BOARD SIZE AND FIRM VALUE IN THE CONTEXT OF MALAYSIA: A CONCEPTUAL FRAMEWORK

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ABSTRACT
This paper presents a conceptual framework between board size and firm value in the context of Malaysia. A comprehensive study of the impact of corporate governance on firm value was conducted. Theoretically, agency theory and resource dependence theory are two frameworks that can be used to analyse the relationship between board size and firm value. Agency theory states that smaller boards of directors are associated with better firm performance and higher firm value because they lead to better decision-making and more effective oversight. Resource dependence theory, on the other hand, suggests that larger boards are able to access external resources, a diverse group of backgrounds, skills, and expertise in specific areas relevant to the company’s operation will increase the value of the firm. Considering the countervailing positive and negative effects of board size on firm value, this paper predicts a non-monotonic relationship between board size and the firm value of listed companies in Malaysia. Therefore, it is important for policymakers to consider the composition and size of the board of directors to ensure effective corporate governance and contribute to the overall success of the company.

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1. INTRODUCTION
The board of directors plays a crucial role in overseeing the management of the company and making strategic decisions that can affect the company’s financial performance and firm valuation. The size of the board of directors can affect the value of the company, but there is no consensus on whether a larger or smaller board is more beneficial. However, the relationship between board size and firm value is complex and can vary depending on various factors such as the industry in which the firm operates, the size of the company, and the effectiveness of the board of directors.

Research on the relationship between board size and firm value has produced mixed results. Some studies report that larger board sizes are negatively associated with a firm
value (see Bachiller et al., 2015; Nguyen et al., 2016; Khan et al., 2021). This is because firms with larger boards may underperform those with smaller boards, possibly due to the increased costs associated with a larger board and potentially less effective decision-making due to the greater number of individuals involved. On the other hand, the empirical international evidence provided by Pucheta-Martinez and Gallego-Álvarez (2020) show that larger boards have a positive impact on firm value. For example, a larger board can provide the company with a broader range of perspectives and expertise. More specifically, a diverse board can bring different skills and experience to the company, which can help the company make better decisions and improve its performance, thus, supporting the resource dependence theory.

Jensen (1993) favors of a smaller board because a board with more than seven to eight members is unlikely to be effective in a company. With fewer board members, it is easier for the board to reach a consensus and make informed decisions, and there are fewer opportunities for conflicts of interest or agendas to emerge. Additionally, smaller board sizes can provide better decision-making and more effective oversight by the board of directors. This can lead to more effective governance and better alignment with the company’s goals and strategy.

Empirically, the research study of board size and firm value in the context of Malaysia is still limited. We only found three papers show that board size has a negative association with firm value as measured by Tobin’s Q in Malaysian listed companies (Mak & Kusnadi, 2005; Haniffa & Hudaib, 2006; Khan et al., 2021). Their findings show that larger board size has a negative impact on firm valuation due to communication and coordination problems that can hinder the board’s ability to provide effective monitoring and oversee the company. This study mainly focuses on the Malaysia case study because Malaysia has a unique corporate governance landscape including cultural and ethnic diversity, weak investor protection, corruption, and high levels of ownership concentration.

Nevertheless, the size of a board of directors can affect a firm value, but the optimal size depends on the specific needs and goals of the company. A larger board offers more diverse perspectives, while a smaller board is more effective in decision-making and implementation. It is important to note that the relationship between board size and firm value is not a simple linear relationship. In other words, the competing view of board size on firm value in the context of Malaysia, this paper predicts that there is a non-monotonic relationship due to the trade-off between costs and benefits.

2. LITERATURE REVIEW
This section discusses the existing empirical studies on the relationship between board size and firm value. Although there are a handful of literature studies on corporate governance characteristics and firm value, the previous empirical evidence has provided inconclusive and mixed results.

2.1 A Positive Relationship between Board Size and Firm Value
The study of Larmou and Vafeas (2010) investigate the relationship between board size and firm performance by targeting smaller firms that experienced poor operating performance. Their sample covers 257 firms between 1996 to 2000 in the U.S. They use the market-to-book ratio as a proxy for firm performance. They find a positive correlation between board size and firm performance. This suggests that firms with larger boards of
directors are added value rather than detract from it. More specifically, firms with larger boards yield a higher market value.

Similarly, Singh et al. (2018) also report a significant positive correlation between board size and firm value using hand-collected data from 324 Pakistan firms listed on the Karachi Stock Exchange. Their sample period is from 2009 to 2015. They use Tobin’s Q to measure firm value, while the number of directors on the board was used to determine its board size. Their system generalized method-of-moments (GMM) estimation results show that a larger board is associated with a higher Tobin’s Q, which is consistent with earlier findings (Dalton et al., 1999; Kao & Chen, 2004; Rahman & Ali, 2006). The findings show that having a larger board of directors can improve overall firm valuation. This can be justified by the fact that large board size has a better viewpoint and decision-making when company’s faces a difficulty.

On the other hand, Mishra and Kapil (2018) explore the effect of board characteristics on firm value in the context of India. Their sample consists of 391 Indian companies listed on the National Stock Exchange from 2010 to 2014. The authors use market-based (Tobin’s Q) and accounting-based (ROA) to measure firm value. Their findings show that board size is positively and significantly correlated with both Tobin’s Q and ROA measures. Thus, the authors conjecture that larger board size is needed in the Indian corporate environment setting grounded on the resource dependence theory.

For international firms, the cross-country study by Pucheta-Martinez and Gallego-Álvarez (2020) examine the impact of board characteristics on firm performance. Their research sample covers 10,314 firm-year observations for 34 countries over a 12-year period from 2004 to 2015. Within 34 countries, the authors focus on six geographic regions: Africa, Asia, Europe, Latin America, North America, and Oceania. They use Tobin’s Q as the main measure for firm value while return on equity (ROE) is an alternative measure. Their findings demonstrate a positive relationship between board size and firm value. This suggests that a large board size will improve the overall firm performance in accordance with resource dependence theory. In other words, firms that have a large number of directors can provide more human capital to the board with their diversity of expertise, skills, and professional backgrounds, thus, it will help with the decision-making process easier.

2.2 A Negative Relationship between Board Size and Firm Value

Yermack (1996) provides the first empirical evidence that examines the correlation between board size and firm performance of U.S. industrial corporations. The author collects a sample of 452 large U.S. industrial corporations for the period from 1984 to 1991. He uses Tobin’s Q as a proxy to measure the firm performance. The ordinary least squares (OLS) results show a negative relationship between board size and firm value. This indicates that a larger board size will reduce firm valuation. The author claims that firms with a smaller board around six to seven are favorable to improving firm value. His evidence supports the agency theory that larger boards tend to be less effective than smaller boards due to the conflict of interest between principal-agent problems. Later, his study is further explored by Eisenberg et al. (1998) who examine board size and firm value in the Finland firms. Their findings are similar to Yermack’s (1996) who find a negative correlation between board size and firm value in a sample of 879 small and midsize Finnish firms over the period 1992 to 1994.

Another study by Mak and Kusnadi (2005) examine the impact of corporate governance structures on firm value in Singapore and Malaysia firms. They collect 230
samples of firms listed on the Kuala Lumpur Stock Exchange (KLSE) and Singapore Stock Exchange (SGX). The study period covers the financial year-end 1999 or 2000. The financial and board characteristics data are obtained from Datastream and the annual reports published by KLSE. Their OLS results document that board size is negatively and significantly associated with firm value for both Singapore and Malaysia firms, suggesting that firms with a large number of directors on board reduce firm valuation.

Using a sample of 127 manufacturing firms listed in India, Ghosh (2006) investigates the relationship between board characteristics and corporate value for the year 2003. The author uses two measures to evaluate firm value namely, accounting-based measure (return on assets, return on sales, and return on equity) and market-based measure (adjusted Tobin’s Q). The findings show that board size exhibit a negative impact on corporate value. This implies that larger boards can cause inefficiency of monitoring, thus, free-rider problem arises. Ghosh’s research study is similar to the findings by Bennedsen et al. (2008) for Denmark of 6,850 small and medium-sized firms, Cheng (2008) for 1,252 U.S. firms, and Guest (2009) for 2,746 U.K. firms.

In the context of the Italian firms, Bachiller et al. (2015) compares family and non-family firms to see how the board of directors influences firm performance. Their sample covers 31 firms which are divided into 15 from family firms and 16 from non-family firms that traded on Borsa Italiana’s stock market index for the period 2007 to 2009. They employ four indicators to measure financial and social performance, namely return on assets, return on equity, AEI score, and accountability score. For family firms, their OLS regression results show that board size is negatively associated with ROA, but reports contradict findings that the size of the board is positively related to accountability score. This indicates that firms with a larger board are more aware of social performance compare to financial performance. Moving to non-family firms, their findings show that a larger board size lowers ROA and ROE. This suggests that a greater number of directors can generate free-rider problems in the organization.

Another study by Nguyen et al. (2016) investigates the impact of the size of the board on firm value in Australia. Their sample consists of 1,141 firms from 2001 to 2011. Corporate board data are collected from SIRCA’S board governance database. They use Tobin’s Q as a proxy for firm value. Their OLS and firm fixed effects regressions report a negative effect of board size on firm value. This suggests that increasing the size of the board by one member reduces Tobin’s Q by 9.2% (OLS) and 7.1% (firm fixed effects). Therefore, firms with a big board of directors will perform poorly in the firms because their decision-making processes are hampered by the free-rider situation.

2.3 A Non-Monotonic Relationship between Board Size and Firm Value

In the U.S. study, Coles et al. (2008) re-examine the relationship between board size and firm value from 1992 to 2001. Their panel data comprises 8,165 firm-year observations traded on Execucomp firms. They collect board data from Compact Disclosure and Investor Responsibility Research Center (IRRC), while firm data from Compustat. The authors employ Tobin’s Q as a measure of firm valuation which is widely used in the literature. In their study, they argue that the influence of board size on firm value varies depending on the type of firm. They provide evidence that board size and Tobin’s Q is a nonlinear relationship. More specifically, firm value decreases (increases) in board size for simple (complex) firms. This suggests that a larger board size could be an optimal value-enhancing for firms that are large, diversified, and leveraged firms. Smaller board
sizes, on the other hand, would be optimal for firms with high research and development intensive firms.

Yeung (2018) explores the nonlinear effect of board size and firm value based on the cultural backgrounds of directors. The sample comprises 246 firms listed on the Hong Kong Stock Exchange (HKEx) over the period 2008 to 2010. The author collects the financial variables data and board governance data from Datastream, Bloomberg, and the annual reports published on the website of individual firms. He uses the market-to-book ratio (MB) as the main measure for firm value. The key independent variable is proxied by board size, defined as the number of directors who sit on the board during a fiscal year. The fixed effect estimation results show that board size and the squared board size are positive and negative associated with the market-to-book ratio. This suggests that the positive effect of board size supports the resource dependence theory prediction that a larger board has the advantage of providing a broader pool of expertise, resources, and information. However, when board size beyond a threshold point, the negative effect of board size kicks in due to agency problems related to marginal costs outweigh the marginal benefits. Hence, the findings support the hypothesis that there is an inverted U-shaped relationship between board size and firm value in Hong Kong listed firms. In the same vein, De Andres and Valledado (2008) also report an inverted U-shaped relationship between board size and Tobin’s $Q$ using a large sample of 69 international commercial banks in Canada, the U.S., U.K., Spain, France, and Italy.

3. CONCEPTUAL FRAMEWORK
Figure 1 shows a conceptual framework in the relationship between board size and firm value.

![Conceptual Framework](Figure 1: Conceptual framework.

3.1 Measurement for Dependent Variable (Tobin’s $Q$)
In the existing empirical research on board size and firm value, market-based measurement as a proxy for Tobin’s $Q$ is commonly employed in corporate finance literature comparison to accounting-based measurement like return on assets or return on equity. This is because Tobin’s $Q$ is a forward-looking which predict future earnings,
while accounting-based is a backward-looking. Tobin’s $Q$ greater than one indicates that firms generate more revenue in the future using their current resources. The value of Tobin’s $Q$ less than one, on the other hand, indicates that firms are not using the existing resources effectively and generate less revenue in the future. This study defines Tobin’s $Q$ as the market value of assets divided by the book value of assets. In the calculation, the numerator is calculated as the market value of equity plus book value of assets minus book value of equity, and minus balance sheet deferred taxes. The data are provided from Refinitiv Datastream.

3.2 Measurement for Key Independent Variable (Board Size)
Board size is proxied by the total number of directors who sit on corporate boards. Grounded in agency and resource dependence theories, board size has a positive and negative impact on firm value. Agency theory demonstrates that a large number of directors can cause communication and coordination problems (Jensen & Meckling, 1976; Fama & Jensen, 1983), whereas the latter shows that a larger board of directors with diverse backgrounds, knowledge, and skills can provide better advice for firms (Pfeffer & Salancik, 1978). The data are hand-collected from the annual report of Bursa Malaysia.

3.3 Control Variables

3.3.1 Liquidity
Liquidity is proxied by the illiquidity measure of Closing Percent Quoted Spread ($CPQS$) by averaging the daily ratio of the difference between closing ask and bid prices over the average of bid-ask prices. In this study, $CPQS$ is multiplied by minus 1 to indicate that a higher value correlates with greater liquidity. Fang et al. (2009) report that liquidity has a positive effect on firm value. This suggests that liquidity improves company performance mainly through stock price informativeness and managerial pay-performance. The data are provided from Refinitiv Datastream.

3.3.2 Firm Size
Firm size is measured as the natural logarithm of total assets. Previous studies find that the results of firm size and firm value are inconclusive. Pucheta-Martinez and Gallego-Álvarez (2020), Portharla and Amirishetty (2021), and Sharma et al. (2022) show a positive effect of firm size on firm value. This suggests that larger firms have market power and tend to obtain external funding and resources more easily than smaller firms. Larger firms, on the other hand, may report lower firm value due to operational inefficiency and higher monitoring costs (Fama & French, 1992; Lang & Stulz, 1994). The data are provided from Refinitiv Datastream.

3.3.3 Firm Age
Firm age is measured as the natural logarithm of the number of years since the firm is incorporated. The relationship between firm age and firm value is mixed. Fang et al. (2009) find that younger firms perform better compare to older firms. However, the finding of Nguyen et al. (2016) and Wang et al. (2018) favor older firms because they have greater experience, a long track record of financial performance, and have established a stronger relationship with stakeholders, which can help to strengthen company performance. The data are provided from Refinitiv Datastream.
3.3.4 Leverage
Leverage is the ratio of total debts divided by total assets. Theoretically, Modigliani and Miller (1963) argue that high leverage is associated with greater firm value due to the benefit of a tax shield. Jensen (1986), on the other hand, claims that increasing firm leverage can help to reduce agency problems and improve firm value. The data are provided from Refinitiv Datastream.

3.3.5 Capital Expenditure
Capital expenditure is the ratio of capital expenditure divided by the total assets. Johnson et al. (2013) and Nguyen et al. (2016) find that capital expenditure is positively associated with firm value. This implies that investors will invest in long-term investment projects that are expected to provide future growth opportunities for the company. The data are provided from Refinitiv Datastream.

3.3.6 Return on Assets
Return on assets is the ratio of operating income divided by the total assets. According to Isakov and Weisskopf (2014), return on assets has a positive and significant effect on firm value. This is because the higher the ROA value of a firm, the better its ability to manage its assets. A high value of ROA indicates that a company is generating more profit from its assets, whereas a low value of ROA indicates that the company is underperforming and does not use its assets effectively. The data are provided from Refinitiv Datastream.

3.3.7 Board Independence
Board independence is one of the common explanatory variables being used in corporate finance literature. Empirical studies conducted by Pucheta-Martinez and Gallego-Álvarez (2020) and Khan et al. (2021) find that board independence is an important key driver of firm value. This is because independent non-executive directors are to provide independent oversight of the company’s management and operations, advice to the corporate board on matters related to the company’s strategy, governance, and performance, as well as act in the best interests of the company and its stakeholders. Board independence is the ratio of independent non-executive directors divided by board size. According to the Bursa Malaysia Listing Requirements, the ratio of independent non-executive directors should be at least one-third of the board so that it has a better monitoring incentive to enhance firm value. The data are hand-collected from the annual report of Bursa Malaysia.

3.3.8 CEO Duality
CEO duality refers to the same person who serves in both positions such as chief executive officer (CEO) and chairman of the board of directors. In this study, CEO duality is a dummy variable that equals one if the CEO is also a chairman, and zero otherwise. The data are hand-collected from the annual report of Bursa Malaysia.

3.3.9 Independent Non-Executive Chairman
An independent non-executive chairman is a person who is not a member of the company but whose responsibility is to oversee the board’s activities, provide guidance to the board of directors, and act as an interest on behalf of the stakeholders. In this study, the
independent non-executive chairman is a dummy variable that equals one if the chairman is an independent non-executive director, and zero otherwise. The data are hand-collected from the annual report of Bursa Malaysia.

3.3.10 Blockholding
A blockholding refers to a larger number of shares in a company that is owned by a single shareholder. More specifically, blockholding defines as the total percentage of share ownership held by shareholders who own at least 5% of the outstanding shares. Generally, the total of blockholdings includes government, cross holdings, pension funds, investment company, employees, and other holdings. The data are provided from Refinitiv Datastream.

4. THE DATA
In this study, the data are collected from two sources. First, corporate financial data such as firm value, liquidity, firm size, firm age, leverage, capital expenditure, return on assets, and blockholding are obtained from Refinitive Datastream. Second, corporate governance variables such as board size, board independence, CEO duality, and board chairman are hand-collected from Bursa Malaysia annual reports.

4.1 Research Method
This study will use pooled Ordinary Least Squares (OLS) to estimate the relationship between board size and firm value. However, the estimator of pooled OLS has a limitation that does not account for individual heterogeneity which can bias the parameter estimates. We perform sensitivity analysis tests such as firm fixed effects, two-step system generalized method of moments (GMM), and two-stage least squares (2SLS) to account for unobserved heterogeneity or endogeneity issues.

5. THEORETICAL IMPLICATIONS
The research study on board size and firm value suggests that there may be an optimal board size that maximizes firm value. Firms with smaller board lack of necessary expertise and diversity of perspectives, while larger boards suffer from coordination problems. This study theoretically contributes to the board size – firm value relationship by extending agency and resource dependence theories. Agency theory suggests that large boards may suffer from coordination challenges and decision-making inefficiencies. On the other hand, the positive effect of board size on firm value is stemming from resource dependence theory. This indicates that a larger board has diverse networks, knowledge, and various of expertise that can benefit the firm by facilitating access to external resources. Hence, this study has added value to regulators, government, investors, and policymakers to understand the mechanisms through which board size influences firm value.

6. CONCLUSION
In conclusion, the size of a company’s board of directors can potentially have an impact on the company’s financial performance and value. Some studies suggest that smaller boards are associated with higher firm value, as smaller boards are more efficient and able to make decisions more quickly. However, other studies find that a large board of directors is associated with better firm value because a larger board can provide the firm with a greater diversity of perspectives and expertise. In addition, there is some evidence
reports that there is a diminishing return when it comes to board size, and that very large boards may be less effective at driving firm value (Yeung, 2018; Wang et al., 2018; Potharla and Amirishetty, 2021; Sharman et al., 2022). Last but not least, it is important for companies to determine the optimal board size to maximize firm value.

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