Board Diversity and Firm Performance in the Construction, Manufacturing, and Trading/Services Industries

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ABSTRACT

This research investigates the effect of board diversity on Malaysia’s firm performance from an industry specificity angle. The study focuses on three major industries i.e. construction, manufacturing, and trading/services (CMTS) from the year 2012 to 2016. Board personal characteristics measure gender and ethnicity while board characteristics indicate managerial ownership, board size, board independence, and CEO duality. The results obtained proposed that board independence, CEO duality, gender diversity, and managerial ownership are significant factors affecting firm performance. Meanwhile, board size and ethnic diversity are not significant. The results are different due to the differences in industry specialisations. In sum, the mixed evidence implies that Malaysian industries' sectors are not homogenous and unique by nature.

Keywords: Board diversity; Corporate governance; Firm performance; Agency Theory

INTRODUCTION

The documentation of corporate scandals including high profile firms in the US such as Enron, Tyco, and WorldCom has highlighted the issues of corporate governance into a confronting debate. Many criticisms have been reported on the failure of the Board of Directors (BoD) to conduct diligent supervision on management decisions (Al-Matari et al., 2012). In a later event, the implication of Asian crisis in 1997 and the recent global crisis in 2008 have reemphasised the need of best governance practices to improve firm performance in the long run (Mohamad Mokhtar et al., 2009). Consequently, the increasingly diversity in board composition in terms of age, gender, ethnicity, nationality, size, managerial ownership, and independence is a recent phenomenon in the workplace (Al-Matari et al. 2012; Ararat et al. 2015; Ciftci et al, 2019; Shukeri et al. 2012) to promote good corporate governance. The policymakers, academicians, researchers, and the industry players concern on the illustrious composition of the board committee that could enhance value creation for the firm and shareholders in particular.

There are at least four fundamental roles of the BoD: (i) monitoring and controlling management, (ii) delivering ideas and advice, (iii) supervising compliance with related laws and regulations, and (iv) connecting firm with external resources and environments (Mallin 2004; Monks & Minow 2004). However, the composition of the BoD matters the most in ensuring the fulfilment of these functions towards firm performance. The influence of board diversity on firm performance has been well discussed in several interdisciplinary theories (Carter et al. 2003, 2010). Social Psychological Theory suggests that the diversity in BoD (such as education, skills, experiences, culture, and managerial ownership) carries different behavioural and psychological effects on the decision-making process. For instance, while a director with majority status may dictate the group decisions, a minority director encourages critical thinking and diverse opinions, which results in better decisions and creative solutions (Westphal & Milton 2000). Meanwhile, Resource Dependency Theory highlights the benefits of external resources that independent board may bring into the firm such as information and social networks, which eventually improve the firm growth. In extension to this theory, Human Capital Theory argues that the future direction of a firm is determined by the characteristics of the leader (i.e. BoD), which may vary in terms of education, skills, and experience. On the other hand, Agency Theory emphasises on the role of monitoring BoD from the managerial perspective to satisfy the interest of shareholders (Jensen & Meckling 1976). Although more diverse board members increase board independence and hence better performance, yet no clear diversity-performance influences are provided in the Agency Theory (Carter et al. 2003).

Previous studies on board diversity and firm performance were largely on developed economies (Fama & Jensen 1983; Jensen & Meckling 1976; Robinson & Dechant 1997; Rutledge et al. 2016). Emerging studies are focusing on developing countries (Adams & Ferreira 2009; Ang & Ding 2006; Cho & Kim 2003; Chung 2000; Darmadi 2010) highlighting on many issues including women participation in the board, government ownership, and external BoD. Studies on firms in Malaysia indicate mixed results between board diversity and firm performance due to many board demographic factors such as race, religion, culture, gender, and many more (Alazzani, Hassanein &
Aljanadi 2017; Abdullah 2014; Abdul Wahab, Pitchay & Ali 2015; Bliss, Muniandy & Abdul Majid 2007; Haniffa & Cooke 2002; Ismail, Abdullah & Nachum 2013). The findings are a mix due to several aspects involving different countries, the period of studies, and methodological approaches. Despite the inconclusive results, the findings are flawed by the fact that industries making up the market are not homogenous (Amin & Janor 2016; Narayan & Sharma 2011). This scope of research needs further scrutiny, given that industries peculiarities might not be captured by the aggregate results of all firms in the country.

This study extends previous research by examining the role of board diversity on the performance of firms in three important industries in Malaysia, which are construction, manufacturing and trading from the year 2012 to 2016. Malaysia has received much criticism on the issue concerning the weaknesses in corporate governance. Instances of corporate governance cases in Malaysia include Renong, Perwaja Steel, Sime Darby, Malaysia Airlines, and recently 1MDB (Hassan Che Haat, Abdul Rahman & Mahenthiran 2008; Nabilah et al. 2017), which lead to the introduction of the Malaysian Code of Corporate Governance (MCCG), to remedy all corporate sectors in the country. The MCCG has taken several stages of revision since 2000, 2007, 2012, and 2017 as pro-active efforts to ensure that it remains current and relevant with the ever-changing global best practices and standards (Securities Commission Malaysia 2017). Although it is voluntarily, it is interesting to investigate how the industry players have benefited from the corporate governance standards and thereby influence their performance. Therefore, this study intends to examine the impact of board diversity on firm performance by looking into a specific industry in Malaysia. The study aims to investigate the following questions: (1) Does board diversity (in terms of gender, ethnicity, managerial ownership, board size, board independence, and CEO duality) affect firm performance? (2) Does the board diversity-firm performance relationship can be differentiated between industries?

The findings provide several policy implications in several ways. Policymakers will have informed decisions in developing frameworks or applicable regulations related to anticipating board composition. Considering the heterogeneity of industries in Malaysia, the study provides additional knowledge to the literature, which indicates mixed board diversity-firm performance relationships across different nature of businesses. Besides, the investors and managers are provided with instructive knowledge that board diversity might mitigate the problems of dominant shareholders that, in the long run, spark creative solutions and better firm performance.

This paper is arranged into five sections. Beginning with the presentation of the introduction in Section 1, followed by reviewing literature related to board diversity and firm performance in Section 2. The methodology of the study is presented in Section 3, while Section 4 discusses and deliberates the findings of this study. Finally, Section 5 concludes the paper by highlighting contributions of the study and its limitations as well as suggesting future research.

**LITERATURE REVIEW**

Good corporate governance is important and manifests itself in terms of qualified board members, which leads to an effective and efficient Board of Directors (BoD). A BoD is a group of individuals with multi-responsibilities to lead and direct a firm primarily to realise the long-term shareholders’ value. The BoD is a fundamental governing body in a firm that also influences the strategic decision-making in leading better firm performance (Mandala et al. 2018). However, if the BoD fails to control the top management, it becomes ineffective due to several factors. The agency theory explicates on the contradictory interest of managers and shareholders due to separation of ownership and control in the firm (Fama & Jensen 1983).

Board diversity creates a dynamic environment that could lead to a competitive advantage for the firm (Abdullah 2014). A diverse board increases board independence since the various background of board members may have better monitoring mechanism towards the top management. Besides, board diversity may also understand the marketplace better and increase the innovative motivation to become more creative, a better decision-maker, acquire good leadership skill; and international networking (Robinson & Dechant 1997).

There has been much research conducted on board diversity affecting the financial performance of a firm. This research includes gender, ethnicity, managerial ownership, board size, board independence, and CEO duality (Campbell & Vera 2008; Shukeri et al. 2012; Akpan & Amran 2014).

**GENDER**

Gender diversity is important to reflect the rights of society and professional expertise. The corporate world has witnessed low participation of female in BoD. In Norway and Sweden, listed firms impose gender quota (Rondøy, Oxelheim & Thomson 2006) with at least 40 per cent of female board members are required since 2008 (Monbiot
In Malaysia, there is a 30 per cent quota for women to participate as board members, which is established by the Malaysian government (MCCG 2012). Hence, women must portray their capabilities and quality through good educational background, leadership skills, expert in their fields and many more (Ismail et al 2017). As of now, it is 23.7 per cent and Malaysia is believed to reach the 30 per cent quota for women on board by the end of the year 2020 (Securities Commission Malaysia 2019).

The rights of women must not be denied since there are advantages to include women as members of the board. This is due to women may understand a phenomenon differently, which could lead to better quality and creativity in decision-making. Besides, the attributes of women such as meticulous, trustworthy, and strictness lead towards efficiency and effectiveness. A study conducted in Malaysia evident that female directors contribute more to social performance (Alazzami et al. 2017). According to Smith, Smith, and Verner (2005), women involvement in the board would lead to a better image for the firm. Meanwhile, Hassan and Marimuthu (2018) affirmed that there is a significant positive impact on firm performance with the involvement of women as board members. In the US, a study revealed that 30% of women involvement in the corporate board for Science, Technology, Engineering, Maths, and Finance firms would lead to better performance (Wiley & Monllor-Thermos 2018). The impact of women’ presence is seen in the management, shareholders, and market perspectives.

In contrary, some studies contended that women participation in the board, drive down firm value due to high cost related to emotional issues (Tajfel & Turner 1985; Williams & O’Reilly, 1998), communication breakdown (Miller et al. 1998; Adams & Ferreira 2009), and slow decision-making (Adams & Ferreira 2009; Ahren & Dittmar 2012). Other studies revealed that there is no significant impact on gender diversity to firm performance as it depends on corporate culture and custom of the country (Adams & Ferreira 2009; Shukeri et al. 2012; Ujunwa 2012). In the Philippines, the male or female director is believed to have equal quality, thus, women in the board have no significant impact on firm performance (Unite, Sullivan & Shi 2019).

**ETHNICITY**

Firms with diverse demographic background allowing ethnicity or race diversity may portray a social justice paradigm, which suggests a positive perception. Usually, ethnicity is related to cultural values. Malaysia is a unique country that has a multiracial citizen with tremendous cultural values. Malaysian citizen landscape is divided into three major ethnicities namely, the Malays, Chinese; and Indians. Besides these three major ethnicities, there are minority groups, which are the indigenous people. These ethnic groups are then categorised into ethnic lines as Bumiputera and non-Bumiputera for corporate ownership. The Bumiputera includes Malays and all the indigenous people while Chinese and Indians are non-Bumiputera (Yatim et al. 2006).

Although Malaysia is rich with cultural values, multi-ethnicity has no impact on firm performance in studies conducted in Malaysia (Hassan & Marimuthu 2018; Ismail et al. 2013). In different studies (Marimuthu & Kolaindasmy 2009; Shukeri et al. 2012) multi-races has a positive impact on firm value due to diverse background, intellectual capital, and competency that enhance performance. A study conducted by Abdul Wahab et al. (2016) revealed that Bumiputeras are considered the individualistic type and secretive leading to lack of communication and disclosure. While in Nigeria, diverse ethnicity in the board has a significant positive impact on firm performance (Ujunwa 2012).

**MANAGERIAL OWNERSHIP**

Managerial ownership is the composition of an individual or a group of people or institution owning and managing a firm, which could impact corporate performance. The separation of ownership from control would avoid agency conflicts (Jensen & Meckling 1976) due to moral hazards such as managers pursuing their interest sacrificing the shareholder’s interest (Agrawal & Knoeber 1996) and information asymmetry (Ezzamel & Watson 1993). Managerial ownership structure may be represented by three types, which are director ownership, foreign ownership, and government ownership.

There are conflicting results regarding directors’ ownership with firm performance. Studies asserted that directors’ shareholding does not affect firm performance (Chiang 2005; Shukeri et al., 2012). Meanwhile, some studies (Ali et al. 2008; Radziah, Ibrahim, and Pok 2009) found otherwise, stating that directors’ ownership leads to better corporate performance since they could alleviate agency conflicts between managers and owners.

Foreign ownership denotes a large number of foreign shareholders participating in the firm. This triggers a confident signal from an international level towards the corporation. According to Haniffa and Cooke (2002), a large number of foreign shareholders suggest transparent information on the annual report, which in return creates high
value to the firm. This is evident from the study of Ghazali (2010) that shows a significant impact on corporate performance.

The involvement of government in corporations is another form of ownership. Government ownership is usually associated with the privatisation of entities with close monitoring for continued success. The association of the government-owned firm with corporate performance is rather mixed according to an individual country. In Singapore, a government-owned firm has a higher market value (Ang & Ding 2006) than in China (Hovey et al. 2003). Ghazali (2010) also suggested that the interference of government has a significant influence on corporate performance. This could be due to social support given by the government, which without the support will lead to workplace deviant behaviour (Norsilan, Omar & Ahmad 2014).

CEO DUALITY

CEO duality occurs when individuals holding two positions, the CEO and chairman of BoD. The chairman is responsible to ensure the performance of the management through monitoring and evaluating the top management including the CEO, while CEO is held responsible to manage the operational activities of the firm (Weir & Laing 2001). Therefore, CEO duality may incur a conflict of interest and ineffective monitoring system (Bliss et al. 2004; Daynton 1984; Millstein 1992).

According to Shukeri et al., 2012, CEO duality is a non-pragmatic approach in Malaysia supporting the MCCG 2007 suggesting separation of roles and responsibilities between the CEO of the firm and chairman of the board. Moreover, CEO duality also has no significant impact on firm performance (Abdullah 2014; Baliga et al. 1996; Dalton et al. 1998; Ujunwa 2012).

Nonetheless, proponents of CEO duality (such as Boyd 1995; Finkelstein & D’Aveni, 1994; Peng, Zhang & Li 2007; Sridharan & Marsinko 1997) established the Stewardship Theory. The theory suggests that the combined role of CEO and Chairman is the best stewardship role that promotes firm performance because dual board leadership encourages strong leadership and trust that would facilitate quick decisions. In a psychology study, individuals with good knowledge of the subject, skills, and abilities that meet the job demand will offer their best commitment and retain the job (Goh & Lee 2016). Tin and Lee (2008) further added that CEO duality is better with non-family firms since it outweighs the monitoring costs on CEO-chairperson. A study revealed that CEO duality and family controlled firms may result to risk of entrenchment and expropriations in the firms’ activities (Mohd Saleh & Omar 2014). While a study conducted on the construction industry in Malaysia evident significant positive contribution towards firm performance (Hussain & Abdul Hadi 2018). Hence, CEO duality contributes to firm performance.

BOARD SIZE

Board size matters as larger board size is perceived to be better for its diverse expertise (Druckeriv 1992; Zahra & Pearce 1989), experience (Dalton, 2005), better monitoring mechanism (Shukeri et al. 2012), more external linkage, ability to extract crucial resources, and less avenue in manipulating board members (Dalton et al. 1999; Goodstein, Gautam & Boeker 1994). With multiple functions and competencies of board members, an improvement to the firm’s financial performance may occur (Wang et al. 2017).

In contrary, there are arguments on the slower decision-making process with a larger board size (Yermack 1996). Therefore, bigger board size could lead to less effective good governance (Abdul Wahab et al. 2015). Wang et al. (2017) revealed that, in the hotel industry, the optimal board size is 10 and beyond that number will affect the performance of the firm. Among the problems occurred are increased communication barriers and obstacles to coordinate the directors; and directors will also have less ability to monitor the performance of top management (Jensen 1993; O’Connell & Cramer 2010; Yermack 1996).

BOARD INDEPENDENCE

The independent of the board is important to avoid conflicts of interest in influencing the managerial decision. Therefore, Fama and Jensen (1983) believed that outsiders are the best candidates to become board members since they are not active in the firm’s management. Hence, minimising agency problem whilst maximising shareholders value. Independent directors on board provide more knowledge and skills and give greater deliberations and judgements (Heravia et al., 2011; Shukeri et al., 2012). On the other hand, several studies (Agrawal & Knoeber 1996; Yermack 1996; Arosa, Iturralde & Maseda 2013) found board independence does not improve firm value due to poor monitoring roles and cultural barriers. Other studies asserted that there is no evidence on firms having more
influence directors are able to increase firm value suggesting to the dominant role of executive directors in decision-making (Abdul Rahman & Mohamed Ali 2006). This contradicts a study conducted by Ahmadi, Nakaa, and Bouri (2018) revealing that board independence has a significant impact on firm performance.

The Importance of Industry-Specific

The previous reviewed studies thus far are based on an aggregate market sample. Although firm performance is sensitive to the industry specificities, it is ironic that the research on board diversity-firm performance within the industry perspective is very limited. Industry specificities may influence firm performance as the different firm has different background hence influence firm’s decision-making process (Mason 1939). The conditions of each industry vary according to challenges and uncertainties faced (Thompson 1967). From the management strategic aspect, Porter (1980) asserted that the key driver in determining firm performance is the industry structure. In support of this theory, empirical studies proved that industries are heterogeneous and may result in different performance subject to market structure (Narayan & Sharma 2011; Amin & Janor 2016). For instance, the finance industry is dominated by male and experienced members (Kang, Cheng & Gray 2009) while female directors are preferable in services industry such as technologies and healthcare (Harrigan 1981). In addition, board independence is affected by industry requirements (Ravina & Sapienza 2009) and robust legal system (Uribe-Bohoyoquez et al., 2018). Thus, it is important to investigate firm performance by acknowledging the industry specificities effects affecting the firm decision-making process.

METHODOLOGY

The dataset comprises of firms from the industries of construction, manufacturing, and trading/services (CMTS) that are listed on Main Board of Bursa Malaysia. Construction is an industry involved in creating physical structures such as buildings, bridges, or roadways. An industry involving producing finished goods sold to distributors, retailers, or end consumers is known as the manufacturing industry. Trading and services sectors include utilities, wholesale and retail trade, accommodation, food and beverages, transportation, storage, information, and communication. These three industries have been the main industries driving Malaysia economies\(^1\). While the secondary data are retrieved from the published annual report from the year 2012 to 2016. The studied period is selected prior to the reform of MCCG 2017 and at the same time to avoid the impact of the Companies Act 1965, which was revamped in late 2016. This study employs equally 30 firms from each industry in an arbitrary subject to the data available for five years of observations.

Following previous studies (Carter et al. 2003; Darmadi 2010; Shukeri et al. 2012), several explanatory variables are controlled and the board diversity-firm performance relationship is analysed based on the following framework:

\[
Y_{it} = \alpha + \beta_1 OWN_{it} + \beta_2 NUM_{it} + \beta_3 IND_{it} + \beta_4 DUA_{it} + \beta_5 GEN_{it} + \beta_6 RACE_{it} + \beta_7 Control_{it} + \epsilon_{it}
\]

where \(Y\) defines firm value (ROA), OWN refers to managerial ownership, NUM is board size, IND is board independence, DUA is CEO duality, GEN for gender diversity, and RACE estimates ethnic diversity. Control indicates common firm-specific variables i.e. size (logarithm of total assets), leverage, and age from its establishment until 2016. \(\alpha\) is constant, \(\beta\) is the coefficient of variable, while \(\epsilon\) refers to random disturbance. While \(i\) and \(t\) are firm and time, respectively. OWN, NUM, IND, and DUA are selected because these variables had become the common proxy for board characteristics in the past literature (Campbell & Vera 2008; Shukeri et al. 2012; Akpan & Amran 2014). While, GEN and RACE are board personalites included in the model to address the uniqueness of multiracial in Malaysia (Hassan & Marimuthu 2018; Ismail et al. 2013). Furthermore, the BoD in Malaysia remains dominated by the male (Securities Commission Malaysia, 2019). This study includes control factors that could affect firm performance such as firm size, firm age, and leverage. In fact, these three variables are mostly used to explain firm performance in past literature (Devi & Devi 2014; Dogan 2013; Ibhaguia & Olokooyob 2018; Vinasithambhy 2015).

Firm size is measured by the total assets with the anticipation that firm size has a positive relation to firm performance as larger firms have competitive advantages due to economies of scales, market power, growth, and profitability (Punrose 2008; Alarussi & Alhaderi, 2018). Firm age is the years since the establishment of a firm. A young firm is less than 50 years while the old firm is more than 50 years (Anderson & Reeb 2003). It is revealed that younger firms have smaller profit since they have higher capital cost and less experience in the market (Lipczinsky & Wilson 2001). Leverage or debt to the firms’ assets has a positive association towards good corporate governance to enhance firms’ good reputation (Chung, 2000; Cho & Kim, 2003; Black, Jang & Kim 2006). Meanwhile, Faccio et al.
(2001) argued that Asian corporation with higher leverage is vulnerable to expropriation hence lower corporate governance. Table 1 summarises the measures of board diversity and other control variables used in the study.

<table>
<thead>
<tr>
<th>BoD Measures</th>
<th>Definition</th>
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</thead>
<tbody>
<tr>
<td>Managerial Ownership (MO)</td>
<td>The ratio of shares held by BoD to the total shares</td>
</tr>
<tr>
<td>Board Size (NUM)</td>
<td>The total number of BoD</td>
</tr>
<tr>
<td>Board Independence (IND)</td>
<td>The ratio of non-executive directors to the total number of directors</td>
</tr>
<tr>
<td>CEO Duality (DUA)</td>
<td>0 if the CEO is not a chairman and 1 if the CEO is also a chairman</td>
</tr>
<tr>
<td>Gender Diversity (GEN)</td>
<td>The ratio of female directors to the total number of all directors</td>
</tr>
<tr>
<td>Ethnic Diversity (RACE)</td>
<td>The ratio of directors excluded majority race to the number of directors</td>
</tr>
<tr>
<td>Size (SIZE)</td>
<td>Total assets of the firm</td>
</tr>
<tr>
<td>Age (AGE)</td>
<td>Age of the firm since its establishment until the present years</td>
</tr>
<tr>
<td>Leverage (LEV)</td>
<td>The ratio of debt to the total assets of the firm</td>
</tr>
</tbody>
</table>

RESULT AND DISCUSSIONS

DESCRIPTIVE STATISTIC

Table 2 provides a descriptive analysis of all variables for each industry. On average, it shows that all board diversity variables are of within similar range, except managerial ownership of BoD for firms in manufacturing, which hold eight times larger shares than the BoD of firms in trading and construction industries. For profitability (ROA), construction firms outperform (0.27) the other two industries (0.07) within the five years of observation (2012-2016).

<table>
<thead>
<tr>
<th>Variables</th>
<th>Manufacturing</th>
<th>Trading/ Services</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>Mean</td>
<td>S. Dev</td>
</tr>
<tr>
<td>Profitability</td>
<td>150</td>
<td>0.07</td>
<td>0.11</td>
</tr>
<tr>
<td>Managerial Ownership</td>
<td>150</td>
<td>34.07</td>
<td>32.61</td>
</tr>
<tr>
<td>Board Size</td>
<td>150</td>
<td>7.69</td>
<td>1.39</td>
</tr>
<tr>
<td>Board Independence</td>
<td>150</td>
<td>0.62</td>
<td>0.22</td>
</tr>
<tr>
<td>CEO Duality</td>
<td>150</td>
<td>0.93</td>
<td>0.25</td>
</tr>
<tr>
<td>Gender Diversity</td>
<td>150</td>
<td>0.09</td>
<td>0.10</td>
</tr>
<tr>
<td>Race Diversity</td>
<td>150</td>
<td>0.21</td>
<td>0.15</td>
</tr>
<tr>
<td>Firm Size</td>
<td>150</td>
<td>21.12</td>
<td>1.49</td>
</tr>
<tr>
<td>Age</td>
<td>150</td>
<td>37.63</td>
<td>20.72</td>
</tr>
<tr>
<td>Leverage</td>
<td>150</td>
<td>0.40</td>
<td>0.26</td>
</tr>
</tbody>
</table>

REGRESSION RESULT

Table 3 presents the random effect panel data regression analysis of the relationship between board diversity and firm performance, controlling for several firm-specific factors. Prior to regressing the data, this study tested the presence of multicollinearity using Pearson correlation matrix. However, the table on multicollinearity is excluded as the results show a lower correlation across independent variables indicating slight multicollinearity problems.

The result obtained from the regression analysis reveals that, for the manufacturing sector, only board independence has a significant negative impact on firm performance while the other board diversity measures are not significant. Whereas, the firm performance in trading/services is negatively affected by board independence and gender diversity but positively affected by CEO duality. For construction firms, only managerial ownership has a positive impact on performance.
Contradict with other studies (Heravia et al., 2011; Shukeri et al., 2012) indicating that board independence may minimise agency problems, the findings suggest otherwise. It shows that the participation of outsiders in the board has less impact on firm value due to high tendency of making mistakes out of ignorance (Agrawal & Knoeber 1996; Yermack 1996; Arosa et al. 2013) such as unfamiliarity of Malaysian business culture. However, this theory is only applicable to manufacturing and trading/services industries but not for construction firms. The insignificant influence of board independence in the construction field could be related to issues of the superior role of internal directors and managers in the boardroom (Abdul Rahman & Mohamed Ali 2006).

The significant positive impact of CEO duality is in line with the stewardship theory (Finkelstein & Hambrick 1996; Peng et al. 2007; Sridharan & Marsinko 1997) based on the arguments that CEO duality will have a full authority and greater discrepancies, which facilitate quick solutions to challenging issues especially regarding external conditions and environments. The strong leadership of CEO duality based on professional trust encourages conformity, commitments, and the speed of strategic judgements for the benefits of the firm. The CEO who ‘wears two hats’ acquires both the intrinsic knowledge about the firm and the experience to make decisions and run the business and hence improve firm value. Nonetheless, the significant positive role of CEO duality is only the case for trading/services sector but not significant for firms in the other two industries like other studies (Abdullah, 2004; Baliga et al., 1996; Dalton et al., 1998; Ujunwa, 2012). The results suggest that CEO duality is not a central factor in leading to a measurable improvement of these two industries but simply one of many variables (Baliga et al. 1996).

The findings conflict with previous literature (Alazzani et al. 2017; Hassan & Marimuthu 2018; Smith, Smith & Verner 2005) showing that gender diversity has a significant negative impact on firm performance. Some argued that, more often than not, a female is complex in nature, which prone to professionalism issues like emotional conflicts (Tajfel &Turner 1985; Williams and O’Reilly, 1998) and communication barriers (Miller et al. 1998; Adams and Ferreira 2009), which lead to time-consuming and less effective decisions. Similarly, Adams and Ferreira (2009) and Ahren and Dittmar (2012) opined that more gender diverse decision-makers will incur a higher cost due to conflicts and slower decision-making, thus, impair firm performance. Adams and Ferreira (2009) added that participation of female in the boardroom may cause over-supervision for formerly strong governance firm, which consequent in inefficiencies. The negative impact of female presence in the board, however, only evident in trading/service industry but insignificant for firms in the construction and manufacturing industries. The insignificant role of female directors is in line with the findings in Adams and Ferreira (2009), Shukeri et al. (2012), Ujunwa (2012), and Unite et al. (2019) due to differences in corporate culture.

The positive impact of managerial ownership on construction firm performance was confirmed by other local studies (Ali et al., 2008; Radziah et al. 2009). It shows that the board having shares in the firm will act like shareholders and managers at the same time to optimise business opportunities and maximise cash flows. The implication of incentive and entrepreneur effect of managerial ownership reduces the agency conflict since the BoD will work for the firm to increase the share value, instead of personal interest. For manufacturing and trading/service industries, board shareholding does not have any effect on firm performance like the findings in Chiang (2005) and Shukeri et al. (2012). There must be other superior corporate incentives that are more effective to offset agency problem rather than managerial ownership. This could be a bonus or any form of non-monetary benefits like vacation and insurance that has more values than shares offerings.

For other board diversity measures like board size and ethnic, they are not important to affect firm value. The study confirms local studies (Hassan & Marimuthu 2018; Ismail et al. 2013) indicating that multi-racial citizens of Malaysia have long been together and blended-in many aspects that encourage a similar way of thought, thus, lack of creativity to gain abnormal return for the firm. Whereas contrary to previous literature (Abdul Wahab et al., 2015; Shukeri et al., 2012; Wang et al. 2017), the study fails to support the significant impact of the board size on firm performance. This could be the results of other certain characteristics of the board that dominate the decision-making process that prevails over the number. There could be a better judging criterion of board effectiveness such as skills and determination of the board to effectively perform their function to maximise firm profitability.

For firm-specific variables, the findings are consistent with Coad et al. (2013) and Bruni et al. (2014) showing that the age factor harms firm performance. This could be the result due to several factors such as competitive structure and the technology surge in the market in line with globalisation. Throughout times, old firms become less motivated and passive to adopt new corporate challenges, thus, defeated by the younger and more flexible firms. For instance, in the case of Pos Malaysia that has been in the industry for more than 100 years, the entry of new rivals such as DHL, QDEX, and City-Link may have shaken their market position and, thus, decreases the performance. Factors like competitive pricing and good services to indulge from technology advancement may cause the under-performance of Pos Malaysia. High leverage is negatively related to performance (Bokhari & Khan 2013; Saeed & Badar 2013). The negative relationship can be explained by the poor prospects for the firm with high debt, which could lead to less future earnings. The increasing debt in the balance sheet crowd is out cash available to fund new projects, which cause
suboptimal investments and poor profitability. Besides, a high levered firm with high commitments i.e. interest payments reduce earnings per share and increase the risk to shareholders return, especially during the high volatile market condition. On the other hand, the findings differ from early studies (Punrose 2008; Alarussi & Alhaderi 2018) but in line with Dahmash (2015) indicating that size has no significant effect on firm performance. It shows that firms do not fully utilise their capacity to generate income either due to inefficient management or obsolete and worn-out assets.

In sum, the findings found that only board diversity in terms of board independence, CEO duality, gender, and managerial ownership is important to affect firm performance, however, contingent upon industry specificities. The very few significant diversity factors somehow indicate that board diversity is not a focal issue in gearing up firm performance. The findings could have supported the practice of some firms, which prefer less diversity in the board, probably to encourage quick decisions and effective monitoring.

TABLE 3. Estimated Results of Firm Performance Determinants

<table>
<thead>
<tr>
<th>Variables</th>
<th>Manufacturing</th>
<th>Trading/Services</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Managerial Ownership</td>
<td>0.0012</td>
<td>0.0004</td>
<td>0.0447***</td>
</tr>
<tr>
<td></td>
<td>(0.615)</td>
<td>(0.273)</td>
<td>(0.005)</td>
</tr>
<tr>
<td>Board Size</td>
<td>0.0012</td>
<td>-0.0032</td>
<td>0.0079</td>
</tr>
<tr>
<td></td>
<td>(0.831)</td>
<td>(0.128)</td>
<td>(0.518)</td>
</tr>
<tr>
<td>Board Independence</td>
<td>-0.0767**</td>
<td>-0.0697***</td>
<td>-0.1039</td>
</tr>
<tr>
<td></td>
<td>(0.038)</td>
<td>(0.007)</td>
<td>(0.391)</td>
</tr>
<tr>
<td>CEO Duality</td>
<td>0.0346</td>
<td>0.0491***</td>
<td>0.0372</td>
</tr>
<tr>
<td></td>
<td>(0.303)</td>
<td>(0.001)</td>
<td>(0.665)</td>
</tr>
<tr>
<td>Gender Diversity</td>
<td>-0.014</td>
<td>-0.1208***</td>
<td>-0.1857</td>
</tr>
<tr>
<td></td>
<td>(0.857)</td>
<td>(0.009)</td>
<td>(0.243)</td>
</tr>
<tr>
<td>Race Diversity</td>
<td>-0.0894</td>
<td>0.0123</td>
<td>0.03946</td>
</tr>
<tr>
<td></td>
<td>(0.152)</td>
<td>(0.697)</td>
<td>(0.672)</td>
</tr>
<tr>
<td>Firm Size</td>
<td>0.0018</td>
<td>0.0054</td>
<td>0.0017</td>
</tr>
<tr>
<td></td>
<td>(0.972)</td>
<td>(0.180)</td>
<td>(0.381)</td>
</tr>
<tr>
<td>Age</td>
<td>-0.0014*</td>
<td>-0.0021**</td>
<td>0.0060</td>
</tr>
<tr>
<td></td>
<td>(0.060)</td>
<td>(0.036)</td>
<td>(0.801)</td>
</tr>
<tr>
<td>Leverage</td>
<td>-0.2596***</td>
<td>-0.1059***</td>
<td>-0.0849***</td>
</tr>
<tr>
<td></td>
<td>(0.000)</td>
<td>(0.000)</td>
<td>(0.000)</td>
</tr>
<tr>
<td>Constant</td>
<td>0.2516***</td>
<td>0.1823***</td>
<td>-0.1613***</td>
</tr>
<tr>
<td></td>
<td>(0.000)</td>
<td>(0.000)</td>
<td>(0.026)</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.2908</td>
<td>0.3274</td>
<td>0.8892</td>
</tr>
<tr>
<td>F-statistics</td>
<td>11.1326***</td>
<td>7.7936***</td>
<td>159.884***</td>
</tr>
<tr>
<td></td>
<td>(0.000)</td>
<td>(0.000)</td>
<td>(0.000)</td>
</tr>
<tr>
<td>Hausman test (p-value)</td>
<td>1.0000</td>
<td>1.0000</td>
<td>1.0000</td>
</tr>
</tbody>
</table>

Note: *, **, *** significant at 10%, 5%, and 1%, respectively. The Hausman test is insignificant, use random effects.

CONCLUSION

The paper aims to examine the impact of board diversity (in terms of gender, ethnicity, managerial ownership, board size, board independence, and CEO duality) on firm performance in the case of three important industries i.e. construction, manufacturing, and trading/services in Malaysia from the year 2012 to 2016. The findings vary, sensitive to the industry specificities. For the performance of firms in the manufacturing industry, board independence has a negative effect, while for construction firms, managerial ownership has a positive impact. For trading/services firms,
board diversity in terms of board independence and gender diversity has a negative effect while CEO duality has a positive effect on firm performance. Other factors such as age and leverage of the firm are also negatively related to the value of firms. The combination of mixed results suggests that industry factor is important to reflect the board diversity-performance relationship. It also indicates that Malaysian industries are unique and non-homogenous.

The implication of the findings supports the different practice of board composition across countries and industries. The very few significant board diversity factors show that board diversity is less important to influence firm value, which somehow explains why certain firms prefer less diversity of board members, probably due to better control and quick decisions to arrive at a consensus. However, in the case of Malaysia, the importance of industry specificities should be emphasised to relate the effectiveness of board diversities in driving firm growth.

Nonetheless, the findings are restricted by three industries in Malaysia and, thus, limit the generalisation and scope of the research to only industries in the country that share similar characteristics. Particularly for other industries in the country, as well for other countries, comparison analyses could be examined to establish the board diversity-performance theory for more robust results.

NOTE

1 As of the first quarter of 2018, it has been reported that services, manufacturing, and construction sectors contribute to 54.8%, 22.8%, and 4.8% share to RM 295.3 billion GDP, respectively.

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