Diversity at organizational levels: the effect of executive board of directors and corporate officers diversity on performance

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Diversity at organizational levels: The effect of executive board of directors and corporate officers diversity on performance

by

Niclas Leif Erhardt

A thesis submitted to the graduate faculty in partial fulfillment of the requirements for the degree of

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This is to certify that the Master’s thesis of

Niclas Leif Erhardt

has met the thesis requirements of Iowa State University
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ABSTRACT

The research of diversity effects on performance shows the need to go beyond individual or group level of analysis and to include the organizational levels of analysis. In light of current evidence that shows a positive effect of diversity on innovation and creativity performance at group levels, this study hypothesized that other performance measures may also be positively correlated at organizational levels. This relationship was examined by using 1993 and 1998 financial data and diversity representation (average between 1997 and 1998) from 127 large US companies. Two performance measures (return on asset and investment) were correlated with executive board of director and corporate officer diversity (race and gender). This statistical analysis indicated that executive board of director and corporate officer diversity are positively correlated with organizational performance. The discussion addressed: first, the advantage of organizational level of analysis over the individuals and groups approach; and second, the implications for human resources management and a need to develop a theoretical framework for diversity's effect on performance.
INTRODUCTION

There are two demographic changes in the labor market that recently started to play an important role on organizations and their performance: first, the aging of the baby boomers, and second, diversity as a competitive advantage. As the aging baby boomers leave the labor market they are replaced by women who originally were participating in unpaid labor and by minorities, which are now outnumbering white Anglo-Saxon males in the workplace (Hayes-Bautista et al., 1988). Regarding the second event, some researchers suggest that diversity leads to a greater knowledge base, creativity and innovation, and therefore, becomes a competitive advantage in certain areas (Watson, Kumar, & Michaelsen, 1993). Altogether, these two events have become a crucial concern for corporations as they relate to organizational and industry performance.

With these rapid demographical changes in the labor market some corporations are utilizing diversity to stay competitive. However, an increasing diverse workforce has created new challenges and costs for corporations to harness the potential advantages by integrating individual differences. Recent numbers show seventy-four percent of the companies employ diversity programs spending an estimated $200 million to $300 million a year on these programs in the United States alone (Flynn, 1998).

As corporations are spending large amounts on diversity, an increasing number of studies have focused on its relevance to organizational performance (e.g. Solomon, 1998; Shaw, Barret-Power, 1998; Lau & Murnighan, 1998; Elsass & Graves, 1997; Bantz, 1993; Iverson & Buttigieg, 1997; Petersen, 2000; Stumpf & Thomas, 1999; Oetzel, 1999; Timmerman, 2000; Williams, 2000). The question still remains whether diversity per se is a
competitive advantage as researchers report conflicting evidence. On the one hand, researchers suggest that diversity may be advantageous during particular situations where innovation, creativity and quality decision-making are crucial (Witte & Von-Pablock, 1999; Herriot & Permberton, 1995). On the other hand, diversity is also perceived to be a disadvantage as individual differences may create lower group cohesion, stress, communication problems and higher turnover (Pfeffer & O’Reilly, 1984; Knight et al. 1999).

The conflicting research on diversity’s effects on performance generates two central concerns, which this study addresses. First, to extend the unit of analysis of diversity’s effects on performance from individual and group levels to organizational levels of analysis. Previous research has focused mainly on individual and group levels (Hertel et al., 1999; Pelled, 1996). By looking at diversity’s effect on group and individual performance provides limited evidence on how performance impacts organizations as a whole. This study tests whether the inconsistencies found at individual and group are mainly due their level of analysis by looking at demographic diversity at organizational levels. Recent studies have investigated the effect of diversity on organizational performance and report consistent results that diversity in fact contributes to higher levels of performance than more homogenous organizations (Richard, 2000; Murray, 1989).

Second, previous research on diversity’s effects on organizational performance has used various definitions of diversity (e.g. race, ethnicity, age, gender and education). These definitions typically follow two general distinctions of diversity, the observable and the non-observable. Examples of observable diversity are gender, age, race and ethnicity and examples of non-observable diversity are knowledge, education, values, perception, affection, and personality characteristics (Timmerman, 2000; Watson et al., 1998; Petersen,
2000; Pelled, 1996; Milliken & Martins, 1996; Boeker, 1997; Kilduff, Angelmar, & Mehra, 2000). However, most research on diversity and its effects on performance focus on observable or demographic diversity mainly because it is less problematic to measure. For example, it is much easier to measure diversity by the number of minorities within a company, than measuring diversity in values and beliefs. Another reason may be that traditional discrimination is commonly based on ethnicity and appearance, which may make demographic diversity more relevant. Although age and gender are undoubtedly important diversity indicators, this study focuses on demographic diversity (race, ethnicity and gender) as it may be a more suitable indicator in light of the increasing numbers of women, Hispanics, Blacks and Asians entering into the labor market.

Given these two central concerns, the current study is outlined as follows. First, a literature review of the mixed findings on individual and group levels of analysis is provided; second, studies on top management are reviewed followed by a brief account of the limited studies focusing on organizational levels and their relevance to the present study.
LITERATURE REVIEW

The literature of diversity's effects on performance seems to be characterized by the variations of different angles to approach it: group development, communication, brainstorming and innovation, group effectiveness and task, work group cohesion, social loafing, group conflict, turnover, job commitment and gender diversity (Watson et al., 1998; Raths, 1999; Kashima, 1999; Rosen et al., 1999; Lovelace, 1996; Richard, 2000; Caudron, 1994). Most of these studies appear to be restricted to individual and group levels and tend to range from neutral, to negative relationship, to positive relationship between heterogeneous groups and their effects on performance.

Diversity at individual and group levels

Leaving aside studies that report no significant differences between heterogeneous and homogeneous groups in terms of performance (e.g. Rodriguez, 2000) a large number of studies have found a negative relationship. The common theme for studies that stress the disadvantages with diversity concentrate on miscommunication and conflict as diversity tends to trigger lower job commitment and turnover, which ultimately reduces performance.

There are a number of studies that suggest that diversity is highly overrated and that the efforts by companies to diversify their workforce have largely failed. Flynn (1998) argues that although companies are spending millions of dollars on diversity programs the number of lawsuits filed by women and minorities are nevertheless increasing. For example, in 1997 the Equal Employment Opportunity Commission (EEOC) had 32,836 resolutions of sex-based discrimination charges, which was an increase from 1991 with 18,817 suits. Furthermore, the number of race-discrimination suits in 1997 was 36,419, an increase from 1991, which had 28,914 cases.
Others report that time has a negative effect on heterogeneous groups and their performance. Watson, Johnson and Merritt (1998), investigated the effects of cultural, gender and age diversity on group performance and found that culturally diverse groups perform better at first but over time are outperformed by non-diverse groups. Similar results are reported by Thomas, (1999) who found that cultural homogenous workgroups perform better than heterogeneous ones. Thomas found that greater cultural distance between the members tended to lower group performance. However, he does not support the claim by Watson et al. (1998) suggesting that time has an impact on their performance.

The ingroup-outgroup phenomenon has also been used in explaining heterogeneous groups being outperformed by more homogenous ones. Williams, (2000) reports that groups with similar traits (in-groups) perform better when the group only consists of in-group members when an out-group member is introduced into the group performance declines.

Communication is another area that has been found to explain much of the negative performance of diversity (e.g. Raths, 1999; Giambatista, 2000; Milliken & Martins, 1996; Hermon-Vielhaber, 1996). Most researchers that have investigated this issue have found that a frequent explanation for poor group performance is poor communication. Miscommunication is perceived as a larger problem for heterogeneous groups simply because of their individual differences and various communication styles (Maznevski, 1994). However, if communication problems are solved, for example by appropriate training, heterogeneous teams would be able to take advantage of their skills and enhance a group’s performance, that is if the group is properly integrated via various mechanisms (Caudron, 1994; Maznevski, 1994).
The issues of miscommunication and performance have also been related to gender differences (e.g. Franzwa & Lockhart, 1998). Rich (1998) suggests that linguistic codes and the capacity for multiple interpretations may hinder the advancements of women and minorities in organizations. These systems of codes are founded on the knowledge of its existence and the ability to perceive implicit messages. Rich argues that because organizational structures are typically dominated by white males women and minorities are prevented from learning these codes, which further explains why heterogeneous groups may be at a competitive disadvantage compared to more homogenous groups. In an effort to overcome these communication problems, some researchers suggest that mentoring programs for women and minorities are useful that can also contribute to making the workplace less hostile (Wanguri-McGee, 1996).

**Group conflict.** Some researchers have argued that diversity may lead to greater group conflict and disagreements due to their inherent differences. Lovelace (1996) used 43 new product teams from telecommunication, semiconductor and electronic products industries and found that the greater the team’s functional diversity the more group members tend to disagree. They also found that the greater the extent to which intrateam and intergroup disagree the higher the negative relationship with team performance. Metts and Leonard (1996), report that work team effectiveness is not only related to the dynamics within the team but also the supervisor’s ratings of task difficulty.

**Turnover.** Turnover has also been linked to lower heterogeneous group performance (e.g. Galagan, 1993; Allen, 1991; Stringfellow, 1998). Hayes and Hollman (1996) studied the effects of women entering the male-dominated field of accounting and found that women are much more likely to leave than their male counterparts resulting in an increase in costs.
commonly coupled with turnover (e.g. recruitment and training) and lowering overall organizational performance. Complementary results are reported by Milliken and Martins (1996) suggesting that diversity increases turnover through its impact on affective, cognitive, communication and symbolic processes. Milliken and Martins (1996), argue that these underlying factors resulting in turnover also contribute to lowering organizational performance.

**Workgroup cohesion.** As mentioned earlier, workgroup cohesion is another factor that is perceived to have a relationship with diversity. Harrison, Price and Bell (1998), investigated surface (gender, race ethnicity) and deep level diversity (values, attitudes and beliefs) and their relationship with cohesion. They argue that the surface level of diversity is preventing the group to perform. However, over time as group members work together through meaningful interactions the understandings of each others’ deep level diversity performance increases. In other words, cohesion in any group, regardless of diversity, will improve over time and as a result improve team performance.

Researchers that have addressed the positive aspects of diversity appear to look at various skills and abilities that can be integrated over time and subsequently increased performance (Boeker, 1997). Watson, Kumar and Michaelsen (1993) investigated nationality and ethnic diversity during a 17 week laboratory study on groups and their effects on performance. The findings indicate that homogeneous groups score higher on both process and performance effectiveness. However over time, both groups showed improvements on process and performance and the differences between the groups converged. By the end of 17th week, no difference in process or overall performance was found, but the heterogeneous
groups scored higher on two specific task measures. This would suggest that over time heterogeneous groups might have a higher performance than their counterparts.

**Innovation and task.** There is an overwhelming amount of research evidence suggesting that diversity in groups tends to generate greater creative thinking and innovation because of the synergy of skills and experiences (e.g. Herriot & Permberton, 1995). Austin (1997) looked at cognition and its relationship to creative thinking and innovation in heterogeneous groups. The findings suggest that diversity increases both innovation and creative thinking, but at the same time decreases group cohesion and increases conflict. He argues that diversity is clearly an advantage but problems such as cohesion and conflict must be solved in order to fully harness the advantages.

Witte and Von-Pablocki (1999) looked at behavior diversity by using 37 dyads and found that heterogeneous dyads tend to make better qualitative decisions. These findings are consistent with the common assumption that diversity provides a broader knowledge base from various different experiences and ultimately generates better quality decisions. Qualitative decision-making has been found to be moderated by the level of participation (Clark, Anand & Roberson, 2000).

Communication has also been linked to innovation. Ancona and Caldwell (1992) used 45 new product teams in five high-technology companies. They suggest that communication outside the team’s boundaries increase functional diversity and tend to generate higher levels of innovation.

Consistent with findings on innovation and creativity some researchers suggest that cross-functional teams are advantageous in specific tasks that require various skills and knowledge (Thomas, 1999). Witte and Von-Pablocki (1999) suggest that heterogeneous
dyads are better in quality decision making than their counter parts. Thomas (1999) argues that diverse groups may be advantageous at times when members can combine their synergy for a specific problem. However, pooling together hidden strengths are problematic and may be affected by the ability to coordinate group members’ tasks to relevant actions (Kashima, 1999).

**Social loafing and diversity.** Social loafing, the tendency for individuals to contribute less when working collectively than when working individually has also been investigated with its relationship to diversity. Kugihara (1999) investigated gender differences and social loafing in Japan and reports that women tend to loaf less than men. The mean effort of men tended to decrease when the situation is changed from an individual to a collective work setting. This may suggest that boards with more women might tend to decrease social loafing and subsequently show higher performance.

**Top management.** Another area that has gained much attention marked by mixed findings is the relationship between diversity and top management performance. Some research shows that diverse top management teams do not have any significant advantages in terms of responding to a dynamic market. West and Schenk (1996), researched the relationship between industry dynamism, top management team consensus, and firm-level performance using executive teams from 39 machine tool and 26 electronic components firms. The results show no relationship between consensus on goals and means demographic similarities and firm performance. Similar results are reported by Kilduff, Angelmar and Mehra (2000), who conducted an experiment using 159 European managers at a consulting convention investigating differences in cognitive diversity. The results indicate that managers
from different European countries show no effect of demographic diversity on cognitive diversity.

Leaving aside studies reporting no relationship between diversity and performance, a number of studies suggest that diversity at top management levels are in fact at a disadvantage compared to more homogenous ones (e.g. Hambrick, Seung & Chen, 1996). Hambrick et al. (1996) conducted a longitudinal study over a period of eight years on the effects of diversity on top management team performance in 32 major US airlines. Diversity was measured by functional heterogeneity, educational curriculum heterogeneity, and company tenure heterogeneity. Their findings show that homogeneous top-management teams actually outperform heterogeneous ones. They also report that heterogeneous teams were slower in their actions and responses and less likely than homogenous teams to respond to competitors’ initiative. One possible explanation may be that in a heterogeneous group individuals are more likely to disagree therefore weakening the team consensus. In a study by Knight et al.’s (1999) on top management and consensus he suggest that demographic diversity is negatively related to consensus. Knight et al., further suggest that greater time and efforts are necessary for heterogeneous teams to reach decisions; ultimately reducing team performance. In sum, these negative results seem to address the negative effects of diversity due to dynamic relationship and the difficulty of integrating these various individual assets into an effective harmonized group or team.

Diversity at the top management level also shows positive findings as they are related to skills, innovation and quality decision-making. Some researchers have found that most successful companies are characterized by a diverse management team (Etorre, 1997) and may be related to good decision-making and strategic goals. Bantel (1993) investigated the
relationship between the demographic nature of high-level management groups and strategic clarity in retail banks. The findings show that greater diversity on education major and functional background in top management teams benefits from cognitive diversity and engage in better strategic decision making.

Similar results are reported by Simons and Pelled (1999) in their study on executive diversity. Their findings suggest that both educational-level and cognitive diversity is associated with positive effects on organizational performance. However, they argue that experience diversity has a negative impact on return on investments and overall organizational performance. Simons and Pelled argue that the experience diversity and its relationship to negative performance are due to informal communication among top teams.

Elron (1996) examined the relationships of cultural heterogeneity and member diversity with team performance and found that both are mediated by selected aspects of group processes. Contrary to previous findings on group cohesion, no support was found suggesting that cultural heterogeneity has a negative relationship with group cohesion. However, the results did indicate a positive relationship between cultural heterogeneity and levels of issue-based conflict. In terms of performance, both issue based conflict and cohesion were found to be positively related to team performance, which was also tied to subsidiary performance.

Others have investigated board diversity and performance and found positive results. For example, Sicilano (1996) used data from 240 YMCA organizations to construct and compare multiple measures of board member diversity by using a board member index. The findings reveal higher levels of social performance and fundraising results when board
members have greater occupational diversity. The results also show that gender diversity played a role in organization’s level of social performance.

In sum, while few studies report no effects between diversity and performance at individual and group levels it appears that most findings are consistent with the argument that diversity generates greater innovation and quality decision-making. However, research also shows that diversity may generate negative effects in the process such as decreasing group cohesion, increasing miss-communication, lowering job commitment and turnover. These negative effects need consideration in order to harness the benefits from heterogeneous teams.

Diversity at organizational levels

When considering studies reporting neutral, negative and positive relationships between diversity and performance they have mainly been conducted at individual and group levels; a limited number of studies have addressed diversity and performance at organizational levels. One early attempt in addressing diversity at organizational levels was conducted by Murray (1989). By investigating heterogeneous versus homogeneous groups and their effect on organizational performance Murray used 84 Fortune 500 food and oil companies. Diversity was measured as a composite of age, educational degree, average tenure and occupational history. Findings showed that performance and diversity is related to the type of market the organization is operating in. Specifically, homogenous groups were more effective then heterogeneous groups during intense market competition. Heterogeneous groups were more effective in dealing with organizational change, which suggesting that these groups may better respond to rapid dynamic changes in the market. A limitation with Murray’s (1989) study was that diversity was measured via non-demographic diversity.
Although these diversity measures Murray used (age, educational degree and tenure) are undoubtedly important, racial and ethnical diversity may be more informative and relevant to the current demographical changes in the work force.

In a more recent study conducted by Richard (2000) demographic diversity was addressed by investigating racial diversity’s effects on organizational performance at an industry level by looking at the banking industry and the relationship between diversity, business strategy, and firm performance. Performance was measured by productivity return on equity, and market performance measured from 64 banks in three states. Results showed that diversity did in fact add value and may be perceived as a competitive advantage, compared to their counterparts.

Although Richard’s (2000) study is highly informative regarding the positive relationship between demographic diversity and performance this study raises further unanswered questions. First, it is unclear whether Richard’s findings in the banking industry can be generalized to other service and non-service industries, such as the restaurant, insurance business, and production sectors? Second, because Richard’s study only looked at overall diversity it is unclear whether diversity in specific areas (e.g. top management boards) has a greater impact on overall organizational performance than in lower levels?

In light of the current literature suggesting that diversity tends to generate higher creativity, innovation and quality decision making at individual and group levels, as supported by Richard’s (2000) and Murray’s (1989) positive findings, this study posits that similar findings may be found at organizational levels, in which these characteristics are necessary, that is at the level of the executive board of directors and corporate officers. Zahra and Pearce (1989) in their exhaustive review of studies of boards of directors and the
relationship with performance did not identify a single study of demographic diversity at board levels. However, because good strategic decision making is crucial for executive board of directors, which requires creative, innovative, but foremost quality decision making it seems logical to expect that organizations with higher levels of executive board of director diversity will show higher levels of performance than organizations with less diverse executive boards. Thus, the following hypothesis is proposed:

\[ H1. \text{Organizations with higher levels of diversity at the executive board of directors will have a higher performance than organizations with lower diversity at executive board of directors.} \]

Assuming that diversity has a greater impact on employees involved with higher level of decision-making, it is seems reasonable to extend the first hypothesis to other employees market by similar characteristics such as corporate officers. Thus, the second hypothesis propose:

\[ H2. \text{Organizations with higher levels of corporate officer diversity will have a higher level of performance than organizations with lower level of corporate officer diversity.} \]

Consequently, this study will investigate executive board of director diversity and its relationship to performance. The study addresses the research gap on diversity by exploring organizational levels rather than individual or group levels. In light of the literature on heterogeneous groups suggesting that innovation and creativity is positively related to diversity and performance the author assume that these advantages will result in higher performance for organizations that contain higher levels of the executive board of directors and corporate officer diversity than their homogeneous counterpart. The independent variable, demographic diversity, is measured by the average ratio of women and minorities at two times (1997 and 1998) at several levels within organizations in different industries. Two
METHOD

Sample

The sample for this study consisted of data from 127 public companies gathered from Fortune magazine from various industries. The largest number of companies came from manufacturing (34% consumer non-durable and 23% durable goods), financing sector (17%), and transportation/utilities (8%). Due to missing data, two companies were eliminated, eleven companies were excluded because they were privately owned, and two companies were excluded because their results were 20 standard deviations away from the mean in the ROA and ROI measures. Altogether 114 companies with complete data were included in the analysis. The average number of employees was $20202 and the average amount of total assets was $10864 million. The percentage average of minorities and women in the sample was 55 percent. The median for the executive board of director diversity was 24 percent, ranging from 0.6 to 72 percent. The median for corporate officer diversity was 20 percent ranging from 0.0 to 68 percent.

Measures

Independent variables. In this study, demographic diversity was measured in terms of ethnic and gender representation. The diversity representation was obtained from company self report compiled by Fortune magazine. These self reported numbers were based on the Equal Employment Opportunity Commission (EEOC) categories and were measured at two points in time (1997 and 1998) by the representation percentage of women and minorities (African, Hispanic, Asian, and Native Americans) to white Anglo-Saxons for corporate officers and executive board of directors.
The percentage of minorities and females for corporate officers and executive board of directors was determined by dividing the number of nonwhites and white females by the total number of corporate officers, and total number of executive board of directors for both 1997 and 1998. A mean average was calculated for these years. The purpose for using an average over two years was to better control for potential changes in the diversity ratio and to increase reliability.

**Dependent variables.** Organizational performance has been measured in numerous ways (e.g. market shares, number of patented products and total assets) and researchers have commonly used financial data such as the ratios of the stock prices to earnings, and stock prices to book values (Murray, 1989). This study used two financial ratios: return on asset (net income divided by total assets or ROA) and return on investment (net income divided by invested capital or ROI). These measures are consistent with other studies on performance and are frequently used by market and financial analysts in assessing a company’s performance (e.g. Shrader et al., 1997).

What appears to be a concern in most studies on performance is controlling for changes in the market as changes may affect levels of diversity within organizations (Richard 2000). In order to control for these potential changes performance indicators from several times has shown to be effective. Thus, the two performance measures were gathered from a public financial data base (compact disclosure) at two different times (1993 and 1998).

The five-year interval served two reasons. First, measuring performance at two different times would better control for market fluctuations and indicate more consistent results (Katz, Marilyn & Hall, 2000). Second, The impact of strategic decision-making on organizational performance typically requires several years to observe. Thus, a five-year
interval was necessary to account for diverse candidates' potential contributions on strategic decision-making.

Analysis

The data was examined by correlations (see Table 1), partial correlation (see Table 2) and regression analysis (see Table 3). First, the correlation analysis was used to demonstrate the independent variables (executive board of director and corporate officer minority) relationship with the dependent variable (ROI 98 and 93 and ROA 98 and 93). Second, partial correlation was used to demonstrate specific effects of the independent variable on the dependent variable while controlling for ROI 93 ad ROA 93. Third, regression analysis was used to establish which variable had a greater impact on predicting performance.
RESULTS

The means, standard deviations, reliabilities and correlations are reported in table 1. Based on table 1, the two independent variables executive board of director minorities and corporate officer minorities were highly correlated ($r = 0.50$). Executive board of director minorities had a relatively high mean ($m = 0.25$) and the corporate officer minorities mean was slightly lower ($m = 0.22$). As expected, return on investment (98) and return on assets (98) were highly correlated ($r = 0.88$). The return on investment was positively correlated with the minority executive board of directors ($r = 0.21$). The return on assets (93) was positively correlated with returns on investment (98) and (93) ($r = 0.24$; $r = 0.33$) and returns on investment (93) ($m = 0.54$).

<table>
<thead>
<tr>
<th>TABLE 1</th>
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<td>Means, Standard Deviations, and Correlation Matrix among Variables</td>
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<tr>
<th></th>
<th>Mean</th>
<th>SD</th>
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<th>4</th>
<th>5</th>
<th>6</th>
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<tbody>
<tr>
<td>1. Executive Board of director minorities</td>
<td>0.25</td>
<td>0.12</td>
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<td>--</td>
<td>--</td>
<td>--</td>
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<tr>
<td>2. Corporate officer minorities</td>
<td>0.22</td>
<td>0.11</td>
<td>0.50**</td>
<td>--</td>
<td>--</td>
<td>--</td>
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<tr>
<td>3. ROI (98)</td>
<td>0.11</td>
<td>0.15</td>
<td>0.21**</td>
<td>0.16</td>
<td>--</td>
<td>--</td>
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</tr>
<tr>
<td>4. ROA (98)</td>
<td>0.05</td>
<td>0.07</td>
<td>0.18</td>
<td>0.18</td>
<td>0.88**</td>
<td>--</td>
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<tr>
<td>5. ROI (93)</td>
<td>0.02</td>
<td>0.35</td>
<td>0.28</td>
<td>0.05</td>
<td>0.08</td>
<td>0.15</td>
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<tr>
<td>6. ROA (93)</td>
<td>0.02</td>
<td>0.07</td>
<td>0.02</td>
<td>0.04</td>
<td>0.24**</td>
<td>0.33**</td>
<td>0.54**</td>
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**. $p < 0.01$
In table 2, the specific hypotheses were tested by conducting a partial correlation analysis (Cohen & Cohen, 1975). Results show that both minority executive board of directors and minority corporate officers are positively correlated with returns on investment (98) ($r = 0.19$ and $0.22$ respectively) while controlling for returns on investment (93). The results also indicate that minority executive board of directors and corporate officer minorities are positively correlated with returns on assets (98) while controlling for returns on assets (93) ($r = 0.22$ and $0.20$ respectively).

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<tbody>
<tr>
<td>Controlling for ROI(93)</td>
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</tr>
<tr>
<td>1. Executive Board of director minorities</td>
<td>--</td>
<td>0.46**</td>
<td>0.19*</td>
</tr>
<tr>
<td>2. Corporate officer minorities</td>
<td>0.46**</td>
<td>--</td>
<td>0.22*</td>
</tr>
<tr>
<td>3. ROI(98)</td>
<td>0.19*</td>
<td>0.22*</td>
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<tr>
<td>Controlling for ROA(98)</td>
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<td>1. Executive Board of director minorities</td>
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<td>0.46**</td>
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<td>2. Corporate officer minorities</td>
<td>0.46**</td>
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<td>0.20*</td>
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<tr>
<td>3. ROA(98)</td>
<td>0.22*</td>
<td>0.20*</td>
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*. $p < 0.05$.

**. $p < 0.01$. 
In table 3 a regression analysis was conducted to determine whether executive board of directors or corporate officer minorities diversity had a larger impact on performance. In step 1 ROI (93) and ROA (93) ($\beta = 0.07; \Delta R^2 = 0.00; F\Delta R^2 = 0.47$) were included. In step 2 both corporate officers and minority executive board of director were included and found statistically significant results ($\beta = 0.13 & 0.16; \Delta R^2 = 0.06; F\Delta R^2 = 3.32; p < 0.05$). However, the results show that it is impossible to determine which of the two independent variables is more significant in their relationship with performance given their relatively small $\beta$-scores ($t = 1.2$ and $1.5$ for corporate officers and executive board of director diversity respectively).

<table>
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<th>TABLE 3 Regression</th>
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<tr>
<td>Predictor variables</td>
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<tr>
<td><strong>Step 1</strong></td>
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<tr>
<td>Time 1 Profitability</td>
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<tr>
<td>Controlling for ROA(93)</td>
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<td>Controlling for ROI (93)</td>
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<td><strong>Step 2</strong></td>
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<td>Main effects</td>
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<td>Executive Board of director minorities</td>
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<tr>
<td>Corporate officer minorities</td>
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<tr>
<td>Total</td>
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*: $p < 0.05$
The results of this study support the original hypothesis stating that high levels of diversity at executive board of director would lead to higher organizational performance. The results also support the second hypothesis stating organizations with higher level of corporate officer diversity will indicate higher levels of performance than organizations with lower levels of corporate officer diversity.

**Post hoc analysis**

Each company’s mission statement was explored by content analysis in an attempt to find other variables that may indicate the level of importance of diversity. Both published written mission statements (Abrahams, 1999) and company’s individual web pages were used to indicate to what extent diversity was part of the company’s core values. A dummy variable was used to code the data (1 = diversity is mentioned and 0 = diversity is not mentioned in the mission statement). A Pearson correlation between mission statements, executive board of director diversity and corporate officer diversity did not indicate statistically significant results ($r = 0.05$ and $r = -0.03$ respectively). We also examined the interaction term between executive board of directors and corporate officers but did not show statistical significant results.
DISCUSSION

The purpose of this study was to investigate the relationship between demographic diversity and organizational performance, specifically for executive board of directors and corporate officers at organizational levels. As expected, the results supported the hypothesis stating that executive board of director diversity is positively associated with ROI 98 and ROA 98 (hypothesis 1). Thus, diversity at the executive board of director appears to have an impact on overall organizational performance. The results were also consistent with the assumption that corporate officer diversity is positively associated with ROI 98 and ROA 98 (hypothesis 2). This result suggests that organizational performance is also related to diversity for corporate officers.

The findings in this study indicate consistent results reported by early attempts addressing diversity at organizational levels (Richard, 2000; Murray, 1989). Specifically, the findings show that demographic diversity may be a competitive advantage as it may increase overall organizational performance. However, the findings do not suggest that diversity per se is advantageous throughout all levels in organizations, but rather in specific areas, that is, at executive board of director and corporate officer levels.

Corporate governance

Before discussing potential explanations to the positive relationship between demographic diversity and executive board of directors and corporate officers a better understanding regarding their function and composition are necessary. Finkelstein and Hambrick (1996) outlined four key functions for top management that are highly related to the performance of the organization. First, top managers are commonly the most influential actors determining strategy direction and decision-making inherent in their structural
position. Second, executive boards fulfill a monitoring role that may include: representing shareholders, monitoring proper use of organizations' wealth, responses to takeover threats and hiring, compensating and monitoring top management work.

Board composition is a somewhat complicated phenomena but is commonly characterized by an average size of twelve members (directors). These members of the board may be both representatives from inside and outside the organization. The inside members are typically top managers of the firm although normally fewer in representation. The outside representatives are commonly members of other organizations that may or may not conduct business with the organization. These outside representatives may also be family members of the founder of the organizations. The composition of the executive board is also characterized by demographic composition such as age, tenure, managerial experience, industry experience, and heterogeneity of the members.

In contrast to the board of director functions, the primary corporate officers' function is mainly to execute the decisions made by the members of the boards. Contrary to recruiting from outside, corporate officers are commonly recruited and promoted from within the company. However, executive boards and corporate officers, at times, overlap as members of the executive board may also be a corporate officer.

Given the function and composition of executive boards and corporate officers, there are limited solid theoretical foundations in the field on diversity and its relationship with organizational performance that may serve as tentative explanations. With this theoretical limitation inherent in the field of diversity and performance, three non-theory based explanations were generated. First, researchers have found that heterogeneous groups tend to show greater innovation and quality decision-making than more homogenous ones.
(Stringfellow, 1998). This synergy of ideas may be found in heterogeneous groups, in which individuals have different backgrounds and experiences, which together may generate new competitive products and quality decision-making (Bantel 1993). Quality decision making generated from diversity may also create greater strategic thinking. In order to tackle market competitions the organization needs to anticipate other competitors’ actions, which is commonly done by developing strategic business and market goals. These decisions are ultimately made at a higher level in the company (executive board of directors) and are therefore ultimately responsible for the performance of the company. Because executive board of directors are mainly involved in strategic planning and decision making diversity may explain the higher levels of organizational performance compared to other organizations with less diversity at executive board of director and corporate officer levels.

Second, understanding the global market and having the capability to launch suitable global products and improve organizational performance may also require a more diverse team. Take for example the sunglass industry, a highly fashion oriented industry. Not only must sunglasses meet the current fashion design but also be specially designed for various facial structures across the globe. What works in the US may not necessarily work in Japan, a mistake experienced by a major sunglass company in their numerous attempts to market a specific sunglass model in Japan. The company realized that the frame of the glasses were too large for the average facial structure’ in Japan, subsequently failing to meet customer demands. This problem may also be a typical example of group-think, where homogenous groups fail to think “outside the box” and thus may overlook crucial details.

Finally, some researchers have suggested that the positive relationship between diversity and organizational performance may actually be due to a larger applicant pool and
therefore greater chances of selecting more qualified applicants. Shrader et al. (1997), in their study on women in management found a positive link between women (diversity) and their effect on firm financial performance. Shrader and colleges explained the positive relationship by suggesting that theses companies were recruiting from a larger pool, and subsequently recruited more qualified applicants regardless of diversity. The larger recruitment pool resulting in more qualified applicants would explain the increase in organizational performance. They further posit that it is important to acknowledge the fact that if an individual has a different ethnic background it does not necessarily mean his or her viewpoints are different.

The positive relationship between diversity and executive board of director and corporate officers may also offer an explanation why the results on overall diversity in a company (e.g. total workforce) did not show a positive relationship with organizational performance. Some researchers suggest that benefits from diversity are contingent upon the specific type of tasks and situations (Murray, 1989). In situations where solving a problem does not require a broad set of skills and experiences, diversity may generate various viewpoints and discussions ultimately delaying the decision for action and lowering performance (Hambrick, Seung, & Chen, 1996).

**Limitations**

There are important limitations in this study that need to be addressed. First, the sample is drawn from large US corporations and the results may not be generalizable to smaller companies. Future research is needed to address diversity at executive board of directors and corporate officer levels and their impact on organizational performance for smaller companies. However, there are no apparent reasons why the results would differ for
smaller companies; it is possible that diversity may actually show larger effects on smaller organizations as individual efforts or more noticeable.

Second, the results imply that there is a causal relationship between diversity and organizational performance. However, one may argue that this relationship could be equally true when reversing the cause and effect relationship. In other words, it is impossible to know whether diversity actually does increase performance or that companies with high performance attract diverse candidates.

Third, given the research approach used in the present study it is impossible to determine whether the diverse members actually do significantly differ in their behavior compared to non-diverse members. The results only suggest that diversity is positively related to organizational performance. In order to understand behavioral differences other approaches such as participant observation and ethnography of executive boards of directors and corporate officers are needed.

Fourth, the regression analysis in this study suggests that there is a linear relationship between diversity and performance. This implies that a 100% diversity representation (theoretically possible but highly unlikely) on the executive board of directors and corporate officers would double or triple the return on assets (performance). However, it was impossible to determine how diversity will actually affect organizational performance as diversity representation increases due to the inherent range restriction in the representation of women and minorities in these companies. One may speculate that if more data were available the linear relationship between diversity and performance would probably change to a more curve linear relationship, that is, the benefits gained from diversity would increase with a decreasing rate, or flatten out as the number of women and minorities increases.
CONCLUSION

This research has both practical and empirical implications. The results implied that diversity is a competitive advantage at certain levels within organizations, which generates important implications for strategic human resource management, specifically for recruitment and hiring, organizational culture and the socialization of employees. Traditionally, diversity has been treated as a requirement enforced by the EEOC. The current study suggests that a diverse workforce, especially for executive board of directors and corporate officers may be a necessity rather than a requirement for organizational performance. Contrary to complying with the minimal EEOC standards of a balanced diverse workforce, it may be in the companies’ best interests to diversify the workforce in order to maintain a competitive edge.

Diversifying a company’s workforce does not only have an impact on recruiting and hiring but also matching these candidates’ unique assets with proper jobs (Adkins, Russell, & Werbel, 1994). Candidates with unique skills, knowledge and experiences must be aligned with jobs that calls for creativeness and innovation that are typically found in more heterogeneous groups.

However, matching diverse candidates with suitable jobs is only one important aspect, it is equally important to encourage different approaches in decision-making and problem solving that are not considered standard organizational practices via a supportive organizational culture where newcomers are socialized into using their unique individual assets. Chatman and Barsade (1995) suggest that organizational culture may moderate the effects of diversity especially in collectivistic organizational cultures where conflict may arise from group heterogeneity.
From an empirical perspective, the result in the current study sheds some light on the relationship between diversity and organizational performance but raises future research questions. First, the data in this study did not allow for assessing to what extent executive board and corporate officer diversity differentially impacts organizational performance. The results revealed that both are related. Further research is necessary to better understand their individual effects on performance. This is important because it may better indicate which of the two drives diversity in organization; whether it is from hiring board members from outside or promoting corporate officers from within the company?

Second, there is a need to develop a solid theoretical framework to better understand diversity and its advantages in the business arena. This study provides alternative suggestions as to the positive results between diversity and organizational performance. One argument that needs further attention in generating a theoretical model is whether women and minorities differ in terms of their contribution to their workgroups. There is a common argument that women and minorities have a disadvantage compared to their white counterpart. As such, women and minorities must outperform many of their white counterparts in order to become promoted, which would suggest that performance is generated from higher expectation and qualification standards. However, this explanation is only based on speculations and needs further empirical exploration.

Finally, it appears that the aging baby boomers together with the rapid increase of women and minorities in the labor market impact companies’ views of diversity and diversity training. The effects between diversity and performance found in the present study are relatively small but not trivial. There may be numerous alternatives to improve organizational performance that are more effective than investing in diversity. However,
companies may want to consider diversity as a social responsibility. Promoting diversity sends a message to the local community and stockholders that the company is taking a social responsibility in an attempt to reduce racial and ethnic barriers. This act of social responsibility may in itself be good strategic business by attracting qualified candidates and stockholders.

Nevertheless, the issue of social responsibility may not convince companies to invest in diversity given its associated training costs. However, given the positive relationship between diversity and organizational performance the associated training costs may actually be paid for by the increase in organizational performance that follows. In other words, if the cost for diversifying the workforce is paid for by its related increase in performance, are there any other reason why diversification of the workforce should not be pursued?
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