Board Diversity and Agency Cost: Evidence from Bursa Malaysia Stock Exchange

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Abstract
This study aims to determine how board diversity affects agency costs in Malaysia. The sample of 395 firms listed on Bursa Malaysia from 2014 to 2016 was examined in this study. All non-financial data were collected from the annual report, and financial data were composed of DataStream. Increasing board size and board independence decreases the agency's cost. This bigger board size and more independent directors enhance better monitoring of agency costs. Future researches suggest this study can be extended using more sample and period of study and using other countries' data.

Keywords: Corporate Governance; Woman; Board Age; Asset Turnover

1.0 Introduction
According to Jensen (1986), agency costs ascend from the misalignment of the owners' benefits by managers of firms; meanwhile, the segregation of proprietorship and regulator happens. The agency prototypical classifies a quantity of administration association that benefits agents and principals and diminishes agency costs. Agency cost is an internal cost gained from uneven facts or conflicts of interest between an organization's owner and board director (Wilkinson, 2013) due to the absence of shareholders to manage the company alone.

Agency costs create corporate scandals and collapse some companies in Malaysia. For example, Perwaja Steel, Malaysia's iron and steel product manufacturer, bears more than RM10 billion in losses. There was possible deceit of funds and mishandling in Perwaja. So, a corporate scandal happened in Perwaja Steel—another related company, Kobe Steel which provides metal to all types of business. Kobe Steel has confessed to making fraud of the data about their strength and durability on the product sold

to famous clients like Boeing (B.A.) and Toyota (T.M.). Due to the lack of diversity in the company, Galinsky et al. (2015) address that diversity plays a vital role in enhancing company performance and governance. Regarding Hall et al. (2019), diversity drives people to think broader and diverse classes favor an extensive scope of viewpoint and procedure knowledge more systematically than similar ones. In conclusion, association with superior diversity prepares excellent results.

There are several examples of board diversity. Firstly, it is about gender, which is focused on the presence of female directors on the board. High board gender diversity will increase agency costs. Secondly is about the board age. A board with extensive age scope generates an energetic, multi-generational labor force with various scopes of talent arrangements that are helpful to the company. Thirdly is about the size, which is about the number of directors on the board. Large board size will decrease the agency's cost. Fourthly is about independence which refers to outside directors on the board. Outside directors are better at monitoring and controlling than inside directors. Independence directors will give a balanced perspective to the boardroom.

2.0 Literature Review

2.1 Theory-Related Agency Cost

An agency association is a contract in which the principal includes the agent to do on their behalf in the company (Jensen & Meckling, 1976). Agency theory defines observing a form of corporate governance to diminish the agency cost and the clash of concerns among managers and the company owner. The agents try to attain their private aims at the principal's budget. The theory offerings many beneficial conducts to observe the connection between owners and managers and prove in what way the ultimate aim of exploiting the revenues to the owners is attained, mainly once the managers do not possess the company's assets.

Agency theory hypothesizes big companies customarily considered by a massive quantity of shareholders who let agents regulate and accomplish the pooled investment intended for upcoming revenues. The agents, usually, may only sometimes possess dividends but might own significant expert abilities and capability in dealing with the company towards its accomplishments. Suitable compositions of the board of directors are essential to defend shareholders as of presence suppressed thru the managers and support to regulate managers anytime efficiently, and they want to exploit their interest from the company's wealth. This would diminish agency costs and ensure the development of shareholder profitability by effectively controlling the power and self-absorbed management decision.

The stakeholder theory of the company is used by way of a base to observe those parties to whom the company would be liable. A primary stakeholder is defined as one deprived of whose ongoing contribution the company cannot persist as a going anxiety with the primary group comprising shareholders, investors, subordinates, customers, and suppliers. A secondary stakeholder is defined as persons who influence, affect, or are influenced or affected by the company. However, they are not involved during dealings with the company and are not necessary on behalf of its endurance. The company might concentrate more on authentic (Primary) stakeholders who obligate control and insistence.

Stewardship theory takes a contrasting perception. From a stewardship angle, they look at directors and managers as the stewards of the company. As stewards, directors are expected to exploit the shareholders' prosperity. Stewardship theory advocates that managers such as directors should be particular independence regarding belief, which diminishes the value of observing and directing the performance of the managers and directors. When managers have assisted a company for a substantial time, there is a consolidation of personality and the company. From the stewardship theory viewpoint, a more remarkable presentation of the company was connected to consuming a common of the inside directors on the board; meanwhile, these inside directors know the industry, enhanced positioned to direct than outside directors, then can make more remarkable conclusions.

2.2 Hypothesis Development

2.2.1 Board Gender

Robinson and Dechant (1997) admit that some diversity supports a company through creativity and effective problem-solving. Daily et al. (2000) also admit there is a growing representation of women on board since women commonly experience a glass ceiling in the corporate sector, and most of them are likely to be from the public sector, said Hillman et al. (2002). Chapple and Humphrey (2014) admit that hiring female directors in the company to enable effective board operatives will change the business surrounding and increase the difficulty of corporations. According to Loukil and Yousfi (2015), female participation on board gives better value, a higher level of liquid assets, and higher equity investment. Besides, Faccio et al. (2016) admit that firms headed by females are more attainable and succeed, mostly during financial pressure. Women are more ethical, and their presence on board compared to men can reduce agency costs.

H_a: Agency costs will be lower if gender diversity is higher.

2.2.2 Board Age

According to Kang et al. (2007), the older age group of the board of directors had more experience in managing the company, maturity, and usually had economic resources. Meanwhile, the younger age groups had the energy and courage to succeed and had plans for the future. Board of directors with the older age group have more experience and wisdom that can influence the agency's cost. Companies with positive information advanced staff self-esteem, developed efficiency, and admission to a varied customer corrupt (Department for Work and Pensions, 2002). The company will be in better condition if the directors are among young people as young people have the energy and enthusiasm to do the work well. Young directors may reduce the agency cost of the company because they have learned many things from everywhere to make the work done well.

H_b: Agency costs will be lower if the age of board is lower.

2.2.3 Board Size

Jensen (1993) disagree that larger board produce less effective monitoring due to organization and method problems inherent in the large size of the board. The large board size leads to less participative, less organized, and less able to reach unity. Large boards will be less effective than small boards in working in a group like the free-rider problem. Regarding Golden and Zajac (2001), Goodstein, Guatam, and Breker (1994) prove that an increase in the board size negatively influences strategic change for larger boards.

H_c: Agency costs will be lower if the board size is lower.

2.2.4 Board Independence

Independent directors are who have no direct ties to the company's management. The Independent directors are believed to reduce agency costs by providing unbiased oversight, monitoring management, and protecting shareholder interests (Fama and Jensen, 1983). Duchin, Matsusaka, and Ozbas (2010) argue that the effectiveness of independent directors in reducing agency costs is contingent upon their expertise and the complexity of the firm's operations. Their study suggests that independent directors are more effective in firms with greater operational complexity.

Hd: Agency cost will be lower if the percentage of board independence is higher.

3.0 Methodology

3.1 Sample Description and Data Collection
The sample has been selected from listed companies in Bursa Malaysia's Main Board. In this study, board diversity is the main focus for evaluation. The period of the sample taken is 3 years beginning from 2014 and ending in 2016. This study recommends observing 395 companies' annual reports in the industrial products industry for 3 years. The financial data is collected using DataStream and non-financial data is collected through annual report from 395 companies.

3.1 Regression Model
The function of the regression model in this study is shown below:

$$AC_{il\text{-}t} = \alpha_{it} + \beta_1\, BGD_{it} + \beta_2\, BAG_{it} + \beta_3\, BSZ_{it} + \beta_4\, BID_{it} + \beta_5\, LVG_{it} + \beta_6\, OWN_{it} + \beta_7\, FSZ_{it} + s_{it}$$

Where:
Dependent Variable
A.C. = Agency cost

Independent Variable
GEN DER = Female board members
BAG = Board age
BSZ = Board size
BID = Board independence

Control Variable
LVG = Leverage
NEW S = Ownership
FSZ = Firm size
SIZE = Logarithm of Net Asset Value of selected companies

α = Intercept
β = Coefficients of independent variables

E = Statistical error

3.1 Measurement of Variables

Table 1: Measurement of variables

Variable	Measurement
Asset turnover	Total sales divided by total assets
Board Gender	Percentage of female directors
Board Size	Natural log of total size
Board Independence	Percentage of independent directors
Board Age	Number of board age in company
Leverage	Debt to total assets.
Ownership	Proportion of stock owned by directors in net common stock
Firm Size	Natural log of total asset

4.0 Result and Discussion

4.1 Descriptive Statistics

Table 2: Descriptive statistics of the variables

Variables	Minimum	Maximum	Mean	Std. Deviation
ASSETTO	0.000000	3.580000	0.581493	0.478709
GENDER	0.000000	50.00000	1.659025	6.129240
BAGE	36.55556	74.60000	57.57747	4.991144
BSIZE	4.000000	14.00000	7.404594	1.923538
BINDP	0.000000	83.33333	8.443212	18.55662
FLEV	-2.739887	13.63288	0.566298	0.819575
OWN	0.000000	75.24000	11.85191	11.85191
FSIZE	3.915558	8.123430	5.807715	0.659480

Table 2 shows the descriptive analysis of board diversities among board of directors in 395 firms listed on Bursa Malaysia from year 2014 to 2016. The dependent variable in this study is asset turnover (ASSETTO) which is representing agency cost. Asset turnover is the only converse proxy variable for agency costs. This means that agency cost rise as the asset turnover decline. An analysis of Table 4.1 shows that the average of asset turnover for sample firms from year 2014 to 2016 is 0.581 times (range from 0.000 times to 3.58 times) with the gap between the minimum and maximum score is quite high for them. Standard deviation figures were 0.479 are large relative to their mean.

The independent variable which is board gender or GENDER has the mean of 1.659% (range from 0% to 50%). The standard deviation also lies on 6.129 respectively. Next, board age or BAGE with the mean of 57 to 58 years old. The range of board age with the lowest number of 36 years old and the highest number 75 years old. Its standard deviation is 4.991. Next, board size is represented as BSIZE. Board size had an average mean of 7 to 8 directors with the range of 4 directors to 14 directors. The standard deviation is 1.924. Then, board independence or BINDP. The mean of board independence is 8 to 9 outside directors, with the range of 0 to 84 outside directors. Besides, the standard deviation is 18.557.

The control variables being used in this study are firm leverage and represented as FLEV. The mean of firm leverage is 0.566. The minimum number is -2.74, and the maximum number is 13.633. Its standard deviation is 0.82. The following control variable is ownership or represented as OWN. The mean of ownership is 11.852% (range 0% to 76%). The standard deviation is 16.079. The last control variable used is firm size and represented as FSIZE. The mean firm size is 5.808, with the range of 3.916 to 8.123. The standard deviation is 0.659.

4.2 Correlation Analysis

As shown in Table 2, ASSETTO, which is asset turnover, significantly correlated to the board gender of GENDER at a 5% level of significance. It also presented a positive sign, meaning ASSETTO is positively significant with GENDER. ASSETTO shows a positive sign between BINDP and OWN. Besides, BINDP and OWN have a 1% level of significance. Finally, ASSETTO revealed that it has a negative sign with FLEV and FSIZE. In addition, FLEV and FSIZE have a 1% significance level with ASSETTO. GENDER shows a negative sign and has a 10% significance level with BSIZE. Besides, GENDER presents a positive sign with BINDP with a 1% significance level. Furthermore, GENDER shows negative signs with FLEV and has a 1% significance level. Finally, links between BAGE and FSIZE show positive sign and has a 1% level of significance. BSIZE shows that the association with FLEV and FSIZE is positive and has a 1% significance level. Then, BSIZE shows a negative sign and a 1% significance level with BINDP. Finally, BSIZE shows a positive sign and a 1% significance level with FSIZE. BINDP presents a negative sign and a 1% significance level with FLEV and FSIZE. FLEV shows a negative sign and has a 5% significance level with OWN. Then, FLEV proves a positive sign and has a 1% significance level with FSIZE. Last, OWN shows a negative sign and has a 1% significance level with FSIZE.

4.3 Multiple Regression Analysis

Table 3: Coefficient of Multiple Regression Analysis

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.199393	0.185759	6.456710	0.0000
GENDER	-0.002187	0.002784	-0.785626	0.4323
BAGE	0.001338	0.002828	0.473337	0.6361
BSIZE	0.020282	0.007801	2.600052	0.0094
BINDP	0.003350	0.000939	3.566003	0.0004
FLEV	-0.048161	0.017892	-2.691737	0.0072
OWN	0.001942	0.000865	2.245359	0.0249
FSIZE	-0.149035	0.024633	-6.050111	0.0000
R-squared	0.081168	Mean dependent var		0.581493
Adjusted R-squared	0.075446	S.D. dependent var		0.478709
S.E. of regression	0.460296	Akaike info criterion		1.293149
Sum squared residual	238.1449	Schwarz criterion		1.328709
Log-likelihood	-723.9225	Hannan-Quinn criter.		1.306583
F-statistic	14.18461	Durbin-Watson stat		0.127350
Prob(F-statistic)	0.000000			

The influence of independent variables, which are board gender, board age, board size, and board independence, in addition to control variables, firm leverage, ownership, and firm size, have a value of R-square 0.081. This entails that 8.2% of the variance for asset turnover is calculated by the four independent variables in the model: board gender, board age, the board size, and board independence. From the table, the value of the adjusted R-square is 0.076. It is proven that the variation can describe 7.6% of the variation in asset turnover in the independent and control variables after the degree of freedom (df) is accounted for.

The Anova Statistics for Regressions piloted with the independent, dependent, and control variables specify that the complete regression model was significant to the data. According to Anova, the F statistics is 14.293. Then, it précises the residual. The residual sum of the square is 238.159 with the degree of freedom (df) 1127, consequential in a mean squared error of 0.2111.

The first, the involvement of female directors on the board was expected to have a negative relationship with the asset turnover, which is the inverse proxy of agency cost. The coefficient for the gender is -0.002. Table 3 shows a negative relationship between female directors and asset turnover with a t-value of -0.786 and a significance level of 0.432. Hence, the hypothesis is unsupported as the significance level is higher than 0.1.

The second hypothesis is a positive relationship between board age and asset turnover. The coefficient of board age is 0.001. The table shows an insignificant negative relationship between board age and agency cost where the t-value is 0.473, and the significance level is 0.636. Thus, the hypothesis is also not supported.

The third hypothesis proves a positive relationship between board size and asset turnover. The coefficient for board size is 0.02. Besides, there was a significant negative relationship between board size and agency cost as the t-value is 2.6, and the significance level is 0.009. Thus, this hypothesis is supported as the significance level is less than 0.1. A bigger board size board of directors can help bring together expertise and advice regarding strategic options, and the shareholders can receive more business performance information. It is consistent with Huu Nguyen et al. (2020) research.

		ASSETTO	GENDER	BAGE	BSIZE	BINDP	FLEX	OWN	FSIZE
ASSETTO	Pearson Correlation	1							
	Sig. (1-Tailed)								
GENDER	Pearson Correlation	0.065624**	1						
	Sig. (1-Tailed)	0.0271							
BAGE	Pearson Correlation	-0.02554	0.002382	1					
	Sig.(1-Tailed)	0.3901	0.9361						
BSIZE	Pearson Correlation	-0.02665	-0.054365*	0.028693	1				
	Sig.(1-Tailed)	0.3696	0.0671	0.3342					
BINDP	Pearson Correlation	0.15007***	0.594008***	0.037774	-0.130124***	1			
	Sig.(1-Tailed)	0	0	0.2035	0				
FLEV	Pearson Correlation	-0.165787***	-0.120916***	0.000756	0.116515***	-0.21113***	1		
	Sig.(1-Tailed)	0	0	0.9797	0.0001	0			
OWN	Pearson Correlation	0.105537***	0.048239	-0.033754	-0.03287	0.034662	0.068658**	1	
	Sig.(1-Tailed)	0.0004	0.1043	0.2559	0.2685	0.2433	0.0207		
FSIZE	Pearson Correlation	-0.222494***	-0.037275	0.215445***	0.396559***	-0.131797***	0.306983***	-0.167749***	1
	Sig.(1-Tailed)	0	0.2095	0	0	0	0	0	

***. Correlation is significant at the 0.01 level (1-tailed), **. Correlation is significant at the 0.05 level (1-tailed) and *. Correlation is significant at the 0.10 level (1-tailed).

Table 2: Pearson Correlation Analysis

The fourth hypothesis shows a positive relationship between board independence and asset turnover. The coefficient of the board independence is 0.003. The table above illustrates a significant negative between board independence and agency cost as the t-value is 3.566 and the significance level is 0.0004. Therefore, the hypothesis is supported. Brickley, Coles, and Terry (1994) mention that non-executive directors are likely to ensure the board of directors acts for the shareholder's best benefit.

Regarding the control variables, there is a negative relationship between firm leverage and asset turnover. The coefficient of firm leverage is -0.048. The table above demonstrates a positive significant relationship between firm leverage and agency cost as the t-value is -2.692 and significance level is 0.007. high debt levels, agency costs would increase due to higher bankruptcy costs (Muñoz Mendoza et al., 2021). The ownership and asset turnover show the positive relationship. The coefficient of ownership is 0.002. The table above stated a significant negative relationship between ownership and agency cost as the t-value is 2.245 and the significant level is 0.025. As a result, the hypothesis is supported. Regarding Jensen and Meckling (1976) in agency theory, agency cost will be declined the larger the managerial ownership.

Finally, there is a negative significance between firm size and asset turnover since the t-value is -6.05 and the level of significance is 0. The larger the firm size, the greater the agency cost. The bigger firm size is an alternative for the complicatedness of the firm and requires for advanced quantity of guideline to the board (Fama & Jensen, 1983).

5.0 Conclusion

This study proves that board size and board independence are positively correlated with agency cost. Besides, board independence has supported the agency's cost. Bigger board size and independence contribute to better monitoring and reduce agency costs. The bigger board size can bring more expertise and advice regarding strategic options, and the shareholders can receive more business performance information. Independent or non-executive directors are more likely to ensure that the board of directors acts for the shareholder's best benefit.

This study has main implications for various affairs, such as investors and public managers. First, this study will provide to the investors. Investors can understand how useful the board diversities will be to reduce agency costs. The findings indicate that the lesser board size and independence reduce the agency's cost. Of the negative relationships between board diversities variables with agency cost, investors might be confident to invest in the firm because the lesser the agency cost, the higher of financial return.

The limitation in producing this study is that researcher only implemented three years of annual reports from Bursa Malaysia. This annual report is taken from the year 2014 to 2016. In this study, the researcher only used corporate annual reports to accumulate data analysis and DataStream. For future research, researchers may relate a longitudinal technique by exploiting more years of data information and more sample. Secondly, the researcher may also enlarge the number of board diversities elements to be verified to get more significant results between every variable of independent and control variable toward agency costs. Thirdly, future research must engage more sample size, and the period of observations should be extended. Fourthly, future researchers may study board diversities in terms of board gender, board age, board size, board independence, firm leverage, ownership, and firm size towards agency costs within other countries to regulate its legitimacy in diverse perspectives of other countries.

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Author Contributions

M. W. M. Razali: Conceptualization, Abstract, Introduction, Discussion, Conclusion, Data collection; **N. M. Nasir**: Methodology, Result and Editing; **J. Lunyai**: Result, Discussion and Writing-Reviewing. **S. Shaharudin:** Writing-Reviewing.

Conflicts of Interest

The manuscript has not been published anywhere else and is not being considered by any other journals. All authors have authorized the review, agree with the submission, and state that they have no conflicts of interest in the work.

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