

# Political Connection Firms, Female Directors and the Appointment of Female Executives: Evidence from an Emerging Country

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## ABSTRACT

This study examines whether firm political connection and female directorship influence the appointment of female executives, namely the chief executive officers and chief financial officers in Malaysia. Based on 450 firm-year observations of Malaysian Top100 public listed firms over five years, i.e. 2016-2020, this study finds political connection firms are less likely to appoint female executives. However, firms with female directors are more likely to appoint female executives. The result is stronger when the female is an executive director. This study also examines the moderating effect of female directors on the relationship between political connection firms and the appointment of female executives. The results show that female directorship weakens the negative relationship between political connection firms and the appointment of female executives. The results are robust after controlling for various additional tests and conducting robustness tests. Overall, the findings inform the government that one way to increase the number of female executives, especially in political connection firms, is by increasing the presence of female directors on the boards.

**Keywords:** ethics, political connections, female directors, female executives, Malaysia **JEL codes:** J16, M40, G30

## INTRODUCTION

The involvement of female executives, namely the chief executive officers (CEOs) and chief financial officers (CFOs) in the capital market, has gained researchers' interest in examining the economic consequences. Previous studies in accounting literature show that female CEOs/CFOs increase earnings quality (Barua et al., 2010; Liu et al., 2016; Peni & Vähämaa, 2010; Zalata et al., 2019), more likely to use excess cash to increase dividend distributions (Doan & Iskandar-Datta, 2020; Sah, 2021) and report earnings more conservatively (Francis et al., 2015; Ho et al., 2015; Ismail et al., 2021) due to their risk aversion and ethical behaviour. Female CEOs/CFOs also increase firm performance because they cooperate more with female directors (Xing et al., 2021). Therefore, empirical evidence supports policymakers who demand female top-level appointments as their presence establishes a business case.

Although female executives have increased globally over the past decades, their presence is relatively low. Hence, several studies have examined the determinants of female executives, namely CEOs at individual-level factors and firm-level factors. For instance, Hurley and Choudhary (2016) find that years of education, number of employees and number of children play a significant role in determining the appointment of female CEOs. Gupta and Raman (2014) show that board diversity, specifically, female directorship is one of the determinants of the appointment of female CEOs. The appointment of female CEOs is much stronger when the number of female directors achieves a critical mass of at least three (You, 2021).

However, previous studies do not account for the institutional environment in determining the appointment of female executives. For the institutional environment of East Asian countries, including Malaysia, political connection (PCON) is a dilemma that plagues its capital market (Abdul Wahab et al., 2017). PCON firms are associated with less ethical and risk aggressiveness behaviour. Studies such as Ding et al. (2018), Hashmi et al.

(2018) and Kamarudin et al. (2021) find that PCON firms are more likely to engage in real activities to manage earnings and report lower earnings quality and poorer quality of accruals. Moreover, PCON firms are more likely to involve in tax-aggressiveness behaviour (Abdul Wahab et al., 2017; Khlif & Amara, 2019), less transparent (Kim & Zhang, 2016) and associated with lower analyst forecast accuracy and higher forecast dispersion (Kamarudin et al., 2021).

Based on the evidence, it can be concluded that PCON firms in Malaysia have governance issues and are less ethical. Therefore, this study predicts that PCON firms are less likely to appoint female executives, namely CEO and CFO. This is because the issue of females at senior levels is only taken seriously by firms that are serious about corporate governance and business ethics (Institute of Business Ethics, Business Ethics Briefing 21:1, 2011). What is more, as females are considered a mechanism to enhance corporate governance effectiveness (Adams & Ferreira, 2009; Srinidhi et al., 2020), female executives appointments by PCON firms seem undesirable as females are likely obstacles against resource diversion away from firms. Thus, the first objective of this study is to investigate the relationship between PCON firms and the appointment of female executives in Malaysia.

People tend to work with individuals whose demographics and values are similar (Byrne, 1971; Useem & Karabel, 1986). The preference to work with similar demographic individuals is to increase the salience of their in-group status by constructing a homogenous group (Tajfel & Turner, 1986). Therefore, females tend to be more cooperative with each other than with men (Kunze & Miller, 2017), which could be reflected in hiring decisions. For instance, Gupta and Raman (2014) find the presence of female directors increases the likelihood of the appointment of a female as a CEO. The effect is more salient when the number of female directors achieves the critical mass (You, 2021).

From the view of the justice case, the appointment of females at the executive level is the right thing to do to ensure and fulfil gender equality sensitivity (Wang & Clift, 2009). As females are more ethically sensitive than men (Akaah 1989; Dawson, 1997; Deshpande, 1997), one can expect that the former are more sensitive towards ethical issues, including the issue on the appointment of female executives. Hence, female directorship is another determinant relevant to the appointment of female executives. This study argues that the presence of female directors is positively related to the appointment of female executives. Thus, the second objective of this study is to investigate the relationship between female directorship and the appointment of female executives in Malaysia.

Third, this study investigates whether female directors weaken the effect of PCON firms on the appointment of female executives. This study predicts that female directors could lessen the tendency of PCON firms to increase the likelihood of the appointment of female executives. In this perspective, as female directors tend to work with individuals with similar demographics and values, there is a tendency that in PCON firms, female directors will exert their power to appoint female executives. Moreover, since female directors share the same value as female executives, for example, by being more ethical and more risk-averse in financial decision-making (Doan & Iskandar-Datta, 2020; Huang & Kisgen, 2013; Pucheta-Martínez, 2016; Shin et al., 2020; Zalata et al., 2019), female executives are more likely to be appointed by female directors in order to curb the precarious and riskier financial activities of PCON firms (see for example Kamarudin et al., 2021; Khlif & Amara, 2019; Abdul Wahab et al., 2017).

Based on 450 firm-year observations derived from Malaysian Top 100 public listed firms by market capitalization listed on the Bursa Malaysia from 2016 to 2020, this study finds a negative and significant relationship between PCON firms and the appointment of female executives. The negative relationship is derived from two types of PCON firms: board of directors (BOD) and government-linked companies (GLCs). Next, using two measurements of female directorship, proportion and the critical mass of female directors, this study finds a positive and significant relationship between female directorship and the appointment of female executives. In addition, the effect is derived from female executive directors. Lastly, this study provides evidence that female directors weaken the negative relationship between PCON firms and the appointment of female executives. The results are robust to various additional analyses.

This study contributes to the literature in several ways. First, this study is distinctively different from previous studies, such as Cook and Glass (2015), Hurley and Choudhary (2016), Gupta and Raman (2014) and You (2021). While previous studies examine individual-level and firm-level factors, this study accounts for the institutional environment factor, namely PCON firms. Thus, this study contributes to the extant literature that the institutional environment (i.e., PCON firms) also plays an important determinant in the appointment of female executives. Second, data used in this study is peculiarly different from previous studies centred on developed countries, which is mostly in the US. Instead, this study uses data from a developing country, specifically Malaysia. Lastly, the finding suggests that female directorship can mitigate political PCON firms to appoint females as executives broaden the understanding the role of female directors as corporate governance mechanism in PCON firms.

Malaysia provides an interesting and unique setting to examine this issue for several reasons. First, Malaysia is a country with a large percentage of PCON firms, where "crony capitalism" is more prevalent (Gul 2006; Wong & Hooy, 2018). Second, although Malaysia has been ranked among the countries with a low gender gap index in 2021 (Hirschmann, 2021), the number of females appointed as senior management has increased to 37 percent in 2021, which is higher than the global average recorder at 31 percent (Grant Thornton 2021). Lastly, the number of female directors in the Top 100 public listed firms also increased to 25.5 percent (Securities Commission, 2021), making an archival study feasible.

The remainder of this paper is structured as follows. First, section 2 discusses the institutional background. Next, Section 3 reviews and describes the rationale behind the hypothesis, and Section 4 explains the sample selection method. Following that, Section 5 presents the results. Finally, section 6 provides the additional analysis results, and Section 7 concludes the paper.

## **Institutional Background**

### **Political connections in Malaysia**

As opposed to an arm's length system, the economic system of numerous East Asian countries is a relationship-based system (Rajan & Zingales 1998). Malaysia is not exceptional in this case as it is characterized by weak corporate governance mechanisms, low transparency levels, poorly enforced contracts, and cronyism (Ball et al., 2003; Gul, 2006). Based on the facts, the Malaysian corporate sector has many PCON firms (Wong & Hooy, 2018). The new economic policy (NEP) that was implemented in late 1969 to balance the wealth between the Chinese, who in the past have controlled the economy, and Bumiputras (Malay) is one of the factors that contribute to the involvement of the Malaysian government in the corporate sector (Gomez & Jomo, 1999; Gul, 2006). The political connection also took form in informal ties between prominent business people and Malaysian political elites to advance their business interests (Gul, 2006).

The existence of PCON firms in the capital markets contributes to the lower level of financial reporting quality (Ball et al., 2003). Moreover, it reduces financial transparency (Kim & Zhang, 2016) as political connections could suppress firm-specific information to hide expropriation activities by politicians and their cronies. In return, politicians who control regulatory policies will be rewarded with bribes and political support from their cronies when the regulated policy favours the cronies (Gul, 2006). As such, the Malaysian Code on Corporate Governance (MCCG) 2021 that supersedes MCCG 2017 discourages the appointment of an active politician as a director on the board (MCCG, 2021)<sup>1</sup>.

### **Female directors and senior management in Malaysia**

The participation of females at the board and senior management level has become an emerging issue in Malaysia. In 2011, former Prime Minister Najib Razak announced a policy that 30 percent of the directors on the boards and senior management of public listed firms must be filled by females (Ministry of Women,

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<sup>1</sup> An active politician if (s)he is a Member of Parliament, holds a position at the Supreme Council, State Assemblyman, or hold any division level in a political party (MCCG, 2021).

Family, and Community Development, 2011). In addition, the Malaysian Code on Corporate Governance (MCCG) 2017 requires that the participation of females must not only be on the boards but also at the senior management level. This is because females at senior management serve as a pipeline for board candidacy, benefiting the firm (MCCG, 2017).

In supporting the participation of females on boards and senior management, the MCCG 2017 requires public listed firms to establish gender diversity policies and that they must be disclosed in firms' annual reports. This policy also has been emphasized in large firms; however, small firms are encouraged to appoint females on their boards<sup>2</sup>. Nevertheless, the MCCG 2021, with immediate effect on April 2021 and supersedes MCCG 2017, requires all publicly listed firms to have at least 30 percent female directors. This policy is voluntary as no action will be taken against public listed firms that fail to achieve the targeted quota. Nevertheless, firms should disclose the actions taken to achieve the 30 percent target. Furthermore, the time frame for achieving the quota must be three years or less (MCCG, 2021).

Nonetheless, the government has taken a surprising move under Budget 2022. It was announced that it is now mandatory for large firms by September 2022 and all other listed firms by January 2023 to have at least one female director on the board (Dhesi, 2021). For the record, until June 2021, female directors occupied only 25.5 percent of the total board seats of Top 100 firms and only 17 percent of all the Bursa Malaysia listed firms (Securities Commission, 2021). Thus, the 30 percent quota has not yet been achieved. However, females in senior management increased to 37 percent in 2021. Specifically, female CFOs rose to 41 percent and female CEOs to 10 percent (Grant Thornton, 2021).

## Hypotheses Development

### Political connection and appointment of female executives

The political involvement in the economy resulted in hiding politicians' expropriation activities and their cronies by suppressing firm-specific information. Additionally, politicians tend to exploit their control over regulatory policies to favour cronies in return for political support, nepotism, and bribes. This resulted in lower financial transparency (Bushman et al., 2004). PCON firms are also riskier because they are more likely to misstate their financial positions to avoid covenant violations and have a higher probability of financial business failure. Abdul Wahab et al. (2011) and Gul (2006) show that because PCON firms have greater risk inherent, they require greater audit effort, which in turn leads to a higher charge of audit fees. Ding et al. (2018), Hashmi et al. (2018) and Mohammed et al. (2017) find PCON firms to have lower financial reporting quality as they are more likely to engage in real activities, report lower quality of accruals and are less conservative in reporting earnings. Moreover, PCON firms are more likely to involve in tax-aggressiveness behaviour and associated with a lower analyst forecast accuracy and higher forecast dispersion (Abdul Wahab et al., 2017; Khlif & Amara, 2019; Kamarudin et al., 2021).

Therefore, political connections may cause poor corporate governance (Bliss & Gul, 2012). Based on the connotation, this study argues that PCON firms are less likely to appoint female executives as the latter are likely obstacles against resource diversion away from firms. This is because female CEOs/CFOs are more ethical (Doan & Iskandar-Datta, 2020), report higher earnings quality (Barua et al., 2010, Francis et al., 2015; Ismail et al., 2021) and are more risk-averse (Zalata et al., 2019). What is more, females are considered a mechanism to enhance corporate governance effectiveness (Adams & Ferreira, 2009; Srinidhi et al., 2020). Additionally, the issue of the appointment of female executives is taken seriously only by firms with strong governance and business ethics (Institute of Business Ethics, Business Ethics Briefing 21:1, 2011) which is may not likely in the PCON firms. Therefore, this study argues that PCON firms are less ethical than other types of firms thus are less likely to appoint ethical executives, i.e. female executives. Hence, this study predicts the following hypothesis:

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<sup>2</sup> Large listed firms are firms that have a market capitalization of RM 2billion and above at the start of the financial year or that are included in the FTSE Bursa Malaysia Top 100 Index (MCCG, 2017).

H1: PCON firms are less likely to appoint females as executives.

### **Female directors and appointment of female executives**

Leaders who represent a demographic minority will increase the representation of their demographic minority by advocating in hiring and promoting this minority (Duguid et al., 2012). Hence, females as a minority in top leadership positions are assumed to tend to appoint other females into leadership ranks. Moreover, the tendency to appoint other females into leadership ranks is because females tend to be more cooperative with each other and prefer to work with a similar demographic (Kunze & Miller, 2017; Tajfel & Turner, 1986). Matsa and Miller (2011) demonstrate that the "gender spillover" effect occurs when female directors help other females attain executive positions. Firms with female directors also signal to female executives' candidates that those firms are attractive, welcoming and fair (Ng & Burke, 2005). Additionally, female directors are more ethical than male directors as they always challenge the use of related party transactions (RPTs) (Usman et al., 2021). Hence, female directors are more ethically sensitive in making a decision, including the appointment of female executives.

Studies such as Elsaid and Ursel (2011) and Gupta and Raman (2014) find the proportion of female directors has a positive relationship with the appointment of females as a CEO. However, Cook and Glass (2015) find no relationship between the proportion of female directors and the appointment of female CEOs. Instead, they contend that the influence of female directors has a stronger effect on the appointment of female CEOs than the numerical presence of female directors. In contrast, You (2020) find the critical mass of female directors has a positive relationship with the appointment of female CEOs. This is because the presence of at least two numerical minority members in a group increases the support of each other, encouraging them to pursue positive decision-making (Lyod et al., 2008), including appointing female executives. Additionally, critical mass increases the power of female directors in decision making because they become a potential alliance, more vocal and assertive (Kanter, 1977), thereby increasing their demand to appoint female executives. Hence, this study predicts the following hypotheses:

H2: The proportion of female directors has a positive relationship with the appointment of female executives.

H3: The critical mass of female directors has a positive relationship with the appointment of female executives.

### **The moderating effect of female directors on the relationship between firm political connection and the appointment of female executives**

Female directors are substitutes for weak governance and act to enhance corporate governance effectiveness (Adams & Ferreira, 2009; Srinidhi et al., 2020). This is because female directors are more ethical. For instance, Mc Daniel et al. (2001) contend female directors are able to instil an ethical culture in a corporate landscape where corruption is rampant. Similarly, Isidro and Sobral (2015) and Bernadi et al. (2009) find that the probability of firms acting more ethically is increased with the presence of female directors. Additionally, female directors are more risk-averse and effective in monitoring (Srinidhi et al., 2011; Zalata et al., 2019). The monitoring role played by female directors are able to mitigate managerial opportunism (Zalata et al., 2019).

The presence of female directors on a board who bring different perspectives and views due to different backgrounds, attitudes, and experiences improves the firm's corporate governance (Srinidhi et al., 2020; Srinidhi et al., 2011). Based on a comprehensive literature review, Terjesen et al. (2009) provide strong evidence that female directors positively impact corporate governance. Thus, as female directors are one of the corporate governance mechanisms, their presence in PCON firms is more likely to increase the likelihood of the appointment of female executives. Furthermore, because PCON firms have poor governance and are less ethical, thereby instil sound governance and high ethical values, female directors tend to appoint female executives who share the same values. Hence, this study postulates the following hypotheses:

H4: The proportion of female directors weakens the negative relationship between PCON firms and the appointment of female executives.

H5: The critical mass of female directors weakens the negative relationship between PCON firms and the appointment of female executives.

## RESEARCH METHOD

This study utilized data from Malaysian 100 Top public listed firms based on market capitalization because MCGG 2017 identifies that one of the best practices is the appointment of female directors and senior management (MCGG, 2017). However, the best practice is only applicable to large companies because MCGG 2017 acknowledges that all listed companies are different, signifying the Code's flexibility and proportionality in applying certain best practices. This sets the tone and inspires the small and mid-cap firms to appoint female directors by ensuring that large companies achieve excellence in corporate governance (MCGG, 2017).

Subsequently, the number of female directors in the Top 100 firms increased to 25.5 percent in 2021 (Securities Commission, 2021), making this study feasible. Further, this study focuses on 2016 to 2020 because of the availability of senior management profiles in firms' annual reports. The disclosure was made mandatory starting in 2016 (Bursa Malaysia Listing Requirements, 2021), and the year 2020 is the last year of the adoption of MCGG 2017.<sup>3</sup> Non-financial data is hand-collected from firms' annual reports retrieved from the Bursa Malaysia website. The financial data is retrieved from Datastream.

The final sample consists of 450 firm-year observations after excluding firms with missing data and newly listed firms. Because the dependent variable (gender CEOs/CFOs) is binary, this study used panel data logit regression to predict the likelihood of the appointment of female executives by firms<sup>4</sup> and control for year fixed effect. Matsa and Miller (2011) contend that the year fixed effects ensure that the association this study measures does not simply reflect the economy-wide trend of greater female participation in all facets of corporate leadership. The following models are used to test the hypotheses:

$$FEXEC = \beta_0 Intercept_{it} + \beta_1 PCON_{it} + \beta_2 \%FBOARD_{it} + \beta_3 FSIZE_{it} + \beta_4 ROA_{it} + \beta_5 LEV_{it} + \beta_6 LFAGE_{it} + \beta_7 BSIZE_{it} + \beta_8 INSTU_{it} + \beta_{9-12} PERIODS_{it} + \epsilon_{it}$$

(1)

$$FEXEC = \beta_0 Intercept_{it} + \beta_1 PCON_{it} + \beta_2 CMFBOARD_{it} + \beta_3 FSIZE_{it} + \beta_4 ROA_{it} + \beta_5 LEV_{it} + \beta_6 LFAGE_{it} + \beta_7 BSIZE_{it} + \beta_8 INSTU_{it} + \beta_{9-12} PERIODS_{it} + \epsilon_{it}$$

(2)

To address the third and fourth hypotheses, i.e., that the relationship will be affected by moderating the female directors and firm political connection, this study incorporated the following regression equations:

$$FEXEC = \beta_0 Intercept_{it} + \beta_1 PCON_{it} + \beta_2 \%FBOARD_{it} + \beta_3 \%FBOARD * PCON_{it} + \beta_4 FSIZE_{it} + \beta_5 ROA_{it} + \beta_6 LEV_{it} + \beta_7 LFAGE_{it} + \beta_8 BSIZE_{it} + \beta_9 INSTU_{it} + \beta_{10-13} PERIODS_{it} + \epsilon_{it}$$

(3)

$$FEXEC = \beta_0 Intercept_{it} + \beta_1 PCON_{it} + \beta_2 CMFBOARD_{it} + \beta_3 CMFBOARD * PCON_{it} + \beta_4 FSIZE_{it} + \beta_5 ROA_{it} + \beta_6 LEV_{it} + \beta_7 LFAGE_{it} + \beta_8 BSIZE_{it} + \beta_9 INSTU_{it} + \beta_{10-13} PERIODS_{it} + \epsilon_{it}$$

<sup>3</sup> Firms with financial year ending 31 December 2021 are the first have to report on the adoption of MCGG 2021. As 55 firms from a sample of total 90 firms have financial year ending 31 December, therefore the cut-off of this study is at year 2020. It is worth noting that there is no difference between MCGG 2017 and MCGG 2021 on the code of the appointment of female except MCGG 2021 now emphasise on all board, unlike MCGG 2017.

<sup>4</sup> If the firms have female CEO that serves on the board, this study excludes female CEO from the calculation of female directors because they are the same person. In the sample, no female CFOs serve on the board.

(4)

The operational definitions of all the variables are as described in Table 1.

**Table 1: Operational definition**

Variables	Definitions	Source(s)
Panel A: Dependent Variable		
FEXEC	CEOs or CFOs that takes on the value of 1 if female and 0, otherwise.	Annual report
Panel B: Independent Test Variables		
PCON	Political connection firms that takes on the value of 1 if politically connected and 0, otherwise.	Annual report
%FBOARD	Proportion of female directors measured by total female directors divided by total directors	Annual report
CMFBOARD	Female directors that takes on the value of 1 if the boards have two or more of female directors and 0, otherwise	Annual report
Panel C: Independent Control Variables		
SIZE	Firm's total assets	Datastream
FSIZE	Natural log transformation of SIZE.	
ROA	Return on assets measured by net income scaled by total assets.	Datastream
LFAGE	Natural log of firm age measured as the total number of years (plus one) elapsed since the year of firm is first listed in Main Market.	Annual report/Firm's website
LEV	Leverage measured as total debt scaled by total equity.	Datastream
BSIZE	Total number of directors on the board.	Annual report
Panel D: Exclusion Restriction for Self-selection test		
BIG4	An indicator variable that takes on the value of 1 if the auditor is a Big 4 international auditor, zero otherwise	Annual report

### Dependent test variable

The primary dependent test variable is the presence of a female executive (*FEXEC*), which takes the value of 1 if a firm has either female CEO or CFO, zero otherwise. If a firm's CEO and CFO are both females, this study will consider the firm as having a female CEO because of its higher ranking when subdividing the sample.

### Independent test variables

The first test variable is firms' political connection (*PCON*), which takes the value of 1 if firms have political connections and zero otherwise. Following Wong and Hooy (2018), firms are classified as politically connected if (i) they have at least one director who once served as a government servant, (ii) their business owners have a personal relationship with politicians, (iii) at least one of the immediate family members of the

government leaders is a shareholder or serves as the firms' director and (iv) they are government-owned through Government-Linked Investment Companies (GLICs).

Political connection firms are identified in three ways. First, Wong and Hooy's (2018) data are cross-checked with their annual reports to ensure the existence of business ties and that the family members are still associated with the firms. Second, in identifying the former government servants, including police and military, that serve as directors on the board, data is obtained manually from firms' annual reports. Lastly, for the Government-Linked Companies (GLCs), this study manually checks the firms' annual reports to ascertain that one of the largest shareholders in the firms is one of the six government-linked investment companies (GLICs) in Malaysia, namely (i) Khazanah Nasional Berhad, (ii) Employee Provident Fund, (iii) Lembaga Tabung Angkatan Tentera, (iv) Lembaga Tabung Haji, (v) Permodalan Nasional Berhad, and (vi) Ministry of Finance.

The second test variable is female directorship. Thus study measured female directorship in two ways - the proportion of female directors and a critical mass of female directors. The proportion of female directors (*%FBOARD*) is measured by the total number of women directors divided by the total number of directors. For critical mass (*CMFBOARD*), following Joecks et al. (2012), this study computed the critical mass using 30 percent multiplied by the average board size. As the average board size for this study is 8.53 (smaller than Joecks et al.'s (2012), who recorded 11.45), the critical mass of 30 percent of female directors translates into a critical mass of two females. Thus, firms with two or more female directors will score 1, zero otherwise. This data is hand-collected from firms' annual reports.

### Independent control variables

This study control several variables that may influence the appointment of female executives. First, consistent with You (2021), this study controls for firm size (*LASSET*) measured by the natural log of total assets and predict a positive relationship between firm size and the appointment of female executives. This study also controls for firm performance (*ROA*) and predict a positive relationship. Next, this study predicts firms with higher leverage (*LEV*) are less likely to appoint female executives. It is argued that as older firms (*FAGE*) have less information asymmetry and uncertainty, they are less likely to manage earnings (Chiu et al., 2013). Therefore, this study predicts that older firms are less likely to appoint female executives as the firms already have sound governance. Lastly, this study predicts a negative relationship between board size (*BSIZE*) and the appointment of female executives. As larger boards are better at monitoring and governance (Upadhyay et al., 2014), this study predicts that they are less likely to appoint female executives as females substitute for weak governance (Adams & Ferreira, 2009).

## FINDINGS

### Descriptive statistics

Panel A of Table 2 shows the descriptive statistics of the dependent variable. Firms with female executives (*FEXEC*) represent 26.40 percent of the sample. The extended descriptive analysis of *FEXEC* shows that female CEOs (*FCEO*) represent three percent of the sample and female CFOs (*FCFO*) represent 25 percent of the sample. The result is slightly lower than that reported by Grant Thornton (2021), in which female CEOs and female CFOs are only 10 percent and 41 percent, respectively, based on the Top 100 public listed firms.

**Table 2: Descriptive statistics (2016-2020, n=450)**

		Mean	Std. Dev.	Min	Max	Median
Panel A: Dependent variable						
FEXEC		0.264	0.442	0.000	1.000	0.000
FCEO		0.030	0.170	0.000	1.000	0.000
FCFO		0.250	0.430	0.000	1.000	0.000

Panel B: Independent variables							
PCON			0.622	0.485	0.000	1.000	1.000
% FBOARD			0.209	0.133	0.000	0.571	0.220
CMFBOARD			0.451	0.498	0.000	1.000	0.000
Panel C: Independent Control Variables							
SIZE (RM'000)			44,657,710	114,590,873	143,471	856,860,000	8590,000
FSIZE			24.522	1.810	18.781	27.476	22.873
ROA			0.067	0.091	-0.258	0.600	0.050
LEV			0.666	0.853	0.000	5.154	0.850
AGE (YEAR)			25.991	14.21	4.000	63.000	24.000
FAGE			3.257	2.653	1.386	4.143	3.430
BSIZE			8.533	2.132	4.000	15.000	10.000

Please refer Table 1 for variables definition.

Panel B shows the descriptive statistics of the independent variables. PCON firms represent 62.20 percent of the sample. The highest proportion of female directors (*%FBOARD*) is 0.571, and the lowest is 0, indicating that some boards do not have females. Firms with a critical mass of female directors (*CMFBOARD*) constituted 45.10 percent of the sample. Panel C describes the control variables. For firm size, the highest total assets (*LASSET*) is recorded at RM856 billion (*ln* 27.476), and the lowest is RM143 million (*ln* 18.781). The lowest value of *ROA* is -0.258, and the highest is 0.600. The highest leverage (*LEV*) is 5.154, and the lowest is 0.000, indicating that some firms do not have debt. The oldest firm (*LFAGE*) is 63 (*ln* 4.143), and the average board size (*BSIZE*) is 8.533.

### Univariate analysis

Table 3 shows the univariate analysis of PCON and non-PCON firms regarding firm-level variables. This

study finds that the mean of *FEXEC* for PCON firms (0.235) is significantly smaller than non-PCON firms (*FEXEC* = 0.311). This indicates that PCON firms are less likely to appoint females as executives. However, PCON firms are more likely to have two or more female directors, larger in size, less profitable, younger and more leveraged, and have larger boards than non-PCON firms. This study also run the correlation analysis (untabulated for brevity). *PCON* is negatively correlated with the appointment of female executives, and *%FBOARD* is correlated positively with the appointment of female executives. In addition, leverage (*LEV*) and firm age (*LFAGE*) are negatively correlated with the appointment of female executives.

**Table 3: Univariate analysis between PCON and non-PCON firms (2016-2020, n=450)**

	PCON (n=280)		NON-PCON (n= 170)			
	MEAN	MEDIAN	MEAN	MEDIAN	t-test	Mann-Whitney
					p-value	p-value
Panel A: Dependent Variable						
FEXEC	0.235	0.000	0.311	0.000	<b>(0.076)</b>	
Panel B: Independent Test Variables						

%FBOARD	0.212	0.250	0.205	0.167	0.617	0.315
CMFBOARD	0.525	1.000	0.329	0.000	(0.000)	
Panel C: Independent Control Variables						
FSIZE (RM ‘000)	51,600,000	10,300,000	34,200,000	2,360,000	0.119	0.000
FSIZE	23.310	23.496	22.489	22.001	0.000	0.000
ROA	0.061	0.042	0.076	0.053	0.085	0.029
FAGE	25.507	24.000	26.764	23.000	0.363	0.213
LFAGE	3.056	3.178	3.163	3.135	0.061	0.193
LEV	0.725	0.466	0.566	0.239	0.055	0.000
BSIZE	8.867	9.000	7.982	8.000	0.000	0.000

Please refer Table 1 for variables definition. Significant p-values are bold. Chi-Square ( $X^2$ ) results are in parenthesis.

### Panel data logit analysis

Table 4 presents the baseline regression analysis. Columns 1 and 3 show that *PCON* firms are significantly negative with the appointment of *FEXEC* ( $-0.487$ ,  $z = -2.080$ ,  $p < 0.05$ ;  $-0.528$ ,  $z = -2.290$ ,  $p < 0.05$ ), indicating that *PCON* firms are less likely to appoint female executives. It is argued that having females as executives is an obstacle against resource diversion away from firms, usually practised by politically-connected firms (Bliss & Gul, 2012). Therefore, H1 is supported. Next, this study finds H2 is supported; Column 1 of Table 5 shows that *%FBOARD* is significantly positive with the appointment of female executives ( $2.177$ ,  $z = 2.460$ ,  $p < 0.01$ ), suggesting that firms with female directors are more likely to appoint female executives. The results demonstrate that the presence of female directors increases the likelihood of the appointment of female executives due to the belief that women tend to work with similar demographics and be more cooperative with each other than with men (Kunze & Miller, 2017; Tajfel & Turner, 1986).

This study also finds that the critical mass of female directors (*CMFBOARD*) (Column 3) is significantly positive with the appointment of female executives ( $0.533$ ,  $z = 2.050$ ,  $p < 0.05$ ), indicating that the critical mass of female directors increases the propensity of females to be appointed as firm executives. This result is similar to You (2021), who contends that when female directors achieve the critical mass, the spirit of supporting each other increases, thus encouraging them to pursue positive decision-making, including that related to the appointment of female CEOs. Hence, H3 is supported.

**Table 4: Baseline regression (2016-2020, n=450)**

	% FBOARD			CMFBOARD	
	1	2		3	4
INTERCEPT	-2.052	-2.053	INTERCEPT	-1.341	-1.895
	(-1.270)	(-1.270)		(-0.790)	(-1.110)
PCON	-0.487**	-1.301***	PCON	-0.528**	-1.144***
	(-2.080)	(-2.910)		(-2.290)	(-3.630)
%FBOARD	2.177***	-0.017	CMFBOARD	0.533**	-0.309
	(2.460)	(-0.010)		(2.050)	(-0.810)

%FBOARD*PCON		3.642**		CMFBOARD*PCON		1.355***
		(2.080)				(2.900)
FSIZE	0.155**	0.183***		FSIZE	0.149**	0.193***
	(1.950)	(2.320)			(1.840)	(2.410)
ROA	0.791	1.392		ROA	0.943	1.389
	(0.540)	(0.920)			(0.640)	(0.930)
LEV	-0.355**	-0.345**		LEV	-0.356**	-0.339*
	(-1.800)	(-1.650)			(-1.770)	(-1.580)
LFAGE	-0.638***	-0.669***		LFAGE	-0.629***	-0.672***
	(-3.130)	(-3.270)			(-3.110)	(-3.300)
BSIZE	-0.087*	-0.099**		BSIZE	-0.133***	-0.142***
	(-1.600)	(-1.810)			(-2.340)	(-2.470)
YR 2017	0.263	0.265		YR 2017	0.269	0.293
	(0.740)	(0.740)			(0.760)	(0.830)
YR 2018	0.245	0.217		YR 2018	0.286	0.293
	(0.690)	(0.610)			(0.810)	(0.830)
YR 2019	0.018	-0.004		YR 2019	0.059	0.044
	(0.050)	(-0.010)			(0.160)	(0.120)
YR 2020	0.100	0.089		YR 2020	0.157	0.153
	(0.270)	(0.240)			(0.430)	(0.410)
N	450	450		N	450	450
Wald chi2	27.890	30.98		Wald chi2	25.57	34.42
Pseudo R2	0.058***	0.067***		Pseudo R2	0.055***	0.070***

This table presents the result and z-statistics are (in paratheses). Please refer Table 1 for summary of operational definitions. \*\*\*, \*\*, \* denote significance at the 1%, 5% and 10% level, respectively (one-tailed).

Columns 2 and 4 of Table 4 present the results of the regression models that include the interaction term *PCON\*%FBOARD* and *PCON\*CMFBOARD* to test H4 and H5, respectively. The interaction term *PCON\*%FBOARD* is significantly positive with *FEXEC* (3.642,  $z = 2.08$ ,  $p < 0.05$ ). Similarly, *PCON\*CMFBOARD* is significantly positive with *FEXEC* (1.355,  $z = 2.900$ ,  $p < 0.01$ ). The results demonstrate that female directors in PCON firms can mitigate PCON firms to appoint females as executives. As female directorship is one of the corporate governance mechanisms, females tend to appoint female executives who share the same value to instil sound governance and ethical values considering that PCON firms have poor governance and are less ethical (Kamarudin et al., 2021; Abdul Wahab et al., 2017). Overall, these results support H4 and H5.

As for the control variables, as predicted, *FSIZE* is positively and significantly affects *FEXEC*, indicating that larger firms are more likely to appoint female executives. Consistent with the prediction, the results show *LEV*, *LFAGE*, and *BSIZE* are significantly negative with female executives' appointments. However, *ROA* is insignificant with *FEXEC*.

## Endogeneity: Propensity score-matching

To eliminate the differences in firm-specific factors, as in Rosenbaum and Rubin (1983), this study constructs a propensity score-matched sample of treatment (PCON firms) and control (non-PCON firms). Therefore, this study includes an exclusion restriction of auditor quality (measured by Big 4 and non-Big 4 firms) in the regression models. This study includes auditor quality because it is related to firm political connection and female directorship, which is the independent variable test. For instance, Husnin et al. (2016) find that political connection is related to auditor quality. Additionally, female directors' presence increases the likelihood of the appointment of Big4 auditors (Alfraih, 2017). However, auditor quality is not related to the appointment of female executives. This study runs the logistic regression on PCON firms on all the control variables, including the year effect and exclusion restriction (audit quality). Finally, the propensity score obtained from the logistic is used to perform the 5-nearest-neighbours approach. Propensity score matching yields a matched sample consisting of 200 observations: 86 treatment (PCON firms) and 114 control cases (non-PCON firms). This study then re-run the regression using the sample.

**Table 5: Endogeneity: Propensity score-matching (2016-2020, n=200)**

	%FBOARD			CMFBOARD	
	1	2		3	4
INTERCEPT	-1.504	-2.346	INTERCEPT	-0.913	-1.887
	(-0.580)	(-0.880)		(-0.360)	(-0.730)
PCON	-0.823**	-2.306***	PCON	-0.854***	-1.560***
	(-2.310)	(-2.920)		(-2.430)	(-3.050)
%FBOARD	2.013*	-0.747	CMFBOARD	0.654**	0.088
	(1.480)	(-0.430)		(1.660)	(0.190)
%FBOARD*PCON		6.875**	CMFBOARD*PCON		1.582**
		(2.270)			(2.180)
Control variables	Included	Included	Control variables	Included	Included
Industries and Year effect	Yes	Yes	Industries and Year effect	Yes	Yes
N	200	200	N	200	200
Wald chi2	17.49	19.85	Wald chi2	17.49	21.31
Pseudo R2	0.095*	0.119**	Pseudo R2	0.097*	0.118**

This table presents the result and z-statistics are (in paratheses). Please refer Table 1 for summary of operational definitions. \*\*\*, \*\*, \* denote significance at the 1%, 5% and 10% level, respectively (one-tailed).

Columns 1 and 3 of Table 5 show that *PCON* is significantly and negatively related to *FEXEC* (-0.823,  $z = -2.310$ ,  $p < 0.05$ ; -0.854,  $z = -2.430$ ,  $p < 0.01$ ). Additionally, *%FBOARD* (2.013,  $z = 1.480$ ,  $p < 0.10$ ) and *CMFBOARD* (0.654,  $z = 1.660$ ,  $p < 0.05$ ) is significantly positive with the appointment of female executives. In Columns 2 and Column 4, that is when the interaction term of *%FBOARD\*PCON* (6.875,  $z = 2.270$ ,  $p < 0.05$ ) and *CMFBOARD\*PCON* (1.582,  $z = 2.180$ ,  $p < 0.05$ ) is included, the results remain consistent with the main analysis. The evidence suggests that female directors influences PCON firms to appoint female executives.

## Additional analysis

### Types of political connection

This study's primary test uses the overall definition of political connection firms. In this section, this study classifies them into four types. The classification enables us to understand further the types that determine the appointment of female executives. The classification is according to Wong and Hooy (2018) as follows: (i)

firms have at least one director who once served as a government servant (BOD), (ii) firms' business owners have a personal relationship with politicians (BIZ), (iii) immediate family members of the government leaders are shareholders or serve as firms' director (FAMILY), and (iv) firms that are government-owned through Government-Linked Investment Companies (GLICs), known as GLCs.

**Table 6: Types of PCON and appointment of female executives (2016-2020, n=440)**

	%FBOARD				CMFBOARD			
	1	2			3	4		
INTERCEPT	-2.482*	-2.836**		INTERCEPT	-1.611	-2.655*		
	(-1.540)	(-1.790)			(-0.960)	(-1.580)		
BOD	-0.433**	-1.242***		BOD	-0.508**	-1.276***		
	(-1.680)	(-2.560)			(-2.010)	(-3.560)		
BIZ	0.202	-1.398		BIZ	0.167	-0.303		
	(0.380)	(-0.880)			(0.310)	(-0.520)		
FAMILY	OMITTED			FAMILY	OMITTED			
GLC	-0.739**	-2.356***		GLC	-0.714**	-1.539**		
	(-2.150)	(-2.760)			(-2.060)	(-2.280)		
%FBOARD	2.459***	-0.040		CMFBOARD	0.591**	-0.392		
	(2.660)	(-0.030)			(2.180)	(-1.050)		
%FBOARD*BOD		3.676**		CMFBOARD*BOD		1.735***		
		(1.840)				(3.240)		
%FBOARD*BIZ		8.889		CMFBOARD*BIZ		1.679		
		(0.950)				(1.060)		
%FBOARD*FAMILY			OMITTED		CMFBOARD*FAMILY		OMITTED	
%FBOARD*GLC		5.942**		CMFBOARD*GLIC		1.542**		
		(2.260)				(2.100)		
Control variables	Included	Included		Control variables	Included	Included		
Industries and Year effect	Yes	Yes		Industries and Year effect	Yes	Yes		
N	440	440		N	440	440		
Wald chi2	32.02	36.13		Wald chi2	28.28	40.47		
Pseudo R2	0.059***	0.073***		Pseudo R2	0.056***	0.079***		

This table presents the result and z-statistics are (in paratheses). Please refer Table 1 for summary of operational definitions. \*\*\*, \*\*, \* denote significance at the 1%, 5% and 10% level, respectively (one-tailed).

Columns 1 and 3 of Table 6 show the regression analysis results using political connection type. However, *FAMILY* is omitted from the regression analysis because of the collinearity issue. This study finds that *BOD* is significantly negative with the appointment of female executives in Column 1 ( $-0.433, z = -1.680, p < 0.05$ ) and Column 3 ( $-0.508, z = -2.010, p < 0.05$ ). This is because politically connected directors are more likely to divert resources away from the firms (Bliss & Gul, 2012). However, female executives can become obstacles due to their ethical and risk aversion behaviour. Therefore, BODs' demand for the appointment of females as executives is low. This study also finds *GLC* is significantly negative with the appointment of female executives in Column 1 ( $-0.739, z = -2.150, p < 0.05$ ) and Column 3 ( $-0.714, z = -2.060, p < 0.05$ ). The results demonstrate that *GLCs* are less likely to appoint females as executives, although female CEO/CFOs would improve earnings quality (Barua et al., 2010; Zalata et al., 2019) as *GLCs* are often not motivated to report high-quality earnings (Kamarudin et al., 2021). However, *BIZ* is insignificant with *FEXEC*, indicating that the personal relationship between firms' leaders and politicians does not matter as far as the appointment of female executives is concerned.

Column 2 of Table 6 shows that when the proportion of female directors (*%FBOARD*) interact with *BOD* ( $3.676, z = 1.840, p < 0.05$ ) and *GLC* ( $1.753, z = 3.240, p < 0.01$ ), the results are significantly positive, indicating that the proportion of female directors can influence *BODs* and *GLCs* to appoint female executives. Similarly, when using the critical mass of female directors (*CMFBOARD*), the result in Column 4 of Table 6 shows the result is significantly positive when *CMBOARD* interact with *BOD* ( $5.942, z = 2.260, p < 0.05$ ) and *GLC* ( $1.542, z = 2.100, p < 0.05$ ).

#### Female independent directors vs female executive directors

To understand which female directors drive the appointment of female executives, this study separates female directors into female independent directors (*FBINED*) and female executive directors (*FEXEC*). Table 7 shows the results of the regression analysis. Contrary to Gupta and Raman (2014), who find that female independent directorship positively influences the appointment of female CEOs, this study finds no such association. However, this study finds the presence of female executive directors (*FBEX*) is significantly positive with the appointment of female executives ( $8.937, z = 5.760, p < 0.05$ ). This is because female executive directors are firm employees. As they are involved with the day-to-day operations, they would engage more with the executives, especially the CEO and CFO, than the female independent directors. Hence, the "gender spillover" and "female helping female" effect could be stronger for female executive directors to appoint females as a CEO/CFO.

Additionally, in Column 2, this study finds that when *FBINED* interacts with *PCON*, there is a weak positive significant relationship with the appointment of female executives ( $2.833, z = 1.280, p < 0.10$ ). Similarly, the interaction term of *FBEX\*PCON* is significantly positive with the appointment of female CEOs/CFOs ( $5.926, z = 1.67, p < 0.05$ ). The findings suggest that compared to female independent directors, female executive directors play a more significant moderating role in the relationship between *PCON* firms and the appointment of female executives. Therefore, the results provide strong empirical evidence on executive female directors' role in appointing female executives in politically connected firms.

**Table 7: Female independent or executive directors (2016-2020, n=450)**

	1	2
INTERCEPT	-5.656***	-5.469***
	(-3.250)	(-3.100)
PCON	-0.892***	-1.483***
	(-3.360)	(-3.340)

FBINED	-1.398	-2.909**
	(-1.250)	(-1.810)
FBEX	8.937***	4.829**
	(5.760)	(1.640)
FBINED*PCON		2.833*
		(1.280)
FBEX*PCON		5.926**
		(1.670)
Control variables	Included	Included
Industries and Year effect	Yes	Yes
N	450	450
Wald chi2	50.42	50.34
Pseudo R2	0.110***	0.116***

This table presents the result and z-statistics are (in paratheses). Please refer Table 1 for summary of operational definitions. \*\*\*, \*\*, \* denote significance at the 1%, 5% and 10% level, respectively (one-tailed).

## CONCLUSION

This paper examines the determinants of the appointment of female executives. This study focuses on institutional-level factors, particularly firm political connections. This study also focus on the influence of female directors using their proportion and critical mass as a measure. In light of the emergence of female executives in Malaysia, this study examines whether PCON firms and female directors are determinants of the appointment of female executives. Moreover, this study interacts female directorship with PCON and examines if the interaction influences the appointment of female executives.

The results show that PCON firms are less likely to appoint female executives. Further analysis shows that the results are driven by two types of PCON, namely BOD and GLC. The findings also provide evidence that the presence of female directors, whether the percentage or critical mass, increases the likelihood of the appointment of female executives, and female executive directors drive the results. The presence of female directors drives politically connected firms to appoint females as executives. Further analysis shows that female independent directorship interacts with female executive directorship to influence PCON firms to appoint female executives. However, female executive directors play a more significant moderating role than female independent directors.

Overall, the results broaden the understanding of the institutional environment, especially on the influence of PCON firms on the appointment of female executives, as previous studies focus on firm and individual-level factors. The results also add to the understanding that female directors influence the appointment of female executives. Lastly, the results broaden the understanding of the appointment of female executives; when female directorship is used as a moderator, politically connected firms are more likely to appoint female executives. In sum, the findings demonstrate that firm political connection and female directorship influence female executives' appointments. Therefore, the results inform the government to encourage and influence political connection firms, especially those through the individual directors (BOD) and government-link companies (GLC), to appoint females as executives. The results also suggest that more women should be appointed as directors in political connection firms because the findings show that the presence of female directors improves the appointment of female executives in political connection firms.

Additionally, the findings serve as feedback to the government that female directors, who bring the "gender spillover" and "female helping female" effects, could facilitate the government to achieve its policy in

increasing the number of female participants at the executive level. Moreover, because the issue of appointing female executives is related to ethicality, which is the right thing to do, female directors who are more ethically sensitive are more likely to pursue this issue by encouraging the board to appoint female executives. Therefore, one approach to ensure the increase in female executives is by encouraging more females to sit on the board. For the practitioners, the findings suggest that the presence of female directors is crucial in signalling firm female-friendliness and in hiring female executives.

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### **List of political connection firms**

1. Frontken Corporation Berhad
2. MY E.G. Services Berhad
3. Malaysian Resources Corporation Berhad
4. MMC Corporation Berhad
5. Cahya Mata Sarawak Berhad
6. Mega First Corporation Berhad
7. Genting Berhad
8. IJM Corporation Berhad
9. MISC Berhad
10. Malaysian Pacific Industries Berhad
11. UMW Holdings Berhad
12. Genting Malaysia Berhad
13. Malaysia Airports Holdings Berhad
14. Timedotcom Berhad
15. AirAsia Group Berhad
16. UEM Sunrise Berhad
17. Petronas Chemicals Group Berhad
18. Sunway Berhad
19. Sapura Energy Berhad
20. FGV Holdings Berhad
21. Tenaga Nasional Berhad
22. Gamuda Berhad
23. Maxis Berhad
24. Astro Malaysia Holdings Berhad
25. Dialog Group Berhad
26. Padini Holdings Berhad
27. Axiata Group Berhad
28. Hap Seng Consolidated Berhad
29. Hartalega Holdings Berhad
30. IOI Corporation Berhad
31. Petronas Dagangan Berhad
32. Petronas Gas Berhad
33. Sime Darby Berhad

34. Telekom Malaysia Berhad
35. Bermaz Auto Berhad
36. British American Tobacco (Malaysia) Berhad
37. DRB-Hicom Berhad
38. Duopharma Biotech Berhad
39. Genting Plantations Berhad
40. Heineken Berhad
41. Hong Leong Industries Berhad
42. IGB Real Estate Investment Trust
43. Inari Amertron Berhad
44. Matrix Concepts Holdings Berhad
45. QL Resources Berhad
46. Scientex Berhad
47. S P Setia Berhad
48. Westports Holdings Berhad
49. Yinson Holdings Berhad
50. YTL Corporation Berhad
51. YTL Hospitality REIT
52. YTL Power International Bhd
53. Hong Leong Bank Berhad
54. CIMB Group Holdings Berhad
55. Malayan Banking Berhad
56. RHB Bank Berhad
57. AMMB Holdings Berhad
58. AEON Credit Service (M) Berhad