MODERATING ROLE OF GENDER DIVERSITY OVER THE NEXUS BETWEEN BOARD CHARACTERISTICS AND EARNINGS MANAGEMENT IN MALAYSIA

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FACULTY OF BUSINESS AND ACCOUNTANCY
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DISSERTATION SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF ACCOUNTIONG

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ABSTRACT

In a large number of studies, it has been found that accounting manipulation is more prone to exist among the financially distressed companies. The manipulation moves were taken by the top management to portray a rosy picture of the firm's financial performance by using the earnings management approach. This opportunistic behaviour of top management is due to the management reward system of a company that is grounded on the company's financial performance. The top management misleads the stakeholders with the help of the earnings management approach, by taking advantage of asymmetric information available to the stakeholders. This opportunistic behaviour of the top management receives a large attention due to the absence of effective corporate governance mechanisms, which points to the failure of the Board of Directors (BODs) in controlling the top management. Against this backdrop, this study examines the relationship between board characteristics and earnings management in Malaysia.

In examining the behaviour of the board of directors around the globe, it is intriguing to note that researchers find that female directors behave in a more ethical way than their male counterparts. Previous studies document that higher ethical behaviour of female directors helps them to provide a better supervision and their risk-averse nature triggers them to put a high level of effort into monitoring management activities. Taking into consideration this factor, this study further investigates the moderating effect of gender diversity over the relationship between board characteristics and earnings management.

Using a sample of 1965 firm-year observations of the companies that are listed on the Malaysia Stock Exchange (Bursa Malaysia Berhad) from 2014 to 2018, this study finds no significant influence of board independence on earnings management. In addition, the study finds that increasing the number of members in the BODs results in further increases in the level of earnings management. On a stark contrast, Chief Executive

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Officer (CEO) duality which is referred to as the condition whereby the CEO also serves as the firm's board chairman appears to result in a significant decrease in the level of earnings management. Accordingly, an increase of female percentage in independent directorship and board membership apparently reduces the level of earnings management. However, this research finds no significant moderating effect of gender diversification on the relationship between the board structure to earnings management.

The findings of this study provide a rather robust estimation of earnings management practices in Malaysia and the nature of board characteristics, i.e. (Board Independence, Board Size, and Board Structure) in influencing the earnings management behaviour. This study shows that the presumption from the *"Agency Theory"* fails to illustrate that the board characteristics are effective in reducing earnings management. However, this study finds that gender diversity moderates the relationship of board independence and board size with earnings management. This implies that the findings correspond with the presumption in *"Gender Socialization Theory"*. Furthermore, the findings are likely to help the policymakers to come up with regulations that will help to ensure increasing gender diversity among the members of BODs.

Key Words: Corporate Governance, Board Characteristics, CEO Duality, Earnings Management, and Gender Diversity.

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ABSTRAK

Dalam sebilangan besar kajian, didapati bahawa manipulasi perakaunan lebih cenderung berlaku di kalangan syarikat yang mengalami masalah kewangan. Pergerakan manipulasi diambil oleh pengurusan atasan untuk menggambarkan gambaran prestasi kewangan syarikat dengan menggunakan pendekatan pengurusan pendapatan. Tingkah laku oportunis pengurusan atasan ini disebabkan oleh sistem ganjaran pengurusan syarikat yang berdasarkan prestasi kewangan syarikat. Pengurusan atasan menyesatkan pihak berkepentingan dengan bantuan pendekatan pengurusan pendapatan, dengan memanfaatkan maklumat asimetri yang tersedia untuk pihak berkepentingan. Tingkah laku oportunis pengurusan atasan ini mendapat perhatian besar kerana ketiadaan mekanisme tadbir urus korporat yang berkesan, yang menunjukkan kegagalan lembaga pengarah dalam mengendalikan pengurusan atasan. Dengan latar belakang ini, kajian ini mengkaji hubungan antara ciri lembaga dan pengurusan pendapatan di Malaysia.

Dalam meneliti tingkah laku dewan pengarah di seluruh dunia, sangat menarik untuk diperhatikan bahawa penyelidik mendapati bahawa pengarah wanita berkelakuan lebih beretika daripada rakan lelaki mereka. Kajian terdahulu membuktikan bahawa tingkah laku etika yang lebih tinggi dari pengarah wanita membantu mereka untuk memberikan pengawasan yang lebih baik dan sifat mereka yang menghindari risiko memicu mereka untuk melakukan usaha yang tinggi dalam memantau aktiviti pengurusan. Dengan mengambil kira faktor ini, kajian ini seterusnya menyiasat kesan penyederhanaan kepelbagaian jantina terhadap hubungan antara ciri lembaga dan pengurusan pendapatan.

Dengan menggunakan sampel pemerhatian tahun-tahun 1965 syarikat-syarikat yang tersenarai di Bursa Saham Malaysia (Bursa Malaysia Berhad) dari tahun 2014 hingga 2018, kajian ini tidak menemui pengaruh yang signifikan terhadap kebebasan lembaga pengarah terhadap pengurusan pendapatan. Di samping itu, kajian mendapati bahawa

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peningkatan bilangan anggota dalam lembaga pengarah mengakibatkan peningkatan dalam tahap pengurusan pendapatan. Sebaliknya, ketua pegawai eksekutif dualitas disebut sebagai syarat di mana ketua pegawai eksekutif juga berperanan sebagai ketua lembaga syarikat nampaknya mengakibatkan penurunan yang signifikan dalam tahap pengurusan pendapatan. Oleh itu, peningkatan peratusan wanita dalam jawatan pengarah bebas dan keanggotaan lembaga pengurangan nampaknya mengurangkan tahap pengurusan pendapatan. Walau bagaimanapun, penyelidikan ini tidak menemui kesan penyederhanaan gender yang signifikan terhadap hubungan antara struktur lembaga dengan pengurusan pendapatan.

Penemuan kajian ini memberikan anggaran praktik pengurusan pendapatan di Malaysia yang agak kuat dan sifat ciri lembaga, iaitu (Kebebasan Lembaga, Ukuran Papan, dan Struktur Papan) dalam mempengaruhi tingkah laku pengurusan pendapatan. Kajian ini menunjukkan bahawa anggapan dari "Teori Agensi" gagal menggambarkan bahawa ciri-ciri lembaga berkesan dalam mengurangkan pengurusan pendapatan. Walau bagaimanapun, kajian ini mendapati bahawa kepelbagaian jantina menyederhanakan hubungan kebebasan lembaga dan ukuran lembaga dengan pengurusan pendapatan. Ini menunjukkan bahawa penemuan tersebut sesuai dengan anggapan dalam "Teori Sosialisasi Gender". Tambahan pula, penemuan ini mungkin dapat membantu para pembuat dasar untuk membuat peraturan yang akan membantu memastikan peningkatan kepelbagaian gender di kalangan anggota BOD.

Kata Kunci: Tadbir urus Korporat, Karakteristik Papan, Dualitas Ketua Pegawai Eksekutif, Pengurusan Perolehan, dan Kepelbagaian Jantina.

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LIST OF SYMBOLS AND ABBREVIATIONS

BODs: Board of Directors.

CEO: Chief Executive Officer.

KLCI: Kuala Lumpur Composite Index.

IMF: International Monetary Fund.

MCCG: Malaysian Code on Corporate Governance.

CG Priorities: Corporate Governance Strategic Priorities.

CG Monitor: Corporate Governance Monitor.

FSMP: Financial Sector Master Plan.

CMP: Capital Market Master Plan.

PLCs: Public Listed Companies.

MASB: Malaysian Accounting Standard Board.

IFRS: International Financial Reporting Standards.

MFRS: Malaysian Financial Reporting Standards.

VIF: Variance Inflation Factor.

FGLS: Feasible Generalized Least Squares.

EM1: Performance-Adjusted Modified-Jones Model Discretionary Accrual.

EM2: Performance-Matched Modified-Jones Model Discretionary Accrual.

Inde: Board Independence.

Bsize: Board Size.

BS: Board Structure.

FD: Female Director.

R&D: Research and Development

Eq.: Equation.

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DEFINITIONS OF COMMONLY AND FREQUENTLY USED TERMS

Earnings Management: The act of "managing" the financial figures to reflect a better financial performance and hide the true and fair picture of a company (Perols and Lougee, 2011).

Corporate Governance Systems: A set of effective mechanisms that ensures the company is properly managed in the best interest of stakeholders (Kumari and Pattanayak, 2014).

Board Independence: Percentage of independent directors among the members of BODs.

Board Size: Number of directors on the BOD.

CEO Duality: Both the roles of a board chairperson and a CEO are performed by the same person.

Female Director: Percentage of female directors among the members of BODs.

Inde_FD: Standardized value of board independence multiplied by the standardized value of female director.

Bsize_FD: Standardized value of board size multiplied by the standardized value of female director.

BS_FD: Standardized value of board structure. i.e. CEO duality multiplied by the standardized value of female director.

LnSales: Natural logarithm of the annual sales from main operations.

LnAssets: Natural logarithm of firms' total assets.

LnGrow: Natural logarithm of the sum of the market value of equity and the book value of debt scaled by the book value of total assets.

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CHAPTER 1. INTRODUCTION

1.1. Background of The Study

Earnings are one of the most commonly stated indicators for a firm's performance. Hence, investors are familiar with the fact that accounting earnings carry information about the firm's values. Financial statements convey all the useful information for shareholders, creditors, lenders, investors, and the government to make valuable economic decisions (Arioglu, 2020). Therefore, it is very important to portray the true and fair picture of a firm's financial statements. Otherwise, investors' confidence over the reported financial statements will be impaired if the investors get intentionally misguided through incorrect financial figures. Once the investors' confidence got compromised, then investors might be unwilling to make an investment in the stock market (Gull, Nekhili, Nagati, and Chtioui, 2018).

However, the management may depart from reporting the true and fair view when the results of the firm's performance are unfavourable or less favourable and then to report more favourable financial results they opportunistically use the financial reporting strategies (Barac, Vuko, and Šodan, 2017). This opportunistic behaviour of portraying a rosy picture of the firm's financial condition by the management is because of their performance-based compensation, which is measured based on the financial performance of that firm (Stringer, Didham, and Theivananthampillai, 2011). This opportunistic behaviour of taking vital decisions by the management accordingly demonstrates that the management serves their own interest over the stakeholders, which consequently causes a conflict of interest with other stakeholders to arise. The concept of agency problem is derived from the conflict of interests between the contractual parties, which is the consequence of having different incentives among the parties. Accordingly, the agency problem leads to earnings management practices (Jensen, 1994). Based on this conflict of interest, the situation demands for effective mechanisms that will ensure the proper management of the managers to act in the best interest of stakeholders rather than serving their own interest. This set of effective mechanisms is

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called corporate governance systems (Kumari and Pattanayak, 2014). According to Kumari and Pattanayak, (2014), the managerial opportunistic behaviour is firmly dependent on the quality of corporate governance systems. Therefore, the opportunities for the management to manage the earnings reduce with more effective governance systems (Ibid). However, the effectiveness of corporate governance mechanisms got obstructed due to the political influence in Malaysia (Mohammad, Wasiuzzaman, and Salleh, 2016). For example, the Malaysian government takes reformative actions under the national economic policy to enhance the ethnic Malays' involvement in the Malaysian economy. In this regard, the ethnic Malays got appointed as independent directors on the boardrooms of Malaysian listed companies. These appointments of ethnic Malays are the consequence of their affiliation with the government rather than based on their capacity of deterring earnings management practices (Mohammad et al., 2016).

Few major corporate scandals (e.g. Enron Corporation, Lehman Brothers, WorldCom, Bernard L. Madoff Investment Securities, and Satyam Computer Services) conducted in the past (Terjesen and Sealy, 2016), demonstrated the lack of proper corporate governance practices, which was the consequence of inadequate board independence and lack of gender diversity in the board (Adams and Funk, 2012). In this regard, Adams, Haan, Terjesen, and Ees, (2015) addresses the importance of gender diversity in terms of academic and policy issues. According to Adams et al., (2015), optimal decision making is the consequence of a proper level of gender diversity in a boardroom, which is not possible if the policy for boardroom homogeneity is maintained. Therefore, the past reforms of board gender diversity have been done based on the cognitive, psychological, and physiological difference between men and women, which leads to the presumptions that exceptional experiences, expertise, perspectives, preferences, skills, talents, values, and work ethic can be added by the female directors to the boardrooms (Adams, 2016). Hence, it is assumed that increasing board gender

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diversity can act as a remedy in terms of abolishing or lessening the earnings management practices, which helps to boost investors' confidence (Gavious, Segev, and Yosef, 2012).

The absence of adequate gender diversity in corporate boardrooms is the consequence of having a lower percentage of female leadership in top positions like CEO and board directorship among developed countries, regardless of constituting a larger portion of the labour force (Adams, 2016). Therefore, enhancing the gender balance among corporate boardrooms remains a vital issue that continues to seek global concern. In 2007, only 0.4% of women serve as a board member in Japan, whilst the percentage of female representation in the board is at 8% in Europe, 9% in Canada, 11% in Australia, and 15% in the US, respectively. These figures show that despite the countries' status as developed countries, female directorship among the major corporations in these developed nations is still significantly low (Adams and Ferreira, 2009). According to the New York Times report in 2006, there were only nine female CEOs among the Fortune 500 firms in the US, which not even 2% of the total (Creswell, 2006). However, in the years 2011 and 2012 this percentage increases up to 2.4% and 4% respectively, but still, these figures are way lower compare to the overall female presence in the workforce, i.e. 46.3% (Bhatti, 2012; Dizik, 2011). In 2013 this percentage increases where 16.9% out of Fortune 500 board directorships were held by female directors but still the number of companies in the US with 25% or above female directors were less than one-fifth of total companies, whilst there were no female directors among one-tenth of the boardrooms (Arun, Almahrog, and Aribi, 2015). In the case of Malaysian listed companies, women were holding only 8% of the total board seats during the financial years from 2008 to 2011 (Abdullah and Ismail, 2016). However, the percentage of female directorship increases from 16.6% to 23.68% among the top 100 listed companies during the period from December 2016 to December 2018, while the increase is 12% to 15.59% for the 841 Malaysian listed companies (Securities Commission, 2019).

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With the help of mandatory or statutory board gender quotas, improving corporate governance and reformation of gender diversity in the boardroom has been observed in the past three decades (Adams, 2016; Terjesen, Couto, and Francisco, 2016). According to Adams, (2016) and Terjesen, Couto, and Francisco, (2016), these mandatory or statutory board gender quotas helped to significantly enhance the female representation in the boardrooms by enforcing female representation among the state-owned firms of 13 countries[1] and the listed firms of 10 countries.[2] In 2015, Germany adopted a bill (Adams, 2016) and in 2017, Malaysia brings amendments in the MCCG (Securities Commission, 2017) that mandate the large listed companies to have a 30% gender quota in their boardroom.

1.2. Problem Statement

A large number of researches demonstrate that accounting manipulation is more prone to exist in a financially distressed company (Shayan-Nia, Sinnadurai, Mohd-Sanusi, and Hermawan, 2017). According to the practice note 17 of the listing requirements published by Bursa Malaysia Berhad, (revised in 2019), a company shall be recognized as financially distressed, if the auditors expressed an adverse opinion on the financial statements of that company. Moreover, if the company is reported as a failure of making the payment of loans or credit facilities (Ibid). The "manipulation" moves were initiated to portray a rosy picture of the firm's performance using a subtle approach such as earnings management to prevent being caught (Ding, Zhang, and Zhang, 2007; Harris, Karl, and Lawrence, 2019).

[1] Quotas for state-owned firms - Austria, Denmark, Finland, Greece, Iceland, Ireland, Israel, Kenya, Poland, Slovenia, South Africa, Switzerland, and United Arab Emirates.

[2] Quotas for listed firms - Belgium, France, Germany, Iceland, India, Italy, Malaysia, Netherlands, Norway, and Spain.

In this regard, it is useful to highlight that even though earnings management refers to the act of “managing” the financial figures to reflect better financial performance, fraudulent reporting on the other hand represents a much more severe form of financial misconduct (Perols and Lougee, 2011). Internationally, renowned companies like; Enron Corporation, WorldCom, Bernard L. Madoff Investment Securities, and Satyam Computer Services are the few examples of corporate misconduct done by their top management. In an emerging economy context such as Malaysia, this issue is also whereby it is reported that significant evidence of committing fraud has been found among the Malaysian firms who managed earnings successively using accruals (Nasir, Ali, Razzaque, and Ahmed, 2018; Rahman, Sulaiman, Fadel, and Kazemian, 2016). The evidence presented in these studies points to the crucial issue of financial reporting misuse. The consecutive conviction by the top managers of these companies eventually raises an alarming concern for the quality of earnings (Ndofor, Wesley, and Priem, 2015; Shawver and Clements, 2014; Harris and Bromiley, 2007). In a similar vein, Lo, (2008) mentioned about the similarities among earnings management and earnings quality, where the quality of extremely managed earnings is low but the high-quality of earnings cannot be assured by only excluding earnings management. This is due to several other factors that are contributing to the quality of earnings.

Although earnings management practices are more “subtle” than outright fraudulent reporting, major corporate scandals around the world seriously reflected corporate governance failures. Accordingly, this reduces the integrity of accounting information available to the investors, which resulted in a fall in investors’ confidence over published company accounts (Cohen, Dey, and Lys, 2008; Ding et al., 2007). Since economic liberalization has taken place over the past decades, foreign direct and portfolio investment is becoming more important alongside the local institutional investors. Hence it has now become very crucial to re-examine the efficiency of the current governance system in order to bring changes if the situation demands (Farooque, Zijl, Dunstan, and Karim, 2007).

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The discussion above points out an increasing involvement of top management in terms of managing earnings and the failure of the BODs in controlling the top management. Therefore, the alarming concern of increasing managerial tendency to manage earnings in an attempt to prevent increases in negative earnings surprises leads this study to examine the effect of board characteristics over earnings management practices for Malaysian companies.

As previously mentioned, women are poorly represented on the board even in the context of developing nations. Lack of women representation results in lesser gender diversity in the board across the board. In this regard, it is interesting to note that according to the suggestions of behavioural, ethical, and social role based theories, on average, women are more ethical compare to men in terms of making ethical judgments (Adams and Funk, 2012; Lund, 2008). Moreover, altruism, conservatism, independence, objectivity, responsibility, and risk-aversion are the hard skills of female directors that give an advantage over male directors. Also, when it comes to monitoring the executives, apparently, the female directors do this job more intensely than the male directors (Croson and Gneezy, 2009). Accordingly, related to the corporate governance and the earnings management issue, existing literature points to an imperative portrayal of gender diversity in moderating the relationship between board characteristics and earnings management (e.g., El-Mahdy, 2014; Harris et al., 2019; Ittonen, Vähämaa, Vähämaa, 2013; Na and Hong, 2017; and Saona, Muro, and Alvarado, 2020). Studies like, Abbott, Parker, and Presley, (2012); Ho, Li, Tam, and Zhang, (2015); and Srinidhi, Gul, and Tsui, (2011) for example, suggested a well gender diversified board is capable of lessening the level of managerial opportunistic behaviour that leads to earning management practices.

Therefore, relating to the issue of corporate governance, this study also proposes to examine the effect of gender diversity in board characteristics over the quality of earnings. Hence, this study will investigate the moderating effect of gender diversity over the nexus between board characteristics and earnings management in Malaysia, which is a multicultural

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society and where women have equal chances and opportunities like men to further their education to the highest level and career advancement accordingly (LIM, 2019). In addition, the strong political influence over the corporate environment in Malaysia, which restricts the complete impact of corporate governance regulations in Malaysian listed companies (Mohammad et al., 2016) is another reason for sampling Malaysian listed companies in this study to investigate the phenomenon.

The following two sections further outline the research objectives and questions that drive this study.

1.3. Research Objectives

Based on the issues presented in the problem statement, the research objectives for this study are set as follows:

- To examine the association between board characteristics and earnings management in Malaysia.
- To investigate the moderating role played by gender diversity, between board characteristics and earnings management.

1.4. Research Questions

Research questions are consequently raised from the earlier discussion of the problem statement and this is shown below.

1. What is the impact of a Malaysian firm's board characteristics over the earnings management practices?
    - Does an increase in the proportion of independent director, effectively decreases earnings management practices?
    - Does an increase in the number of directors on a board, effectively decreases earnings management practices?

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- Does the duality function of CEO and Board Chairman role significantly increase earnings management?

2. What is the role that female leadership in a Malaysian firm has over the nexus between board characteristics and earnings management?

   - Does female leadership in a Malaysian firm moderate the relationship between board characteristics and earnings management?

1.5. Significance of the Research

Top management is assigned by the shareholders to make vital decisions and act on their behalf. However, the top management could also behave in a way that serves their own interest over the shareholder's (Parker, Dressel, Chevers, and Zeppetella, 2018) which is addressed by the *"Agency Theory"*. Therefore, BODs act as the representatives of stakeholders to invigilate the management activities to ensure the protection of stakeholder's interests (Saona et al., 2020). Using the *"Agency Theory"*, this study attains the first research objective. In terms of attaining the second research objective, this study employs *"Gender Socialization Theory"*, as the risk-taking and ethical attitude of female directors differ from their opposite gender, and according to Adams, (2016) and Harris et al., (2019), female directors prioritize more on work ethic which subsequently helps in abolishing or lessening the earnings management practices. In this study, the *"Gender Socialization Theory"* works as an extension of *"Agency Theory"* (Base Theory) to examine its moderating effect.

The findings of previous studies produced a mixed outcome and therefore this phenomenon inconclusive. For example, the findings of Braiotta, Gazzaway, Colson, and Ramamoorti, (2015); Cunha and Piccoli, (2017); Gulzar and Zongjun, (2011); Iraya, Mwangi, and Muchoki, (2015); and Saona et al., (2020) exhibits the acceptance of *"Agency Theory"* as an effective solution of earnings management. However, the findings of Abdul-Manaf, Amran, and Zainol-Abidin, (2014); Ghosh, Marra, and Moon, (2010); Jamaludin,

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Sanusi, and Kamaluddin, (2015); Rahman and Ali, (2006); and Zgarni, Halioui, and Zehri, (2014) shows otherwise, rejecting the presumption contained in the *"Agency Theory"* in this phenomenon. Therefore, the results of these studies further demonstrate that chances exist for theory improvement as well as explaining this phenomenon in the light of different theories.

In this regard, the reason for conducting this study is to find out the latest scenario of this phenomenon from the Malaysian perspective and to explain the finding using possible, applicable, and appropriate theories. As per the existing literature (El-Mahdy, 2014; Harris et al., 2019; Ittonen, Vähämaa, Vähämaa, 2013; Na and Hong, 2017; Saona, Muro, and Alvarado, 2020) which use the *"Gender Socialization Theory"* to point to an imperative moderating effect of gender diversity over this particular phenomenon, this study also adopts this theory to explain whether gender diversity plays a significant role in moderating the relationship between board characteristics and earnings management.

1.6. Summary

This chapter explained the background of earnings management incidence and the influence of board characteristics in these incidences. Moreover, an important aspect of gender diversity over this influence of board characteristics on earnings management incidence is further described. The problem statement is then raised out of the concern regarding the failure of BODs in controlling the increasing involvement of top management in terms of managing earnings. Based on the problem statement and the existing literature that points to an imperative portrayal of gender diversity in this regard, the research questions are then raised. Following the research questions, this chapter clearly states the research objectives to find the answer to the research questions. Lastly, the significance of this research is then explained in this chapter.

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1.7. Chapter Organization

Having discussed the background of this study, problem statement, research questions, research objectives, and significance of this research, this study is constructed and proceeds in the following manner. The next chapter, i.e., chapter 2 discusses the relevant literature on earnings management by relating it to board characteristics and the role of gender diversity in this phenomenon. Following that the third chapter describes the development history of corporate governance in Malaysia and the importance of corporate governance mechanisms. The fourth chapter exhibits the development of the conceptual framework and hypotheses based on the literature review. The fifth chapter illustrates the research design, sample selection, empirical models, variable measurement, data collection, and data analysis. Consequently, the sixth chapter reported the research findings based on the data analysis. In the seventh and last chapter, the results are discussed by relating them to the findings of similar studies and the theoretical contribution along with practitioner and policy implications. This study ends with a conclusion by summarizing the findings, limitations faced, and suggestions for future studies. Accordingly, following this structure, the subsequent chapter, (i.e., Chapter 2) provides a discussion on past literature relating to the studies in this area.

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CHAPTER 2. LITERATURE REVIEW

2.1. Introduction

In this chapter, the relevant literature will be reviewed in an attempt to identify the main research issues from global perspectives. Accordingly, these research issues are then formulated to accomplish the research objectives of this study. Thereupon, the literature on earnings management is reviewed and the *"Agency Theory"* is then introduced on section 2.3 and discussed its connection with the relationship between board characteristics and earnings management. Following that, section 2.4.1 – 2.4.3 addresses the studies from previous literature on the relationship between board characteristics and earnings management in the light of *"Agency Theory"*. Also, the *"Gender Socialization Theory"* is then introduced on section 2.5 and discussed its connection with the moderating effect of gender diversity over the relationship between board characteristics and earnings management. After that, the literature review is extended and to include the moderating effect of gender diversity over this relationship, section 2.7 – 2.8 addresses the studies from previous literature in the light of *"Gender Socialization Theory"*. Moreover, this chapter also relates theories on the direct effect and the moderation effect as well to gain an insight into the research issues presented in the problem statement in Chapter 1.

2.2. Earnings Management

A brief definition of earnings management is manipulating the reported earnings of a company by hiding the truthful representation of that company's financial position (Gavious et al., 2012). There are three incentives that lie behind the reason for managing earnings, firstly, to meet or beat the forecasted income analysis, secondly, to improve last year's earnings, and thirdly to prevent reporting losses. Cohen et al., (2008) documented these motives as the most important and most significant reasons that specifically induce the earnings management behaviour. Similarly, if managers fail to achieve a predetermined earnings target for a particular year, then they delay the revenues and report it for the

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following year, which is an opportunistic manipulation of the situation and this manipulation is known as income smoothing, i.e. another form of earnings management (Jensen, Murphy, and Wruck, 2004)

According to Gavious et al., (2012), earnings management is commonly practiced by making the choices of discretionary accounting approach. Therefore, the firms that were not even close to meeting the predetermined benchmarks of profits and earnings increase or perhaps missing the benchmarks, had a significantly higher level of discretionary accruals. The Generally Accepted Accounting Principles (GAAP) permits various accounting choices and therefore earnings management can be performed by altering the accounting approaches, e.g. changing the asset acquisition timing and its nature, without violating the roles of GAAP (Teoh, Welch, and Wong, 1998). The legal limit of making accounting choices is not clearly posted due to several choices of presenting the company's income, hence it gives flexibility to the management to select the way they want to report the earnings being within the GAAP (Jamaludin, Sanusi, and Kamaluddin, 2015). The author exhibits an example of an accounting choice made by the management to show the company's good performance, i.e. adopting a longer depreciable life for a machine to lesser the depreciation cost which will maximize the income and share price of the company for future periods. According to Healy and Wahlen, (1999), this judgmental approach by the managers is the conception of earnings management towards reporting a predetermined performance of the company to mislead the stakeholders. Therefore, earnings management is the reason behind the rising information gap between management and shareholders, resulting in declining shareholders' capital (Abad, Lucas-Pérez, Minguez-Vera, and Yagüe, 2017).

According to Saona et al., (2020), purposeful interference of top management in the reporting system to gain personal benefits can be acknowledged as earnings management and this opportunistic behaviour receives large attention due to the absence of effective corporate governance mechanisms. In this regard, Dichev, Graham, Harvey, and Rajgopal, (2012) and

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Harris et al., (2019) add that such incidence happens as managers are more inclined towards striving to achieve the firm's short term performance instead of focusing on the long-term performance. According to Stringer, Didham, and Theivananthampillai, (2011), the reason for this behaviour is attributed to the management reward system of a company which is grounded on the company's financial performance. Consequently, the management is inclined towards meeting the financial goals, regardless of how the financial rewards are determined - directly or indirectly based on the company's accounting outcomes. Failing to accomplish the goals will adversely affect the managers' personal interests, thereby inducing the managers to manage earnings resultantly (Jamaludin et al., 2015).

The following section shall introduce the *"Agency Theory"* and link its connection with earnings management.

2.3. Agency Theory

"Agency Theory" addresses the conflict of interest between the principal and the agent. The management acts as an agent, who has been assigned by the principal (shareholders) to make decisions and act on their behalf. Asymmetric information exists, since the management as the agent is better informed than the shareholders who are the principal. The conflict of interest arises when the agent takes vital decisions that serve their own interest over the principal's (Parker et al., 2018). According to Saona et al., (2020), managers might be induced by their utility seeking nature and better serve their own interest rather than maximizing the shareholders' wealth. As the managers are managing the earnings to gain their personal benefits at shareholders' cost, hence, earnings management can be addressed as an agency cost (Davidson, Jiraporn, and Nemec, 2004).

In a study, 90% of top executives are reported by Gaver, Gaver, and Austin, (1995) to have bonus and equity-based compensation and they make earnings management decisions based on these two compensations (Gong, Li, and Yin, 2019). Hence, the opportunistic

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manipulation of accounting numbers by the management is the consequence of that company's poor financial performance that increases agency costs (Saona et al., 2020). According to the *"Agency Theory"*, one of the most important duties of a company is to monitor its management (Arioglu, 2020). Therefore, corporate governance with improved mechanisms acts as an effective solution to resolve differences amongst shareholders and managers' interests (Mohamad, Abdurrahman, Keong, and Garrett, 2020).

Having explained earnings management and *"Agency Theory"*, the subsequent section dedicates further explanation on board characteristics and their association with earnings management. Board characteristics as a part of corporate governance are important to be studied in the light of *"Agency Theory"* in this regard because of their significantly direct impact on earnings management founded on what the previous studies reported.

2.4. Board Characteristics and Earnings Management

In corporate governance, the conflict of interest that exists between shareholders and the management is generally addressed by the traditional agency approach. As a part of corporate governance, the board of directors mainly act as the representatives of stakeholders, where their major role is to invigilate the management activities in order to confirm that the stakeholder's interests are protected (Saona et al., 2020). In this regard, there are few responsibilities that are assigned to the BODs, namely, monitoring top management activities, fixing up their pay, and inspecting the financial reporting procedure. Despite the general delineation of the BOD's responsibilities, in actual fact, there are vast differences of board structures around the globe; although the recent globalization trends and incorporation of financial markets could influence companies to adopt a more or less similar board structure (Ghosh, Marra, and Moon, 2010).

Accordingly, board characteristics have a significant effect on financial reporting quality (Farber, 2005) and according to Huang and Hilary, (2018), it generates better firm

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performance. Consequently, an ideal composition of a boardroom is the key to maintain good corporate governance. Therefore, following Saona et al., (2020) and Kumari and Pattanayak, (2014) this study identifies three important characteristics of a board that exhibits a vital influence in earnings management namely, board independence, board size, and board structure. The relationship between these three board characteristics and earnings management is being discussed as follows.

2.4.1. Board Independence

According to Saona et al., (2020) and Fama and Jensen, (2008) external directors are the ones who play a more effective role compared to inside directors in terms of invigilating the management and policy directives. This happens because the outside directors take vital decisions in other firms. Therefore, they are further concerned about the reputation they hold in the managerial labour market which induces their effectiveness than the insiders. Braiotta, Gazzaway, Colson, and Ramamoorti, (2015) further added that outside directors hold greater expertise compared to the affiliated directors, as they are likely to be more objective. Hence a board is assumed to be more independent with the presence of more outside directors. Even the corporate governance regulations in many jurisdictions like; for example "*Sarbanes–Oxley Act*", (promulgated in 2002) in the United States, "*UK Corporate Governance Code*" which is outlined by the Financial Reporting Council, (released in 2014) in the United Kingdom and Corporate Governance Guidelines by Canadian Securities Administrators (pronounced in 2015) in Canada presume that the board can be more effectively monitored with the presence of more external directors (Saona et al., 2020). According to the agency approach, independent directors act as a potential governance system in lessening the agency costs that arise due to the separation of ownership and control (Saona et al., 2020). The findings of a study on Spanish listed firms by Pucheta-Martínez and García-Meca, (2014), provides evidence of the more effective influence of independent directors compared to other board of directors in ensuring high-quality financial information. Similarly, the findings of

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previous empirical studies like; Braiotta et al., (2015); Fama and Jensen, (2008); and Saona et al., (2020) also shows the chances of managing earnings decreases with the increase of independent directors in the board, which helps to confirm the better quality of financial information.

However, the results from Ghosh et al., (2010) suggested an insignificant effect of any proportionate change of independent directors over earnings management. In line with this, an empirical study conducted by Fadzilah, (2017) on 184 Malaysian family-owned firms, exhibits the ineffectiveness of board independence in terms of lessening earnings management. Whereas, the findings of Jamaludin, Sanusi, and Kamaluddin, (2015) on Malaysian Government-Linked Companies (GLCs) shows greater earnings management with the proportionate increase of independent directors on boards. In a similar vein, Johari, Saleh, Jaffar, and Hassan, (2009) mentioned about the mandator composition of one-third independent director in the Malaysian boardroom required by the Malaysian Code on Corporate Governance (MCCG). According to Johari et al., (2009), 33.3% of independent directorship is not enough for Malaysian firms to effectively monitor and reduce the earnings management practices. Thus, the above findings refuted the claims of the effective influence of independent directors ensuring better quality financial information.

In light of the above discussion, a conclusion can be drawn that the findings of previous studies on board independence and earnings management relationship are mixed. Hence, the relationship needs to be examined to draw a conclusive result of these inconclusive findings.

2.4.2. Board Size

In monitoring the management Jensen, (1993) believes, that a streamlined board is more effective. He further explained that as the number of directors on the board increases, the inferior communication and extensive decision-making process increases as well, which eventually overcomes the benefits of a bigger board. Likewise, Forbes and Milliken, (1999)

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mentioned that higher bureaucracy costs are related to an increase in the board size. Consequently, due to the existence of coordination problems among the board members, a bigger board produces difficulties for the effective use of knowledge and skills. In contrast, having a smaller board appears to be more beneficial in terms of making more dynamic decisions on time to effectively discourage the opportunistic behaviour of the management. Hence, smaller board of directors successfully reduces earnings management (Forbes and Milliken, 1999). In this regard, a study conducted by Abdul-Manaf, Amran, and Zainol-Abidin, (2014) show the existence of higher accounting conservatism among the Malaysian firms with small board size that works effectively in reducing earnings management level. Consistent with these views, previous studies like; Karamanou and Vafeas, (2005); Xie, Davidson, and Dadalt, (2003); Yermack, (1996); and Zgarni, Halioui, and Zehri, (2014) also claimed that the smaller boards are effective in reducing earnings management through efficient monitoring of financial reporting oversights. Whereas, the findings of Chen, Firth, Gao, and Rui, (2006) on China and Jamaludin et al., (2015) on Malaysian GLCs show no significant influence of increasing board members in reducing earnings management. Likewise, Fadzilah, (2017) suggested no impact of increasing board size in lessening the earnings management practices for Malaysian family-owned companies. However, a study conducted by Rahman and Ali, (2006) based on 100 top companies listed on Bursa Malaysia Main Board exhibits an increase in earnings management due to the increasing board members.

With an opposite viewpoint Cunha and Piccoli, (2017); Ghosh et al., (2010); and Saona et al., (2020), further contended that an increasing number of board directors also increases the chance of having more directors, who are knowledgeable and experienced in financial reporting and audit committee. According to them, a bigger board increases the chance of having more experienced professional independent directors who play a much more effective role in terms of lessening earnings management. Similarly, the findings of Byard, Li, and Yu,

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(2011); Chiu, Teoh, and Tian, (2013); García-Meca and Sánchez-Ballesta, (2009); and Shah, Butt, and Hasan, (2009) also shows that with increasing board size, the level of earnings management declined significantly.

The above discussed mixed outcome of the findings from previous studies shows that the relationship between board size and earnings management is inconclusive and needs to be re-examined.

2.4.3. Board Structure

Another key area of concern to make sure good corporate governance is the CEO duality that has a huge impact over the board as a monitoring system (Saona et al., 2020). Having the CEO duality for a company means that both the roles of the board chairperson and the CEO is performed by the same person. In this regard, it is important to note that the role of the chairperson of a board is to monitor the CEO (Jensen, 1993). Henceforth, it is not possible that the chairperson can perform both the functions – i.e. as a member of the board of directors as well as monitoring the CEO without conflicts of interest (Ibid). As a result, it constrains the board's independence that makes the monitoring system becomes useless and derives towards inferior corporate governance (Bliss, 2011).

The opportunistic accounting approaches are practiced by CEOs to exhibit upward trending earnings that help to maximize their bonus compensation (Das, Hong, and Kim, 2013) and increases the stock price, which consecutively maximizes their equity-based compensation (Beneish and Vargus, 2002). In line with this, according to (Gong et al., 2019), CEOs might inflate the earnings with the help of earnings management to maximize their compensations. Thus, to monitor the CEO and carry out all other critical responsibilities of the board and to be efficient enough, it is crucial to ensure that the position of chairperson and CEO is performed by two separate persons. According to the *"Agency Theory"*, having a CEO duality reduces the board monitoring effectiveness and the transparency of mandatory

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disclosures. Hence, it prefers non-duality in the case of well-performing firms to vigilantly monitor the management (Dechow, Sloan, and Sweeney, 1996).

Similarly, the evidence from a study on Shanghai and Shenzhen stock exchanges listed firms by Gulzar and Zongjun, (2011), suggested a significant effect of separation among CEO and Chairman roles to lessen the level of earnings management. Whereas, the findings of studies by Zouari, Lakhal, and Nekhili, (2012) and Iraya, Mwangi, and Muchoki, (2015) consecutively in France and Kenya shows that increasing CEOs with dual roles in the listed companies also increases earnings management. parallel to these findings, Jensen, (1993) suggested a positive relationship between CEO duality and earnings management.

In a stark contrast, the findings of a study conducted on Malaysian companies by Rahman and Ali, (2006) exhibit a negative but insignificant relationship between CEO duality and earnings management. In line with this finding, Johari et al., (2009) suggested no influence of CEO duality on earnings management practices among the Malaysian firms. In this regard, the empirical findings of Fadzilah, (2017), reported no significant impact of CEO duality on earnings management among the family-owned companies in Malaysia. In a similar vein, the findings of Saona et al., (2020) reveals a comparable scenario of CEO duality for the Spanish listed companies. The study shows that the level of earnings management decreases with the presence of CEO duality among the Spanish listed companies. Consequently, the findings of Ghosh et al., (2010) also reported an increase in earnings management with the separation of the CEO role board chairman role. Hence, the findings of these studies rejected the claims of increasing board monitoring effectiveness and decreasing the level of earnings management due to the separation of roles of the CEO and Chairperson.

Collectively, the findings from former studies that examine the relationship of board structure and earnings management show mixed results as evident in the above discussions. Apparently, most of the research (e.g., Damak, 2018; Fan, Jiang, Zhang, and Zhou, 2019; Gull et al., 2018; Harakeh, El-Gammal, and Matar, 2019; Kouaib and Almulhim, 2019; Saona

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et al., 2020; Sial, Chunmei, and Khuong, 2019; and Zalata, Ntim, Choudhry, Hassanein, and Elzahar, 2019) recently done in this area applies *"Agency Theory"* due to the comprehensive presumption of this theory that offers a better explanation of the relationship between board characteristics and earnings management. Accordingly, the presumption of this theory turns out to be most accurate in the majority of the cases. However, still, there are studies (e.g., Abdullah and Ismail, 2016; Damak, 2018; Fadzilah, 2017; Ghosh et al., 2010; Jamaludin et al., 2015; Rahman and Ali, 2006; and Saona et al., 2020) that shows results that go against the presumption of *"Agency Theory"*. Based on these inconclusive results presented by the previous literature, this study employs *"Agency Theory"* as a theory that has been predominantly applied in this research area to re-examine the relationship between board characteristics and earnings management.

The following section shall introduce the *"Gender Socialization Theory"* and link its connection with the *"Agency Theory"*.

2.5. Gender Socialization Theory

According to the *"Gender Socialization Theory"*, gender roles are prescribed throughout childhood and with the help of social norms, it is reinforced over time. Hence, men and women carry different values, attitudes to the workplace, and ethical views (Dawson, 1992). In compliance with the above statements Roxas and Stoneback, (2004) added that ethical decision making, communication skills, and leadership styles differ between males and females. The *"Gender Socialization Theory"* suggests quality improvement of earnings with the presence of females in the top positions and their risk-taking and ethical attitude that differs from the opposite gender (Harris et al., 2019). In this regard, Kaplan, Pany, Samuels, and Zhang, (2009) and Kouaib and Almulhim, (2019) suggested that women pursuing higher ethical standards compare to men, makes them more cautious and risk-averse in nature. According to Adams and Ferreira, (2009), this risk aversion nature might decrease a firm's financial performance, whereas, males are mostly focused on profit maximization to support

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their career development at any cost (Betz, O'Connell, and Shepard, 1989). However, the leadership style of a woman is different from men and they are more inclined toward providing support to others (Betz et al., 1989). Abad et al., (2017); Lakhal, Aguir, Lakhal, and Malek, (2015); and, Pan and Sparks, (2012) mentioned that, female directors are more prone towards the reduction of information asymmetry and they are not inclined towards attaining unethical personal benefits. Therefore, the presence of female directors in the boardroom is related to a lower level of earnings manipulations (Ibid).

According to the presumptions of *"Agency Theory"*, effectively monitoring the management is one of the most important duties of a company (Arioglu, 2020). In this regard, Previous studies like; Adams and Ferreira, (2009); Adams, Hermalin, and Weisbach, (2010); Ishak, Amran, and Manaf, (2016); Srinidhi et al., (2011) suggested gender diversity as an effective corporate governance in terms of monitoring the management. Therefore, based on the presumptions of *"Gender Socialization Theory"*, boardroom gender diversity can enhance the board's monitoring power which helps to reduce the agency conflicts by complementing the *"Agency Theory"*.

2.6. Gender Diversity

According to the literature in business ethics, when it comes to morality the females are more ethical in comparison to the males (Deshpande, Joseph, and Prasad, 2006). With this particular view, interestingly gender diversity gets more relevant attention in the business world and as well as in the academic world over recent years. Therefore, an increasing number of researches illustrate the importance of gender in terms of business ethics and risk-taking behaviours, which eventually have an impact on the firm value (Clikeman, Geiger, and O'Connell, 2001). In the context of making valuable financial decisions for companies, an extra cautiousness is being shown by women due to having higher ethical standards (Kouaib and Almulhim, 2019). The author also mentioned the risk aversion nature of women along with managing higher financial reporting quality towards improving firm performance.

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However, Adams and Ferreira, (2009) find a decrease in firm performance as a consequence of women's risk aversion nature, but at the same time, corporate governance improved with the increasing presence of female directors, as they behave more ethically. According to Betz, O'Connell, and Shepard, (1989), there are differences between males and females which is significant in terms of dealing with financial matters where females tend to provide support to others and males are mostly focused on the maximization of profit that helps them in career development. Therefore, to make personal profit, males are more inclined towards violating corporate laws and policies that are related to expense reports.

The fundamental rights of equal involvement of men and women in the decision-making processes were mentioned in a report on equality between both genders in the European Union by the European Commission (2018), which demonstrates the fairness of good governance practices. In the context of Spain, Reguera-Alvarado, Fuentes, and Laffarga, (2017) pointed that specific provisions contained in the country's governance regulations stipulated that a minimal female presence is ensured by keeping at least 40% and a highest 60% of both gender quotas in the boardrooms to increase the board gender diversity. In line with Reguera-Alvarado et al., (2017), García-Izquierdo, Fernández-Méndez, and Arrondo-García, (2018) provided the empirical evidence of good corporate governance practices in the Spanish listed companies due to the increase of female directors. Similarly, the findings of Faccio, Marchica, and Mura, (2016) is an example of female leadership where firms have a higher possibility of survival compared to other firms due to lower leverage and less unstable earnings. All these findings might be explained by the result signifying the arrogance shown by the male executives in corporate decision making compare to female executives (Huang and Kisgen, 2013).

The existing literature portrays the effect of gender diversity on board characteristics and earnings management in a very interesting manner and the next two sections will review this effect.

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2.7. Gender Diversity on Board of Directors

Due to the global trend of increasing corporate gender diversity, boards are getting pressurized to have female directors in the boardroom (Ahern and Dittmar, 2012). However, several studies demonstrated the consequences of board gender diversity, where the empirical evidence is contradicting. Studies that encourage gender diversity, argue that increasing boardroom gender diversity enhances the board's monitoring power (Adams and Ferreira, 2009) which, in turn, reduces agency conflicts (Adams, Hermalin, and Weisbach, 2010). Moreover, the findings of Adhikari, Agrawal, and Malm, (2019) exhibit robust evidence of firms adopting strategies that are less risky and litigation-prone, (i.e. aggressive investments in R&D and promotional campaigns), where the firms' boardroom have at least one female executive director. Then again, studies that discourage boardroom gender diversity, argues that it might consume additional time in the decision-making process (Ahern and Dittmar, 2012) and create greater difference in the team objectives (Petrovic, 2008) which, may turn the boardroom into an inefficient one Usman, Zhang, Farooq, Makki, and Dong, (2018).

Speaking of better financial reporting and more transparent disclosures, Gul, Srinidhi, and Ng, (2011) suggested a higher gender diversity in the board to enhance the discussions and decisions making quality of that board. In line with this, Ishak, Amran, and Manaf, (2016) also mentioned about the enrichment in the board's decision making process by the female directors in the boardroom. In a similar vein, Lara, Osma, Mora, and Scapin, (2017) finds empirical evidence of increasing board gender diversity that positively effect different aspects of financial reporting. However, the findings of Joecks, Pull, and Vetter, (2013) show a negative impact of board gender diversity over firm performance in general, but if a boardroom is consists of around 30% female directors then board gender diversity is associated with higher firm performance. In this regard, Betz et al., 1989; and Kaplan, Pany, Samuels, and Zhang, (2009), find that the strong morality and higher risk aversion nature of women restrict them from resorting to any immoral ways for financial gains. So, based on all

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these aspects of female directorship, gender diversity can be considered as an enhanced corporate governance control that positively effect the monitoring quality which decreases the agency conflicts (Ishak et al., 2016).

2.8. Gender Diversity on Earnings Management

As a part of corporate governance mechanisms, gender diversity in the boardroom is assumed to have the potentiality of abolishing or at least moderating the managerial tendency of commencing earnings management practices (Gavious et al., 2012). According to the author, gender diversity could help to improve the earnings quality, which will be beneficial for both current and potential shareholders to safeguard their interests. In this regard, several studies suggested a positive influence of gender diversity in the boardroom on earnings quality based on the empirical evidence, e.g. females are expected to apply more cautiousness (Arun, Almahrog, and Aribi, 2015); to have more risk aversion in nature (Barber and Odean, 2001); unlikely to portray immoral behaviour and make more ethical decisions (Kaplan, Pany, Samuels, and Zhang, 2009); unlikely to have involvement in fraud (Ho et al., 2015); to discourage opportunistic behaviour more (Krishnan and Parsons, 2008); to be more concerned about maintaining company reputation (Srinidhi et al., 2011) compare to male. In line with these studies, according to Bosquet, Goeij, and Smedts, (2014) and Rau, (2014) the information quality of financial reporting improves with the presence of female directors, as they are more risk-averse in nature compare to the male directors. Based on all these characteristics female directors are assumed to be more effective monitors (Srinidhi et al., 2011). According to Kaplan et al., (2009), compare to male counterparts, there are fewer chances of finding female directors' involvement in the incidence of fraudulent financial reporting. In this regard, Peni and Vähämaa, (2010) documented that gender-diverse boards are less involved in earnings management practices that mislead the shareholders and distract them from making economic decisions.

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In the light of *"Gender Socialization Theory"*, Harris et al., (2019) suggested better earnings quality with female presence in the top positions, which is the consequence of their risk-taking and ethical attitude differing with male counterparts. In terms of board independence, it gets stronger with the presence of female directors and improves the board's monitoring functions more effectively (Masulis and Mobbs, 2014). Moreover, the board's effectiveness could be enhanced by gender diversity to deal with various corporate issues. In line with this, Gull et al., (2018) find the above-mentioned enhancement in the boardroom is possibly the consequence of different ethical behaviour, risk-taking, and decision-making approach between men and women. According to the author, these differences could play a vital role in terms of enhancing earnings quality and countering earnings management practices, as the monetary and ethical dilemmas are involved in this matter. Consequently, Arun et al., (2015); Gull et al., (2018); and Srinidhi et al., (2011) suggested a negative impact of increasing board gender-diversity over earnings management activities.

According to Ittonen, Vähämaa, and Vähämaa, (2013), female board members are found to be more pronounced in terms of reducing earnings management due to their comprehensive moral behaviour with strong ethical values. The author empirically shows a decrease in the level of earnings management due to an increase in the proportion of female directors. Likewise, the findings of Saona et al., (2020) also show the significant effect of a proportionate increase of female members on the board that reduces the executive's earnings management capacity. An empirical study from the European context by Kouaib and Almulhim, (2019) suggested that the boards employ more gender diversity in terms of reducing earnings management. In this regard, the findings of Harakeh, El-Gammal, and Matar, (2019) on UK public companies show a lower level of earnings management due to an increase in the presence of female directors in the boardroom.

However, with an opposite viewpoint, Abdullah and Ismail, (2016) recommended no significant influence of women's presence in the boardroom on earnings management. This

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recommendation is based on the findings of their study conducted on listed companies in Malaysian. In line with this, Al-Absy, Ismail, and Chandren, (2019); and Ishak et al., (2016) shows no effect of female directorship over earnings management practices among Malaysian firms. In a similar vein, an empirical analysis that delves into this topic conducted by Harris, Karl, and Lawrence, (2019) produced mixed results. The authors contend that earnings management does not necessarily reduce by female CEOs. They further explained that female CEOs manipulate earnings on a much lesser scale compared to the male CEOs at a lower level of equity-based compensation, but eventually, both the gender shows greater earnings management behaviours at a higher level of equity incentives. To report a positive or increase in earnings, male CEOs use both aggressive discretionary accruals and real activities-based earnings management, while female CEOs do not (Na and Hong, 2017). Thus, the finding of El-Mahdy, (2014) suggested fewer chances of real activities-based earnings management by female CEOs compare to male counterparts. In a similar vein, Gull et al., (2018) suggested fewer chances of female CEOs to be associated with earnings management. Accordingly, the finding of their study shows that female CEOs are more prone towards reducing earnings management. This could be the consequence of their greater ethical leadership and higher conservative mindset, which emphasize the improvement of the internal control environment (Ho et al., 2015). In addition, this conservative mindset of female CEOs contributes to higher ethical financial reporting (Ibid).

In the light of theoretical presumptions surrounding this research area, the *"Agency Theory"* addresses the existence of asymmetric information between the management and shareholders, where the management is better informed and takes vital decisions to serve their own interest. In this regard, the findings of Abad, Lucas-Pérez, Minguez-Vera, and Yagüe, (2017) shows the beneficial effects of gender diversity in reducing the level of information asymmetries as well as explaining the findings against the backdrop of gender diversity subject matter in the Spanish corporate sector. Therefore, *"Gender Socialization*

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Theory" is also employed in this study to examine the moderating effect of gender diversity over the association between board characteristics and earnings management.

2.9. Summary

This chapter reviewed the literature that addresses the research questions and is relevant to the research objectives. Starting with a comprehensive literature review of earnings management, this chapter introduced the *"Agency Theory"* and discussed how it links the connection between earnings management and board characteristics by reviewing the literature on the relationship between three board characteristics and earnings management. Following that, the *"Gender Socialization Theory"* is then introduced and link its connection with the *"Agency Theory"*. This chapter ends by reviewing the literature related to gender diversity and its moderating effect on the relationship between board characteristics and earnings management.

The next chapter shall be discussing, the development of corporate governance in Malaysia and how it is important.

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CHAPTER 3. DEVELOPMENT OF CORPORATE GOVERNANCE IN MALAYSIA

3.1. Introduction

This chapter will discuss the development history of corporate governance in Malaysia. The discussion will start with the event of the financial crisis in the East Asian economy and how it triggered Malaysia to start recognizing the importance of corporate governance. Following that the importance of corporate governance and the corporate governance mechanisms in Malaysia will be discussed.

3.2. The Event of Financial Crisis

The discussion on the historical development of corporate governance in Malaysia should be started with the event of a financial crisis at the beginning of July in 1997, which was the consequence of the collapsing economy of East Asian countries from where it all commenced. This financial crisis put a huge concern for those countries, and the public and private sectors started recognizing the necessity of corporate governance in this regard. Initially, this financial crisis was commenced in Thailand where foreign investors lost their confidence due to the devaluation of the currency and started withdrawing their invested capital. From Thailand, the problems spread to its other neighbouring countries where, Indonesia, South Korea, Malaysia, and the Philippines got mostly affected (Zulkafli, Samad, and Ismail, 2005).

When this problem is transmitted in Malaysia, the country tries to restrain further devaluation. However, the attempts increased the interest rate at a higher level and caused credit decline. As a result, the output declined severely, and the corporate profitability decreased badly, which consequently reflected in a huge equity price drop. A drop of 72% in the Kuala Lumpur Composite Index (KLCI) was witnessed during the period starting from the end of June 1997 to the end of August 1998. Moreover, the higher interest rate and the

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crisis atmosphere caused real estate markets to decline quickly. Accordingly, in the real estate and construction sector, the banks who were financing the stock purchase got severely affected, as the banks had a huge exposure of loans in this sector (Zulkafli et al., 2005).

Different opinions were made on the reason behind this economic crisis. According to the International Monetary Fund (IMF) Staff, (2000), the crisis was the consequence of weak domestic policies where the domestic financial system was vulnerable. In this regard, The World Bank, (1998) considered too much lending and inadequate risk management as the weakness of the banking sector where, the loans were more focused on real estate development (IMF Staff, 2000). Moreover, a very limited investment in the enhancement of risk management technology is the consequence of poor corporate governance that is reflected through weak risk management (IMF Staff, 2000; and The World Bank, 1998).

The above-mentioned factors highlighted the causes of the crisis where the factors are disclosing a common element, which is poor governance in the Malaysian corporate sector. As a result, in the post-crisis period, Malaysia was found to promote corporate governance in its corporate sector actively in line with other east Asian economics (Zulkafli et al., 2005). Accordingly, actions were taken to enhance the characteristics like; transparency, fairness, accountability, and responsibility in terms of managing the organizations in a more effective manner. The next section shall discuss what is corporate governance and why it is so important.

3.3. Importance of Corporate Governance

A definition of corporate governance in Malaysia reported by the finance committee in 1999, stated that:

"Corporate governance is defined as the process and structure used to direct and manage the business and affairs of the company towards promoting business prosperity and corporate accountability with the ultimate objective of realising long-term shareholder

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value while taking into account the interest of other stakeholders" (Securities Commission, 2017, p.1).

The above definition specifies that the application of corporate governance is not limited to the concern of shareholders' interest but also put emphasis on the other stakeholders' needs. Consequently, a framework is provided by the corporate governance that controls a company's all kinds of mechanism in such a way that supports the process of the company's goal accomplishment. At the same time, it helps to prevent unwanted conflicts (Securities Commission, 2017). The report of MCCG published by the securities commission in 2017, mentioned that:

> *"The pillars of corporate governance such as ethical behavior, accountability, transparency, and sustainability are important to the governance of companies and stewardship of investors' capital. Companies that embrace these principles are more likely to produce long term value than those that are lacking in one or all"* (Securities Commission, 2017, p.1).

From this, the necessity of corporate governance can be understood, which is extremely important to enhance the companies' long-term value. Moreover, good governance is required to ensure that the rights and responsibilities are properly allocated to different individuals in the company. Accordingly, corporate governance is essential to define the decision-making, risk management, and internal control related rules and procedures (Securities Commission, 2017). Similarly, corporate governance is a vital component from an economic viewpoint in terms of gaining distribution efficiency by allocating scarce funds for investment projects that will deliver the maximum amount of returns. Where, at a given level of risk, the investments in the projects will be counted as efficient ones, when it will offer the highest return that exceeds the cost of invested capital (Zulkafli et al., 2005).

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In light of the above discussion, it can be stated that the crisis was the consequence of failure to regulate good corporate governance. Consequently, the crisis shows how the corporate sector fails to mobilize funds effectively (Zulkafli et al., 2005). Whereas effective corporate governance mechanisms act as an assurance of generating healthy returns for the investors, out of their investments in organizations and assuring the protection of that fund (Shleifer and Vishny, 1997). Therefore, the event of 1997's economic crisis raised the concern on corporate governance's effectiveness for corporate finance (Zulkafli et al., 2005).

It can be concluded that during the event of the financial crisis, the efforts were not sufficient to provide adequate protection on shareholder's investment, and therefore, this insufficiency reflected in value destruction of their investment. As a consequence of that, the finance committee introduced the MCCG and made it mandatory for the corporate sector to follow the code. The following section shall exhibit the evolution of corporate governance in Malaysia.

3.4. History of Corporate Governance in Malaysia

It all commenced in early 1998 with a comprised initiative of the Malaysian government and private industry that formed a world-class high-level finance committee on corporate governance (Alnasser, 2012). The committee was instructed to build a new corporate governance framework and come up with best practices that can be set as a standard for the industry (Salim, 2011). Sequentially, in March 1998, the finance committee established the Malaysian Institute of Corporate Governance (MICG), where the objective of the MICG was to increase understanding of good corporate governance practices in Malaysia (Alnasser, 2012). Later on, the finance committee published MCCG for the first time in March 2000, from where the corporate governance got significant recognition in Malaysia (Salim, 2011). Apparently, in most aspects, the features of MCCG are identical to the code of the UK, which is the consequence of borrowing a lot of knowledge from the code in the UK (Alnasser, 2012; Salim, 2011).

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In 2007, the MCCG was revised and several important amendments were brought into the code, which demonstrates the collective endeavour of the government and the industry (Securities Commission, 2007). The amendments were made to improve the BODs and audit committees to ensure the effective execution of their roles and responsibilities. Hence, the eligibility criteria for directors to be appointed, the boardroom and audit committee composition, the role and responsibilities of the audit committee, nominating committee, and independent director were specified in the revised code (Salim, 2011). In addition, the instructions for internal audit reporting were clarified and all Public Listed Companies (PLCs) were required to perform internal audit functions (Securities Commission, 2007).

In 2012, the MCCG was revised for the second time and amendments were brought accordingly that supersedes the code of 2007. The revision mainly concentrates on the improvement of bord structure and market discipline as well as the recognition of board directors' role as an effective and accountable fiduciary. In addition, the changes were made to foster better internalization of good corporate governance culture in Malaysia to enhance the corporate governance standards. Hence, it promotes a change in corporate governance culture to strengthen the trustworthiness factor in the relationship between companies and shareholders. Moreover, it instructed the board to establish a policy ascertaining the enhancement of boardroom gender diversity (Securities Commission, 2012).

In 2017, the MCCG was reviewed again and amendments were made accordingly, which supersedes the 2012 edition. This new edition comes up with new approaches for corporate governance culture to be internalized on a greater scale. The new amendments bring more emphasis and clarity on the expected consequences of each practice and provide guidance on how to apply the practices in companies. Subsequently, it shifted from the comply or explain an approach to apply or explain an alternative approach. Moreover, it suggests examples of practices that assist companies to achieve superiority. In addition, 30% of women's directorship in the boardroom becomes mandatory for large companies. Accordingly,

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companies need to disclose their policy on gender diversity in the annual report (Securities Commission, 2017).

In 2018, the Malaysian securities commission published Corporate Governance Strategic Priorities (CG Priorities). The CG Priorities is a result securities commission's extensive review on the status of corporate governance of Malaysian PLCs. This review is done on the basis of lessons taken from the recent failures of corporate governance as well as from the past. Moreover, the review includes domestic and international stakeholders' feedbacks, changes in market structure, and social, business and environmental needs. The reported five priorities are; improvement of corporate governance regulatory framework, enhancement of corporate governance ecosystem, fostering boardroom gender diversity adoption, embedding the necessity of good corporate governance culture among the youth and companies' life cycle, and technological advancement to monitor corporate governance practices and involvement of shareholder (Securities Commission, 2018).

In 2019, the Malaysian securities commission published the Corporate Governance Monitor (CG Monitor), which contains the analysis made by the securities commission based on their observation on the status of MCCG adoption on a yearly basis. Accordingly, the observation shows: more than 70% of listed companies adopted 27 best practices from the MCCG, 131 listed companies reported the remuneration of their top 5 senior management, Malaysian companies made constant progress in board gender diversity, 81% of CEOs of the top 100 listed companies received remuneration around RM10 million, 74% of the 841 listed companies adopted corporate governance practices that are 1 step up (Securities Commission, 2019).

Based on the above discussion, the development history of corporate governance in Malaysia is demonstrated through a flowchart in Figure 3.1 below.

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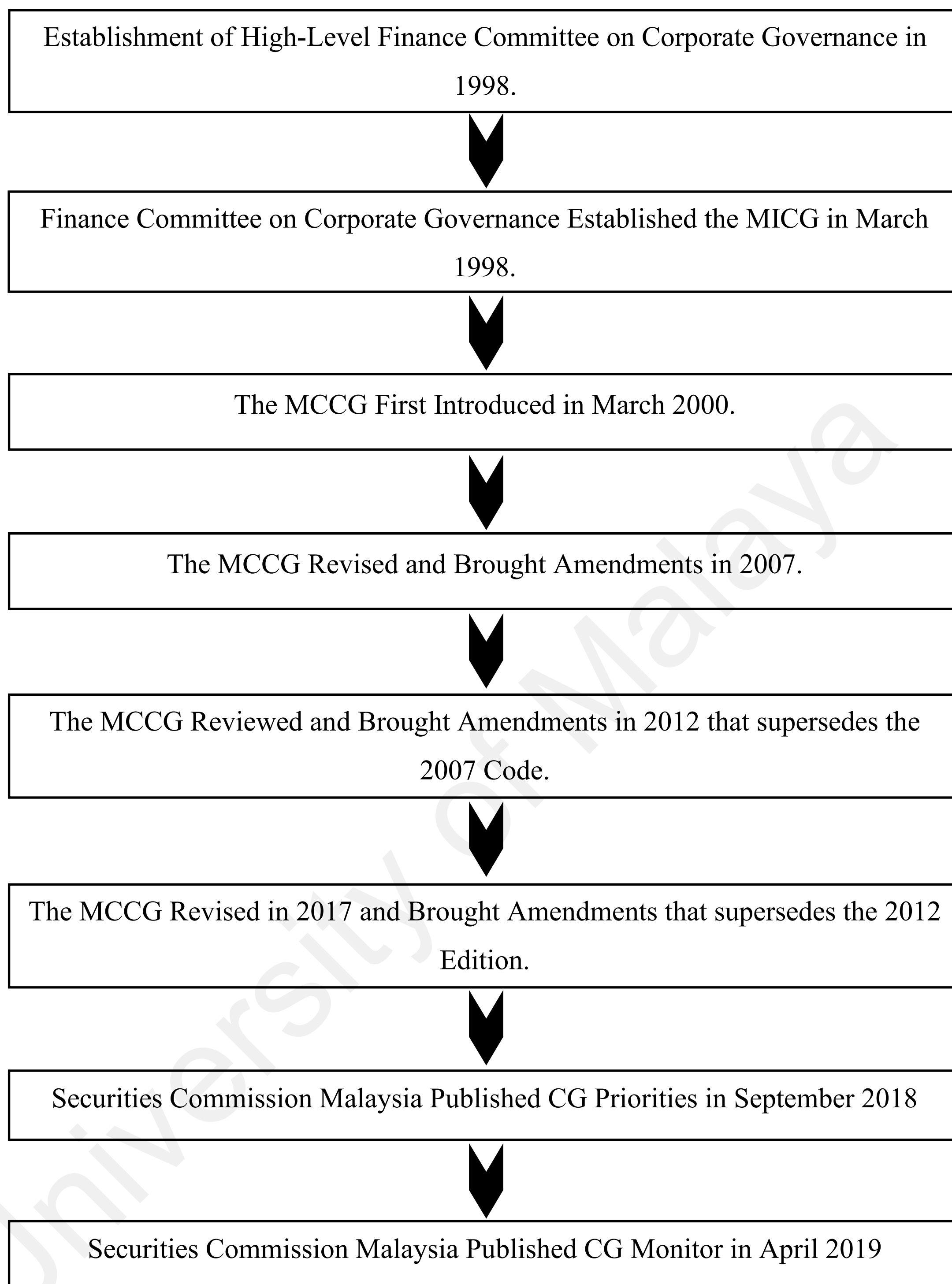

Figure 3.1: Development of Malaysian Corporate Governance

The discussion on MCCG development history exhibits that the amendments were made to ensure the standards of the MCCG to be aligned with internationally accepted best practices. Consequently, the primary objective of the MCCG is to maximize the shareholders' value and emphasis on the long-term interest of shareholders without

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compromising the interests of other corporate stakeholders. This primary objective mainly contributes to resolving the conflict of interest between top management and shareholders. From the development history of MCCG, it is observed that the boardroom gender diversity agenda was prioritized and strongly promoted with the second and third revisions of MCCG in 2012 and 2017, respectively. Considering the amendments being made in the MCCG, it can be concluded that the overall aim of the code is to increase transparency and accuracy of the information that helps investors to make a more informed decision. Additionally, the code increases transparency in governance and improvement in reporting financial performance that provides investor protection and enhances market confidence. The next section shall discuss the mechanisms of corporate governance in Malaysia.

3.5. Malaysian Key Corporate Governance Mechanisms

There are issues that were grounded on the MCCG published in 2000. The issues were related to the ideal composition of the board, criteria for appointment of new directors, setting the benchmark for directors' remuneration, and deciding the activities and responsibilities of board committees (Zulkafli et al., 2005). Therefore, the corporate governance mechanisms in Malaysia are the standard that engenders an ideal relationship between companies and their respective stakeholders (Alnasser, 2012). Apparently, there were three major sources that mainly plays the most important role to reform corporate governance in Malaysia. The sources are; MCCG published by the finance committee on corporate governance, Capital Market Master Plan (CMP) issued by the securities commission, and Financial Sector Master Plan (FSMP) released by bank Negara Malaysia on the financial sector (Zulkafli et al., 2005). Accordingly, these sources provided guidelines to develop the best corporate governance mechanisms and how they should be implemented. The following sub-sections shall discuss the different mechanisms of Malaysian corporate governance.

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3.5.1. Ownership Structure

Concerning the Malaysian corporate governance reform, in the banking sector, the FSMP restricts individual and family ownership. At the same time inside the ownership structure, emphasized more on the significance of institutional and foreign ownership (Alnasser, 2012). According to the guidelines in the CMP, ownership of foreign majority is permitted in the requirement of equity ownership of brokerage firms in the future. This happens due to a subsequent announcement where; 100 percent equity ownership of brokerage companies is permitted to be owned by foreign participants (Zulkafli et al., 2005). Accordingly, an announcement was made in March 2005 that provides permission to a foreign fund manager and five foreign brokers to start operating in Malaysia. Aberdeen Asset Management was the fund manager and the name of the five brokers were; Credit Suisse First Boston, JPMorgan Chase & Co, Macquarie, UBS, and CLSA (Alnasser, 2012). On the other hand, the FSMP fosters the institutional investor's ownership in the banking sector. In this regard, a historical fact was underlined that most of the institutions were either family-owned businesses or operated by renowned individuals (Zulkafli et al., 2005). Apparently, the suggestions were made depending on the ability of institutional investors where, they invest with the intent of making the banking institutions stronger and more dynamic (Alnasser, 2012). Therefore, to make sure the accomplishment of this objective, the maximum investment of individuals was restricted up to 10 percent at the same time this limit is 20 percent for institutions.

3.5.2. Independent Director

According to the MCCG and listing requirement of Bursa Malaysia, the terms of independent director means the director must be independent of the management and significant shareholders (Zulkafli et al., 2005). The amendments of the listing requirement of Bursa Malaysia in 2001, required at least one-third of the boardroom needs to be consist of independent directors (Alnasser, 2012). Based on their independent judgment, independent directors are more capable of mitigating conflict of interest that rises risks (Securities

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Commission, 2012). Therefore, in the amendments of MCCG in 2012, it is required that the majority of the board directors should be independent directors if the chairman of the board is not an independent director.

3.5.3. Board Size

According to the MCCG, the requirement on the size of the board depends on the impact of the board size on the board's effectiveness in Malaysia (Zulkafli et al., 2005). Consequently, a board can appoint any number of directors in the boardroom based on its effectiveness as the MCCG does not specify the maximum number of directorships. However, a limitation was made by the listing requirements of Bursa Malaysia in 2002 for any one person where an individual is not allowed to hold more than 15 non-listed companies' directorships and in the case of public listed companies' directorship, the number is not more than 10 (Alnasser, 2012). Companies should allow the board to get actively involved in mandatory functions and make more effective decisions (Ibid).

3.5.4. CEO Duality

The duty of a CEO is to concentrate on the business and manage the day to day activities of the company, while the board chairman is involved in guiding the board in controlling the management. Therefore, different individuals should play the role of board chairperson and CEO (Securities Commission, 2012). According to the MCCG in 2000, the balance of control and authority is required between the board chairperson and CEO so that no individual can get access to the unrestricted authority of decision making. Evidently, the separation of CEO and board chairperson role simplifies the responsibilities between them and enhance accountability accordingly (Securities Commission, 2012). The MCCG in 2000 suggests that the event of CEO duality should be induced by a solid unbiased factor and explained publicly.

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3.5.5. Board Activity

The MCCG advises a board to meet on a regular basis and the number of meetings held in a year needs to be disclosed along with the attendance of the directors (Alnasser, 2012). Apparently, there is no provision on the number of meetings to be held in a year, but the proposal is intended to provide a positive explanation of the companies' control over the board and it is less than four meetings annually (Zulkafli et al., 2005). In terms of board committees, the banking institutions are expected to create additional committees for the purpose of long-term improvement of corporate governance (Alnasser, 2012). The existing committees are audit, credit, and asset-liability committees, where the required additional committees are, nominating, risk management, and management development and compensation committees (Zulkafli et al., 2005). According to the MCCG and listing requirements of Bursa Malaysia, committees are required to deal with the matters related to directors' nomination, and compensation and remuneration. In addition, required to handle the internal control and the reliability of external audits (Ibid).

Coming to the remuneration of board directors, the MCCG suggested that the directors' responsibility and commitment need to be reflected through their remuneration and it must be appreciable (Alnasser, 2012). Classifying the directors' remuneration, executive directors' remuneration needs to be associated with the rewards on individual and corporate performance. Whereas the rewards are based on experience and responsibilities in terms of non-executive directors (Zulkafli et al., 2005). Accordingly, the details of each director's incentives are required to be reported in the companies' annual report (Ibid).

3.5.6. Financial Reporting

Investors are the key users of financial statements and their objective is to make economic decisions based on the prediction of an entity's future cash flows. Along with the investors, each stakeholder of an entity makes their key decisions depending on the financial statements. Therefore, it is very important to confirm the true and faithful representation of

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financial reporting. In this regard, the role of the financial reporting framework in Malaysia works as a guideline to ensure the fulfillment of each required criterion to prepare statutory financial statements for all registered companies in Malaysia. In order to improve the quality of disclosure in Malaysia, listed companies started reporting their financial information on a quarterly basis for the public, effective from August 1999 (Alnasser, 2012). This reporting includes income statement, balance sheet, and cash flow statement to be prepared by following the financial reporting standards published by the Malaysian Accounting Standard Board (MASB) (Ibid). The MASB was established on 1st July 1997 under the Financial Reporting Act 1997.

To keep pace with global development, the Malaysian accounting standards needed to be aligned with the International Financial Reporting Standards (IFRS). Therefore, the MASB introduced the Malaysian Financial Reporting Standards (MFRS), which was applicable starting from 1st January 2012 onwards. The MFRS ensures the alignment of Malaysian accounting standards with IFRS and regulations on financial reporting in Malaysia. Accordingly, the MFRS ensures the faithful representation of underlying economic events that helps the users to make key economic decisions.

3.6. Summary

This chapter exhibits the evolution of corporate governance in Malaysia and the importance of good corporate governance. In addition, the key amendments of the MCCG are also discussed briefly. Moreover, the chapter discussed the corporate governance mechanisms in Malaysia, where it finds the mechanisms are comprehensive and wide in range.

The following chapter shall provide a further discussion and exhibit the development of a conceptual framework and hypotheses based on the literature review.

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CHAPTER 4. CONCEPTUAL FRAMEWORK AND HYPOTHESIS

4.1. Introduction

This chapter will discuss and highlight the unsettling issue of mixed outcomes from the previous studies in examining the relationship between board characteristics and earnings management along with the inconclusive mixed findings of the literature on gender diversity. Moreover, the discussion will address the theoretical aspects of this phenomenon based on the theories that had been discussed previously in Chapter 2. Based on these discussions, the conceptual framework that postulates the various interrelationships is developed and further elaborated in this chapter. Accordingly, the sections in this chapter discuss the role of literature in the development of the conceptual framework, alongside the discussions surrounding the hypothesis development.

4.2. Conceptual Framework

In order to be designated as an independent director, an individual needs to be an external director who is independent of the influence of major shareholders and management (Zulkafli et al., 2005). Based on the presumption of the *"Agency Theory"*, independent directors are more effective invigilators of the management and policy directives, which act as a potential governance system in reducing the agency costs and thereupon reduce the earnings management (Saona et al., 2020). In this regard, the MCCG by Securities Commission, (in 2012) suggested the capability of independent directors in reducing the chances of conflict of interest between the shareholders and management. However, Rahman and Ali, (2006) raised an opposite viewpoint by stating the shortage of knowledge among the independent directors regarding the company's affairs which makes them ineffective in reducing earnings management. The author also highlighted the management's dominance over the board's matters which is responsible for the independent directors' failure to lessening the earnings management activities.

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In the case of bord size, Cunha and Piccoli, (2017); and Saona et al., (2020) recommended a bigger board to increase the chances of having more professionals with expertise in handling different board committees and financial reporting. Accordingly, this approach appears to play a much more effective role in monitoring the management and therefore reduces earnings management, which is in line with the presumption of the *"Agency Theory"* (Ibid). However, with an opposite viewpoint Forbes and Milliken, (1999); and Jensen, (1993) suggested a smaller board in terms of reducing earnings management effectively. Moreover, they mentioned about the higher bureaucracy costs and longer decision-making process of a bigger board that eventually reduces the efficiency of monitoring the management's opportunistic behavior (Ibid).

Another important characteristic of the board is CEO duality and speaking of its connection with conflicts of interest, Jensen, (1993) suggested that a chairperson of a board cannot perform the role of a CEO at the same time, as the board chairperson's role is to monitor the CEO. In line with this, Bliss, (2011) mentioned that a board chairperson who plays the role of CEO at the same time constrains the independence of a board that hampers the top management monitoring system and leads towards inferior corporate governance. Using this point as the basis of the presumption of the *"Agency Theory"*, any incidence of CEO duality accordingly reduces the board monitoring effectiveness and therefore significantly increases the level of earnings management practices (PATRICIA M. Dechow et al., 1996). However, Ghosh et al., (2010) disapproved these claims with their findings and show that the separation of CEO and board chairperson role eventually increases earnings management practices. In a similar vein, Saona et al., (2020) recommended CEO duality to reduce earnings management successfully.

All the above recommendations made by the respective studies, based on their findings on board characteristics and earnings management, mandate the requirement of ascertaining a conclusive result. Thus, it becomes essential to re-examine the relationship between board

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characteristics and earnings management in the light of *"Agency Theory"* to find out where this theory still explains the relationships at best or not. In this regard, it will be useful to examine the association between board characteristics and earnings management in Malaysia to find a conclusive result of these diverse findings.

With regards to the composition in the board of directors, Female directors are found to be more risk-averse in nature compared to the male directors (Kouaib and Almulhim, 2019). According to the presumptions of the *"Gender Socialization Theory"*, the comprehensive moral behaviour with strong ethical values and the risk-averse nature of female directors enhance greater earnings quality (Harris et al., 2019). Consequently, this significantly contributes to the reduction of earnings management (Gull et al., 2018). In this regard, El-Mahdy, (2014) and Na and Hong, (2017) suggested a lesser likelihood of earnings management practices by female directors compared to the male counterparts. In a similar vein, Ittonen et al., (2013) and Saona et al., (2020) show the significant effect of the proportionate increase of female members on the board that reduces earnings management. However, according to Harris et al., (2019), whenever it comes to a higher level of equity incentives, then the earnings management behaviours are equal among the male and female CEOs. Therefore, female CEOs do not certainly reduce earnings management (Ibid).

A mixed outcome from the findings of Gull et al., (2018); Harris et al., (2019); Kouaib and Almulhim, (2019); Na and Hong, (2017); and Saona et al., (2020) on the relationship between the presence of female directors in the board and earnings management suggest that the role played by gender diversity might moderate the relationship among board characteristics and earnings management. In addition, the presumptions of the *"Gender Socialization Theory"* enlighten this possibility for gender diversity to moderate the relationship between board characteristics and earnings management. However, the above-mentioned studies were conducted in the context of developed countries where women play a significant role (if not dominant) in monitoring the board. In this regard, it would be

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interesting to investigate the phenomenon in Malaysia, where, the amendments of MCCG in 2012 and 2017 precisely promoted the gender diversity agenda among Malaysian companies. Accordingly, enhancing the adoption of boardroom gender diversity was in the top five priorities of CG Priorities published by the Securities Commission, (in 2018). In Malaysia, many women receive equal opportunities in pursuing their studies and progressing in their careers, however, their role in corporate governance is still not clear and not well documented.

Based on these theoretical presumptions, the conceptual framework for this study is then presented in Figure 4.1 below.

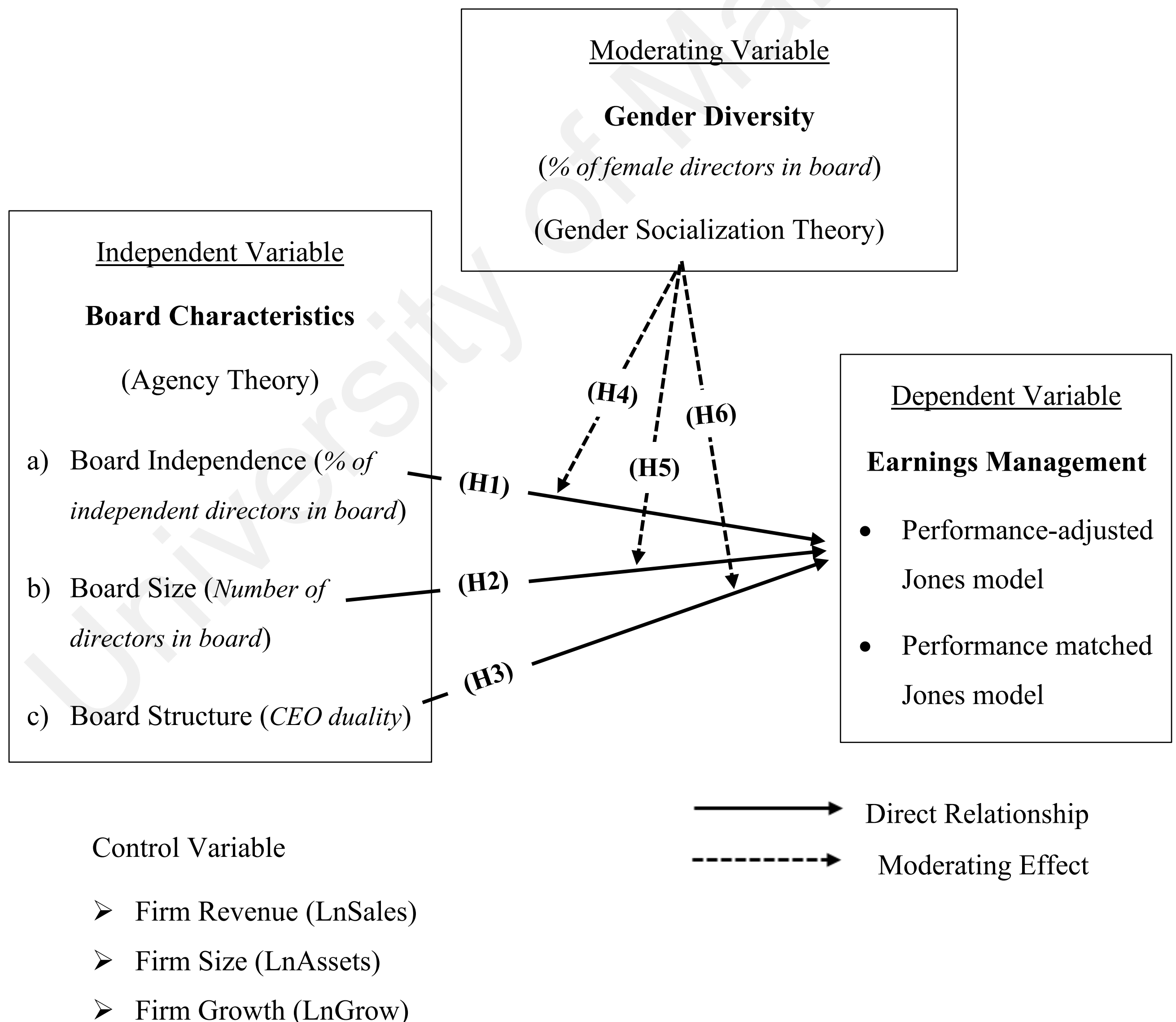

Figure 4.1: Conceptual Framework

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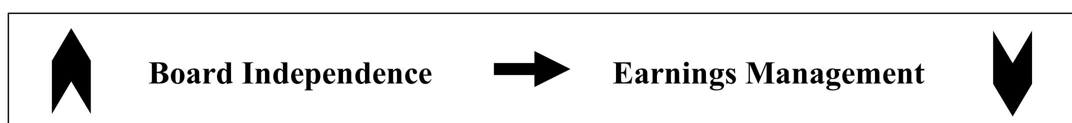
Figure 4.1 above shows the independent variable in this study, the board characteristics, and the dependent variable, i.e. earnings management. As previously mentioned, the diversity in gender, reflected by the proportion of female directors in the board moderates the relationship between the board characteristics and earnings management. H1 to H6 shows the hypothesis formulated in the study, to study and examine this occurrence. In addition to the independent variables, dependent variable, and moderating variable, control variables namely the firm revenue, firm size, and firm growth are introduced in the framework. The variables and the hypothesis shall be explained in the following sections.

4.3. Hypothesis

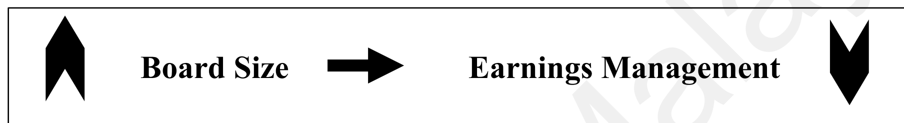
External directors are more concerned about their reputation in the managerial labour market and hence, they are more induced to monitor the management activities and policy directives compare to the inside directors (Saona et al., 2020). According to Braiotta et al., (2015), outside directors are likely to be more objective as they take vital decisions in other firms (Fama and Jensen, 2008). Therefore, a board is assumed to be more independent with an increasing percentage of external directors in the boardroom. Braiotta et al., (2015); Fama and Jensen, (2008); and Saona et al., (2020) documented that a proportionate increase of independent directors on the board helps to ensure a better quality of financial information and reduces the level of earnings management. Hence a board is assumed to be more independent with a higher proportion of independent directors and is related to downward earnings management. Therefore, the following hypothesis, H1 is developed following the proposition in the *"Agency Theory"*.

H1: An increase of board independence is negatively related to earnings management.



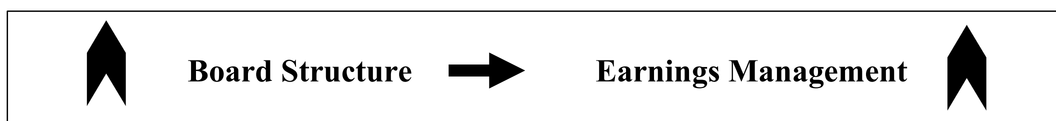
As, the number of board directors increases, this consequently implies that there is an increase in the chance of having more directors with relevant knowledge and experience on financial reporting and audit committee, which ultimately helps to reduce earnings management practices (Cunha and Piccoli, 2017; Ghosh et al., 2010; Saona et al., 2020). Similarly, Byard et al., 2011; and Chiu et al., (2013) show empirical evidence of reducing earnings management by increasing the board size. Based on the arguments presented, the following hypothesis, H2 is formulated following the proposition in the *"Agency Theory"*.

H2: An increase of board size is negatively related to earnings management.



CEOs are more prone to practice opportunistic accounting approaches to inflate the earnings, which helps them to maximize their bonus and compensation (Das et al., 2013; Gong et al., 2019). Therefore, the role of the chairperson of a board is to monitor the CEO. So, it is not possible for the chairperson to perform both functions without conflicts of interest. So, it is important to ensure that the position of chairperson and CEO is performed by two separate persons to reduce earnings management practices (Gulzar and Zongjun, 2011; Iraya et al., 2015; Zouari et al., 2012). Otherwise, CEOs with dual roles significantly increase earnings management, and Iraya et al., (2015); Jensen, (1993); and Zouari et al., (2012) reported this with empirical evidence. Therefore, the following hypothesis, H3 is developed following the proposition in the *"Agency Theory"*.

H3: A board structure with CEO duality is positively related to earnings management.



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According to *"Gender Socialization Theory"*, Men and women carry different values, ethical views, and attitudes to the workplace (Dawson, 1992). Women are assumed to have higher ethical standards and risk-averse in nature and therefore, show extra cautiousness in terms of making valuable financial decisions (Kouaib and Almulhim, 2019). According to Adams and Ferreira, (2009), this higher ethical standards and risk aversion nature of the female director helps to improve corporate governance mechanism. Therefore, the quality of reported earnings improves a lot with the presence of a female on the board, hence it reduces earnings management practices (Bosquet et al., 2014; Rau, 2014). Based on the presumptions of *"Agency Theory"*, a company's one of most vital duties is to effectively invigilate the management's activities (Arioglu, 2020), and according to Masulis and Mobbs, (2014), board independence gets stronger with the presence of female directors and therefore, the board can invigilate top management's opportunistic behaviour more effectively. Similarly, Fan, Jiang, Zhang, and Zhou, (2019) find female directors are more capable of taking independent decisions that help to counter earnings management practices. The empirical evidence from El-Mahdy, (2014); Na and Hong, (2017); and Saona et al., (2020) documented a reduction in the level of earnings management due to increasing female independent directorship. Based on these arguments, the following hypothesis, H4 is therefore formulated following the presumptions in *"Gender Socialization Theory"*.

H4: An increase of gender diversity in board independence, significantly moderate the relationship between board independence and earnings management with a negative earnings management.

Increasing boardroom gender diversity also enhances the board's monitoring mechanism in terms of lessening the top management's opportunistic behaviour that leads to earnings management (Adams and Ferreira, 2009; Krishnan and Parsons, 2008). Therefore, it also

fulfils one of the most important duties of a company based on the presumptions of *"Agency Theory"*, which is to effectively monitor the management's opportunistic behaviour (Arioglu, 2020). Consequently, García Lara et al., (2017) and Gul et al., (2011) documented a better financial reporting with more transparent disclosures as a consequence of higher gender diversity in the board, which in turn helps to discourage opportunistic behaviour. In this regard, Gull et al., (2018) find strong ethical behaviour, less risk-taking, and better decision-making approach of women that differs from the opposite gender based on the presumptions of *"Gender Socialization Theory"* (Harris et al., 2019), plays an important role in improving earnings quality and reducing earnings management. Therefore, according to Ittonen et al., (2013) and Saona et al., (2020), an increase in the proportion of female directors successfully resulted in the reduction of earnings management.

Based on these arguments, the hypothesis, H5 is formulated by following the presumptions in *"Gender Socialization Theory"* and presented below.

H5: An increase of gender diversity in board size, significantly moderate the relationship between board size and earnings management with a negative earnings management.

According to Na and Hong, (2017), male CEOs use both aggressive discretionary accruals and real activities-based earnings management to report a positive or increase in earnings. On the other hand, female CEOs carry a highly conservative mindset which helps to ensure better financial reporting for a firm (Ho et al., 2015). The findings of Na and Hong, (2017) and Ho et al., (2015) are in line with the presumptions of *"Gender Socialization Theory"*, according to which, men and women carry different values, attitudes to the workplace, and ethical views (Dawson, 1992). Therefore, female CEOs pursue higher ethical leadership that contributes to the enhancement of internal control mechanisms which

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eventually counter the earnings management practice (Ho et al., 2015). Consequently, there are lesser chances of earnings management by female CEOs compare to male counterparts (El-Mahdy, 2014). These arguments led to developing the following hypothesis, H6 whereby, following the presumptions in *"Gender Socialization Theory"*.

H6: Gender diversity in board structure with CEO duality, significantly moderate the relationship between board structure and earnings management with a negative earnings management.

4.4. Summary

This chapter exhibits how the inconclusive mixed findings of the literature on the relationship between board characteristics and earnings management lead to the development of independent and dependent variables along with the development of moderating variable based on the gender diversity literature. Moreover, the theoretical aspects of this phenomenon are also discussed in this chapter and exhibit the presumptions of two theories (i.e. *"Agency Theory"* and *"Gender Socialization Theory"*) to examine the relationship between the variables. Then exhibits the development of the conceptual framework by following the research questions. Following that, using the proposition of *"Agency Theory"*, the relationship between board characteristics and earnings management is hypothesized. Whereas the moderating effect of gender diversity on this relationship is hypothesized using the proposition of *"Gender Socialization Theory"*.

The above stated six hypotheses shall be tested based on two earnings management measures and one empirical model explained in the next section, where the research method is explained in detail.

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CHAPTER 5. RESEARCH METHOD

5.1. Introduction

The objective of this study is to investigate the relationship between board characteristics and earnings management. Moreover, this study also aims to examine the moderating effect of gender diversity over this nexus of board characteristics and earnings management. In this regard, the research design, selecting sample size, development of empirical models, measurement of variables, method of data collection, and process of data analysis is illustrated in the following sections of this chapter to answer the research questions of this study.

5.2. Research Design

The approach of this study is quantitative research by nature, where it identifies the phenomenon to be studied by gathering quantifiable data to analyse the statistical relationship among dependent, independent, moderating, and control variables of this study. To fulfil the research objectives and serve the purpose of this study, the sample of the study is finalized and the empirical models are developed based on the literature. Consequently, the data was collected from secondary sources based on the measurement of the variables. Finally, the analysis of the collected data is then performed to answer the research questions. In the following section, the process of selecting industries and firms to finalize the sample size is described in detail.

5.3. Sampling Procedure

The sampling procedure for this study is undertaken using the purposive sampling method. The sample consists of non-financial firms (only) that trade on Malaysia Stock Exchange (Bursa Malaysia Berhad). The sampling procedure proceeds industry-wise, as the estimation of earnings management for panel data requires a two-digit industry classification code to estimate discretionary accruals annually for each industry-year (Hope, Thomas, and

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Vyas, 2013; Zalata et al., 2019). This study excludes banks and other financial institutions from the sample, as they follow different financial reporting rules. Consistent with the research approach in Ding et al., (2007) industries having less than seven firms have been excluded from the sample to ensure a sufficient number of observations for each industry to run the panel data regression analysis. Accordingly, firms with missing data were also dropped from the sample. These dropped-out firms are the firms that have some financial data missing from Thomson Reuters Eikon's data-stream and later those missing financial data remains unavailable due to missing annual report for that particular year. Therefore, the firms with missing data that were inaccessible from both sources, (i.e., Thomson Reuters Eikon's data-stream and Annual Reports) were excluded from the final sample. This study only considers firms with an available complete set of financial data. The process of compiling and filtering the data had been undertaken as the study progresses. In particular, the procedures applied in: Step 1 - segregating the companies into its respective industries and Step 2 - proceeding with the firm selection procedure. This is presented and tabulated accordingly in Table 5.1 and 5.2 below:

Table 5.1: Industries Selection

(a) Total No. of Industries	(b) Bank and Financial Institutions	(c) Industries with Less than seven firms	(d) Industries with Less than seven firms due to Missing Data	No. of Industries Selected (a)-(b)-(c)-(d)
40	8	10	3	19

Table 5.1 exhibits the selection procedure of industries to be studied. There are 40 industries in total that trade on Malaysia Stock Exchange (Bursa Malaysia Berhad). Out of that 40 industries, 8 of them are bank and financial institutions and therefore excluded from the sample. Following Ding et al., (2007), another 10 industries are excluded from the sample due to having less than seven firms. Lastly, 3 industries are excluded from the sample as they have less than seven firms due to the exclusion of missing data firms. So, in total 21 industries

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are excluded from the sample which makes the final sample of 19 industries to be studied. Table 5.1 above is further extended into table 5.2 below, which tabulated the process of firms' selection.

Table 5.2: Firms Selection

No.	Industries	(a) No. of Firms	(b) No. of Firms with Missing Data	No. of Total Firms (a)-(b)	Percentage % of Firms in the Industry over Total Number of Firms
1	Automobiles and Parts	19	6	13	3.3
2	Chemicals	21	9	12	3.1
3	Construction and Materials	75	25	50	12.7
4	Fixed Line Telecommunications	13	4	9	2.3
5	Food Producers	86	33	53	13.5
6	Forestry and Paper	16	5	11	2.8
7	Gas, Water, and Multi-utilities	12	1	11	2.8
8	General Industrials	27	5	22	5.6
9	General Retailers	22	10	12	3.1
10	Household Goods and Home Construction	30	13	17	4.3
11	Industrial Engineering	38	12	26	6.6
12	Industrial Metals and Mining	29	11	18	4.6
13	Industrial Transportation	30	6	24	6.1
14	Oil Equipment and Services	24	6	18	4.6
15	Personal Goods	28	11	17	4.3
16	Software and Computer Services	58	30	28	7.1
17	Support Services	28	13	15	3.8
18	Technology Hardware and Equipment	27	15	12	3.1
19	Travel and Leisure	29	4	25	6.4
	Total	612	219	393	100

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Table 5.2 represents the selection procedure of sample firms from the selected 19 industries, to finalize the total number of firms to be studied. Two industries hold approximately 26.2% of the whole sample size where, the highest number of firms, (i.e. 53 firms), were selected from the Food Producers industry which is 13.5% of the total sample size, even after excluding 33 firms with missing data. Following that, the second-highest number of firms, (i.e. 50 firms) were selected from the Construction and Materials industry which is 12.7% of the total sample size, even after excluding 25 firms with missing data. After that, there are 4 industries, (i.e. Industrial Engineering, Industrial Transportation, Software and Computer Services, and Travel and Leisure) which then combined contribute towards another 26.2% of the sample size. On an individual basis, each of the industries has more than 6% of the total sample. The rest of the 13 firms amounts to 47.6% of the total sample size.

After excluding a total number of 219 firms with missing data, the final sample size becomes a total of 393 firms. As the study is for the five-year period from 2014 to 2018 with a final sample of 393 firms which makes a total of 1965 firm-year observations. The construction of empirical models for data analysis and their measurements are described in the next section.

5.4. Model Development and Measurement of Variables

Based on the literature, earnings management can be measured by two general approaches. One is accounting measures and the other one is stock returns based (Wang and Yung, 2011). According to the author, the accounting measures of earnings management is related to the level of accruals. Whereas the stock returns-based measure of earnings management is related to the earnings from stock prices with an assumption of the market is efficient. The existing literature portrays the extensive use of accounting measures and its well-known substantial market effects (Wang and Yung, 2011). Hence, this study also employs the accounting measure of earnings management. The regression model for

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measuring earnings management, the construction of two empirical models for relationship testing of variables, and their measurements are reported below.

5.4.1. Measuring Earnings Management.

Based on the prior literature (Cohen et al., 2008; Ghosh et al., 2010; Wang and Yung, 2011), earnings management (EM1) is proxied by discretionary accruals, which is derived from the most widely used performance-adjusted Jones model also known as modified Jones model proposed by Dechow, Sloan, and Sweeney, (1995). Using this modified Jones model, in Eq. (1) accrual-based earnings management is measured in this study.

$$\frac{\mathrm{TA}_t}{A_{t-1}} = \alpha_0 + \alpha_1 \left(\frac{1}{A_{t-1}}\right) + \alpha_2 \left(\frac{\Delta S_t - \Delta AR_t}{A_{t-1}}\right) + \alpha_3 \left(\frac{PPE_t}{A_{t-1}}\right) + \varepsilon_t \qquad \text{(Eq. 1)}$$

For the purpose of robustness, this study adopts the performance-matched Jones model introduced by Kothari, Leone, and Wasley, (2005) from the balance sheet approach and later on modified by Cohen et al., (2008), which is a cash flow statement based approach of measuring discretionary accruals (Hsieh, Chen, Tseng, and Lin, 2018). Therefore, Eq. (2) is proxied for earnings management (EM2) in this study as an alternative measure of accrual-based earnings management.

$$\frac{\mathrm{TA}_t}{A_{t-1}} = \alpha_0 + \alpha_1 \left(\frac{1}{A_{t-1}}\right) + \alpha_2 \left(\frac{\Delta S_t - \Delta AR_t}{A_{t-1}}\right) + \alpha_3 \left(\frac{PPE_t}{A_{t-1}}\right) + \alpha_4\, ROA_t + \varepsilon_t \qquad \text{(Eq. 2)}$$

*Further description of the variables in Eq. 1 and 2 can be found in Table 5.3 of the report.

5.4.2. Association of Board Characteristics and Earnings Management.

In compliance with Ghosh et al., (2010), the association between board characteristics and earnings management, which is determined using the modified Jones model and performance-matched Jones model, (i.e. for the sake of robustness) explained above has been examined using the following regression framework (M. 1):

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$$EM = \beta_0 + \beta_1(\text{Inde}) + \beta_2(\text{Bsize}) + \beta_3(\text{BS}) + \beta_4(\text{LnSales}) + \beta_5(\text{LnAssets}) + \beta_6(\text{LnGrow}) + \varepsilon_t \quad \text{(M. 1)}$$

*Further description of the variables in this model can be found in Table 5.3 of the report.

5.4.3. Moderating effect of Gender Diversity.

This study further investigated the moderating effect of gender diversity in the relationship between board characteristics and earnings management using the following regression framework (M. 2):

$$EM = \beta_0 + \beta_1(\text{Inde}) + \beta_2(\text{Bsize}) + \beta_3(\text{BS}) + \beta_4(\text{FD}) + \beta_5(\text{Inde}\times\text{FD}) + \beta_6(\text{Bsize}\times\text{FD}) + \beta_7(\text{BS}\times\text{FD}) + \beta_8(\text{LnSales}) + \beta_9(\text{LnAssets}) + \beta_{10}(\text{LnGrow}) + \varepsilon_t \quad \text{(M. 2)}$$

*Further description of the variables in this model can be found in Table 5.3 as presented below.

The Model 1 (M. 1) is integrated into the Model 2 (M. 2). Therefore, the Model 2 (M. 2) shall examine the relationship between board characteristics and earnings management, and the moderating effect of gender diversity in this relationship as well.

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Table 5.3: Description of Variables

Symbol	Variable	Measure
EM1/EM2	Earnings Management (Ghosh et al., 2010; Wang and Yung, 2011)/(Hsieh et al., 2018)	
TA_t	Total accruals during year t. (i.e., earnings before extraordinary items and discontinued operations minus operating cash flows)	
A_{t-1}	Total assets at the end of year t−1.	
ΔS_t	Change in net sales from year t−1 to year t.	
ΔAR_t	Change in accounts receivable from year t−1 to year t.	
PPE_t	The gross value of property, plant, and equipment for year t.	
ROA_t	The net income scaled by the lagged total assets for year t.	
ε_t	A stochastic disturbance term.	
α , β	Regression parameters	
Board Characteristics Variables (Ghosh et al., 2010)		
Inde	Board Independence	Percentage of independent directors on the board
Bsize	Board Size	The number of directors on the board
BS	Board Structure	1 when the role of CEO and board chairman performed by the same person and 0 otherwise (Dummy Variable)
Gender Diversity Variables		
FD	Female Director	Percentage of female directorship on the BODs (Kouaib and Almulhim, 2019).
Moderation		
Inde_FD	Inde × FD	Product of Board Independence and Female Director
Bsize_FD	Bsize × FD	Product of Board Size and Female Director
BS_FD	BS × FD	Product of Board Structure and Female Director
Control Variables		
LnSales	Firm Revenue	Natural logarithm of the annual sales from main operations for year t. (Harakeh et al., 2019).
LnAssets	Firm Size	Natural logarithm of firms' total assets for year t. (Kouaib and Almulhim, 2019).
LnGrow	Firm Growth	Natural logarithm of the sum of the market value of equity and the book value of debt scaled by the book value of total assets for year t. (Ghosh et al., 2010).

**All variables are measured at the firm-year level.*

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Based on the above-described measurement of variables, the data is then collected, and the next section illustrates the process of data collection.

5.5. Data Collection

All the required data has been collected using the database of Thomson Reuters Eikon and Annual Reports as a secondary source of data collection. All the data related to earnings management, firm revenue, firm size, and firm growth has been collected from Eikon Data-Stream, whereas the data related to board characteristics and gender diversity, were collected independently from Annual Reports. To capture the recent changes and gather more contemporary information on board characteristics, gender diversity, and earnings management, the data has been collected for the latest available five-year period from 2014 to 2018 following the research approach from previous studies (Ding, Jia, Wu, and Zhang, 2014; Lo, Ramos, and Rogo, 2017). Since the earnings management computation requires the calculation of the lagged value of assets and delta value of sales and account receivable, the data for these three items had therefore been collected for six years from 2013-2018. Once all the required data has been collected, then the data analysis is performed, and the following section shall demonstrate the process of data being analysed to fulfil the research objectives.

5.6. Data analysis

This section exhibits the process of data analysis performed to answer the research questions in pursuing the objectives of this study. In this regard, STATA software has been used to run all the required statistical data analyses, as it offers better flexibility in data analysis and visualization. The process of data analysis is divided into three segments and the process is demonstrated through the following Figure 5.1.

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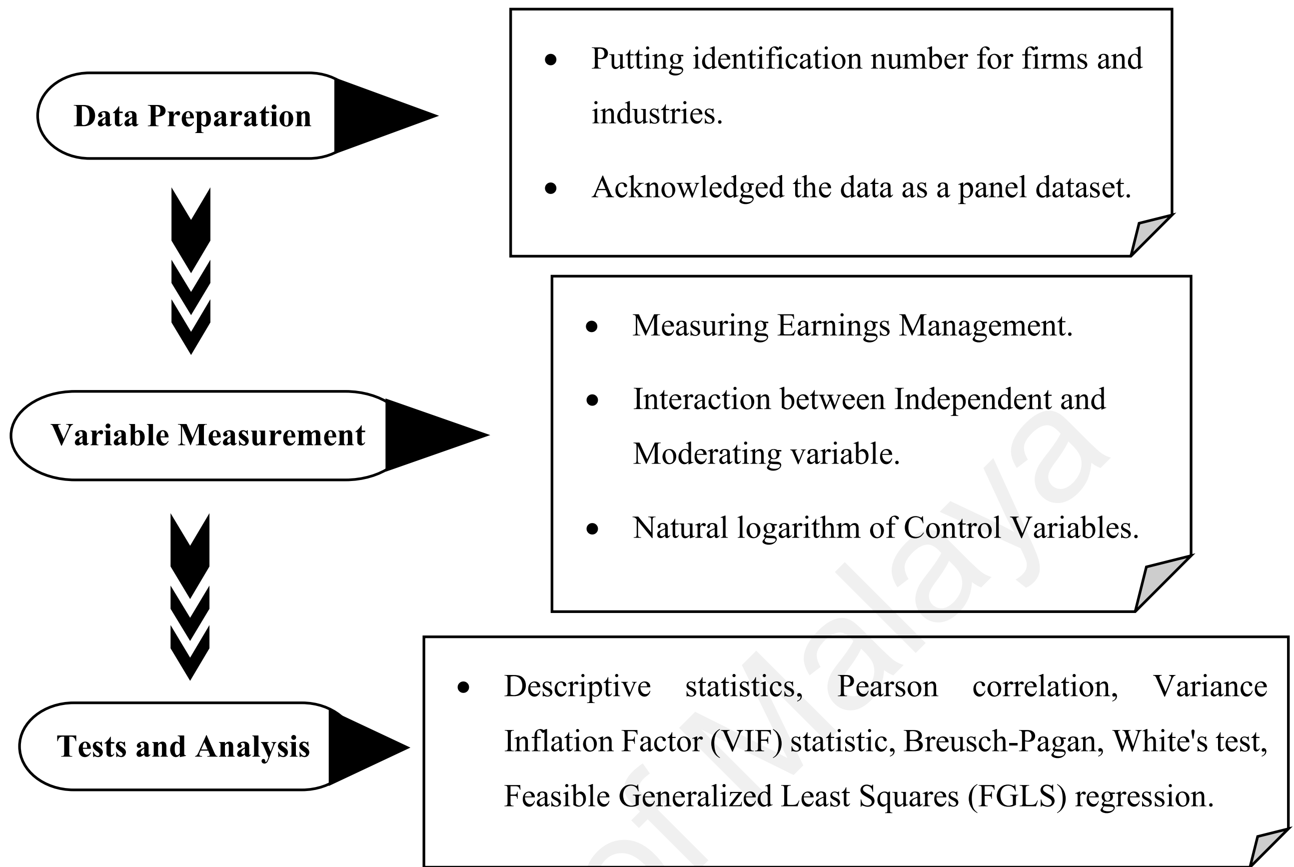

Figure 5.1: Data Analysis Process

The above figure 5.1: Data Analysis Process shall be explained in detail in the following sub-sections of data analysis.

5.6.1. Data Preparation

Panel data is a combination of both cross-section and time-series data, where the observations are based on cross-section units for several time-periods. According to Alipour, (2013), results that a panel data analysis provides cannot be extracted from a pure cross-sectional or time-series data analysis. Nevertheless, as a research instrument, the panel data models facilitate the researcher to consider any sort of possible demographic effect into the cross-sectional data and thereupon finalize the appropriate empirical model. The panel dataset also improves the efficiency of economic estimations through the application of its several data points that reduce co-linearity between variables and increases degrees of freedom (Alipour, 2013). As a process of stating the data as a panel dataset for STATA, a

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four-digit identification number for firms and a two-digit classification code for industries has been assigned to identify the firms and industries.

After that based on the firm id and years, the data was acknowledged as a panel dataset using variants of the STATA function "Command = egen firm_iden = group(firmid); egen industry_group = group(industrygroup); xtset firm_iden year, yearly". This was performed to treat the data as a panel dataset for further analysis to be performed on STATA.

5.6.2. Variable Measurement

To calculate the dependent variable, the performance-adjusted Jones model regression proposed by Dechow, Sloan, and Sweeney, (1995) is then run to measure the accrual-based earnings management, (i.e. EM1). Moreover, to calculate the dependent variable with a different measure of accrual-based earnings management, performance-matched Jones model regression proposed by Kothari et al., (2005) is then run as an additional equation, (i.e. EM2) for the sake of robustness.

After that, the moderation between independent and moderating variables is performed to create three new variables, i.e. Inde_FD (interaction of Board Independence and Female Director), Bsize_FD (interaction of Board Size and Female Director), and BS_FD (interaction of Board Structure and Female Director) by using the standardized value of the variables. These three new variables are created to use in the regression analysis later on to check the moderating effect of female directorship over the relationship between board characteristics and earnings management.

Following the empirical models of Ghosh et al., 2010; Harakeh et al., 2019; and Kouaib and Almulhim, (2019), the transformation of three control variables, (i.e. Firm Revenue, Firm Size, and Firm Growth) were then made by applying arithmetic Ln to create new control variables, i.e. LnSales, LnAssets, and LnGrow. This transformation of control variables is done according to the measurement of these variables provided in Table 5.3.

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5.6.3. Tests and Analysis

According to Levin, Lin, and Chu, (2002), the pooled t-statistic has a limiting normal distribution of the data due to the larger size of cross-section and time-series dimensions of the panel dataset. Hence, the normal distribution of data for the panel dataset is not required. So, when done with creating all the required variables for the tests and analysis to be performed, descriptive statistics is then run to summarize and report the collected information of data for each variable.

A chance of having serial correlation (or Autocorrelation) exists among the time series data when a lagged version of a variable is repeating the first variable but started at a different point in time (Riffenburgh, 2012). Therefore, no chance of having serial correlation among the panel dataset, as the data is covering fewer time periods and none of the dependent, independent, moderating, and control variables are repeating in their lagged version in this study. Next, using Pearson correlation coefficient analysis, positive or negative correlations along with significance among all the variables are then checked. This correlation coefficient analysis is performed for all variables – namely, the dependent, independent, moderating, and control variables.

Panel data can be analysed through different kinds of estimation strategies. However, to control the time-period effect, Okhmatovskiy, (2010) suggests using regression with standard errors cluster, in the case of the data that covering fewer time periods but many observations into each period. According to Reed and Ye, (2011), to avoid generating inefficiency in the coefficient estimation, it is important to properly address the presence of complex errors in a panel dataset. Multicollinearity, cross-section dependence, and group-wise heteroscedasticity are a potential problem for panel data and in many cases, all of them are likely to be present. Most of the common panel data estimators are incompetent when it comes to handling multicollinearity, cross-section dependence, and group-wise heteroscedasticity simultaneously (Reed and Ye, 2011). Therefore, to finalize the panel data estimator,

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following Okhmatovskiy, (2010), this study generates the Variance Inflation Factor (VIF) statistic to check the presence of multicollinearity among the independent, moderation, and control variables. Consequently, Breusch-Pagan and White's test is then performed to check the presence of heteroskedasticity in the panel dataset.

To address the presence of complex errors in a panel dataset, Ghaleb, Kamardin, and Tabash, (2020); Al-Absy et al., (2019); and Reed and Ye, (2011) suggested that Feasible Generalized Least Squares (FGLS) is capable of handling multicollinearity, cross-section dependence, and group-wise heteroscedasticity simultaneously. Therefore, based on the results of VIF, Breusch-Pagan, and White's test, this study adopted Feasible Generalized Least Squares (FGLS) estimator in line with Ghaleb et al., (2020) and Al-Absy et al., (2019), using variants of the STATA function "Command = xtgls; options = corr(independent) panels (heteroscedastic)" (Reed & Ye, 2011) for the panel dataset to make the results robust. Consequently, FGLS regression analysis is then run to check the relationship between Independent, (i.e. Inde, Bsize, and BS), and Dependent, (i.e. EM1 and EM2) variables and the moderating effect of Gender Diversity, (i.e. Inde_FD, Bsize_FD, and BS_FD) over this relationship following the model 2 (i.e. M. 2).

5.7. Summary

This chapter firmly discussed the research design, comprehensively demonstrated the selection process of sample size, and explicitly described the development of empirical models and the measurement of variables. Moreover, this chapter explained the method of data collection and exhibits the process of data analysis in detail.

The preliminary research findings out of the above-stated panel data analysis shall be reported in the next chapter.

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CHAPTER 6. RESEARCH FINDINGS

6.1. Introduction

This chapter will describe the primary research findings of this study from the tests and analysis being performed in the previous chapter. Hence, the results of the panel data analysis, (i.e. Descriptive statistics, Pearson correlation, VIF statistic, Breusch-Pagan, White's test, and FGLS) regression are discussed thoroughly. A descriptive statistic is the first analysis being performed among all the analyses and the results are reported in the following section.

6.2. Descriptive Statistic

Table 6.1 reports the descriptive statistics for dependent, independent, moderating, moderation, and control variables. Descriptive statistics include statistics such as minimum and maximum value, the mean, median, and standard deviation of an individual variable. This table also contains information on the number of firm-year observations for a balanced panel dataset. Except for the variable Sales, the number of firm-year observations and time-period for all other variables is 1965 and 5 years, respectively. To calculate the lagged value of assets and delta value of sales for 393 firms, the data for assets and sales have been collected for 6 years period starting from 2013.

The mean and median for the dependent variable, earnings management measured by EM1 is 0. 19 and -0.09 respectively, and for the alternative measure, i.e. EM2 is -0.16 and -0.22 respectively. While the first independent variable board independence (Inde) shows a median of 50% and on average 47.81% of independent directorship on the board. The second variable, i.e. board size (Bsize) exhibits the median of 7 and on average 7.5 members in the boards for the entire sample. The last independent and sole dummy variable board structure (BS) shows the mean of 0.20 which means that 20% of the Malaysian firms have a board chairman who is performing the role of CEO as well.

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For the moderating variable, female director (FD) exhibits the median of 11.11% which shows that on average, 11.71% of female directorship is represented in the boards of Malaysian firms. As for the moderation, the first interaction of female directorship with board independence, (i.e. Inde_FD) shows the mean is -0.023 and the median is 0.012. Whilst the second interaction with board size, (denoted as Bsize_FD) shows a larger mean of 0.098 and a smaller median of -0.037 in comparison to the first interaction. Whereas the third and last interaction with board structure (denoted as BS_FD) exhibits a mean of -0.013 that is higher than the first but lower than the second interaction and a median of 0.025 is higher than the first and second interaction.

For control variables, the firm revenue, (i.e. LnSales) shows a mean of 12.53 and a median of 12.51. Whilst, for firm size, (i.e. LnAssets) both the mean and median are higher than LnSales which is 13.13 and 12.98, respectively. However, the third control variable firm growth, (i.e. LnGrow) exhibits a lower mean of 1.821 and a median of 2.171 compare to LnSales and LnAssets.

Under the firm-year observations, the dependent variable earnings management measured by EM1 has a range between a minimum of -42.23 with a maximum value of 84.61 and the standard deviation is 8.33. Earnings management measured by EM2 on the other hand, has a range of minimum -37.69 to a maximum of 69.32 with a standard deviation of 6.70. Whereas the independent variable board independence (Inde) shows a minimum of 14.29% to maximum 100% presence of independent directors among the board with a standard deviation of 12.32. Another independent variable board size (Bsize) has a minimum of 4 to a maximum of 17 members on the board of directors with a standard deviation of 1.99. The moderating variable female director (FD) shows no presence of female director at all in the board which is translated into a value of 0 for the minimum value, whilst the maximum value denotes 60% of females participate as members in the BOD with a standard deviation of 12.11. The moderation between board independence and female director, (i.e. Inde_FD)

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has a range between a minimum of -4.57 with a maximum value of 10.42 and the standard deviation is 1.037. Another moderation is ascertained between board size and female director, (i.e. denoted as Bsize_FD), has a minimum value of -5.549 with 6.714 at a maximum, where the standard deviation is 0.989. The maximum and minimum value of third and last moderation is 6.33 and -1.99 respectively for the interaction of board structure and female director, (i.e. BS_FB) with a standard deviation of 0.993. Meanwhile, the control variable firm revenue (LnSales) has a standard deviation of 1.66 with a data variation range between 7.86 to 17.65. Another control variable, firm size (LnAssets) has a range between a minimum of 8.77 with a maximum value of 18.38 and a standard deviation is 1.659. The last control variable, firm growth (LnGrow) shows a minimum value of -3.912 to a maximum of 5.086 with a standard deviation of 1.547. This is depicted in Table 6.1 below.

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Table 6.1: Descriptive Statistics

Variable	Mean	Median	Std. Dev.	Min	Max	Prob> Skewness	Prob> Kurtosis
EM1	0. 19	-0.09	8.33	-42.23	84.61	0.00	0.00
EM2	-0.16	-0.22	6.70	-37.69	69.32	0.00	0.00
Inde	47.81	50	12.32	14.30	100	0.00	0.84
Bsize	7.50	7	1.99	4	17	0.00	0.00
BS	0.20					0.00	0.03
FD	11.71	11.11	12.11	0	60	0.00	0.38
Inde_FD	-0.02	0.012	1.04	-4.57	10.42	0.00	0.00
Bsize_FD	0.10	-0.04	0.99	-5.55	6.71	0.00	0.00
BS_FD	-0.01	0.03	0.99	-1.99	6.33	0.00	0.00
LnSales	12.53	12.51	1.66	7.86	17.65	0.00	0.27
LnAssets	13.13	12.98	1.66	8.77	18.38	0.00	0.01
LnGrow	1.821	2.17	1.55	-3.91	5.09	0.00	0.00

**The values are taken from appendix I*

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The next section will report the results of the Pearson correlation analysis that is performed to illustrate the statistical correlation between the variables and their significance.

6.3. Pearson Correlation Analysis

The result of Pearson correlation analysis between the variables reported in Table 6.2. The correlation matrix represents the statistical correlation between the variables and their significance. From Table 6.2 twelve negative correlations are observed among the variables and they are significant at a higher level of $p < 0.01$, where earnings management (EM2) with firm revenue (LnSales), i.e. -0.092; board independence (Inde) with board size (Bsize), i.e. -0.376, the product of board structure and female director (BS_FD), i.e. -0.060, and firm

revenue (LnSales), i.e. -0.116; board structure (BS) with board size (Bsize), i.e. -0.134, firm revenue (LnSales), i.e. -0.212, firm size (LnAssets), i.e. -0.167, and firm growth (LnGrow), i.e. -0.092; the product of board independence and female director (Inde_FD) with the product of board size and female director (Bsize_FD), i.e. -0.47 and firm growth (LnGrow), i.e. -0.061; and the product of board structure and female director (BS_FD) with the product of board size and female director (Bsize_FD), i.e. -0.077, and firm size (LnAssets), i.e. -0.077. However, another four negative correlations are less significant at a level of $p < 0.05$, where earnings management (EM2) with the product of board size and female director (Bsize_FD), i.e. -0.055; firm size (LnAssets) with board independence (Inde), i.e. -0.054 and the product of board independence and female director (Inde_FD), i.e. -0.056; and board structure (BS) with the product of board independence and female director (Inde_FD), i.e. -0.057. Moreover, the negative correlation between the earnings management (EM1) and the product of board size and female director (Bsize_FD), i.e. -0.039 is significant at a lower level of $p < 0.10$.

There are 12 cases of positive correlations are observed among the variables and they are significant at a higher level of $p < 0.01$, where between the two earnings management measures, i.e. 0.804; board independence (Inde) with board structure (BS), i.e. 0.062; board size (Bsize) with the product of board size and female director (Bsize_FD), i.e. 0.088, firm revenue (LnSales), i.e. 0.417, firm size (LnAssets), i.e. 0.416, and firm growth (LnGrow), i.e. 0.157; the product of board size and female director (Bsize_FD) with firm revenue (LnSales), i.e. 0.105, firm size (LnAssets), i.e. 0.148, and firm growth (LnGrow), i.e. 0.074; firm revenue (LnSales) with firm size (LnAssets), i.e. 0.881 and firm growth (LnGrow), i.e. 0.31; and firm size (LnAssets) with firm growth (LnGrow), i.e. 0.416. Moreover, the correlation between earnings management (EM2) and firm growth (LnGrow), i.e. 0.046 is less significant at a level of $p < 0.05$. The rest of the correlations between the variables are insignificant.

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Table 6.2: Pearson Correlation Matrix

Variables	EM1	EM2	Inde	Bsize	BS	Inde_FD	Bsize_FD	BS_FD	LnSales	LnAssets	LnGrow
EM1	1										
EM2	0.804***	1									
Inde	-0.019	0.019	1								
Bsize	0.021	-0.035	-0.375***	1							
BS	-0.003	0.010	0.062***	-0.134***	1						
Inde_FD	-0.007	-0.013	-0.015	0.003	-0.057**	1					
Bsize_FD	-0.039*	-0.055**	0.003	0.088***	0.017	-0.471***	1				
BS_FD	-0.018	-0.012	-0.060***	0.017	-0.020	0.022	-0.077***	1			
LnSales	-0.026	-0.092***	-0.116***	0.417***	-0.211***	-0.022	0.105***	-0.028	1		
LnAssets	0.020	-0.021	-0.054**	0.416***	-0.167***	-0.055**	0.147***	-0.077***	0.881***	1	
LnGrow	0.012	0.046**	0.037	0.157***	-0.092***	-0.061***	0.074***	0.028	0.310***	0.416***	1

Correlation is significant at ($p < 0.10$), (** $p < 0.05$), (*** $p < 0.01$); *The values are taken from appendix II*

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After the Pearson correlation, VIF statistic to check multicollinearity among the variables and Breusch-Pagan and White's test to check heteroskedasticity in the panel dataset is performed and the results are reported in the following section.

6.4. Multicollinearity and Heteroskedasticity Testing

VIF testing is done to check whether multicollinearity problem among the independent, moderation, and control variables exists or not. Whereas the presence of heteroskedasticity in the panel data is examined through Breusch-Pagan and White's test.

Table 6.3: VIF Testing

	Inde	Bsize	BS	FD	Inde_FD	Bsize_FD	BS_FD	LnSales	LnAssets	LnGrow	Mean
VIF	1.20	1.44	1.06	1.05	1.29	1.34	1.03	4.67	5.20	1.25	1.95

**The values are taken from the appendix III*

According to the results of VIF testing from above Table 6.3, except LnAssets (i.e. Firm Size) none of the independent, moderation, and control variables including the mean are above 5. The value for mean VIF is 2.04 and according to Okhmatovskiy, (2010) this is not a critical value to signal problems with multicollinearity among the variables.

Table 6.4: Heteroskedasticity Testing

	Breusch-Pagan test	White's test
Prob > chi2 (EM1)	0.0031	0.0028
Prob > chi2 (EM2)	0.0001	0.5993

**The values are taken from appendix IV & V*

From the above Table 6.4, the result of both Breusch-Pagan (0.0031) and White's (0.0028) test based on EM1 is highly significant at a level of $p < 0.01$, which confirms the presence of heteroskedasticity in the panel dataset. However, the result based on EM2 for Breusch-Pagan (0.0001) test is highly significant at $p < 0.01$ but insignificant at $p > 0.10$ for

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White's (0.5993) test. Therefore, it partially confirms the presence of heteroskedasticity in the panel dataset.

Based on the results of VIF, Breusch-Pagan, and White's test, the FGLS regression is then performed and the results are reported in the next section.

6.5. FGLS Regression Analysis

This study attempted to explain the relationship between board characteristics and earnings management, followed by the moderating effect of gender diversity in this particular relationship for Malaysian companies. In this context, two regression models were developed, where the Model 1 (M. 1) is integrated into Model 2 (M. 2) to analyse this issue. Therefore, Model 2 (M. 2) tested the hypothesized relationship between board characteristics and earnings management, also examine the moderating role of gender diversity over this relationship at the same time. Two different equations are used in this study to measure the earnings management for the sake of robustness, where the first equation, (i.e. EM1) used the performance-adjusted Jones model and the second one, (i.e. EM2 used) performance-matched Jones model.

As the results of Breusch-Pagan and White's test, confirms the presence of heteroskedasticity in the panel dataset so, FGLS regression analysis was performed to run the Model 2 (M. 2) as the FGLS regression is capable of handling the existing heteroskedasticity. The nature of the relationship between the variables is assessed by the beta coefficient (β) and the significance level of that relationship is measured by p-value and t-value. Moreover, the significance level of the model's acceptance is evaluated through the value of Chi-square. The results of FGLS regression analysis based on Model 2 (M. 2) exhibits in Table 6.5.

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The subsequent subsections shall explain the results for direct relationship and moderating effect based on Model 2 (M. 2) which is summarized in Table 6.5. The hypotheses are verified through the beta coefficient, p-value, and t-value.

6.5.1. Direct Relationship

Based on the EM1 and EM2, FGLS regression analysed the direct relationship between board characteristics and earnings management that was previously stated in Hypothesis 1, 2, and 3 respectively.

Firstly, the impact of board independence, i.e. Inde on EM1 is negative $\beta = -0.002$ but insignificant $p > 0.10$, $t = -0.29$, whereas, on EM2 the impact is positive $\beta = 0.006$ but still insignificant $p > 0.10$, $t = 0.99$. Thus, it means that there is practically no effect of increasing board independence towards earnings management and therefore, Hypothesis 1 is not supported.

Secondly, the impact of board size, i.e. Bsize on EM1 is positive $\beta = 0.093$ at a lower level of significant $p < 0.10$, $t = 1.87$. This means that an increase of one-unit Beta (β) of board size will increase earnings management by 0.093 unit. Whilst the impact of the board size on EM2 is positive $\beta = 0.015$ but insignificant $p > 0.10$, $t = 0.34$. This subsequently means that there inherently no effect of changes in the board size on earnings management practice. Thus, it is clear from this result that in both cases Hypothesis 2 is not supported.

Thirdly, the impact of board structure, i.e. BS on EM1 is less significant at $p < 0.05$, $t = -2.43$ but negative at $\beta = -0.528$. Likewise, the impact on EM2 is highly significant at $p < 0.01$, $t = -2.62$ but negative at $\beta = -0.485$. Therefore, an increase of one-unit beta (β) of board structure will decrease the level of earnings management by 0.528 unit for EM1 and 0.485 unit for EM2. This shows that a board structure with CEO duality does not increase earnings management practices. Hence, Hypothesis 3 is not supported.

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The impact of female director, i.e. FD on EM1 is negative β = -0.124 but insignificant $p > 0.10$, $t = -1.40$. While the impact on EM2 is negative at β = -0.145 and less significant at $p < 0.10$, $t = -1.82$. Hence, an increase of one-unit beta (β) of FD will decrease the level of earnings management by 0.145 unit for EM2. This indicates an increase of female percentage on board directorship successfully reduces earnings management.

6.5.2. Moderating Effect

Based on EM1 and EM2, FGLS regression analysed the moderating effect of female directorship over the relationship between board characteristics and earnings management that stated by Hypothesis 4, 5, and 6.

The impact of Inde_FD, (i.e. Product of Board Independence and Female Director) on EM1 is negative at β = -0.205, and less significant at $p < 0.05$, $t = -2.23$. Similarly, the impact on EM2 is negative at β = -0.312 but highly significant at $p < 0.01$, $t = -3.89$. Hence, an increase of one-unit beta (β) of Inde_FD will decrease the level of earnings management by 0.205 unit for EM1 and 0.312 unit for EM2. This indicates an increase of female percentage on independent directorship successfully reduces earnings management and therefore, Hypothesis 4 is supported.

The impact of Bsize_FD, (i.e. Product of Board Size and Female Director) on EM1 is highly significant at $p < 0.01$, $t = -3.89$ and negative at β = -0.388. Similarly, the impact on EM2 is highly significant at $p < 0.01$, $t = -5.01$ and negative at β = -0.458. Therefore, an increase of one-unit beta (β) of Bsize_FD will decrease the level of earnings management by 0.388 unit for EM1 and 0.458 unit for EM2. This shows an increasing number of female directors in the board membership successfully reduces earnings management and thus, Hypothesis 5 is supported.

The impact of BS_FD, (i.e. Product of Board Structure and Female Director) on EM1 is negative at β = -0.004 but insignificant at $p > 0.10$, $t = -0.04$. Likewise, the impact on EM2

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is negative at $\beta = -0.083$ but insignificant at $p > 0.10$, $t = -1.04$. This insignificant relationship implies no effect of the female director's presence in the dual role of CEO and board chairman to earnings management. Therefore, Hypothesis 6 is not supported.

6.5.3. Control Variables with Earnings Management

The first control variable firm revenue, (i.e. LnSales) shows a highly significant at $p < 0.01$, $t = -9.78$ and negative at $\beta = -0.999$ impact on EM1, as well as on EM2, i.e. highly significant $p < 0.01$, $t = -12.35$ and negative $\beta = -1.157$. Therefore, firms with an upward sale experienced downward Earnings Management which is similar to the findings of Harakeh, El-Gammal, and Matar, (2019). However, the second control variable firm size, (i.e. LnAssets) has a higher level of significant at $p < 0.01$, $t = 9.06$ and positive at $\beta = 0.976$ relationship with EM1 and EM 2, i.e. highly significant at $p < 0.01$, $t = 9.04$ and positive at $\beta = 0.902$ as well. So, earnings management increases with an increase in total assets. This positive relationship is in line with Kouaib and Almulhim, (2019). Third and last control variable firm growth, (i.e. LnGrow) exhibits less significant at $p < 0.05$, $t = -1.97$ and negative at $\beta = -0.121$ impact on EM1. However, the impact on EM2 is less significant at $p < 0.05$, $t = 2.11$ but positive at $\beta = 0.120$. Thus, an increase in firms' growth, (i.e. a Market value of Equity plus Book value of debt scaled by Total assets) reduce earnings management for EM1 but increases for EM2. This negative association is parallel with the findings of Ghosh et al., (2010).

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Table 6.5: FGLS Regression Analysis and Hypothesis Testing

	EM1				EM2				Hypothesis
	Coeff.	Sig.	p-value	t-value	Coeff.	Sig.	p-value	t-value	
Inde	– 0.029		0.748	– 0.32	0.077		0.321	0.99	Reject
Bsize	0.190	*	0.056	1.91	0.028		0.749	0.32	Reject
BS	– 0.525	**	0.016	– 2.40	– 0.465	**	0.013	– 2.49	Reject
FD	– 0.124		0.160	– 1.40	– 0.145	*	0.068	– 1.82	
Inde_FD	– 0.213	**	0.020	– 2.32	– 0.318	***	0.000	– 3.97	**Accept**
Bsize_FD	– 0.396	***	0.000	– 3.97	– 0.473	***	0.000	– 5.16	**Accept**
BS_FD	– 0.009		0.924	– 0.10	– 0.095		0.234	– 1.19	Reject
LnSales	– 0.993	***	0.000	– 9.65	– 1.163	***	0.000	– 12.35	
LnAssets	0.980	***	0.000	9.13	0.925	***	0.000	9.29	
LnGrow	– 0.130	**	0.034	– 2.12	0.104	*	0.066	1.84	
Constant	– 0.123		0.873	– 0.16	2.172	***	0.001	3.25	
Chi-square	123.59				199.64				
Prob > chi2	0.000				0.000				

** Beta coefficient and* chi^2 *is significant at (* p < 0.10), (** p < 0.05), (*** p < 0.01); *The values are taken from appendix Table VI & VII*

The following Table 6.7 summarizes the result of hypothesis testing and the result suggests that out of 6 hypotheses only 2 got acceptance. This rejection of hypotheses 1, 2, and 3 reflects the failure of board characteristics in reducing earnings management for Malaysian firms. Hence, the board characteristics are proven to be ineffective corporate governance mechanisms in terms of lessening the earnings management practices among the Malaysian firms. Consequently, it indicates the ineffective application of *"Agency Theory"* and rejects the outlined presumption of this theory for Malaysian listed companies.

Whereas the acceptance of hypotheses 4 and 5 reflects the successful moderation of gender diversity in the relationship of board independence and the board size to earnings management for Malaysian firms. Hence, it shows the findings are in line with the presumption in *"Gender Socialization Theory"* according to which, the different values and

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attitudes to the workplace and ethical views of female directors compared to male counterparts, reduces earnings management practices among the Malaysian listed firms.

Table 6.6: Summary of Hypothesis Testing

Hypothesis	Description	Expected Relationship	Result
H1	An increase of board independence is negatively related to earnings management.	Negative	Not Supported (Negative Insignificant)
H2	An increase of board size is negatively related to earnings management.	Negative	Not Supported (Positive Significant)
H3	A board structure with CEO duality is positively related to earnings management.	Positive	Not Supported (Negative Significant)
H4	An increase of gender diversity in board independence, significantly moderate the relationship between board independence and earnings management with a negative earnings management.	Negative	**Supported** (Negative Significant)
H5	An increase of gender diversity in board size, significantly moderate the relationship between board size and earnings management with a negative earnings management.	Negative	**Supported** (Negative Significant)
H6	Gender diversity in board structure with CEO duality, significantly moderate the relationship between board structure and earnings management with a negative earnings management.	Negative	Not Supported (Negative Insignificant)

In the light of this matter, the following discussions are directed to provide further insight into this seemingly interesting phenomenon. The following Figure 6.1 plots the average percentage of female directorship on board and female on independent directorship from the year 2014 to 2018 for Malaysian firms. The green line represents the trend of the average

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percentage of females in the BOD, where the blue line shows the trend of the average female percentage in independent directorship. Both the lines demonstrate an upward sloping trend of female percentage which implies the consciousness of Malaysian firms in reducing earnings management through promoting gender diversity. This increasing trend of promoting gender diversity is the consequence of revision in the Code on Corporate Governance by the Securities Commission, (released in 2012) in Malaysia which endorses the gender diversity agenda and permits more academically and professionally qualified women to be employed in the decision making possessions. Apparently, the increasing trend of female percentage is much higher in the years 2017 and 2018 compared to the previous years. This increase is the consequence of the revised MCCG in 2017 that makes 30% presence of women in the boardroom mandatory for large companies.

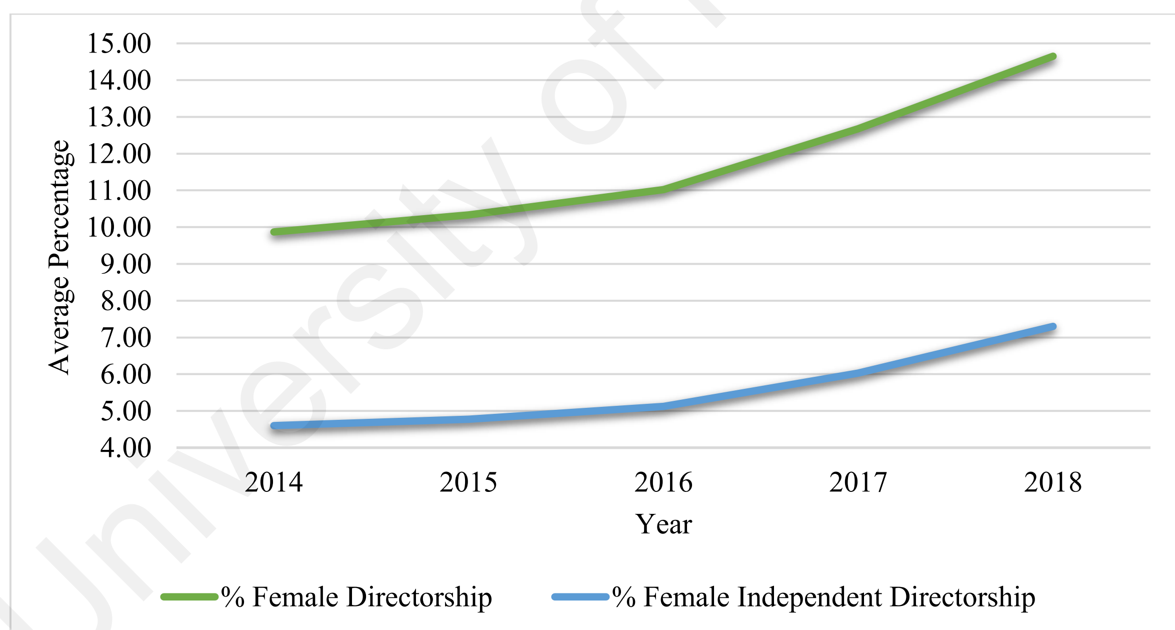

Figure 6.1: Year Wise Average Number of Female on Boards

In relation to the above discussion, the following discussion stated the consequences of increasing gender diversity over the earnings management practices in Malaysia. Figure 6.2 exhibits the trend of overall earnings management practices among the Malaysian listed firms from the year 2014 to 2018. The green line represents the trend of earnings management

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(EM1) based on the performance adjusted jones model, where the blue line shows the trend of earnings management (EM2) based on the performance-matched jones model. Initially, both the lines exhibit an upward sloping trend of earnings management practices from the year 2014 to 2015, which reflects an increase in the level of earnings management practices during that time. Whereas both the lines demonstrate a downward sloping trend of earnings management practices among the Malaysian firms from the year 2015 onwards. Hence, relating this downward trend with the upward sloping trend of gender diversity and taking the acceptance of hypotheses 4 and 5 into consideration, it can be stated that the decreasing earnings management is the consequence of increasing female directorship. Therefore, gender diversity can be considered as an effective governance mechanism in terms of reducing the earnings management practices among Malaysian listed firms.

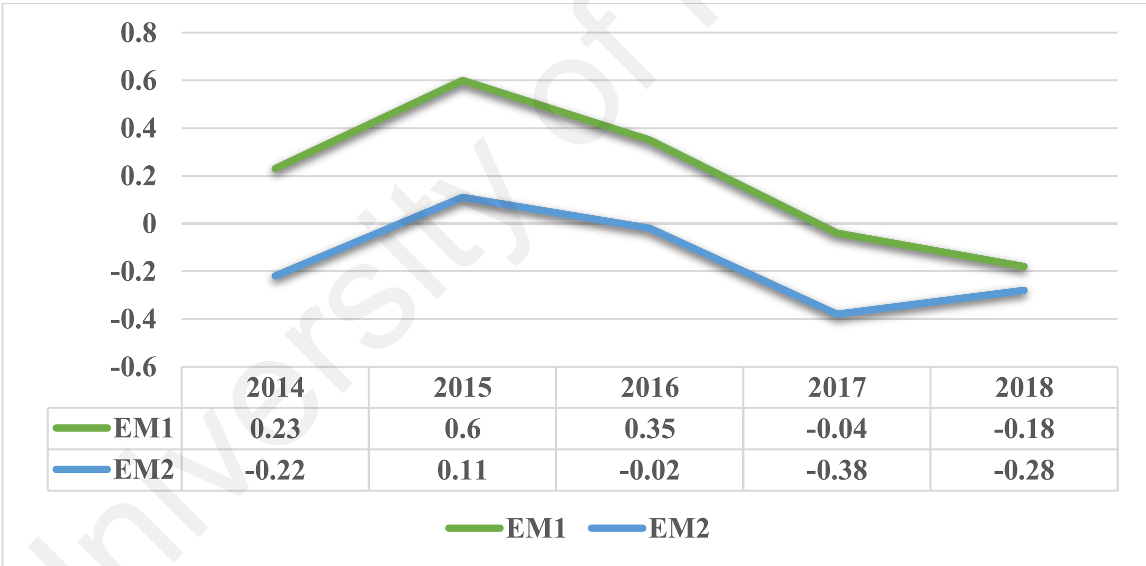

Figure 6.2: Year Wise Average Trend of Earnings Management

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6.6. Summary

This chapter clearly reported the results of various statistical analyses performed on the panel dataset. Starting with the explanation of summery out of the descriptive statistics analysis for each variable, the significant positive and negative correlations among all the variables are then stated from the outcome of the Pearson correlation coefficient analysis. Results from VIF statistic testing confirms the absence of multicollinearity among the independent, moderation, and control variables. Whereas the results out of Breusch-Pagan and White's test confirms the presence of heteroskedasticity in the panel dataset and therefore the FGLS regression analysis is performed, and the findings are discussed thoroughly. At the end, this chapter summarized the hypothesis testing and explained the increasing trend of female percentage from the year 2014 onwards.

The findings from this study shall be discussed in the following chapter along with the theoretical and practical contributions of them. Moreover, a conclusion shall be made on these findings at the end.

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CHAPTER 7. DISCUSSION AND CONCLUSION

7.1. Introduction

This chapter will discuss the results of this study by relating them to the findings of similar studies conducted previously in Malaysia and other countries as well and will address the possible reason for the outcomes. Furthermore, the theoretical contribution of this study to the existing body of knowledge along with the practical implication of the findings will be exhibit in this chapter. Lastly, a conclusion of this study will be drawn by summarizing the findings along with the limitations faced and suggestions will be made for future studies. The next two sections will discuss the findings on the relationship between board characteristics and earnings management along with the moderating effect of gender diversity in this relationship.

7.2. Board Characteristics to Earnings Management

In line with the findings of Jamaludin et al., (2015) on Malaysian firms and Ghosh et al., (2010) on the international context, the result for hypothesis 1 shows no significant influence of board independence on earnings management. Similarly, the findings of Fadzilah, (2017) on Malaysian family-owned firms also confirms no significant relationship between board independence and earnings management. Therefore, a significant reduction in earning management with the higher proportion of independent directors in the board suggested by Braiotta et al., (2015); Fama and Jensen, (2008); and Saona et al., (2020) is rejected. An apparent reason for this insignificant influence of independent directors over earnings management could be their lack of knowledge in the company's affairs (Rahman and Ali, 2006). According to the author, the dominance of management over the matters related to the board makes the independent directors ineffective in monitoring the management activities. In a similar vein, (Mohammad et al., 2016) stated that the effective role of independent directors in reducing earnings management practices may not be applicable to Malaysian listed companies. Mohammad et al., (2016) further pointed out the ethnic and family

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structures and the government ownership that induces the appointment of ethnic Malays who may not have the required technical expertise in terms of effectively monitoring the management that will reduce the earnings management practices.

Now the results for hypothesis 2, rejected the claims of Chiu et al., (2013); Cunha and Piccoli, (2017); and Saona et al., (2020) that board effectiveness in reducing earnings management with increasing board members. Whereas it shows an increase in earnings management with the increasing number of board members. The results are similar to the findings of Jamaludin et al., (2015) on Malaysian GLCs that confirm the failure of increasing board size in terms of reducing earnings management. Parallel to these findings, Abdullah and Ismail, (2016) suggested no significant association between the increasing board size and earnings management for the Malaysian listed companies. Likewise, the results from a study conducted on 100 top companies listed on Bursa Malaysia Main Board by Rahman and Ali, (2006) also confirms the increase of earnings management due to the increasing board size which is in line with the findings of Damak, (2018) from French context. A possible reason for this outcome could be the inferior communication and coordination between board members, extensive decision-making processes, and higher bureaucracy costs due to the larger size of the board (Forbes and Milliken, 1999; Jensen, 1993). According to Rahman and Ali, (2006), it is difficult for a larger board to control the possible arising conflicts of interest among the board members of Malaysian companies which affect the proper management monitoring process. Also, the dominance of top management in the board matters and over the selection process of outside directors might be a reason behind the failure of increasing board size in reducing earnings management (Ibid).

Speaking of the board structure, the results for hypothesis 3 shows a significant decrease in the level of earnings management due to the role of CEO and board chairman performed by the same person which is in line with the findings of Saona et al., (2020) and Ghosh et al., (2010). Hence it rejects the claim of Gulzar and Zongjun, (2011) for the separation of CEO

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and board chairman role to effectively reduce Earnings Management. However, the results are complying with the suggestion of Rahman and Ali, (2006) based on a study conducted on Malaysian firms, where the author shows a negative relationship between CEO duality and earnings management. Therefore, this study is suggesting CEO duality for Malaysian companies to effectively reduce earnings management. A possible reason for this outcome could because CEO duality is looking at the individual values of a particular person which is unlike the other two characteristics of board, i.e. board independence and bard sized looking at the combined influence of more than one individual. Hence, it can be assumed that among Malaysian listed companies, an individual will highly be motivated to work and devoted to carrying out the responsibilities that he or she is entrusted with if the role of CEO and chairman of the board is performed by the same person.

The above discussion on the findings of the relationship between board characteristics and earnings management revealed the failure of corporate governance in reducing earnings management in Malaysia. In line with the findings of this study, few recent studies like; Ghaleb et al., (2020); Mohamad et al., (2020); Al-Absy et al., (2019); Fadzilah, (2017); and Abdullah and Ismail, (2016) conducted on Malaysian listed companies also exhibits the failure of corporate governance in Malaysia to reduce earnings management. In this regard, Table 7.1 exhibits the effect of corporate governance mechanisms on earnings management, which is derived from the findings of the studies that previously conducted on Malaysian listed companies. According to the findings of these studies, the board characteristics are ineffective corporate governance mechanisms in reducing earnings management practices among Malaysian companies. Furthermore, these studies suggested that the application of *"Agency Theory"* is not applicable to the Malaysian listed companies to reduce earnings management practices successfully. In line with these studies, the findings of this study on Malaysian listed companies disclosed the board characteristics as unsuccessful corporate

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governance mechanisms and declined the effective application of *"Agency Theory"* in reducing earnings management practices as well.

Table 7.1: Articles on Corporate Governance in Malaysia

Author(s)	Year	Findings
Ghaleb et al.	2020	Independent Directorship does not have any impact on earnings Management.
Mohamad et al.	2020	Board Independence and Board Size does not influence Earnings Management.
Al-Absy et al.	2019	No effect of Board Independence on Earnings Management.
Fadzilah	2017	No effect of Board Size on Earnings Management. Increasing the number of Independent Director leads to higher Earnings Management. No effect of CEO Duality on Earnings Management.
Abdullah and Ismail	2016	No effect of Board Independence and Board Size on Earnings Management.
Mohammad et al.	2016	No effect of Independent Directorship on Earnings Management. Increasing Board Size leads to higher Earnings Management.
Mahad, Zakaria, and Ismail	2015	Increasing Independent Directorship also increases Earnings Management. Board Size does not have any effect on Earnings Management. No impact of CEO Duality on Earnings Management.
Jamaludin et al.	2015	Increasing the number of Independent Director leads to higher Earnings Management. No influence of Board Size over Earnings Management.
Abdul-Manaf et al.	2014	Smaller Board Size effectively reduces Earnings Management.
Ishak, Haron, Mohamad, and Rashid	2011	No impact of Independent Directorship on Earnings Management. Increasing Board Size leads to higher Earnings Management.
Mohamad, Rashid, and Shawtari	2012	No effect of Board Independence and Board Size on Earnings Management.

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Author(s)	Year	Findings
Yang, Chun, and Ramadili	2009	Proportion of Independent Directorship and Board Size does not have any impact on Earnings Management.
Johari et al.	2009	CEO Duality does not influence Earnings Management. No effect of Board Independence on Earnings Management.
Rahman and Ali	2006	Increasing Board Size leads to higher Earnings Management. No influence of Independent Directorship over Earnings Management. No influence of separating the CEO and Chairman role over earnings Management.

7.3. Moderating effect of Gender Diversity

According to the results for hypothesis 4, an increase of female percentage in independent directorship significantly reduces earnings management which is parallel with the findings of El-Mahdy, (2014); Ittonen et al., (2013); Na and Hong, (2017); and Saona et al., (2020) from an international context. In a recent study of earnings management in the US banking sector, Fan et al., (2019) show female directors are more capable of taking independent decisions to counter the opportunistic behaviours of top management compare to their male counterparts. The risk-averse nature of female directors triggers them to put a high level of effort into monitoring management activities to reduce earnings management (Fan et al., 2019).

In line with the findings of Kouaib and Almulhim, (2019) on the European context, the results for hypothesis 5 shows an increase of female percentage in Board Membership successfully reduces the level of earnings management. Similarly, the results are also parallel with the findings of a study conducted by Harakeh et al., (2019) on UK public companies. The results are consistent with the results of studies conducted in the French context by Lakhal, Aguir, Lakhal, and Malek, (2015) and Damak, (2018). According to these two studies, the demonstration of higher ethical behaviour of female directors helps to provide

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better supervision compare to male directors in monitoring the management activities is the reason behind this downward earnings management. Therefore, Malaysia also has been increasing its female directors in line with the increasing gender diversity in the developed countries. This is made possible due to the revision in Code on Corporate Governance by Securities Commission, (released in 2012) in Malaysia which endorses the gender diversity agenda and permits more women and that women are becoming more academically and professionally qualified.

Interestingly, the result for hypothesis 6 shows no significant moderating effect of gender diversification on the relationship of board structure to earnings management. Thus, the result supports the claim of Harris et al., (2019) that the duality function of CEO and board chairman performed by a female doesn't necessarily reduce the earnings management. A very limited presence of females in the dual role of CEO and board chairperson might be the possible reason behind this consequence. Whereas the successful application of *"Gender Socialization Theory"* reflected by the acceptance of hypothesis 4 and 5, and the first and third amendments in the MCCG that firmly endorsed the gender diversity agenda. Therefore, it can be concluded that increasing female leadership in the boardroom is an indication toward having women in roles like CEO and board chairperson will enhance the stewardship function among that individual to counter against earnings management approaches.

In light of the above discussion on the findings of the moderating effect of gender diversity over the association between board characteristics and earnings management. It can be concluded that the boardroom gender diversity works as an effective governance mechanism in terms of reducing earnings management. Therefore, the findings of this study on gender diversity abolish the findings of earlier studies like; Abdullah and Ismail, (2016); Al-Absy et al., (2019); and Ishak et al., (2016) conducted on the Malaysian listed companies which exhibit no influence of board gender diversity on earnings management. In this regard, the amendments of MCCG in 2012 and 2017 that strongly promoted the boardroom gender

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diversity, eventually signifies their acknowledgment on the significance of gender diversity in the board as an effective governance mechanism. Consequently, the boardroom gender diversity agenda is in the list of five priorities published in the CG Priorities announced by the Securities Commission, (in 2018).

The following sections shall state the theoretical contribution, practical implications, and the conclusion of this study.

7.4. Contribution of the Study

7.4.1. Theoretical Contributions

The preliminary analysis out of this study provides a rather robust estimation of earnings management practices in Malaysia and how board characteristics influence earnings management behaviour. This study adds to the literature by addressing this nexus between board characteristics and earnings management, using the *"Agency Theory"* perspective. The findings of this study on board characteristics exhibit the application of *"Agency Theory"* does not influence the Malaysian firms in reducing earnings management. As this study extends the gender diversity literature by using *"Gender Socialization Theory"* with *"Agency Theory"*. Hence, this study examines the moderating effect of gender diversity over the association between board characteristics and earnings management and the findings of this study extended the gender diversity literature by employing *"Gender Socialization Theory"* along with *"Agency Theory"*. The findings on gender diversity demonstrate the successful application of *"Gender Socialization Theory"* on board independence and board size by complimenting the *"Agency Theory"* in reducing earnings management.

Interestingly, although it is hypothesized that CEO duality increases earnings management, the findings show completely contrasting results. The results show that CEO duality reduces earnings management and therefore rejects the application of the *"Agency Theory"* when it comes to examining board structure. It is hoped that the application of

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"Agency Theory" and *"Gender Socialization Theory"* in this study has further enlightened the incidence of earnings management behaviour in the light of board characteristics attributes and the existence of gender diversity.

7.4.2. Practical Contributions

- ✓ The findings of this study will be useful for a Malaysian company in relation to better board characteristics. The successful application of *"Gender Socialization Theory"* will influence Malaysian companies to focus more on boardroom gender diversity and appoint more female directors to make sure the boardroom's effective monitoring capacity in reducing the agency cost.
- ✓ The findings of this study will help investors to understand how board characteristics alongside gender diversity could influence earnings management behaviour in Malaysian companies. Accordingly, it is hoped that such information would be useful for investors in making investment decisions by taking a company's board characteristics into account.
- ✓ The results on gender diversity from this study are likely of interest to policymakers to come up with regulations related to ensuring an increasing presence of female directors in the boardrooms to increase the board gender diversity. As ensuring gender diversity in the Malaysian boardroom will also ensure the strong monitoring capability of the boardrooms, which will be associated with downward earnings management.
- ✓ Lastly, it is envisaged that the results from this study could be of use to the regulators and standard setters and implementation bodies in formulating and implementing initiatives (i.e., increasing boardroom gender diversity) to improve financial reporting quality. As the extra cautious and risk-averse nature of female directors are in favour of ensuring high-quality financial reporting.

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7.5. Conclusion

This study examines the relationship between board characteristics and earnings management, where it finds that board independence and board size is not capable of reducing earnings management, whilst, the board structure, (i.e. CEO duality) significantly reduces the earnings management practices in the Malaysian context. These findings on board characteristics imply the ineffectiveness of corporate governance mechanisms in Malaysia, which could be a consequence of strong political influence over the Malaysian corporate environment. Moreover, the findings of the investigation on the moderating role played by gender diversity, between board characteristics and earnings management demonstrate a successful moderation of gender diversity in reducing earnings management. These findings are the consequence of extra cautiousness, risk-averse nature, and higher ethical behaviour of female directors, which contribute to recognise gender diversity as an effective corporate governance mechanism for Malaysian listed firms. However, there is no influence of gender diversity in the dual role of CEO and board chairperson over earnings management.

The finding of this study on board independence shows an insignificant negative relationship with earnings management, which indicates no effect of board independence on earnings management. In the case of board size, the finding indicates a significant increase in earnings management along with an increase in the number of board members. Hence, a smaller board could be more effective in monitoring the top management and reducing earnings management practices (Forbes and Milliken, 1999; Jensen, 1993). However, the findings on board structure are suggesting to perform the role of CEO and board chairman by the same person to reduce earnings management practices successfully. Therefore, in the Malaysian scenario, it can be assumed that the CEO appears to have a strong sense of responsibility to safeguard the company's assets and well-being. This is an interesting insight that is worthy of discussion. The findings imply that an individual is collective minded and

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pro-organizational rather than individualistic and have self-interests when it comes to performing the dual role of CEO and board chairman, which makes the individual intrinsically motivated to work more sincerely. Hence, the individual demonstrates a strong sense of responsibility and exercises the stewardship function, which helps to reduce earnings management significantly.

Speaking of gender diversity, if the proportion of female members increases in the board then the earnings management decreases significantly for the Malaysian companies. This finding is also consistent in terms of reducing earnings management by increasing the female proportion in independent directorship. The findings of the moderating role played by gender diversity show the effective and successful application of *"Gender Socialization Theory"* in reducing earnings management. Accordingly, gender diversity is represented by the increasing female directorship in the boardroom, which confirms the effectiveness of promoting boardroom gender diversity through the amendments in MCCG in 2012 and 2017. However, gender diversity fails to influence the relationship between earnings management and the separation of CEO and board chairman role. A possible reason for this could be the limited presence of females in these positions which beliefs to be resolve by the increase of female personnel in these particular positions.

There are some limitations to this study. Firstly, the limited availability of data, restricted this study from examining some other potential scenario. Secondly, the data collected from annual reports manually for each year consumes a lot of time from the limited research period. Lastly, the allocated time period for conducting this research was limited and hence it restricted this study from expanding to some other possible phenomena. However, overcoming these limitations can produce potential ideas for future research. A possible extension of this study could be examining the moderating effect of gender diversity on the other board committees and top management in reducing earnings management. Moreover, the examination can be conducted based on the presumptions in *"Stewardship Theory"*. In

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addition, the sample can be divided into State-Owned Enterprises (SOEs) and Privately-Owned Enterprises (POEs) in order to observe the difference.

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