, Malaysian government declared there must be 30% women participation at the top level in the public sector. In 2011, the government called for 30% women leadership position in the corporate sector and extended its 30% mandatory women representation on the corporate board, which is to be achieved in 2020. This was further supported by the requirement in the latest Malaysian Code on Corporate Governance 2017 (MCCG 2017) which binds the listed firms under large companies' category to comprise at least 30% women directors. Practice 4.6 states that large companies must have 30% women directors on the corporate board, and half of the directors must be independent. In a nutshell, MCCG 2017 aims to improve board structure by enhancing the board independence and gender diversity.

Furthermore, the implementation of 30% women quota on board is stated strictly on MCCG-2021 and Malaysia is following the rules and regulations stated by MCCG-2021. In MCCG-2021, it is clearly written that all boards must have 30% women on board. Those boards who have still not achieved 30% women on board, they have to reveal the cause of it, possible action, and the estimated timeframe for achieving it.

Energy sector plays a crucial role in mapping the future growth in Malaysia. Malaysian energy sector is a combination of natural gas, fuel, petroleum, coal, biodiesel and electricity. The contribution of energy sector to the country's gross domestic product (GDP) is approximately 20% in which oil and gas industry makes up nearly 76% of the entire energy sector. Energy sector is selected in this paper for its known male-dominated environment. Only one-fifth of energy employees are female in which this raises a concern, indicating female participation in the energy sector workforce is low—the lowest in other industries (Cottle, 2019). This sector is also known as one of the male-centric industries not only in Malaysia, but also globally. The 'glass ceiling' and 'broken rung' phenomenon still prevail in the energy sector economy, throwing cold water on the women's corporate ladder.

Women's involvement in the energy sector is generally low and unsatisfactory, not just at entry and mid-level positions, but also at senior management and board-level positions across the world. Female involvement in the energy sector is at an all-time low, with the lowest percentages of any major industry (New Straits Times, September 2019). It's almost the same storey all across the world, where women make up a smaller percentage of board members in the energy business than in other industries. Furthermore, male equivalents in technology and energy firms have greater flexibility than female counterparts (New Straits Times, 2021). When women are competent for a sought job, it is assumed that they were promoted owing to bribes rather than their qualifications (New Straits Times, 2021). As a result, women confront challenges in climbing the corporate ladder in a male-dominated industry.

When quota comes into force, there are two problems that need to be addressed i.e., tokenism and visibility (Darmadi, 2012). Tokenism problem occurs when female directors assume themselves as token. They do not feel comfortable sharing their opinions in decision making for the corporation. Meanwhile, the visibility problem suggests that women directors are always being observed by their male counterparts (Darmadi, 2012). This continuous observation limits and shrinks the credibility and decision making of women directors. On another note, in order to comply with the government's 30% quota, it is concerned that firms might appoint women directors just as a box-ticking process rather than taking serious consideration on their respective qualification.

Only a few prior quantitative studies (Ahmad and Hamdan, 2019) have been conducted on the influence of female directorship on business performance, as well as the implications of Malaysia's quota legislation. Furthermore, according to the researcher's understanding, there is a paucity of research (Baharuddin and Marimuthu, 2019) on the variety of women CEOs in Malaysia's energy business. There is still a research gap that may be filled with an article.

In view of the above discussion, this paper examined the trend of women directorship in the Malaysian energy industry from 2013 to 2019 which covers the pre- and post-quota period. The trend was examined using the percentage of women directors, quota achievement, Shannon index, and qualification (business background and industry-related experience). In addition, it also examined the impact of women directorship on firm performance in the Malaysian energy industry.

Literature Review

Theoretical Development

A few different theories have been used in examining the role of board of directors i.e., agency theory, resource dependence theory, resource-based view theory, stakeholder theory and stewardship theory. In the context women directorship, this paper takes the approach from two theories i.e., agency theory (AT) and resource-dependency theory (RD) to provide support and justification of women directorship on the corporate board.

Agency theory was introduced by Ross (1973) and was later given a detailed overview by Jensen and Meckling (1976). It plays a crucial role in resolving the issues between agents and principals of a company. This theory is used to promote board's gender diversity and improve agency's problems by suggesting that good corporate governance can be achieved through greater board's gender diversity by enhancing board independence and monitoring system (Isidro & Sobral, 2014). This theory also asserts that women are considered as outsiders of the corporate board because they are not members of the "old boys' network", therefore they perform better at monitoring and supervising role than their male counterparts (Kirsch, 2018).

A homogeneous board has the same type of network connection as a heterogeneous board, and the same group maintains the same alliance (Halder, Shah & Rao, 2015). Furthermore, the diverse board is made up of people from various backgrounds, as well as a mix of men and women with varying levels of skill. More industry-related information is provided via a heterogeneous board with various network connections. Furthermore, gender diversity on the board can help to improve the monitoring mechanism and ensure board independence. Gender diversity on the board can help to reduce the homogenous board's dominance in decision-making (Mohamad, Bakar, Razzak & Badaruddin, 2017). There will be less information bias, less moral hazard, and less adverse selection when the company is closely monitored and supervised. As a result, the firm's responsibility and transparency will be assured, and the agency problem will gradually be reduced.

Next, Resource dependency theory explained by Pfeffer and Salancik in 1978. According to this notion, the board of directors links their company to external channels in order to solve environmental addictions. Board members should be chosen based on their experiences, abilities, expertise, and diverse backgrounds in order to achieve competitive advantages. Women are thought to have in-depth knowledge of the market situation. They can also help the organisation grow by coordinating customer service and diversity concerns (Campbell & Minguez- Vera, 2007). As firms possess unique attributes within their capacity and internal resources, this heterogeneity will lead firms to attain sustainable competitive advantages to foster the firm's growth (McWilliams & Siegel, 2010).

A homogeneous board is more likely lacking in creativity, risk mitigation and market insights while a heterogeneous board enhances firm's reputation and growth through creativity, productivity and better market insights (Ali et al., 2009). Moreover, Charbel Salloum et al. (2016) found women directors to be more enthusiastic and dynamic than their male counterparts. Gender diversity aids not only in the expansion of channels, communication, and attempts to link enterprises, but also in the maintenance of excellent relationships among business colleagues (Reguera –Alvarado et al., 2017). Women directors, according to this belief, have the power to increase resources and improve performance. Furthermore, by fostering gender equality on the board, women directors can boost the legitimacy and acceptance of the company (Isudro & Sobral, 2014).

Women directors bring to the board unique perspectives, expertise, and talents that are not shared by male directors (Terjesen et al. 2009). According to Tai (2015), when a business has a big board of directors or more board members, the firm can profit by gaining more diverse expertise and abilities. These abilities and a wide range of information can assist the company improve its performance. According to Mohamad et al. (2017), mixing genders might result in new perspectives and ways of thinking. This can help to encourage good governance while also increasing the value of the company.

According to this RDT, a diverse board may establish relationships with other organisations, as we as maintain and develop strategic partner with them.

Hypothesis Development

We examine our key hypotheses on the influence of corporate board diversity on company financial performance in this section of the study.

Board Gender Diversity

Past research had shed light on the significance of having women directors on the corporate board. Women directors engage themselves more sincerely in the supervisory committee and carry out responsibilities related to supervision and monitoring (Adams & Ferreira, 2009).

Lückerath-Rovers (2013) asserted that women directors can perform as an intermediary to create a connection between external entities (business stakeholders) to uphold the prestige of a firm. They also justified that firms with more women directors are performing better than the firms having fewer females on the corporate board in Netherlands. Women, in comparison to men, are more assertive, compassionate and determined to follow rules and regulations (Luckerath-Rovers, 2013). Mohamad et al. (2017) argued that gender mixture is great in providing better and more balanced viewpoints.

On another note, Doldor et al. (2012) suggested that women face difficulties to be the directors as they are lacking in proper family connection, networking, determination, confidence, personality traits, education qualification and industry experience. Nevertheless, Amran et al. (2014) highlighted that although women are underrepresented on the corporate board, their existence, worth and values should not be ignored. Women directors are more supportive in the workplace rather than male counterparts, leading to managers being more open to share valuable information with them (Arzubiaga et al., 2018). Moreover, women directors with different mindsets and backgrounds will bring in many viewpoints, leading to high quality brainstormed ideas and perceptions. Hanuman (2012) conducted a study in Mauritius and concluded that company's financial position is improved by the gender-balanced board rather than no female on board.

Next, Yap et al. (2017) concluded that female presence on the corporate board, measured through Shannon index, can enhance the financial position of a company in Malaysia. Hassan and Marimuthu (2014) posited that female presence has a positive relationship with firm's values. Devi et al. (2015) examined and reported that both the number of women directors and its percentage have positive relationships with firm performance. Flabbi et al. (2017) reported when there are at least 30% women directors on the corporate board, the financial position of a company is increased in Latin America and Caribbean. Au Yong and Tan (2018) argued that a gender-balanced board has positive impacts on firm's growth in both consumer and property sectors of Malaysia in terms of the return on assets (ROA). Agyemang-Mintah and Schadewitz (2019) examined and found that female director's presence can leave positive impact on firm's value.

Based on the above discussion, the following

H1a: Board gender diversity (Shannon index) has significant impact on firm performance.

H1b: Board gender diversity (quota achievement) has significant impact on firm performance.

Qualifications (Business Education and Industry Experience)

Having business education background is an advantage to directors because they are exposed to various business- and management-related subjects that enable them to have better understanding on business operations (Mahadeo et al., 2012).

It also allows directors to understand and interpret financial data and subsequently make strategic decisions for the company (Ahmad et al., 2019). Meanwhile, industry-related experience gives a better understanding about corporate-related issues like firm's strengths, weaknesses and opportunities in the industry. The presence of more skilful, knowledgeable and experienced women directors brings positive contributions to the firms. Possessing the qualities and traits helps women directors to identify problems and high-risk ventures to maximize the shareholders' wealth.

On the other hand, there is positive impact found with industry related experience with firm performance (Baraka Pascal Samuel, 2014). Bonsa Mitiku (2015) studied and found that business management knowledge has positive impact on the firm's performance of Ethiopia. Past research found positive associations between women directors' business education qualification and firm's growth (Poon et al., 2012) and women directors' industry experience and firm's growth (Kebede, 2016) in terms of their ability to provide insightful information and make strategic decisions.

Based on the discussion, the following hypothesis is proposed:

H2: Women directors' qualifications (business education and industry experience) have significant impact on firm performance.

Women Directors' Participation in the Risk Management Committee (RMC)

Women are generally risk averse than men for being less risky and challenging and for avoiding daunting tasks (Carter et al., 2015). Hutchinson et al. (2014) stated the feminization of board can have a fruitful moderating effect on extreme risk-taking**.** Shimin, Xu and Jamie (2016) underscore that women directors can improve firm's performance along with board effectiveness in risk management.

Chen et al. (2015) underlined female directors can enhance board effectiveness in risk management while Perryman et al. (2016) found that having more female representatives in top management lowers down business risk and can improve firm performance. When compared to RMC members with merely general financial and accounting backgrounds, RMC members with particular risk management skills can encourage effective risk monitoring, therefore increasing the value of businesses (Malik et al., 2021).

Based on the above discussion, the following hypothesis is proposed:

H3: The participation of women directors in the risk management committee (RMC) has significant impact on firm performance.

Research Methodology

The sample data of this study is a total of 31 energy companies listed on the main market of Bursa Malaysia for seven-year period from 2013 to 2019 known as pre-quota (2013-2017) and post-quota (2018-2019) policy period. The post-quota period considered the time when MCCG 2017 executed the 30% quota requirement. The final observation used 197 samples and the data were gathered from annual reports, Bloomberg, and official websites of the respective energy companies. First the initial 217 observation we exclude 11 for non-listed on Bursa Malaysia and 9 for missing annual reports. Then finally 197 observations are selected for research.

Sample Selection

Initial sample observation (31*7)	217
Exclusion due to non-listed into public listed company	(11)
Exclusion firms with missing annual reports	(9)
Final observation	197

For the first research objective, a descriptive analysis was conducted to examine the trend of women directorship in the Malaysian energy industry from the perspective of percentage of women directors, quota achievement, Shannon index, board independence and qualifications (business education and industry experience). The operationalization of the perspectives is described in Table 1.

Table 1: The examined characteristics of women directors (descriptive analysis)

Characteristics	**Operationalization**
Percentage of women directors	Number of women directors on a board/ Number of directors on a board
Quota achievement	Number of companies which have achieved the 30% quota requirement by MCCG 2017
Shannon index	Total value of Shannon diversity index/ total sample size of that year
Qualification (Business education)	Number of women directors with business education background/ Number of women directors
Qualification (Industry experience)	Number of women directors with industry-related experience/ Number of women directors

For the second research objective, an inferential analysis was conducted to examine the impact of women directorship on firm performance. An unbalanced panel data analysis based on generalised least square (GLS) was applied. The dependent variable was the returns on assets (ROA) while the independent variables were board gender diversity (quota achievement and Shannon index), qualifications (business education and industry experience) and participation in the risk management committee (RMC). The impact of women directorship on firm performance of the energy industry in Malaysia was estimated using the following equation:

$$\mathbf{ROA = \beta_0 + \beta_1 BGD_{it} + \beta 2QI_{it} + \beta_3 WDRM_{it} + \beta_4 BI_{it} + \beta_5 LEV_{it} + \beta_6 BS_{it} + \beta_7 FS_{it} + \beta_8 PQ_{it} + \mu_{it}}$$

Here, β_0 is the intercept of the model, $\beta_1 \ldots\ldots \beta_8$ is the coefficient, μ_{it} is the error term.

Table 2**:** Operationalization of variables for regression analysis (inferential analysis)

Acronym	Name	Measurement
Dependent variable:		
ROA	Return on asset	Net income after tax/ total assets
Independent variable:		
BGD	Board gender diversity	
	Shannon index (SI)	$-\sum_{i=o}^{n} pilog\ (pi)$
	Quota achievement (QA)	0 = No fulfilment of 30% women quota on the corporate board 1 = Fulfilment of 30% women quota on the board
QI	Quality Index	0 = No business knowledge or industry experience 1 = Either business knowledge or industry experience 2 = Both business knowledge and industry experience
WDRM	Women director in risk management	Total women in risk management committee/ Total members in risk management committee
Control variable:		
BI	Board independence	Number of independent directors/ Number of total directors
LEV	Leverage	Total debt/ Total asset
BS	Board size	Natural log of total assets
FS	Firm size	Total board of directors
PQ	Post-quota	Post-quota year: 2018-2019 (MCCG 2017)

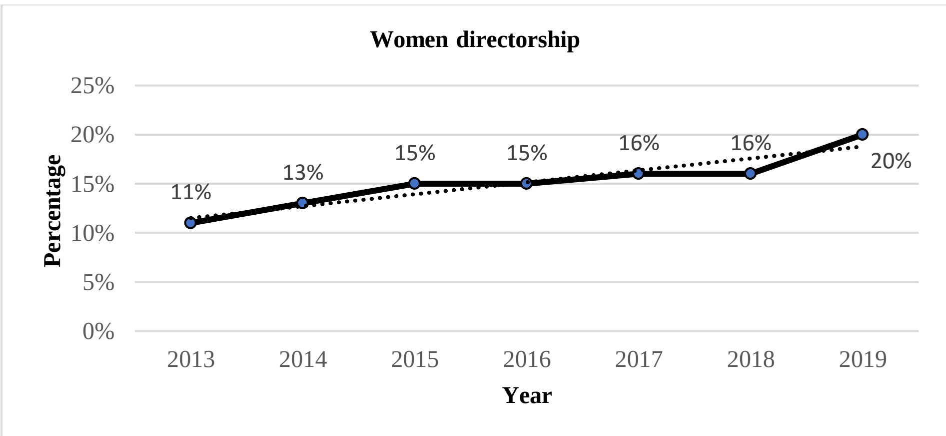
Note: On Shannon index formula, pi is the percentage of board members, n is the total board members, log is the natural logarithm

Results of the Study

Trend of Women Directorship in the Malaysian Energy Industry

The following section presents the findings of this paper with regards to the trend of women directorship in the Malaysian energy industry during the pre- and post-quota period (2013-2019).

Figure 1: The percentage of women directors from 2013 to 2019



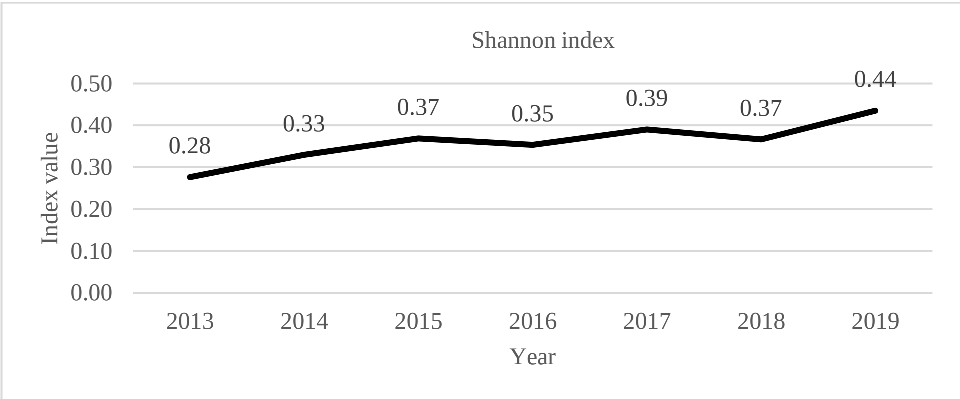
The upward trend started during the pre-quota policy, moving from 11% to 16% from 2013 to 2017. This is conjectured to be the implication of MCCG 2012 which highlighted the need for gender diversity on the corporate board, albeit no quota was stipulated at that time. Subsequently, MCCG 2017 executed the representation of 30% women directors in the corporate board for large companies. In order to comply with this obligation, companies started to hire women directors to fill in the quota. However, although the percentage of women directors in 2018 was the same as in 2017 with 16%, the situation changed in 2019 with a dramatic increase to 20%.

Shannon Diversity Index

Shannon diversity index was used as the variable for women representation in this study, considering the number of gender classification along with distribution of board members.

The value of Shannon index lies from 0 to 0.69 where 0.69 denotes the presence of equal number of male and female on the corporate board. The larger the Shannon index value, the more diverse the corporate board is in terms of gender. The Shannon diversity index value increased from 0.28 in 2013 to 0.39 in 2017. This is in compliance with MCCG 2012 during pre-quota period whereas the value of the diversity index increased from 0.39 in 2017 to 0.44 in 2019 during post-quota period from Figure 2. Although the value of Shannon index did not match with the optimum value of 0.69, equal participation of female and male on the corporate board did show a noticeable change from 0.28 to 0.44 during pre- and post-quota period.

Figure 2: Trend of Shannon diversity index of energy industry in Malaysia from 2013 to 2019



Source: Author's Compilation using Malaysian Energy Industry's annual reports

Meeting Quota Requirement

Figure 1 shows that energy industry did not comply with MCCG 2017 30% quota of women directors in large companies. The increasing percentage of women directors on the corporate board, however, was still far from achieving the target of 30% quota requirement. Nevertheless, in the case of single entity, some companies had already achieved the imposed 30% quota.

Among the 31 listed energy companies, only five companies were able to achieve the 30% women representation on the corporate board to comply with the MCCG 2017 in 2018. Other 26 companies failed to achieve the desired target set by the Malaysian government to ensure gender balance board.

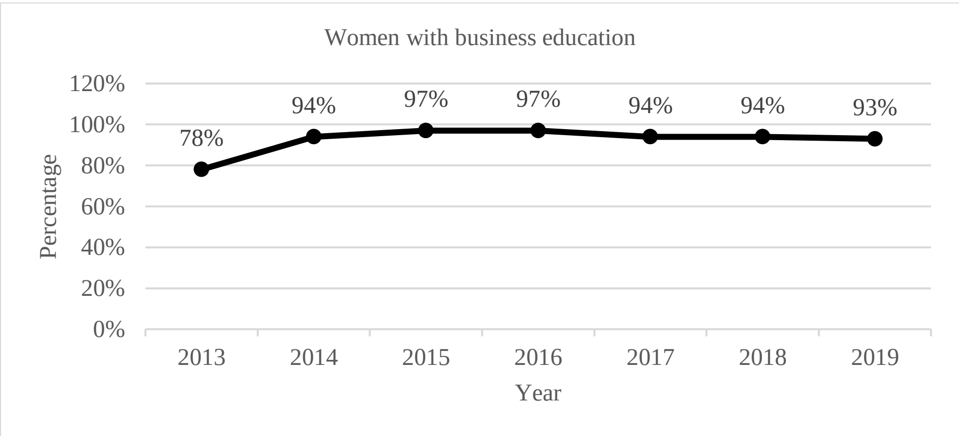
Furthermore, the scenario was slightly different in 2019, in which eight companies managed to achieve the 30% target while the remaining 23 companies did not manage to comply with the regulations.

Generally, there is still scarcity of qualified pool of women in energy industry at the entry- and mid-level, hence until today it is challenging for companies to meet the 30% women representation on the corporate board within two years after the MCCG 2017 announcement.

Women Directors Qualification

Business education background increases an individual's financial literacy of senior position. Women directors with business education and industry experience distinguish themselves among other board members and have better understanding about business operations and management. These unique attributes beget not only strict monitoring of financial statements but also strategic decision making of companies.

Figure 3: Percentage of women directors with business education background from 2013 to 2019 (business education)

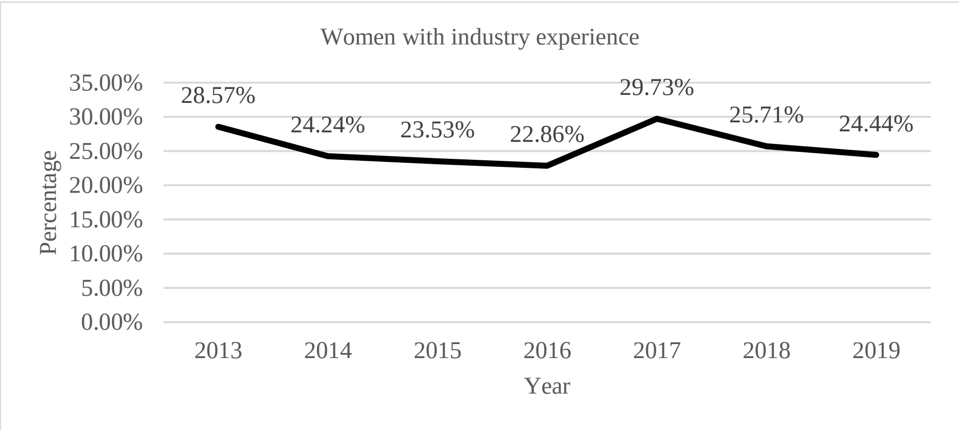


Source: Author's Compilation using Malaysian Energy Industry's annual reports

Figure 3 illustrates almost 78% women directors have business education background such as finance, accounting, economics, management and marketing, contributing to good financial literacy in 2013. In complying with MCCG 2012, firms began to appoint female directors with the majority of them possess knowledge in business. Nevertheless, the scenario of women directors with knowledge in business was different during post-quota period (MCCG 2017). Overall, there was an upward trend in terms of financial literacy among female directors. It can be concluded that women in general are more inclined to take business-related qualifications and women with business education are more likely to be appointed as directors. Knowledge in business makes women stricter in monitoring any issues related to financial statements and makes them strategic decision makers.

Energy companies are more likely to appoint women directors with solid business knowledge. This is important in ensuring the women directors are able to contribute more significantly to the firm's growth. Next, industry experience is one of most important factors to appoint the board of directors. If the appointed women directors have outstanding industry experience, they can dodge the tokenism problem. Women having industry experience keep themselves distinct from others, thus deserving the priority to be on the corporate board. From Figure 5, it is shown that only 28.57% of women directors have industry experience in 2013 and in 2017, the percentage increased to 29.73% with a bit of fluctuations in between those two years. During the post-quota period, the percentage declined to 24.44% in 2019.

Figure 4 Percentage of women directors with industry-related experience of energy industry in Malaysia from 2013 to 2019.



Source: Author's Compilation using Malaysian Energy Industry's annual reports

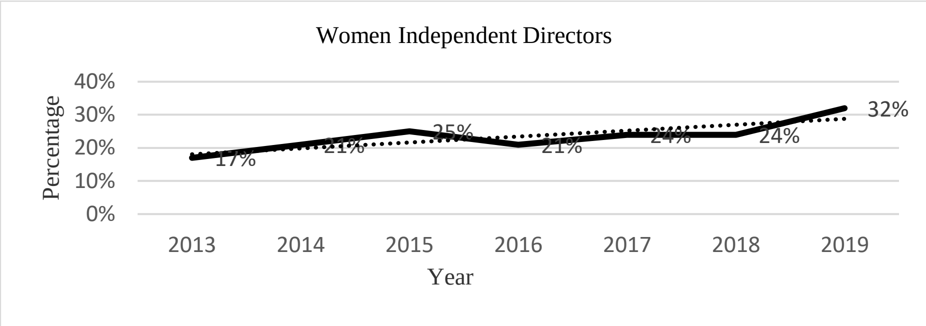
Moving on, Figure 4 depicts that the Malaysian energy industry is still facing shortage of women directors with industry experience. It is also shown that the industry appoints more women with knowledge in business rather than industry experience. One plausible reason for this less industry experience women director can be lack of women in the entry and mid-level in the energy industry. As there is shortage of women's presence in the entry and mid-level, the proper, skill full and experienced women can't be supplied as the director's position from time to time. Apart from this, the industry has an outstanding number of women directors with financial literacy because of their business education background.

Board Independence

Independent directors are appointed to strengthen a firm's monitoring and supervision system. MCCG 2017 clearly states that each board should have at least half independent directors. In the case of large companies, there must be a majority presence of independent directors.

Although it was not explicitly emphasized about women independent directors in MCCG 2012 and MCCG 2017, the presence of women independent directors on energy industry is encouraging. The findings of this study present a visionary scenario in which there was an upsurge in the percentage of independent women directors in the energy industry from 2013 to 2019. Figure 5 presents a rapid increase from 17% to 24% during the pre-quota period from 2013 to 2017. This trend continued during the post-quota period, in which the percentage increased from 24% to 32%, showing an increment of 5% in two years.

Figure 5: Percentage of women independent directors in the energy industry in Malaysia



Source: Author's Compilation using Malaysian Energy Industry's annual reports

From the figure 5 it is shown that in the energy industry, the percentage of independent women directors had increased at a noticeable rate, indicating that senior position i.e., independent non-executive director is becoming more accessible to women directors.

The Impact of Women Directorship on Firm Performance in the Malaysian Energy Industry

The following section presents the findings of the second objective of this paper i.e., the impact of women directorship on firm performance in the Malaysian energy industry during post-quota period.

The regression results are presented in Table 3. Further statistical checking indicates that a random effect model is appropriate for the analysis.

Regressor	ROA
Constant	-0.3151 (0.1145)
SI	0.01700 (0.09681)
QA	0.06007**(0.020904)
WQI	-0.01349(0.02481)
WDRM	-0.11057 (0.11737)
BI	0.11279 (0.07776)
LEV	-0.0026***(.00083)
FS	0.037** (0.0151)
BSI	0.00877 (0.00691)
PQ	-0.0459** (.02101)
R-square	0.2353
Heteroscedasticity	83.20 ***
Autocorrelation	6.967 **
BPLM test	5.32**
Hausman test	13.0

Note :1% significance level ***, 5% significance level **, 10% significance level *. Standard errors are in parenthesis. (Source: Author's calculation)

Regression Analysis: ROA as Dependent Variable

Table 3 shows that heteroskedasticity and serial correlations were checked to justify the panel data reliability. If there are problems related to heteroskedasticity and auto correlation, the P value will become less than .05. Authors had examined the data through a robust and cluster check in order to rectify these issues. Table 3 also shows the regression analysis results. Out of all the independent variables, only quota achievement was found to have a statistically significant impact on firm performance. Positive coefficient indicates companies that had achieved 30% quota of women directors performed better than their counterparts which had not, hence suggesting that quota brings positive impact to firm performance. This result supports Luckerath- Rovers' (2013) findings, which suggest that enforcing quotas might result in considerable positive performance on a firm's ROA. This research supports Julizaerma and Sori's findings (2012). These results espoused with Jubille et al. (2018), Arunima et al. (2015), and Bennouri et al. (2018), who found that quota had a favourable influence on company performance. This evidence supports agency theory's (Abdullah, 2014) as well as resource dependence theory's (Loukil & Yousfi, 2016) theoretical predictions, implying that board diversity improves board effectiveness and surveillance. Diversified boards also bring a wealth of experience, information, and perspectives to the table, enhancing decision-making efficiency and, as a result, financial success.

These findings align with agency theory's theoretical implications that female directors are more likely to perform a better monitoring function than male directors. The notion of resource dependency, which states that appointing female directors might help to strengthen a company's authority (Loukil & Yousfi, 2016). Women quality index has statistically insignificant relationship with firms' financial performance. The coefficient of this variable was -0.013 which means women quality index has negative impact on firms' financial performance. On the other hand, the participation of women directors in risk management committee has statistically insignificant relationship with firm's financial performance. The coefficient of this variable was -0.11.

Next, for the control variables, board independence was found positive, insignificant relationship with firm performance in the energy industry in Malaysia. Leverage and firm size were found to have significant impact on firm performance. The negative coefficient for the leverage indicates that companies with higher level of leverage will have lower firm performance. This finding contradicts the result found by Yap et al. (2017). Meanwhile, firm size was found to be positively related to firm performance because larger firms have greater competitive advantage, economies of scale and bargaining power, thus leading to better firm performance. Meanwhile, board size was found to be statistically insignificant with firm's value. This finding refuted Mohapatra's (2017) findings. Furthermore, the post-quota period was found to bring negative, significant impact on firm performance. This negative impact shows that company's performance has been lowered during this post-quota policy period. One cause can be the unskilful, unexperienced women can lead to lower the performance of Malaysian energy industry. Another cause can be the time duration after the post policy approval as the time for the sample is too short to enlighten the impact of the post quota on the performance (Ahmad et al., 2019). Some companies are more inclined to appoint female from the family of board of directors or acquaintances despite of having no proper academic background along with experience just to fill quota by giving eye wash to government. Furthermore, women directors possessing multiple boards can decline the firm's performance as they face difficulty to give their proper attention and effort on one board. This can happen as energy industry can appoint women from other board of other industries only to make up this 30% numerical figure. These causes can decline the performance of energy industry in the post-quota policy period. Companies should appoint those women who have proper skill, creative knowledge, market experience rather than just to comply with 30% quota. Fulfilling 30% quota on board is not just a "number game"; this can add value to firm by increasing firm's value, shareholder's value and creating brand name. This is only possible when board will appoint women with qualification, experience and give proper time to nurture their capabilities in making the business decision.

Discussion, Conclusion & Recommendations

The Malaysian energy industry is still male-dominated and women in this industry are still under-represented, not only at the board level but also at the entry- and mid-level of company. The glass-ceiling and broken-rung phenomena still prevail and hinder women's ladder of success at every level by not getting promoted easily. The findings of this study posited only 20% women are serving the corporate board within the energy industry: a 10% underrepresentation from the targeted quota of 30%. This implies a long way towards achieving the desired targeted quota level in the energy industry.

This study bridges the gap between literature, specifically those related to the Malaysian energy industry. As meeting quota has significant impacts on firm performance, government should come forward to scrutinize energy companies whether they fulfil the 30% quota or not. This study can pave a way for the energy companies to break the old boy's network and give women a chance to come forward and showcase their intelligence, ability, skills and talent in management. Furthermore, achieving the 30% women quota requires energy companies to ensure the right and sufficient pool of talents are available within the companies.

This study is also aligned with the sustainable development goal 17 (SDG-17) which emphasizes the importance of gender equality to flourish the country's energy industry and national economy, as well as boosting its image in the world. Moreover, energy companies should come forward to give proper training and mentoring to ensure improvement of the female directors that will help not only themselves but also the growth of the industry along with economy.

The implementation of quota system is not intended to create conflict between male and female but to encourage female counterparts to take part in the corporate world. Quota gives an assurance that female workers are no longer denied access to hold the desirable and important position just because of their gender. The energy industry should create a working environment with female-friendly culture, so the female employees are persuaded to stay rather than to leave due to the old boy's network taboo.

In addition, quota offers a lens through which women can easily step forward towards their desired position along with male colleagues. The time has come for corporations to break the stereotype, empower the women, celebrate diversity and practice inclusion. Quota is the way to achieve these aspirations and mobilize women's capabilities in this male-dominated industry. A properly established and well-recognized quota makes women feel more welcomed, confidence and happy at work, leading to women's ability to make better decisions for the betterment of their companies.

Quota is also a great way to make the world *equiterra* where no discrimination is held against each other among men and women. This study has shown that 30% women representation on the corporate board has significant impacts on firm performance. Nevertheless, companies should pick women with the right qualifications and qualities to produce fruitful results rather than just satisfying the 30% quota. In this case, quota should be maintained in a way that can provide meaningful impacts. However, the quota should be reviewed and redesigned as the target has not been achieved yet. Government should be more flexible about the quota percentage and the tenure of target achievement as the target was initially set to be achieved by the year 2020.

It is not easy to achieve the quota requirement without government intervention and company support. Thus, it is best for the government to extend the year of target besides giving importance not only on the quantity of women directors but also on the quality of women directors. Women employees should equip themselves and be confidence in carrying out their duties and responsibilities at work. Women must be furnished themselves well with knowledge, skills, resources, ideas, power to perform well. Women of top positions in any companies should not be afraid to express their opinions, ideas and perspectives. Most importantly, they should not let themselves being considered as "token".

Finally, the first limitation is the inclusion of public listed companies of Malaysian energy industry. The other industries along with private companies have been kept out of this study. there is only selection of single country and did not consider the comparison of other neighbouring countries where cultural, economic and governance related issues are similar like Vietnam, Japan, Indonesia. There is only accounting based measure has taken into consideration rather than others. This study can be extended to other industries such as information technology, real-estate, insurance, banking and manufacturing. Future studies can take into consideration new variables, for instance women in audit committee, return on capital, return on equity, Tobin's q ratio, enterprise value and economic value added. The duration of post-quota period should also be longer for better justifications of the impact of women directorship on firm performance. In this sense, interlock issues of directors and family ownership should be put on the table to examine the impact of quota on the energy industry's performance. Proper monitoring, sponsorship development and formal training programs should be launched to retain female employees and gain the advantages of a gender-balanced corporate board.

Conflict of Interest

All the authors declare no conflict of interest for this research**.**

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