

# CAN DEMOGRAPHIC DIVERSITY IN TOP MANAGEMENT TEAM CONTRIBUTE FOR GREATER FINANCIAL PERFORMANCE? AN EMPIRICAL DISCUSSION

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## Abstract

The purpose of this paper is to empirically examine the effect of demographic diversity on top management teams (TMTs) with regard to firm financial performance. This paper uses secondary data of listed companies in Malaysia. Relevant concepts, propositions, hypotheses and control variables are developed to suit the parametric statistical procedures. Demographic diversity is represented by ethnic diversity (the percentage of Non-Malay top managers) and gender diversity (the percentage of female top managers) and performance is measured by return on asset (ROA) and return on equity (ROE). A series of OLS regressions based on the cross-sectional data are also presented. The results fail to support our hypotheses. Hence, diversity does not seem to be relevant in TMTs with regard to financial performance.

**Key Words:** Gender and ethnic diversity; TMTs, Performance

## 1. Introduction

It is of great interest for many researchers to continue investigating the characteristics of the top management teams (TMTs) and their impact on firm performance (Kakabadse & Kakabadse, 2006; Kakabadse et.al., 2006; Cadbury, 1992; Dahya & Travlos, 2000; Kroll, Walters & Le, 2007; Auden et. al., 2006). Women's and multi-ethnic groups' increasing participation in the top level management has triggered us to further explore with more correlational and causal studies in the constantly changing business environment (Burke, 1997; Burke & Nelson, 2002; Carter, Simkins & Simpson, 2003; Klenke, 2003).

## 2. Top Management Teams (TMTs)

Firm performance is a reflection of the characteristics and actions of the team of managers central to the firm, which is conceptualized as top management team, (TMT) (Hambrick & Mason, 1984). Several studies have made attempts in examining the characteristics and behaviors of the top management team, such as interaction and demography, and exploring the impact on success of the firm (Amason, 1996; Amason & Sapienza, 1997). Top management team and their importance as a potential determinant of firm performance continue to be a focus of strategic management researchers (Goll, Sambharya & Tucci, 2001). The ultimate objectives of top management team's efforts are to create competitive advantages and ensure strong organizational performance. As the top management takes important corporate decisions and sets strategic directions, it is therefore recognized as a key component affecting a firm's performance.

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### 3. Theoretical Perspectives

Research on TMT characteristics has been widely carried out on various aspects for theorizing purposes (McGrath, 1984; Murray, 1989; Michel & Hambrick, 1992). The demographic characteristics on TMT include age, functional background, education, tenure, (Hambrick & Mason, 1984), who paved a way to deal with diversity within top management and its impact on firm performance that is strongly linked to the **Upper Echelon Theory**. They argued that top management's characteristics (e.g. demographic) influence the decisions that they make and therefore the actions adopted by the organizations that they lead. It occurs because demographic characteristics are associated with many cognitive bases, values and perceptions that influence the decision making of top management. This discussion was later expanded to the 'six specific influence processes' that allow shaping the strategic direction and performance of the organization (Navahandi, 2006).

In view of this, top management members could with greater demographic diversity, influence decision making process in the top management and positively contribute to firm performance. The basic foundation of this theory could be rooted to the earlier concepts on the characteristics at the top management and competitive behaviours (Cyert & March, 1963). Thus, firm performance could be positively impacted by the competitive behaviours at top level of an organization. Admittedly, to a large extent, diversity enhances greater creativity, innovativeness and quality decision making and could create greater competitiveness (Hambrick et. al., 1996).

Significantly, some research reiterates that benefits at strategic level are positively related to diverse top management (Eisendardt & Bougeois, 1988). The presence of the demographic heterogeneity at top management level is expected to increase firm performance, hence, heterogeneity is suitable for complex, ambiguous business operations and the decision making processes are structured in nature whereas, homogeneity in top management is more effective especially when faced with unstructured decision making processes (Hambrick & Mason, 1984).

This paper has its 'unique contribution' on the scope of diversity, as well as widening the application of the upper echelon theory and the implications on firm performance. As most studies focus on the demographic diversity involving the individuals of the top management teams (TMTs), we however, have a different view of testing the demographic effect in TMTs with regard to firm performance. Rather than focusing on age, functional background, educational background and tenure of the individual manager, this study incorporates the proportion of demographic diversity based on gender and ethnicity in TMTs and its implications on firm performance. Diversity can be viewed in two perspectives; demographic and cognitive. Demographic diversity includes gender, age, race and ethnicity and cognitive diversity includes knowledge, education, values, perception, affection and personality characteristics (Maznevski, 1994; Milliken & Martins, 1996; Pelled, 1996; Boeker, 1997; Watson et al., 1998; Peterson, 2000; Timmerman, 2000). There have been many contemporary studies on demographic diversity and its effect on performance (Lee & Far, 2004; Evans & Carson, 2005; Bergen & Massey, 2005). Some researchers even studied specifically on the impact of demographic diversity on top management team and its implications on firm performance (Roberson & Park, 2007; Erhardt, et al., 2003; Certo et al., 2006; Carson, et al., 2004).

### 4. Purpose of the Study

This study is specially designed to investigate the impact of demographic diversity in top management teams (TMTs) on firm financial performance. Hence, the purpose of this study is to empirically examine the relationship between gender and ethnic diversity in TMTs with firm financial performance (Certo et.al., 2006, Auden, 2006). This study however, does not investigate the characteristics or discrimination within the top management teams (TMTs).

## 5. Definition

Initially (before 20<sup>th</sup> century) ethnic groups were defined as ‘people of other countries (Yin, 1973) but however, ethnic groups do not necessarily share a country of origin but instead share a sense of common political or cultural origin (Capehart, 2003). Hassan, Samian and Silong (2005) ...*managing diversity is very much based on tolerance and respect ...to preserve inter-ethnic harmony*. Hence, ethnic would be the right term to address racial composition in Malaysia. Hence, ethnicity involves Malays, Chinese, Indians and others and gender refers to either male or female groups.

## 6. Heterogeneity versus Homogeneity and Performance

The current literature reveals the fact that the relationship between diversity and organizational or group performance can be either positively correlated or negatively correlated or even some studies show that there is no relationship (somewhat mixed findings) between diversity and performance. Perceived diversity within the senior management ranks was evidenced in higher perceived levels of overall performance, profitability and return on equity (Allen, Dawson, Wheatly & White, 2008). Some empirical findings indicate that diversity results in greater knowledge, creativity and innovation and thus, organizations tend to become more competitive (Watson et al., 1993). Besides that, the diversity able to attract and retain the best talent available; reduced costs due to lower turnover and fewer lawsuits, enhanced market understanding and marketing ability, better problem solving, greater organizational flexibility and better overall performance (Coz & Blake, 1991; Griscombe & Mattis, 2002) via improvement in decision making at strategic level (Bantel, 1993). Siciliano (1996) found that board diversity paves a way for positive results in performance. Also supported by Eisenhardt et al., (1998), Smith et al., (1994), Carpenter (2002) and Greening and Johnson (1996). Cultural heterogeneity results in issue-based conflict which in turn enhances greater organizational performance. Heterogeneity is positively linked to better problem solving and offering creating solutions (Michel & Hambrick, 1992). Hence, diversity is positively related to performance. However, there could be no relationship between diversity (cultural heterogeneity and member diversity) and group cohesion. Murray (1989) suggested that the infusion of homogeneous groups would result in better performance.

However, advantages associated with homogeneous top management can not be ignored. In fact some argue having homogeneous management team would be more beneficial with regard to firm performance (Williams & O'Reilly, 1998). Evidence shows that heterogeneity tends to lead to conflicts and negatively affect the effectiveness of communication in top management (Pelled et al., 1999; Amason, 1996; Carpenter, 2002). Besides this, racial and gender diversity can have negative effects on individual and group outcomes in certain instances (Miliken & Martins, 1996). For example, group members who differ from the majority tend to have lower levels of psychological commitment and higher levels of turnover intent and absenteeism. It should be noted that the upper echelon diversity is associated with the demographic diversity of the workforce, with evidence of homo-social reproduction taking place in organizations, particularly with regard to gender and race (Nishii, Gotte & Raver, 2007).

## 7. Hypotheses Development

The Upper Echelon Theory by Hambrick and Mason (1984) becomes an important input in relating heterogeneity in top management team (TMT) to firm performance. In view of this, a closer look at the model and its components would be of great help to expand our knowledge on diversity in top management teams (TMTs). It should be noted that it is not organizational performance rather financial performance that is being investigated here and demographic diversity is represented by gender and ethnic diversity (Roberson & Park, 2007; Conyon & Mallin, 1997; Daily et al., 1999; Zander, 1979; Costa & Kahn, 2003; Kang & Cnaan, 1995; Rutledge, 1994; Widmer, 1987; Carson, Mosley & Boyar, 2004; Maran, 2008). Therefore, this argument allows us to develop two directional hypotheses that explain the impact of the demographic diversity in TMTs on firm financial performance, thus the following hypotheses are proposed:

*Hypothesis1: Firm financial performance is positively impacted by gender diversity in TMTs*

*Hypothesis 2: Firm financial performance is positively impacted by ethnic diversity in TMTs*

### 8. Methods and Measures

Top 100 Malaysian listed companies from the non-financial sector were selected for this study over the period 2000 to 2006 (Appendix 1). The selection was based on their market capitalization. This sample represented the overall performance of the main board as they accounted for almost two-thirds the total market capitalization on the main board. A financial database (OSIRIS) and companies' annual report were used for data collection. The main focus was to detect the effect of gender and ethnic diversity in top management teams (TMTs) with regard to firm financial performance from year 2000 to 2006. This period reflects the aftermath of the Asian financial crises which broke out in 1997 coupled with some major revamps taken by most listed companies. The dependent variable was financial performance, independent variables were gender and ethnic diversity and the control variables were TMT size, firm size and firm age. Besides this, previous years' performance was also used as part of the control variables.

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_n X_n + \varepsilon$$

$$\text{Performance} = \alpha + \beta_{\text{gender}} + \beta_{\text{ethnic}} + \sum \beta_{\text{control variables}}$$

The dependent variable, ROA, return on asset (net Income divided by total asset), ROE, return on equity (net Income divided by total equity) and was a measure used to measure firm financial performance (Thomas & Ramaswamy, 1994, Certo et al., 2006). The use of two different dependent variables was to check on the consistency of the regression results as both were widely adopted by researchers. The independent variables, gender diversity and ethnic diversity in TMTs were measured using a ratio scale. Gender and ethnic diversity in TMTs were determined by taking female top managers and non-Malay top managers divided by total top managers. The control variables; TMT size was determined by the number of top managers, firm total asset was a measure for firm size, firm age refers to number of years of business operations and performance of year 2000 and 2003. (Roberson & Park, 2007; Jehn & Bezrukova, 2004; Cohen & Cohen, 1975, Erhardt et al., 2003, Rosenthal & Rosnow, 1984). These methods and measures can be referred to Maran M (2008) and Maran & Indraah (2008).

### 9. Results

The main purpose of this study is to examine the effect of demographic diversity in top management team (TMT) on firm financial performance. The correlation results are shown in Table 1. Table 2 shows the regression results using the two different dependent variables (ROA and ROE) based on the cross-sectional data from year 2000 to 2006.

**Table 1: Mean and correlation results**

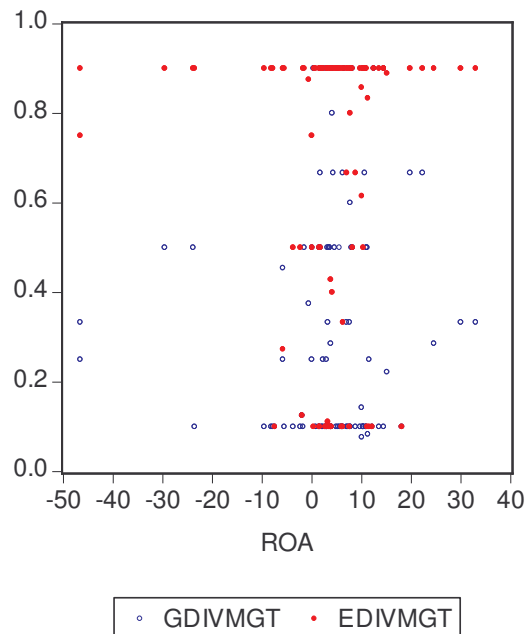
Variables	Mean	1	2	3	4	5	6	7	8	9	10
1. Gender	0.241	1									
2. Ethnicity	0.686	-.172	1								
3. TMT size	3.18	-.165	-.092	1							
4. Firm size <sup>a</sup>	6.238	.177	.001	-.017	1						
5. Firm age <sup>b</sup>	30.520	.080	-.088	.014	.013	1					
6. ROA	3.815	.042	-.007	.033	-.014	-.185	1				
7. ROE	7.895	.058	.026	-.002	.017	-.102	<b>.546**</b>	1			
8. ROA'00	5.053	.050	.129	-.127	-.135	-.148	<b>.417**</b>	<b>.362**</b>	1		
9. ROE'00	9.001	.126	.059	-.157	-.034	-.103	<b>.275**</b>	<b>.266**</b>	<b>.886**</b>	1	
10. ROA'03	5.627	-.149	.114	.056	<b>-.211*</b>	-.187	<b>.561**</b>	<b>.392**</b>	<b>.617**</b>	<b>.435**</b>	1
11. ROE'03	9.842	-.113	.084	.056	<b>-.197*</b>	-.170	<b>.263**</b>	<b>.354**</b>	<b>.442**</b>	<b>.459**</b>	<b>.770**</b>

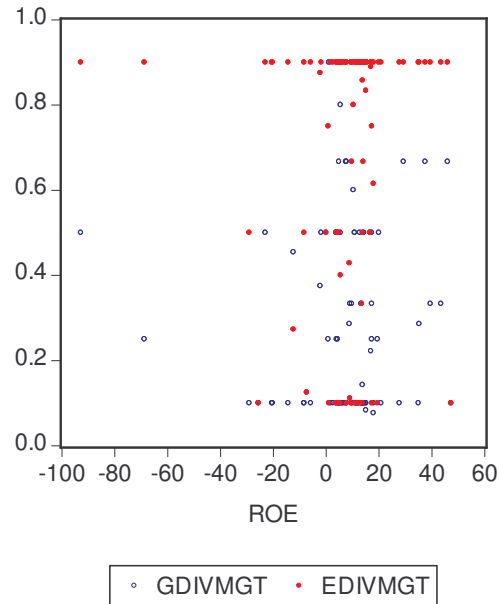
a In billions, b In years, \* p < 0.05, \*\* p < 0.01

Table 1 displays the mean and correlation details indicating that both gender and ethnic diversity are not correlated with any variable including ROA and ROE. These results were not expected at all. However, significant correlations among the performance measures indicating the consistency of the data collected. Though the results obtained in correlation analyses seemed to be weak and the coefficients were positive in most cases however, the researchers continued to proceed with the regression models as planned as they offer more insightful information in the discussion and conclusion parts. Meantime, a diagnostic testing on multicollinearity effect was also done to ensure the independent variables remain reliable in explaining the variation in the dependent variable, and it was verified that the VIFs (Variance-inflating factor) for both control and independent variables were between 1.0 and 1.2

Before we discuss further, graphical presentation in relation to the demographic diversity effect in TMTs using the scatter plot matrix approach can be viewed in Figure 1 and 2. Figure 1 (below) indicates that there is no clear pattern between gender (GDIVMGT)/ethnic (EDIVMGT) with regard to firm financial performance (ROA). Similar results were repeated when ROE was used as shown in Figure 2.

**Figure 1: Scatter Plot Matrix of Demographic Diversity and Performance (ROA)**



**Figure 2: Scatter Plot Matrix of Demographic Diversity and Performance (ROE)**

Based on findings in Table 2 below, it seemed that both gender and ethnic effect did not have any impact on firm financial performance throughout the years except in year 2003 where gender diversity registered a negative relationship with both ROA and ROE. Hence, the results failed to support both hypotheses. This is a real surprise for us as many previous studies (as discussed earlier) strongly support heterogeneity for greater performance

Table 2: Estimates from Cross-sectional Regressions of Financial Performance on Demographic Diversity (2000 – 2006)

Independent Variables	2000		2001		2002		2003		2004		2005		2006	
	ROA	ROE	ROA	ROE	ROA	ROE	ROA	ROE	ROA	ROE	ROA	ROE	ROA	ROE
Constant	<b>7.483<sup>b</sup></b>	<b>14.063<sup>b</sup></b>	<b>6.729<sup>c</sup></b>	<b>14.424<sup>c</sup></b>	<b>5.157<sup>a</sup></b>	<b>11.895<sup>a</sup></b>	<b>3.660<sup>b</sup></b>	<b>8.339<sup>c</sup></b>	1.979	.088	3.635	5.487	-2.165	-1.877
Gender	1.671	3.369	1.063	3.013	-.647	-5.947	<b>-2.865<sup>b</sup></b>	<b>-6.818<sup>c</sup></b>	1.732	2.310	.635	-.628	4.007	4.829
Ethnic	.126	-2.505	1.485	1.132	2.956	5.524	1.552	1.899	4.113	9.034	.410	4.694	-2.453	.162
TMT size	-.078	-.318	-.095	<b>-1.317<sup>c</sup></b>	.043	<b>-.944<sup>b</sup></b>	<b>.205<sup>b</sup></b>	<b>.314<sup>b</sup></b>	.270	.497	.380	.485	.118	.073
Firm size	<b>-.474<sup>b</sup></b>	-.577	-.237	-.321	-.229	-.230	-.052	.052	.008	.610	.020	.062	.072	.088
Firm age	-.059	-.079	-.067	-.078	-.082	-.144	-.027	-.051	-.032	-.102	-.028	-.016	-.064	-.051
ROA'00							<b>.427<sup>c</sup></b>						.162	
ROA'03													<b>1.176<sup>c</sup></b>	
ROE'00								<b>.312<sup>c</sup></b>						.163
ROE'03														<b>.745<sup>c</sup></b>
R-square (%)	9.0	7.0	6.6	23.8	5.1	9.1	46.9	33.6	5.1	7.8	1.7	3.3	35.6	15.2
F-test	.108	.229	.255	<b>.000<sup>c</sup></b>	.412	.105	<b>.000<sup>c</sup></b>	<b>.000<sup>c</sup></b>	.415	.171	.893	.666	.000 <sup>c</sup>	.030 <sup>b</sup>

Dependent variable: Performance

a ~ p < 0.10, b ~ p < 0.05, c ~ p < 0.01

## 10. Discussions

Our results revealed that diverse groups in top management particularly among the TMT members did not have any significant impact on firm financial performance. It seemed, though women's involvement at corporate level (TMT) in large firms remained intact (24.1 per cent), however, they were unable to create impact on their firms' financial performance. In addition, it could refer to the fact that probably, women's participation was limited to certain areas at strategic level (not actively involved in decision makings) as shareholders remained skeptical about women's ability to handle crisis (Shockley-Zalabak, 1981) as compared to men who could manage using competitive styles (Miller, 1989). But the emergence of women leaders globally can not be denied; in fact they are equally capable to handle global businesses (Warner & Joynt, 2002). Similarly, even ethnic diversity also did not have any significant impact on firm financial performance. This could be regarded as unique findings as many firms were to some extent controlled by either family members or race-based political parties. This could be a contributory factor as to why ethnicity in TMT failed to show its relevance to firm financial performance. Nonetheless, in view of our findings, we can not deny the advantages of homogeneity in our discussion (Williams & O'Reilly, 1998). It should be remembered that homogeneity may only be applicable for a short run as many Malaysian companies were still in the growth stage. However, in the long run companies need to be prepared to increase diversity in TMT in order to compete and sustain in the international and global market (Auden, Shackman & Onken, 2006) as heterogeneity paves a way for greater creativity, innovativeness and of course firm performance (Michael & Hambrick, 1992; Griscombe & Mattis, 2002). Heterogeneity in TMTs is also essentially important in dealing with complex business operations in the global market which obviously requires more competitive managerial skills and styles (Hambrick & Mason, 1984; Miller, 1989).

## 11. Limitations

Some limitations or potential weaknesses in this study must be addressed. First, the sample involves non-financial sector which comprises of various industries thus, it is quite difficult to maintain homogeneous characteristics within the companies chosen as different industries tend to face different types of challenges. Second, this study is constrained by the determination of sample and variables where, only two explanatory variables (gender and ethnic diversity) were used to measure TMT diversity and it involved only large companies. The operational definition of ethnic diversity (non-Malay ratio) is also quite arguable as there are possibilities where all the TMT members are non-Malays but of the same ethnic group which statistically gives a high score for diversity and this could be misleading. There could be a curvilinear relationship between diversity and performance instead of linear relationship. This means diversity may result in adverse results for a certain period, followed by indifferent results, then positive relationship with regard to performance.

## 12. Conclusions

This study is very much skewed to supporting homogeneity rather than heterogeneity in TMTs with regard to firm financial performance. However, shareholders need to be concerned with the dangerous practice of instituting homogeneity in top management as it may lead to major disasters at strategic level since homogenous team members are more likely to compromise on the quality of decision making processes. This could be linked to the practice of '**groupthink**'. As most companies striving for long term survival in the constantly changing business environment be it locally or globally, heterogeneity at strategic level can never be avoided.

## REFERENCES

- Allen, R.S., Dawson, G., Wheatly, K., & White, C.S. (2008). Perceived diversity and organizational performance. *Employee Relation*, 30(1), 20-33.
- Amason, A. C. (1996). Distinguishing the effects of functional and dysfunctional conflict on strategic decision making: Resolving a paradox for top management teams. *Academy of Management Journal*, 39, 123-148.
- Amason, A. & Sapienza, H. (1997). The effects of top management team size and interaction norms on cognitive and affective conflict. *Journal of management*, 23(4), 495-516.
- Auden, W. C., Shackman, J. D., & Onken, M. H. (2006). Top management team, international risk management factor and firm performance. *Team Performance Measurement*, 12, 7(8), 209-224.
- Bantel, K. (1993). Strategic clarity in banking: Role of top management-team demography. *Psychology Reports*, 73, 1187-1203.
- Bergen, V. C. W., & Massey, J. (2005). Workforce diversity and organizational performance. *Equal opportunities International*, 24, 1-16.
- Boeker, W. (1997). Executive migration and strategic change: The effect of top manager movement on product-market entry. *Administrative Science Quarterly*, 42, 213-237.
- Burke, R.J. (1997). Women on corporate boards of directors a needed resource. *Journal of Business Ethics*, 16, 909-15.
- Burke, R., & Nelson, D. (2002). *Advancing women in management: Progress and prospects. Advancing Women's Careers*. Oxford: Blackwell.
- Cadbury, A. (1992). Report of the committee on the financial aspects of corporate governance, Gee & Co., London.
- Capehart., & McMillan. (2003). Hundreds of years of diversity. *Equal Opportunities International*, 22, 20-37.



- Carpenter, M. A. (2002). The implications of strategy and social context for the relationship between top management team heterogeneity and firm performance. *Strategic Management Journal*, 23, 275-284.
- Carson, C. M., Mosley D. C., & Boyar, S. L. (2004). Performance gains through diverse top management teams. *Team Performance Management*, 10, 121-126.
- Carter, D. A., Simkins, B. J., & Simpson, W. G. (2003). Corporate governance, board diversity and firm value. *Financial Review*, 38-53.
- Certo, S. T., Lester, R. H., & Dalton, D. R. (2006). Top management teams, strategy and financial performance: A Meta-analytic examination. *Journal of Management studies*, 43, 813-839.
- Cohen, J., & Cohen, P. (1975). *Applied multiple regression/correlation analysis for the behavioural sciences*. Hillsdale, NJ: Lawrence Erlbaum.
- Coles, J. W., Mc Williams, V. B., & Sen, N. (2001). An examination of the relationship of governance mechanisms to performance. *Journal of Management*, 27, 23-50.
- Conyon, M., & Mallin, C. (1997). Women in the board room: Evidence from large UK companies. *Corporate governance*, 5, 112-117.
- Costa, Dora., & Mathew, E. K. (2003). Cowards and heroes: Group loyalty in the American Civil War. *Quarterly Journal of Economics*, 118(2), 519-548.
- Cox, T. (1991). The multicultural organization. *Academy of Management Executive*, 5(2), 34-47.
- Cox, T., & Blake, S. (1991). Managing cultural diversity: Implication for organizational effectiveness. *Academy of Management Executive*, 5 (3), 45-55.
- Cyert, R. M., & March, J. G. (1963). *A Behavioral theory of the firm*. New Jersey: Prentice Hall.
- Cynthia, L., & Jiing-Lih. (2004). Joint effects of efficacy and gender diversity on group cohesion and performance. *Applied Psychology: An International Review*, 53(1), 136-154.
- Dahya, J., & Travlos, N. G. (2000). Does one man show pay? Theory and evidence on the dual CEO revisited. *European Financial Management*, 6(1), 88-98.
- Daily, C., Certo, S., Dalton, D., (1999). A decade of corporate women: some progress in the board room: None in the executive suite. *Strategic Management Journal*, 20, 93-99.
- Donaldson, L. (1990). The ethereal hand: Organizational economics and management theory. *Academy of management review*, 15, 369-381.
- Donaldson, L., & Davis, G. H. (1991). Stewardship theory or agency theory: CEO governance and shareholder returns. *Australia Journal of management*, 16, 49-64.
- Donaldson, L. (1994). Board and company performance: Research challenges the conventional wisdom. *Corporate governance: An International review*, 2(3), 151-160.
- Eisenhardt, K. M., & Bougeois, L. J. (1988). Politics of strategic decision making in high-velocity environments: Toward a midrange theory. *Academy of Management Journal*, 31(4), 737-770.
- Eisenhardt, K. M. (1989). Agency theory: An assessment and review. *Academy of management review*, 14, 57-74.
- Erhardt, N. L., Werbel, J. D., & Shrader, C. B. (2003). Board of director diversity and firm financial performance. *Corporate Governance*, 11, 102-111.
- Evans, W. R., & Carson, C. M. (2005). A social capital explanation of the relationship between functional diversity and group performance. *Team Performance Management*, 11, 302-314.
- Fischel, D., & Bradley, M. (1986). The role of liability rules and the derivative suit in corporate law: A theoretical and empirical analysis. *Cornell Law Review*, 71, 261-283.

- Goll, I., Sambharya, R. B., & Tucci, L. A. (2001). Top management team composition, corporate ideology and firm performance. *Management International Review*, 41(2), 109-129.
- Greening, D. W., & Johnson, R. A. (1996). Do managers and strategies matter? A study in crisis. *Journal of Management Studies*, 33, 25-51.
- Griscombe, K., & Mattis, M. C. (2002). Leveling the playing field for women of color in corporate in management : Is the business case enough?. *Journal of Business Ethics*, 37, 103-109.
- Gujarati, D. N. (2003). *Basic econometrics* (4<sup>th</sup> ed.). New York: McGraw-Hill Companies, Inc.
- Hambrick, D. C., & Mason, P. A. (1984). Upper echelons: The organization as a reflection of its top managers. *Academy of Management Review*, 9, 193-206.
- Hambrick, D. C., Cho, T. S., & Chen, M. (1996). The influence of top management team heterogeneity on firms' competitive moves. *Administrative Science Quarterly*, 41, 659-685.
- Hassan, Z., Samian, A. L., & Silong, A. D. (2006). *Readings on ethnic relations in a multicultural society: Perspectives and research on national unity and integration*. Serdang: Universiti Putra Malaysia.
- Hoffman, J. J., Lheureux, R. A., & Lamont, B. T. (1997). The effect of inner and outer TMT size on the performance of international firms. *Journal of Managerial Issues*, 9, 121-135.
- Jehn, K., Northcraft, G. B., & Neale, M. A. (2000). Why differences make a difference: A field study of diversity, conflict and performance in workgroups. *Administrative Science Quarterly*, 44, 741-763.
- Jehn, K. A., & Bezrukova, K. (2004). A field study of group diversity, workgroup context, and performance. *Journal of Organizational Behavior*, 25, 703-729.
- Jensen, M.C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3, 305-330.
- Kabilan, M. K., & Hassan, Z. (2005). *Readings on ethnic relations in a multicultural society: Promoting national unity and the practice of noble values*. Serdang: Universiti Putra Malaysia.
- Kakabadse, N. K. & Kakabadse, A. P. (2006). Chairman of the board: demographics effects on role pursuit. *Journal of Management Development*, 26(2), 169-192.
- Kakabadse, N. K., Kakabadse, A. P., & Barrat, R. (2006). Chairman and chief executive officer (CEO): That sacred and secret relationship. *Journal of Management Development*, 25(2), 134-50.
- Kang, C. H., & Cnaan, R. A. (1995). New findings on large human service organization boards of trustees. *Administration in Social Work*, 19, 17-44.
- Karin, K. (2003). Gender influences in decision – making processes in top management teams. *Management Decision*, 41(10), 1024-1034.
- Klenke, K. (2003). Gender influences in decision making processes in top management teams. *Management Decision*, 41(10), 1024-1034.
- Knight, D., Pearce, C. L., Smith, K. G., Olian, J. D., Sims, H. P., Smith, K. A., & Flood, P. (1999). Top management team diversity, group process, and strategic consensus. *Strategic Management Journal*, 20, 445-465.
- Kose, J., & Senbet, L. (1998). Corporate governance and board effectiveness. *Journal of Banking and Finance*, 22(4), 371-403.
- Kroll, M., Walters, B. A., & Le Son, A. (2007). The impact of board composition and top Management team ownership structure on post-IPO performance in young entrepreneurial firms. *Academy of management Journal*, 50(5), 1198.
- Lee, C., & Farh, J. L. (2004). Joint effects of group efficacy and gender diversity on group cohesion and performance. *Applied psychology: An International Review*, 53, 136-154.

- Maznevski, M. L. (1994). Understanding our differences: Performance in decision- making groups with diverse members. *Human Relations*, 47, 531-552.
- Maran, M. (2008). Ethnic diversity on boards of directors and its implications on firm financial performance. *The Journal of International Social Research*, 1(4), 431-445.
- Maran, M., & Indraah, K. (2008). Demographic diversity, top management team, board of directors and firm financial performance: Malaysian evidence. *Proceedings of Applied International Business Conference 2008*, 291-303, Labuan, Malaysia: Labuan School of International Business and Finance.
- McGrath, J. E. (1984). *Groups: Interaction and Performance*. NJ: Prentice-Hall.
- Michel, J. G., & Hambrick, D. C. (1992). Diversification posture and top management team characteristics. *Academy of Management Journal*, 35, 9-37.
- Miller, J. (1989). Memories of peer relations and styles of conflict management. *Journal of Social and Personal Relationships*, 6, 487-504.
- Milliken, F., & Martins, L. (1996). Searching for common threads: Understanding the multiple effects of diversity in organizational groups. *Academy of Management Review*, 21, 402-434.
- Mitton, T. (2002). A Cross-firm analysis of the impact of corporate governance on the east asian financial crisis. *Journal of Financial Economics*, 64, 215-241.
- Moody, J.W., Woszczynski, A. B., Beise, C.M., & Myers, M.E. (2003). Diversity and the information technology workforce: Barriers and opportunities. *Journal of Computer Information System*, 63-71.
- Murray, A. (1989). Top Management group heterogeneity and firm performance. *Strategic Management Journal*, 10, 125-141.
- Nahavandi, A. (2006). *The art and science of leadership*. Upper Saddle River, NJ: Prentice Hall.
- Nishii, L.H., Gotte, A., & Raver, J.L. (2007). Upper echelon theory revisited: The relationship between Upper echelon diversity, the adoption of diversity practices and organizational performance. CAHRS Working Paper Series. Cornell University.
- Pelled, L. (1996). Demographic diversity, conflict and work group outcomes: An intervening process theory. *Organization Science*, 7, 615-631.
- Pelled, L. H., Eisenhardt, K. M., & Xin, K. R. (1999). Exploring the black box: An analysis of work group diversity, conflict and performance. *Administrative Science Quarterly*, 44, 1-28.
- Petersen, R. (2000). The management of a diverse workforce in the business environment of Israel and possible applications for South Africa. *Dissertation Abstracts International Section B: The Science and Engineering*, 60, 4284.
- Pfeffer, J., & Salancik, G. R. (1978). *The external control of organizations: A resource dependence perspective*. New York: Harper & Row.
- Richard, O. C. (2000). Racial diversity, business strategy and firm performance: a resource-based view. *Academy of Management Journal*, 43, 164-77.
- Roberson, Q. M., & Park, H. J. (2007). Examining the link between diversity and firm performance: The effects of diversity reputation and leader racial diversity. *Group & Organization Management*, 32, 548-568.
- Rosenthal, R., & Rosnow, R. L. (1984). *Essentials of behavioural research*. NY: McGraw Hill.
- Rutledge, J. M. (1994). *Building board diversity*. Washington DC: National Center for Non-Profit Boards.
- Shockley-Zalabak, P. (1981). The effects od sex differences on the preferences for utilization setting. *Publiv Personnel Management Journal*, 10, 289-95.
- Siciliano, J. (1996). The relationship of board member diversity to organizational performance. *Journal of Business Ethics*, 15, 1313-1321.

- Slocum, Jr. J.W., & Hellriegel, D. (2007). *Fundamentals of Organizational Behavior*. Mason: Thomson.
- Smith, K. G., Smith, K. A., Olian, J. D., Sims, H. P., O'Bannon, D. P. & Scully, J. A. (1994). Top management demography and process: the role of social integration and communication. *Administrative Science Quarterly*, 39, 412-38.
- Stark, E. (2001). Valuing diversity: Strategic business imperative or HR agenda, Institute of Behavioural and Applied management Proceedings, 34-39.
- Taylor, Cox Jr. (2001). *Creating the multicultural organization: A strategy for capturing the power of diversity*. US: Jossey-Bass.
- Thomas, A. S., & Ramaswamy, K. (1994). Matching managers to strategy: An investigation of performance implications and boundary conditions. *Australian Journal of Management*, 19(1), 73-93.
- Timmermen, T. (2000). Racial diversity, age diversity, interdependence and team performance. *Small Group Research*, 31, 592-606.
- Tsui, A. S., Egan, S.T., & O'Reilly, C. A. III. (1992). Being different: relational demography and organizational attachment. *Administrative Science Quarterly*, 37, 549-579.
- Vafeas, N. (1999). Board meeting frequency and firm performance. *Journal of Financial Economics*, 53, 113-142.
- Watson, E., Kumar, K., & Michaelsen, L. (1993). Cultural diversity's impact on interaction process and performance: Comparing homogeneity and diverse task groups. *Academy of Management Journal*, 36, 590-603.
- Watson, W., Johnson, L., & Merritt, D. (1998). Team orientation, self orientation and diversity in task groups: Their connection to team performance over Time. *Group and Organization Management*, 23, 161-189.
- Weir, C., Laing, D., & McKnight, P. J. (2001). An empirical analysis of the impact of corporate governance mechanisms on the performance of UK firms, Working Paper, <http://www.ssrn.com>
- Widmer, C. (1987). Minority participation of boards of directors of human services: Some evidence and suggestions. *Journal of Voluntary Action Research*, 16(4), 33-44.
- Williams, K.Y., & O'Reilly. (1998). Demographic and diversity in organizations: A review of 40 years of research, in Staw, BM and Cummings LL(eds). *Research in Organizational Behaviour*, 20, 77-140.
- Williamson, O. (1984). Corporate governance. *Yale Law Journal*, 93, 1197-1229.
- Yin, R. (1973). Identity definition and maintenance. In R. Yin (Ed), *Race, creed, Color or national origin: A reader on racial and ethnic identities in American society*: pp 45-48. Itasca, IL:F.E. Peacock Publishers, Inc.
- Zahra, S., & Pearce, J. (1989). Boards of directors and corporate financial performance: A review and integrative model. *Journal of Management*, 15, 291-344.
- Zander, A. (1979). The psychology of group processes. *Annual Review of Psychology*, 30, 417-51.
- Zander, A. (1993). *Making boards effective: The dynamics of non profit governing boards*. San Francisco, CA: Jossey Bass.

**Appendix 1: Top 100 non-financial companies**

No	Company	No	Company
1	AKN Technology Bhd	51	Malayan United Industries Bhd
2	Batu Kawan Bhd	52	Malaysian Airline System Bhd
3	Amway (Malaysia) Hldgs Bhd	53	Malaysian Mosaics Bhd
4	APM Automotive Holdings Bhd	54	Malaysian Oxygen Bhd
5	Asiatic Development Bhd	55	Malaysian Pacific Ind Bhd
6	Bandaraya Developments Bhd	56	Marco Holdings Bhd
7	Berjaya Land Bhd	57	MISC Bhd
8	Berjaya Sports Toto Bhd	58	MMC Corporation Bhd
9	Bintulu Port Holdings Bhd	59	Mulpha International Bhd
10	Boustead Heavy Industries Corp Bhd	60	NCB Holdings Bhd
11	Boustead Holdings Bhd	61	Nestle (Malaysia) Bhd
12	British American Tobacco (M)	62	Oriental Holdings Bhd
13	Cahaya Mata Sarawak Bhd	63	Pan Malaysia Corporation Bhd
14	Camerlin Group Bhd	64	Pan Malaysian Industries Bhd
15	Carlsberg Brewery Malaysia Bhd	65	Panasonic Manufacturing Malaysia Bhd
16	Chemical Co of Malaysia Bhd	66	Petaling Tin Bhd
17	Country Heights Holdings Bhd	67	Petronas Dagangan Bhd
18	Dialog Group Bhd	68	Petronas Gas Bhd
19	DIGI.Com Bhd	69	PPB Group Bhd
20	DRB-Hicom Bhd	70	PPB Oil Palms Bhd
21	Esso Malaysia Bhd	71	PSC Industries Bhd
22	Fraser & Neave Holdings Bhd	72	Puncak Niaga Holdings Bhd
23	Gamuda Bhd	73	Ramatex Bhd
24	Genting Bhd	74	RB Land Holdings Bhd
25	Globetronics Technology Bhd	75	Resorts World Bhd
26	Golden Hope Plantations Bhd	76	Road Builder (M) Hldgs Bhd
27	Guinness Anchor Bhd	77	Shell Refining Co (FOM) Bhd
28	Hap Seng Consolidated Bhd	78	Sime UEP Properties Bhd
29	Hume Industries (Malaysia) Bhd	79	Star Publications
30	IGB Corporation Bhd	80	Sunway Holdings Incorp Bhd
31	IJM Corporation Bhd	81	TA Ann Holdings Bhd
32	KFC Holdings (Malaysia) Bhd	82	TA Enterprise Bhd
33	Kian Joo Can Factory Bhd	83	Talam Corporation Bhd
34	KSL Holdings Bhd	84	Tan Chong Motor Holdings Bhd

35	Kuala Lumpur Kepong Bhd	85	Tanjong Public Limited Company
36	KUB Malaysia Bhd	86	TH Group Bhd
37	Kulim (Malaysia) Bhd	87	Tradewinds (M) BHD
38	Kumpulan Guthrie Bhd	88	Time Dot Com Berhad
39	IOI Corporation Bhd	89	Time Engineering Bhd
40	IOI Properties Bhd	90	Top Glove Corporation Bhd
41	Island & Peninsular Bhd	91	Transmile Group Bhd
42	Jaya Tiasa Holdings Bhd	92	UBG Bhd
43	JT International Bhd	93	Uchi Technologies Bhd
44	K & N Kenanga Holdings Bhd	94	UMW Holdings Bhd
45	Kwantas Corporation Bhd	95	Unisem (M) Bhd
46	Lingkar Transkota Hldgs Bhd	96	WCT Engineering Bhd
47	Lingui Developments Bhd	97	WTK Holdings Berhad
48	Lion Corporation Bhd	98	YTL Cement Bhd
49	Magnum Corporation Bhd	99	YTL Corporation Bhd
50	Malakoff Bhd	100	YTL Power International Bhd