

Diversity in social context: a multi-attribute, multilevel analysis of team diversity and sales performance

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Summary

Prior research on demographic diversity in work teams has yielded mixed results, with the effects of team diversity ranging from positive to neutral to negative. This article shows that an improved understanding of the relationship between team diversity and team performance can be reached by considering the combined effects of team diversity and demographic social context. We hypothesized that three aspects of the social context would moderate the effects of demographic diversity on performance: the combination of diversity dimensions within a team, the demographic characteristics of the team manager, and the demography of the work unit. In a study of 365 sales teams distributed across 42 sales districts in a large U.S. company, we found support for the general proposition that the demographic social context moderates relationships between team diversity and team performance. We discuss the practical implications of these results as well as the research implications for future studies of team diversity. Copyright © 2004 John Wiley & Sons, Ltd.

Introduction

Workforce diversity is acknowledged as a challenging reality in most U.S. organizations today, and increasingly it is recognized as a significant management challenge in other countries as well (Mangaliso & Nkomo, 2001). For legal, social, and economic reasons, effectively managing a diverse workforce is one of the organizational capabilities required for organizations that seek to gain a sustainable competitive advantage. Yet, while some executives extol the virtues of a diverse workforce, there is much evidence to suggest that employers are struggling in their attempts to leverage workforce diversity and achieve positive outcomes (Kochan et al., 2003).

The difficulties that organizations encounter as they attempt to effectively manage their increasingly diverse workforces is suggested by the investments employers make in organizational change and development initiatives intended to improve the morale, commitment, and productivity of their diverse workforces. Based on a recent survey of *Fortune 1000* companies, the Society for Human Resource

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Management estimated that 95 per cent of large U.S. companies have implemented diversity initiatives to address racial and gender diversity (Grensing-Pophal, 2002). Despite these efforts, as the workforce has become increasingly diverse, employees' complaints and legal claims alleging unfair discrimination and harassment at work have steadily increased. The total social and economic costs of poorly managed workforce diversity are difficult to estimate. Nevertheless, it appears that the trend within the United States is that these costs are accelerating at a rapid pace. Monetary awards won by the Equal Employment Opportunity Commission are one indicator of the costs associated with poorly managed workforce diversity. In the year 2000, the total value of such awards was approximately \$300 million, which represented a threefold increase from a decade earlier. When complaints of unfair treatment go to trial and the evidence becomes public, it often becomes apparent that many profitable and otherwise effective organizations struggle with creating work environments that allow employers to reap the potential benefits of workforce diversity.

Like employers, management; researchers have struggled during the past two decades to improve their understanding of how workforce diversity influences organizations, work teams, and individual employees. Numerous empirical studies seem to confirm what employers already know: namely, that the potential benefits of workforce diversity do not accrue automatically. Some studies have found that various forms of diversity are associated with greater innovation, improved strategic decision-making, and organizational performance. Other research shows that various types of team and organizational diversity sometimes increase conflict, reduce social cohesion, and increase turnover (for comprehensive reviews, see Jackson, Joshi, & Erhardt, 2003; Milliken & Martins, 1996; Webber & Donahue, 2001; Williams & O'Reilly, 1998). Apparently, hiring a diverse workforce does not guarantee organizational effectiveness.

Observers and critics of research relating diversity to team and organizational outcomes have suggested various reasons for the inconsistent and seemingly contradictory findings. One category of explanations for inconsistent findings emphasizes methodological issues, such as the statistical indicators used to assess diversity (e.g., Bedeian & Mossholder, 2000). While statistical issues are worthy of continued discussion, it is not clear that differences in statistical approaches account for the finding that diversity has been associated with both positive and negative outcomes. Another issue raised by some observers is that researchers often measure only demographic diversity and fail to assess individual differences in the personal identities, personality, skills, and cognitions of team members. Some theorists assume that such individual differences are the key explanatory constructs for relationships that might be found between demographic diversity and team outcomes. Such criticisms may have some merit, but they are less relevant to the extent that diversity's consequences can be explained by inter-group relations that play out at higher levels of analysis within organizations and society. For example, it is well known that in-group and out-group biases occur even when group labels are essentially meaningless (e.g., the 'blues' and 'greens' or the 'Xs' and 'Os') and membership in an identity group is determined by random assignment (Brewer, 1979).

In their continuing attempts to understand the complex pattern of findings regarding how diversity influences organizations, some researchers have begun to examine the embedding context. In this line of research, organizational contexts are viewed as possible moderating influences that partially determine whether diversity is likely to be associated with positive or negative consequences. For example, in a study of financial services firms, Richard (2000) found that the racial diversity of workforces was associated with higher productivity in firms pursuing a growth strategy but it was associated with lower productivity in firms pursuing a downsizing strategy. For teams, the nature of the task moderates the effects of diversity on performance; diversity is often beneficial for tasks that require creative problem solving but it can interfere with performance on routine tasks (Jackson, 1992; see also Pelled, Eisenhardt, & Xin, 1999). Other contextual factors that may moderate the effects of diversity include the organizational culture (Brickson, 2000; Ely & Thomas, 2001; Cox, 1993), team decision-making

and conflict management approaches (Simons, Pelled, & Smith, 1999; Bottger & Yetton, 1988), and the demographic structure of work units (Joshi, 2004). As this list of examples suggests, many contextual factors seem to influence the dynamics of diversity within organizations.

The present study was designed to contribute to the growing body of contextualized diversity research by examining whether the effects of team diversity are shaped by the demographic context within which teams function. Treating work teams as the focal unit of analysis, we examined two aspects of the embedding social context: the demographic characteristics of team managers and demography of larger business units. Simply put, we hypothesized that the consequences of team demographic diversity depend, in part, on the social environment within which teams carry out their work.

A guiding framework for the research

Our research was conducted in conjunction with the Diversity Research Network (DRN), which is a consortium of researchers who adopted a common framework for investigating the effects of team diversity in several large U.S. companies (see Kochan et al., 2003, for details). In developing a common framework, the objective was to conduct research grounded in a shared mental map that reflected the current state of our knowledge. Following the integrative models proposed by others (see Jackson, May, & Whitney, 1995; Williams & O'Reilly, 1998), this guiding framework proposed that group diversity influences group processes, which in turn influence group performance. The DRN's framework recognized that many dimensions of diversity might be investigated (e.g., gender, ethnicity, tenure, age, and educational diversity) and that not all dimensions of diversity were likely to have the same consequences. In addition, the framework recognized that 'diversity' varies across teams, organizational divisions, work place establishments, and entire organizations. Finally, regardless of the focal unit, the framework asserted that many aspects of the broader context would likely shape the effects of diversity.

The guiding framework used by the DRN consortium researchers did not specify directional hypotheses, nor did it impose a particular theoretical perspective. Instead, it provided a broad outline of the constructs that researchers would consider when conducting their projects in the participating companies. Research projects within a particular company were then designed to address the interests of the company sponsors and the questions of interest to the researchers, while taking into account available resources. In the following paragraphs, we describe these considerations. We begin with a brief description of the company's interests and the available resources, because these necessarily influenced the research questions that we could investigate. After describing the research context, we then develop our theoretical propositions.

Organizational Context

The Host Company

This project was conducted in the U.S. division of a *Fortune* 500 company, which we refer to as Company ABC. During the past three decades, Company ABC had promoted the value of workforce diversity and proactively sought to increase the representation of women and people of color within their U.S. workforce. They were among the first companies to support the formation of

caucuses and affinity groups for employees with shared backgrounds and concerns. The company's initial efforts began in response to the concerns of African American employees (mostly male at the time) in the 1960s. Diversity initiatives were expanded to include women in the 1970s. Like many other U.S. companies, Company ABC subsequently broadened their definition of diversity to be fully inclusive by the 1990s.

The decision to participate in this research project was made by Company ABC's CEO, who believed that the company could benefit from an improved understanding of how diversity influences relationships among employees and company performance. The CEO and other company executives hoped to determine how similar their company's experiences were to the experiences of other companies. In general, the rhetoric within Company ABC strongly endorsed the view that the diversity of the company's workforce was a valuable asset that contributed to the organization's effectiveness. However, the company had no empirical evidence to support this view. Participation in this study represented an opportunity to generate empirical evidence to support the existing rhetoric.

Company Resources and Constraints

Company ABC provided access to archival data, but did not permit us to collect new data. The available archival data covered two major divisions of the company's U.S. operations—sales and service—which were organized and managed to obtain their distinct objectives. Employees in these divisions functioned quite independently of each other, and the jobs were structured quite differently in the two divisions. In this article, we report analyses conducted for the sales division only. In doing so, we are intentionally controlling for many aspects of the task and administrative environments that may have influenced how diversity affected works teams in this organization.

Diversity Measures

When assessing diversity, we focused on the attributes of gender, ethnicity, and organizational tenure. The decision to focus on these attributes was determined partly by the availability of demographic information contained in the company's personnel records, and partly by theoretical considerations. Regarding availability, company records were quite complete for these demographic attributes, which was to be expected given legal regulations and the company's interest in ensuring fair representation of women and minorities. Information about educational background was also available for some employees, but large amounts of missing data meant that we could not adequately investigate this attribute. Age data were available too, but age and tenure were so strongly correlated in this organization that their effects were not easily disentangled. Exploratory analyses indicated that tenure was the more useful explanatory attribute in this organization, so we focus on tenure and not age when stating our hypotheses.

Performance Measures

The performance of individual sales employees was assessed based on a comparison of actual sales to established sales goals. The sales goals set for individuals were carefully calculated to take into account the sales task, including which products were being sold (e.g., type of equipment or service), characteristics of the sales territory (e.g., geographic scope and density), and characteristics of client accounts (e.g., size). The company's method of measuring performance permitted it to directly compare the performance of individuals and teams, despite the fact that they were selling different products in different locations. As is typical for sales employees, a sales person's compensation reflected his or her performance against a preset quarterly goal. The compensation received by managers, in turn, reflected the performance of their sales teams.

Organizational Conditions that Might Shape Diversity Dynamics

Some aspects of the company context were consistent with predicting a positive relationship between team diversity and performance, while others were consistent with predicting a negative relationship. Company-wide conditions that were consistent with observing a positive relationship between team diversity and team performance included a supportive organizational culture and workforce stability. Company-wide conditions that may have detracted from the ability of teams to leverage their diversity included weak interdependence among team members and possibly some negative attitudes about the firm's proactive efforts to manage diversity.

Organizational Culture

According to Ely and Thomas (2001), diversity is more likely to yield positive outcomes when the organizational culture views diversity as an opportunity for 'learning and integration'. In Company ABC, the business strategy clearly emphasized continuous improvement of products and services. Team structures were used to encourage employees to share their knowledge and perspectives to solve daily problems and thereby improve their performance. Presentations by company representatives asserted that the diversity of the workforce provided opportunities for employees to engage in better problem solving and develop better relationships with the company's customers. Thus, the organizational culture appeared to be quite positive and supportive of diversity. Furthermore, during the several years prior to this study, the company had provided extensive diversity training as well as training in teamwork and diversity management. Compared to many other companies, these employees should have been relatively well prepared to take advantage of the diversity in their teams.

Workforce Stability

Another feature of this organization was the relative stability of the workforce. Prior research has shown that team diversity is particularly troublesome for newly formed teams, but as teams work together over a period of time the benefits of diversity may eventually emerge (Harrison, Price, & Bell, 1998; Watson, Kumar, & Michaelson, 1993). Although it was not possible for us to assess the length of time that specific employees had worked together as a designated team, the average organizational tenure of sales employees was more than 10 years. Overall, employees were probably quite familiar with each other even if they did not work together on the same team.

Task Structure

While many aspects of Company ABC provided a favorable situation for diverse teams, some conditions may have created a situation in which diversity was likely to be disruptive. For the sales teams we studied, the presence of shared team objectives was questionable. When members of a team share a common objective, they are more likely to be motivated to learn how to leverage their diversity in order to achieve their common objective. Alternatively, if team members view each other as competitors, their diversity may contribute to the feelings of conflict that are created by the competitive situation (cf. Wageman, 2001; Williams & O'Reilly, 1998). At Company ABC, the managers of sales teams were rewarded based on the team's performance. From the perspective of managers, team members shared the common objective of increasing total sales. However, team members were rewarded according to individual performance. Although the structure of the reward system did not demand competition among team members, it also did not explicitly reward them for working cooperatively.

Proactive Affirmative Action Efforts

For the past two decades, all units within Company ABC were required to meet annual targets for the representation of majority and minority males and females. These annual targets were set based on data about the company's internal labor pools and U.S. Census information.

The company's proactive efforts to ensure a demographically balanced workforce may have created conditions that increased the disruptive consequences of diversity. By proactively promoting the development of a diverse workforce, Company ABC may have inadvertently led employees to view members of other demographic groups as competitors for job placements and promotions (cf. Blalock, 1967).

To summarize, our subjective assessment of Company ABC indicated the presence of both facilitating and debilitating conditions for diversity. There was no clear *a priori* basis for predicting whether diverse teams would outperform or underperform homogeneous teams in Company ABC.

Development of Hypotheses

Figure 1 is a graphic depiction of the constructs we assessed and the relationships we studied. At the most general level, we hypothesized that the effects of demographic diversity on performance would

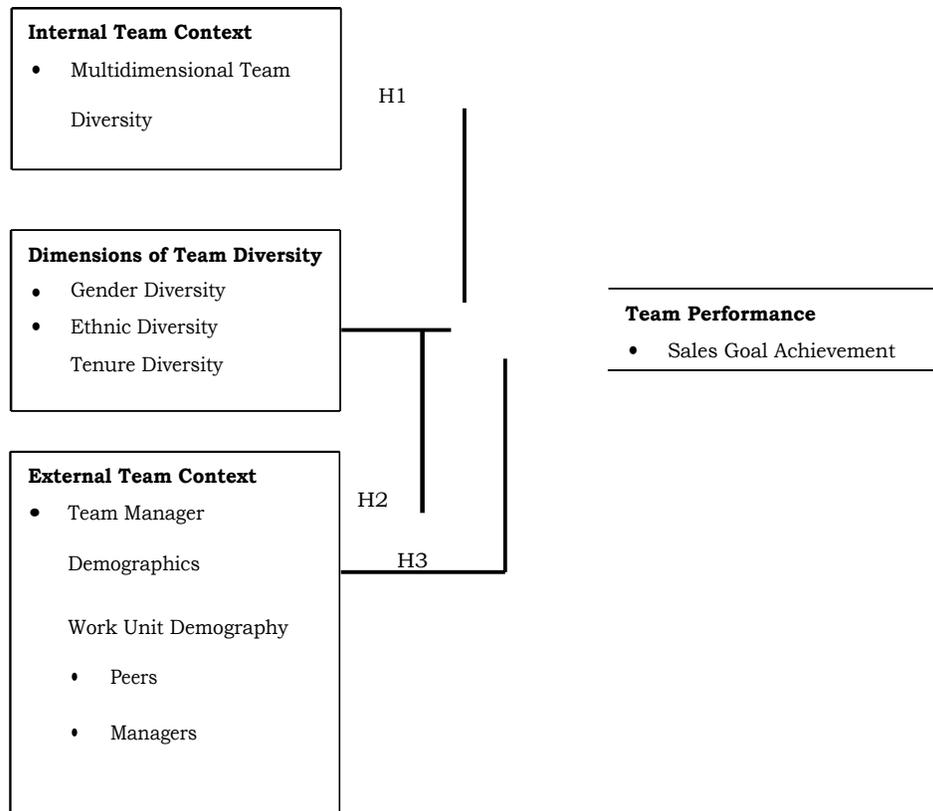


Figure 1. Illustration of conceptual relationships investigated in this study

be moderated by three aspects of the social context: the combination of diversity dimensions within a team (Hypothesis 1), the demographic characteristics of the team manager (Hypothesis 2), and the demography of the work unit (Hypothesis 3).

Studies of the relationship between team demographic diversity and team performance—whether conducted as laboratory experiments or field studies—report mixed findings. Whereas some researchers have found that demographic diversity is associated with improved team performance, others have found that it interferes with team performance. It appears that diversity has potential costs as well as potential benefits for teams.

The potential benefits of diversity

For tasks that require problem solving, team diversity may provide cognitive resources and social capital that enhance performance (Filley, House, & Kerr, 1976; Hoffman, 1979; Joshi & Jackson, 2003; Ibarra & Smith-Lovin, 1997; Shaw, 1981). The dimensions of demographic diversity that have been associated with improved team performance include gender (Rentsch & Klimoski, 2001), ethnicity (Watson et al., 1993), age (Kilduff, Angelmar, & Mehra, 2000), occupational background (e.g., Barsade, Ward, Turner, & Sonnenfeld, 2000; Bantel & Jackson, 1989; Carpenter, 2002), and education (Smith et al., 1994).

Diversity may contribute to improved performance for several reasons. During the environmental scanning that occurs in the earliest phase of problem solving, people with diverse perspectives may generate a more comprehensive view of the problem. For example, gender and ethnic diversity within a sales team may increase the team's ability to understand the perspectives of a broad variety of clients. Tenure diversity may ensure that the team understands both the internal environment (viewed through the eyes of long-tenured members) and the competition (viewed through the eyes of shorter-tenured members). The presence of diverse perspectives may also improve the team's ability to consider alternative interpretations and generate creative solutions that integrate diverse perspectives. As alternative courses of action and solutions are considered, diverse perspectives may increase the team's ability to foresee their many possible costs and benefits. Finally, diversity may enhance a team's network of external contacts. Due to their broad network of external contacts, diverse teams may be better able to access valuable expertise and exercise greater influence (e.g., see Ancona & Caldwell, 1998; Burt, 1982; Hambrick, Cho, & Chen, 1996; Jackson, 1992; McLeod, Lobel, & Cox, 1996).

The potential costs of diversity

Although demographically diverse teams may have more performance potential than homogeneous teams, often they experience performance deficits nevertheless. Diversity seems to be particularly disruptive for the performance of teams striving to achieve efficiency (Hom, Manz, & Millikin, 1998; Jackson, 1992), but diversity can interfere with performance of many other types of tasks also. A study of manufacturing teams found that ethnic diversity was negatively related to both productivity and customer service ratings (Kirkman, Tesluk, & Rosen, 2000). In a study of sports teams, Timmerman (2000) found that age diversity was unrelated to performance when the task required little interdependence (baseball) and negatively related to performance when the task required more interdependence (basketball).

Demographic diversity apparently triggers a variety of interpersonal processes that can interfere with performance. Members of diverse teams may be less friendly toward each other and experience more conflict (e.g., Alagna, Reddy, & Collins, 1982; Harrison et al., 1998; Jehn, Northcraft, & Neale,

1999; Pelled et al., 1999). Demographic diversity also may increase the salience of social identities based on demographic characteristics. When social identities become salient, team members show favoritism toward similar others and discriminate against those who are dissimilar (Tajfel, 1978; Ashforth & Mael, 1989). Social categorization also triggers stereotypes, which may lead to behaviors that do not accurately reflect the resources that individuals bring to the team (cf. Lindeman & Sundvik, 1993).

Context as a moderator of diversity effects

Both theoretical arguments and empirical findings reveal that the specific effects of team diversity are difficult to predict. Numerous contextual conditions seem to moderate the relationship between diversity and performance.

Context is a multilevel construct that encompasses innumerable specific elements. The sales teams we studied all shared elements of the company-wide context, such as its business strategy and numerous corporate policies and practices that governed how human resources were managed. Other elements of context are more local, and vary from one team to the next. Regardless of whether company-wide conditions are favorable or unfavorable for diverse teams, local conditions represent another level of context that may account for diversity's effects in work teams. At the most local level-i.e., at the level of teams-we considered the configuration of team diversity (Hypothesis 1) and the demographic characteristics of team managers (Hypothesis 2). We also considered the potential moderating effects of more distant local conditions, namely the demography of sales districts (Hypothesis 3).

Multidimensional diversity

To this point, when presenting our arguments regarding the potential consequences of diversity, we have used the term 'diversity' as a general term and have not developed separate arguments for the many social attributes that might be relevant (e.g., race/ethnicity, gender, tenure, and so on). The arguments presented above assumed that the same theoretical arguments hold for each social dimension. Furthermore, they implied that the effects of each type of diversity-ethnicity, gender, and tenure-were independent of the presence of other types of diversity. That is, they assumed an additive model of the effects of diversity. In an additive model, the effects of each dimension of diversity are assessed independently of other dimensions of diversity. An alternative view, which we develop here, considers the multiple dimensions of diversity present within teams as elements of the immediate team context that may moderate the effects of any particular type of diversity.

For individuals, it is well known that race and gender jointly influence the returns employees receive on their human capital investments (Smith & Elliott, 2002; Friedman & Krackhardt, 1997): white males gain the maximum returns on investment in human capital in comparison to white females or black males. Other studies have shown that the experiences of black women differ in a number of ways from those of other white women (e.g., Bell & Nkomo, 2001; Frable, 1997). The potential value of considering the joint effects of multiple dimensions of team diversity is widely recognized (e.g., see Lau & Mumighan, 1998; Joshi & Jackson, 2003; Webber & Donahue, 2001). Furthermore, many studies measure multiple dimensions of diversity. Nevertheless, a review of recent studies found that only about 5 per cent of recent studies of diversity addressed the question of whether the effect of a particular dimension of diversity depends on the presence or absence of other dimensions of diversity (Jackson et al., 2003). The need for large samples, an abundance of technical problems associated with data analysis and interpretation, and lack of consensus about how to measure and test for multidimensional effects are all likely reasons for the dearth of empirical evidence.

Conclusions drawn from studies that considered only the additive effects of diversity may lead to inaccurate conclusions about how diversity influences team processes and team performance if the effects of diversity depend on the particular combinations or configurations of diversity in a team. For example, Jehn et al. (1999) showed that social category (gender and age) diversity moderates the relationship between informational (education, function, and position in the firm) diversity and performance. Informational diversity was associated with better performance but only if social category diversity was low. Pelled et al. (1999) found that the consequences of diversity for team conflict were best understood by taking into account interactive effects for specific dimensions of diversity.

Following this line of reasoning, we predicted that the interaction of three dimensions of diversity would explain additional variance in team performance, above and beyond any additive effects of the three dimensions of diversity we assessed (gender, ethnicity, and tenure). We recognized such an interaction could take many possible forms, but did not attempt to specify in advance the most likely form of the interaction. If diversity is an asset that motivates team-mates to cooperate more and leverage their external contacts to improve their performance, then positive interaction effects should be found. If diversity is generally disruptive, then negative interaction effects should be found. Arguments for finding other patterns also could be marshaled. Rather than take a position regarding the most likely pattern for the three-way interactions, we stated our expectations as simply as possible. Thus:

Hypothesis 1: Team performance will be partially explained by the interaction between team ethnic diversity, team gender diversity, and team tenure diversity.

Demographic characteristics of team managers

Responsibility for implementing organizational policies designed to ensure the effective management of diverse work teams ultimately lies with the managers who coordinate the efforts of team members in the pursuit of organizational goals. For manager-subordinate (vertical) dyads, some effects of demographic dissimilarity have been widely studied. For example, several studies have found that managers tend to favor same-gender subordinates (e.g., Duchon, Green, & Taber, 1986; Larwood & Blackmore, 1978; Tsui & O'Reilly, 1989). Demographic dissimilarity in vertical dyads has been associated with lower perceived performance, lower levels of attraction from the supervisor, and greater role conflict and ambiguity (Tsui & O'Reilly, 1989).

Simple biases and preferences for similarity may explain some observed effects of manager dissimilarity, but other dynamics may also be operating. Some types of dissimilarity—such as age, tenure, and education differences—are considered legitimate and may have no negative consequences. Other differences may be viewed as less legitimate and may be particularly troublesome. For example, a recently hired minority female may find it particularly difficult to manage a team dominated by majority men with longer tenure because the men may not view the situation as legitimate (see Tsui, Yin, & Egan, 1995; Kirchmeyer, 1995). Even when female managers supervise other women, their legitimacy may be questioned if they do not also have other attributes that subordinates expect of managers (e.g., see Liden, 1985).

Overall, past research indicates that the demographic attributes of managers are important aspects of the demographic context in which teams operate. Whereas numerous studies have investigated the effects of demographic dissimilarity in vertical dyads, very few studies have investigated the effects of the confluence of manager attributes and team diversity. Team diversity may create additional complications for managers. We examine this issue in the present study, specifically:

Hypothesis 2: Team performance will be partially explained by the interactions between team diversity and the demographic characteristics of team managers.

Sales district demography

Another theoretically interesting aspect of context that has received little attention as a potential moderator of team diversity effects is the demographic environment. As a work team strives to achieve its goals, it functions within a social environment that includes many other people working in a variety of jobs. Just as a particular work team can be characterized as relatively diverse or homogeneous, so too can the surrounding social environment be relatively diverse or homogeneous. Differences in the demography of sales districts might reflect differences in regional population demographics, past economic fluctuations and hiring patterns, managerial effectiveness in meeting staffing goals, and so forth. Regardless of the reasons that give rise to variations in the demography of work units, the social contexts within which teams are embedded may shape the daily experiences of team members (Joshi, 2004).

Existing theories present opposing views of how the demography of the larger social context is likely to affect teams. On the one hand, some theoretical arguments suggest that diverse teams should be more likely to enjoy performance gains when their broader social context also is diverse. Other theoretical arguments suggest that diverse teams are more likely to suffer performance losses when the social context is diverse.

Many arguments can be constructed to support the prediction that diverse sales teams operating within diverse (versus homogeneous) sales districts should be more likely to experience performance gains. Research on the dynamics of social networks suggests that diverse teams will be more able to leverage their diversity for performance gains when they operate within a relatively heterogeneous social context. Within organizations, communication partners tend to be demographically similar (Brass, 1984; Hoffman, 1985; Lincoln & Miller, 1979; Mehra, Kilduff, & Brass, 1998; Morrison & Von Glinow, 1990). Furthermore, studies of the external communication patterns between team members show that team members tend to form external relationships with others who share similar demographic characteristics (Zenger & Lawrence, 1989). Logically, it follows that diverse teams will find it easier to develop a useful network of external relationships when their larger work unit also is diverse (cf. Joshi, 2004).

The logic of distinctiveness theory also supports the argument that a diverse social context is beneficial for diverse teams. Distinctiveness theory is an extension of social identity theory. Social identity theory asserts that process losses occur when demographic attributes become salient (e.g., see Brewer, 1991; McGuire, McGuire, Child, & Fujioka, 1986), and distinctiveness theory asserts that demographic attributes are more likely to become salient when they are distinctive within the immediate context. For members of, diverse teams, the salience of social identities is likely to be weaker when diversity within a team is experienced against a social context of, relative heterogeneity. Thus, the potential negative consequences of diversity should be reduced when the surrounding work unit is more diverse.

The opposite prediction is also reasonable and can be logically supported. That is, it may, be that diverse teams operating in diverse sales districts are more likely to experience performance losses, compared to diverse teams operating in homogeneous sales districts. Theories of inter-group competition emphasize the implications that increasing levels of diversity have for the power and status enjoyed by members of majority groups. As the minority group increases in size, members of the majority group are more likely to view them as competitors for scarce organizational resources (Blalock, 1967). Early research in an era of desegregation found that racial conflict increased as the relative proportions of blacks in predominantly white communities increased (Blalock, 1967; Reed, 1972). Likewise, as organizations began to dismantle their white-male dominated power structures, the problem of backlash was widely recognized (e.g., see Alderfer, 1992). More recently, a study of gender-based conflict within departments of a university showed that gender-based conflict increased as the proportion of female faculty members increased (Tolbert, Andrews, & Simons, 1995). Other

research shows that members of majority groups as well as some minority group members react negatively to 'affirmative action' hiring decisions that are influenced by a person's demographic group membership (e.g., Heilman, McCullough, & Gilbert, 1996).

If increasing diversity creates conflict between members of demographic groups, it is possible that such conflict would be exacerbated by the combination of team diversity and work unit diversity. Majority members of diverse teams operating in relatively homogeneous sales (compared to majority members operating in more diverse units districts) may be less likely to feel that their power base in the larger organization is threatened. Because majority members feel more secure, diverse teams in homogeneous districts may be better able to take advantage of their diversity.

To summarize, multiple theoretical arguments lead to the prediction that the effects of team diversity depend on the diversity present within the team's broader social context. In Company ABC, diversity of sales districts may exacerbate any performance losses experienced by diverse sales teams, *or* diversity of sales districts may augment the performance gains realized by diverse sales teams. Thus, we made a non-directional hypothesis regarding the cross-level effects of diversity:

Hypothesis 3: The degree of diversity present in sales districts will moderate the effects of team diversity on team performance.

Method

Research setting

Company ABC was a *Fortune* 500 company that manufactured, leased, and serviced office equipment. Of the company's entire U.S. workforce, 32 per cent were women, 14 per cent were African Americans, 7 per cent were Hispanic Americans, while Asian Americans and other ethnic groups totaled 5 per cent. (For a more complete description of the research setting, see the preceding description of Organizational Context.)

We tested our hypotheses using data from the sales division of the company. Sales teams were organized into districts for administrative purposes. Sales personnel sold equipment and supplies to customers and negotiated financing agreements with customers. All team members reported to the same manager, who coordinated their activities within a sales territory. The performance of sales personnel was evaluated against goals that were set for each individual and monthly bonuses were based on individual performance.

Descriptions of the participants

Table I summarizes the gender and ethnic characteristics of the individual participants. As would be expected in an organization that used staffing goals in order to create a balanced workforce, the ethnic distribution was the same statistically ($p > 0.10$) for males and females for both the sales personnel ($N = 2333$) and sales managers ($M = 309$).

On average, sales personnel had worked in the organization for 9.52 years, while sales managers had worked in the organization for 16.83 years. A two-way analysis in which tenure was treated as the

Table 1. Gender and ethnicity of individual sales personnel and sales managers (percentage of total sample in each demographic category)

	% Male	% Female	Overall %
Sales personnel (n = 2333)			
White	49.5	26.3	73.8
Black	7.6	4.9	12.6
Hispanic	5.3	2.7	7.8
Asian	1.9	1.5	3.4
Native American	0.2	0.9	0.3
Overall %	64.4	35.6	100.0
Sales Managers (n = 309)			
White	54.0	25.6	79.6
Black	7.4	7.1	14.6
Hispanic	2.9	1.6	4.5
Asian	0.3	0.6	1.0
Native American	0.3	0.0	0.3
Overall %	65.0	35.0	100

Table 2. Average organizational tenure for gender and ethnic groups

	Mean (years)	
	Sales personnel (n = 2333)	Managers (n = 309)
White		
Men	9.9	16.8
Women	9.3	16.5
Total	9.7	16.7
Black		
Men	10.7	19.9
Women	10.0	17.3
Total	10.4	18.6
Hispanic		
Men	7.6	11.9
Women	6.1	15.4
Total	7.1	13.1
Asian		
Men	7.5	15.0
Women	9.2	19.5
Total	8.3	18.0
Native American		
Men	9.8	26.0
Women	10.8	N/A
Total	10.0	26.0

dependent variable revealed that for sales personnel only, tenure differed as a function of ethnicity, $F(4,2323) = 4.73$, $p < 0.001$, but not gender. As shown in Table 2, average organizational tenure was longest for African American sales personnel ($M = 10.43$ years) and shortest for Hispanic American sales personnel ($M = 7.11$ years). For sales managers, neither gender nor ethnicity was associated with tenure.

Sales teams

Sales teams were defined as having three or more members who reported to the same manager (average team size = 5.77). We excluded teams if we did not have complete data for at least 75 per cent of the team members. In addition, we excluded teams if we did not have complete data available for the team manager. After selecting for these criteria, we retained approximately two-thirds of the company's total sales force ($N = 395$ teams).

Sales districts: peers and managers

Sales teams were organized into 46 sales districts, four of which were excluded due to missing data. The average number of teams within districts was 9.2. Districts included managers as well as other personnel with duties that were unrelated to sales. They also included higher-level sales managers. However, we did not have access to data about those other employees. Therefore, district-level measures of diversity reflect the diversity of sales personnel and sales team managers only. In order to determine whether the effects of district level diversity varied for these two subgroups, we computed separate measures of peer diversity and managerial diversity.

Measures

All measures were created using data obtained from the company's archival records. The timing of these measurements was approximately contemporaneous, yielding a design that was essentially cross-sectional.

Demographic characteristics of individuals and single-attribute diversity measures

The demographic characteristics of sales personnel and their managers were assessed using information contained in the company's personnel records. These records included nearly complete documentation about when employees were initially hired, and this was used to calculate each individual's length of organizational tenure. Personnel records also were used to assess the gender (0 = male; 1 = female) and ethnicity (white = 1, African American = 2, Hispanic American = 3, Asian American = 4, Native American = 5) of individual sales personnel.

For the categorical variables of gender and ethnicity, we created gender diversity and ethnic diversity scores using Blau's index of heterogeneity, which is defined as:

$$(1 - \sum p_i^2)$$

where p is the proportion of group members in a category, and i is the number of different categories in the group. For the continuous variable of tenure, the coefficient of variation was used as a measure of tenure diversity. All of these measures were computed separately for teams and districts. In addition, for districts, separate diversity scores were computed for peers and managers. At the district level, diversity scores for managers as well as diversity scores for peers were calculated using the individual data of employees within each district.

Performance

The company's approach to measuring sales performance had evolved over many years. Decades earlier, the company recognized the importance of controlling for features of sales jobs and territories when measuring performance. In order for employees to feel they were being treated fairly, the company needed to ensure that sales performance and compensation were determined primarily by ability and effort and not uncontrollable market forces, the territory to which they were assigned, or the nature

of the equipment they sold. To address this concern, the company took such factors into account when setting sales goals and then used *performance against goals* as the basis for bonus payments. We call this objective measure of performance *sales goal achievement*.

Sales goal achievement is a percentage value that reflects actual revenue generated compared to the individual's revenue target. A score higher than 100 percent indicates that the sales representative exceeded his or her target, and a score lower than 100 percent indicates that the sales representative failed to achieve the target. To create a team-level performance measure, we averaged the sales goal achievement scores for members of a team. The ICC for aggregating individual sales goal achievement to the level of teams was 0.24. By comparison, the ICC for aggregating individual responses to the level of districts was 0.13.

Control variables

Team size was included as a control variable in most analyses in order to reduce the probability of attributing size-related phenomena to the effects of diversity. Prior research has found that work group size and organization size are associated with work attitudes and related outcomes, such as turnover (Berger & Cummings, 1979). Also, for statistical reasons, heterogeneity measures are correlated with team size when teams are relatively small (e.g., see Bedeian & Mossholder, 2000). Controlling for size reduces the consequences of this measurement artifact. The average tenure of employees was also included as a control variable. Like size, prior research has found that organizational tenure is correlated with work attitudes and performance (Berger & Cummings, 1979), and these effects need to be taken into account when examining the effects of diversity.

Finally, we should note that age data were available for all employees. Conceptually, it is clear that different hypotheses could be developed regarding the potential effects of age and tenure, as well as age diversity and tenure diversity. In addition, it is reasonable to assert that our analysis should control for age when assessing tenure effects. For this study, we did not test separate hypotheses regarding the effects of age or age diversity, nor did we include age as a control variable in our analyses. The reason for these decisions was that correlated age- and tenure-based measures at each level of analysis (individual, team, and district) created problems of multicollinearity, which made it **difficult** to separately estimate the effects of age and tenure or age diversity and tenure diversity. At the individual level, the correlation between age and tenure was 0.67 for peers; and 0.80 for managers. At the team level, the correlation between average team age and average team tenure was 0.77 and the correlation between team age diversity and team tenure diversity was 0.39. At the district level, the correlation between district age diversity and district tenure diversity was 0.75 for peers and 0.69 for managers.

Results

Descriptive statistics

Means, standard deviations, and correlation coefficients for sales teams are shown in Table 3. Table 4 presents the corresponding information for sales districts. These tables reveal several noteworthy relationships among the predictor variables.

For teams (Table 3), it is interesting to note that average tenure of the team is negatively related to the degree of tenure diversity ($r = -0.390, p < 0.01$) and it is positively related to the manager's tenure ($r = 0.232, p < 0.01$). Teams of more recently hired sales people tend to be more diverse and they report to managers who have less organizational experience. Table 3 also shows significant associations

Table 3. Means, standard deviations and correlation coefficients for team-level variables

	Mean	SD	1	2	3	4	5	6	7	8
1 Team size	5.773	2.985								
2 Average team organizational tenure	9.595	5.484	0.029							
3 Team gender diversity	0.331	0.182	0.227	-0.110						
4 Team ethnic diversity	0.277	0.233	0.161	0.041	0.118					
5 Team organizational tenure diversity	0.847	0.358	0.080	-0.390	0.098	0.039				
6 Manager's gender (0= male; 1= female)	0.330	0.471	0.077	0.054	0.097	0.133	-0.022			
7 Manager's ethnicity (0 = non-white, 1 =white)	0.782	0.413	0.080	-0.064	-0.090	-0.161	-0.007	-0.121		
8 Manager's organizational tenure	6.538	7.268	0.098	0.232	0.006	-0.009	-0.178	-0.043	-0.020	
9 Sales goals achieved	103.639	51.314	-0.004	0.191	-0.091	-0.013	-0.031	0.080	0.021	0.002

Listwise $n = 395$; values greater than or equal to 0.1 are significant at $p < 0.05$ level (2-tailed).

Table 4. Means, standard deviations and correlation coefficients for district-level variables

	Mean	SD	1	2	3	4	5	6	7	8	9
1 Regional size	93.500	45.021									
2 Average peer tenure	11.803	5.232	-0.298								
3 Average manager tenure	17.771	5.204	-0.069	0.683							
4 Peer gender diversity	0.438	0.074	0.163	-0.566	-0.439						
5 Peer ethnic diversity	0.368	0.126	-0.052	-0.134	-0.098	0.368					
6 Peer tenure diversity	0.825	0.276	0.115	-0.880	-0.737	0.447	0.170				
7 Manager gender diversity	0.337	0.184	0.226	-0.315	-0.231	0.355	0.398	0.247			
8 Manager ethnic diversity	0.273	0.222	-0.080	0.071	-0.121	0.228	0.578	-0.039	0.117		
9 Manager tenure diversity	0.384	0.143	0.154	-0.546	-0.444	0.431	0.091	0.522	0.123	-0.101	
10 District goal achievement	102.205	16.812	-0.147	0.225	0.424	-0.210	-0.089	-0.446	-0.157	-0.053	-0.151

Listwise $N=43$: Values greater than or equal to 0.31 are significant at the $p < 0.05$ level (2-tailed).

between the ethnic diversity within teams and the personal attributes of team managers. More ethnically diverse teams are more likely to have managers who are female ($r=0.133$, $p < 0.05$) and non-white ($r=-0.161$, $p < 0.05$).

For districts (Table 4), the relationships among variables are of substantially greater magnitude. In general, there is a positive relationship between indicators of peer and managerial diversity. That is, districts with higher gender, ethnic and tenure diversity among salespeople also have higher gender, ethnic, and tenure diversity among managers ($r_s = 0.355$, 0.578 , and 0.522 , respectively, all $p_s < 0.05$). In addition, for both sales people and managers, multiple dimensions of diversity are negatively associated with average organizational tenure. For example, districts with sales people with longer average

tenure have significantly less ($p < 0.05$) peer gender diversity ($r = -0.566$), peer tenure diversity ($r = -0.880$), managerial gender diversity ($r = -0.315$), and managerial tenure diversity ($r = -0.546$). A similar pattern of relationships is shown for managerial tenure.

Clearly, in this organization, tenure levels are lower within more diverse social units. The presence of these relationships underscores the importance of simultaneously taking into account multiple dimensions of diversity and the importance of considering jointly the characteristics of a team's members and its manager.

Analytic strategy

Our theoretical arguments and related hypotheses present a complex, multilevel formulation of how the demographic compositions of teams, team managers, and work units combine to shape team cooperation and performance. We tested the model shown in Figure 1 using hierarchical linear modeling (HLM), conducting three separate analyses. Our analyses were conducted using the HLM 5 program (Raudenbush, Bryk, Cheong, & Congdon, 2000).

Table 5 shows the results for the three analyses. For all the models analyzed we also included a preliminary step that tested a null model with no predictors. This step, which is not shown, partitions variance in sales goal achievement into within- and between-district components and assesses the degree of between-district variance in sales goal achievement. (A detailed discussion of HLM analyses can be found in Hofmann, Griffin, & Gavin, 2000). The analysis indicated that there was systematic between-district variance in team sales goals achievement ($X^2 = 59.64$, $d.f. = 41$, $p < 0.05$). However, while 5 percent of the variance in team sales goal achievement resided between districts, 95 percent of the variance resided within districts.

Model 1 tests Hypothesis 1; it includes the team-level controls, all team diversity measures, and all team diversity interactions as predictors of team performance. Model 2 tests Hypothesis 2; it includes the controls, all team diversity measures and their interactions, the individual attributes of managers, and several team \times manager interactions. Model 3 tests Hypothesis 3; it includes the controls, all team diversity measures and their interactions, all district diversity measures, and finally, the cross-level interactions between team and district diversity measures. In order to test the cross-level hypothesis, HLM procedures generated a regression line (i.e., team performance' regressed on team-level predictors) for each of the 42 districts included in the analysis. The parameters (slopes and intercepts) generated by these 42 regression lines served as the dependent variables and were regressed on district-level (level 2) predictors. If the slopes for team diversity measures were significantly predicted by district diversity measures, Hypothesis 3 would receive support. However, prior to testing this hypothesis an intermediate step is essential. In this step, the intercept term only is considered an outcome and the district-level diversity measures are entered as predictors. In order to proceed with the cross-level analysis after including district-level diversity measures as predictors of the intercept term, between-district variance in slopes should remain significant. This step also assesses the relationship between district diversity and district performance. We discuss our findings in detail below.

Hypothesis 1

Hypothesis 1 predicted a significant relationship between team performance and three dimensions of diversity—gender, ethnicity, and tenure—in combination. To test this hypothesis, we examined the level 1 coefficients for the two-way (gender \times tenure, gender \times ethnicity, tenure \times ethnicity) and three-way (gender \times ethnicity \times tenure) interaction terms shown for Model 1. The overall R^2 explained by Model 1 was 0.32.

Table 5. Results of hierarchical linear models assessing the moderating effects of social context on the relationship between team diversity and team performance

Fixed effects	Model 1 Team as context		Model 2 Manager as context		Model 3 District as context		Model 4 Full model	
	Gamma coefficients	SE	Gamma coefficients	SE	Gamma coefficients	SE	Gamma coefficients	SE
<i>Team effects (Level 1)</i>								
Average team tenure	1.64**	0.38	1.94**	0.48	1.83**	0.43	1.90**	0.47
Team size	0.59	0.56	0.34	0.58	0.35	0.56	0.44	0.58
Team gender diversity	-63.27	65.52	30.66	91.86	-45.36	64.18	2.48	82.73
Team ethnic diversity	-122.26	73.97	-117.39	93.88	-119.82	82.40	-125.33	91.19
Team tenure diversity	-10.24	30.59	-9.39	47.50	-8.41	30.92	-7.29	42.34
Team gender x ethnic diversity	334.96 [†]	176.15	328.73	214.29	273.39	181.50	289.00	204.34
Team gender x tenure diversity	37.06	74.09	-5.74	99.85	17.73	70.87	-1.82	89.26
Team ethnic x tenure diversity	141.36 [‡]	76.14	174.84 [‡]	100.88	131.32	85.98	142.90	92.42
Team gender x ethnic x tenure diversity	-413.52*	190.21	-455.72 [‡]	238.35	-327.25 [‡]	198.03	-353.08	217.67
<i>Team manager effects (Level 1)</i>								
Manager's gender ^a			56.31*	25.91			44.901	23.43
Manager's ethnicity ^b			6.90	11.20			0.00	12.05
Manager's tenure			-0.99	0.71			-0.70	0.70
Team gender diversity x manager gender			-130.36*	57.18			-106.98*	52.37
Team ethnic diversity x manager ethnicity			-11.44	23.50			0.19	24.03
Team tenure diversity x manager tenure			1.02	0.79			0.47	0.80
<i>District effects (Level 2)</i>								
District size					-0.09	0.05	-0.11*	0.05
Average peer tenure					-7.05**	1.71	-6.83**	1.73
Average manager tenure					1.92*	0.81	2.14*	0.82
Peer gender diversity					-119.80	106.79	103.54	105.12
Peer ethnic diversity					-7.20	25.73	-8.41	26.45
Peer tenure diversity					-64.98*	28.53	-60.89*	28.29
Managerial gender diversity					22.83	20.31	11.24	18.86
Managerial ethnic diversity					15.07	15.67	16.52	16.53
Managerial tenure diversity					11.44	23.02	8.23	22.66
<i>Team x district effects (cross-level)</i>								
Team gender diversity x peer gender diversity					-152.13	677.16	-276.13	616.71
Team gender diversity x managerial gender diversity					-185.29	123.12	-45.42	86.39
Team Ethnic Diversity x peer ethnic diversity					NE	NE	NE	NE
Team ethnic diversity x managerial ethnic diversity					NE	NE	NE	NE
Team tenure diversity x peer tenure diversity					NE	NE	NE	NE
Team tenure diversity x managerial tenure diversity					NE	NE	NE	NE

Note: N (teams) = 365; N (districts) = 42.

^aFor gender, 0 = male; 1 = female.

^bFor manager ethnicity, 0 = white; 1 = people of color.

^cNE indicates that the coefficient was not estimated due to lack of variance in the effects across sales districts.

[†]p < 0.10; [‡]p < 0.05; **p < 0.01.

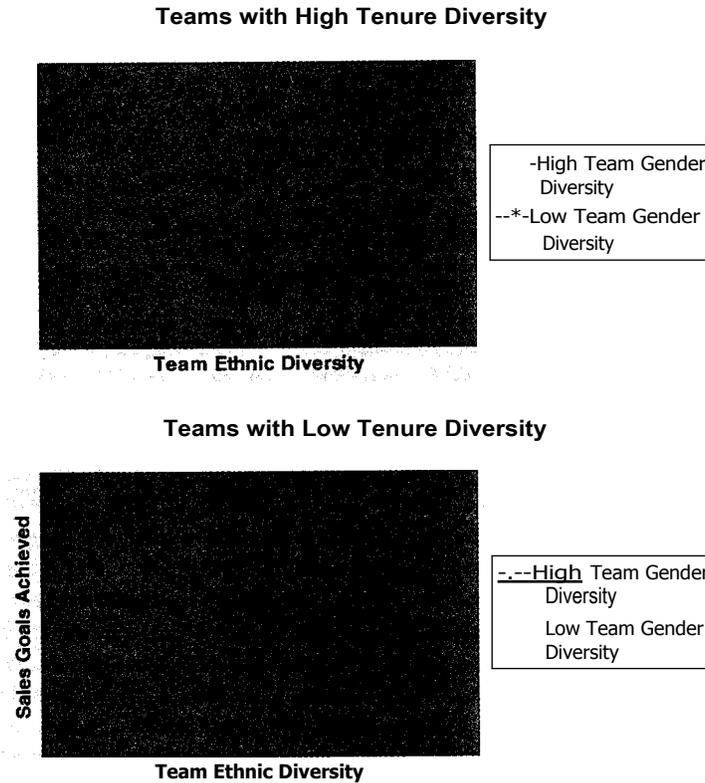


Figure 2. Moderating effect of internal team context on the relationship between team diversity and team performance

The gender \times ethnic diversity and the ethnic \times tenure diversity interaction terms were both positive and marginally significant ($\beta = 334.96$ and $\beta = -141.36$, respectively, $p < 0.10$). As predicted by Hypothesis 1, the coefficient for the tenure \times ethnic \times gender diversity interaction term was significant ($\beta = -413.52$, $p < 0.05$).

Figure 2 illustrates the form of the tenure \times ethnic \times gender diversity interaction. Figure 2 shows that ethnic and gender diversity both detracted from performance in teams with low tenure diversity. However, in teams with high tenure diversity, greater ethnic diversity was associated with higher performance. Furthermore, the benefits of ethnic diversity were greater for teams with relatively low gender diversity. Overall, performance was best (106.6 per cent of sales goal targets) in teams with relatively low tenure diversity, low gender diversity and low ethnic diversity. These results support Hypothesis 1. The results shown in Model 1 are consistent with social identity theory; they are not consistent with the value-in-diversity perspective.

Hypothesis 2

Hypothesis 2 predicted that the relationship between team diversity and performance would be moderated by the demographic attributes of managers. To assess the moderating effects of managers' attributes, we examined the level 1 coefficients associated with three interaction terms: team gender

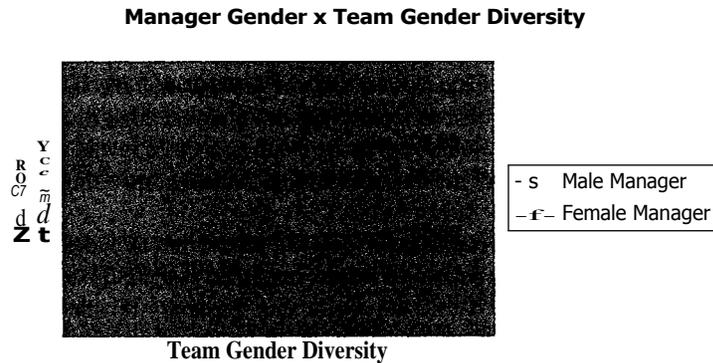


Figure 3. Moderating effect of team manager gender on the relationship between team gender diversity and team performance

diversity x manager gender; team ethnic diversity x manager ethnicity; and team tenure diversity x manager tenure. These results are shown as Model 2 in Table 5. The overall R^2 explained by Model 2 was 0.32.

Hypothesis 2 was partially supported. On the one hand, we found no significant interactions between ethnic or tenure diversity within teams and the ethnicity or tenure of managers. However, as predicted by Hypothesis 2, the effect of team gender diversity was moderated by manager gender ($\gamma = -130.36$, $p < 0.05$). Figure 3 illustrates these effects. For teams with male managers, increasing gender diversity had no effect on team performance. For teams with female managers, there was a negative relationship between gender diversity and team performance.

Hypothesis 3

Hypothesis 3 predicted that the degree of diversity present in sales districts would moderate the relationship between team diversity and team performance. That is, we predicted that performance would be partly explained by cross-level interactions between team-level and district-level diversity. Before assessing the moderating effects of district diversity, we examined the relationship between the level 2 intercept terms and district level diversity measures (an intercepts-as-outcomes model; see Hofmann et al., 2000, for a discussion). This analysis assessed the relationship between diversity and sales goal achievement at the district level. Note that the level 2 effects show separate coefficients for the effects of diversity within the sales force (peers) and diversity within the managerial ranks (managers). The results, shown as Model 3 in Table 5, revealed a significant negative effect on performance of peer tenure diversity ($\gamma = -64.98$, $p < 0.05$). The overall R^2 explained by district diversity measures after controlling for team level predictors was 0.04. After entering the district diversity measures as predictors of the intercept term we examined whether there was any residual variance in the slope parameters, which might be explained by cross-level effects (Hofmann et al., 2000). We found that only the slope indicating the relationship between team gender diversity and sales goal achievement within each sales district had significant residual variance associated with it ($\chi^2 = 116.34$, $p < 0.001$). However, when we modeled this variance using district-level gender diversity among peers and managers we did not obtain significant results. As shown in Model 3, the coefficients for the two cross-level gender effects were negative ($\gamma = -152.13$ for team gender diversity x district gender diversity of peers, and $\gamma = -185.29$ for team gender diversity x district gender diversity of managers) but not significant ($p > 0.10$). Thus, Hypothesis 3 was not supported.

In formulating Hypothesis 3, we focused on the potential role of district level diversity as a moderator of team level effects. We did not formulate hypotheses about the effects of district-level peer or managerial diversity on performance. That is, we did not predict that the level I effects for teams would also hold at the level of districts. Nevertheless, Model 3 reveals that district-level tenure diversity among sales personnel was negatively related to the performance of teams within the districts. The overall R^2 explained by district diversity measures in Model 3 after controlling for team level predictors was 0.05.

Finally, Model 4 in Table 5 shows the coefficients for a full model that includes all of the effects examined to test Hypotheses 1-3. The overall pattern of results remained essentially unchanged when all variables were included in the full model. That is, the coefficients generally retained their sign (positive or negative) and their strength relative to each other. With one exception, the results for the full model were consistent with the conclusions we have drawn thus far for Hypotheses 1-3. The exception is that the three-way interaction for the effect of gender \times ethnic \times tenure team diversity ($\beta = -353.08$, n.s.) was non-significant in Model 4. This level 1 interaction effect for team composition became weaker when other elements of the social context were included as predictors of team performance.

Discussion

In order for employers to manage workforce diversity effectively, they must first understand how it influences their organizations. In their attempts to understand the effects of workforce diversity, many employers monitor and compare the experiences (e.g., rates of hiring, promotion, and turnover; pay levels; attitudes) of employees' with different demographic backgrounds (e.g., men versus women; members of different ethnic groups). If no group-based differences are found, the conclusion drawn is that there are no diversity-related problems for the organization to address. If between-group differences are discovered, a search for explanations is likely to follow and then attempts may be made to provide remedies. Typically, the suggested remedies focus on changing the behavior and attitudes of individual employees and changing the personnel practices used to manage individual employees. The objective of such remedies is to eliminate the observed differences among individuals who belong to demographically defined groups. This widely accepted approach to managing diversity is grounded in a mental model that views organizations as collections of people who differ on a variety of individual characteristics (such as gender, ethnicity, and tenure).

The approach that employers typically use to understand diversity differs markedly from the approach that many researchers have adopted in recent years. Although research on differences in the outcomes of various demographic groups continues, during the past two decades many researchers interested in diversity have focused on understanding how the demographic composition of groups and organizations influence team and organization outcomes. Such work recognizes that organizations comprise a variety of smaller social units, including work teams, task forces, departments, and so on. It is within the context of these smaller social units that many of the dynamics of diversity unfold.

This study considered whether the social context shapes how work teams experience diversity. If social context plays a role in shaping the performance of diverse teams, then organizations- might be able to manage -performance more effectively by attending to how employees with various demographic characteristics are distributed among teams and across larger work units, such as sales districts.

We examined the role of social context as a moderator of the effects of team diversity on team performance in a large U.S. company with a progressive approach to diversity management. For 365 sales teams in 42 districts, we assessed three elements of team social context: the configuration of diversity

within teams, the characteristics of team managers, and the diversity of the larger work units (sales districts) in which teams were located. Numerous theoretical arguments implicated these elements of the social context as relevant to understanding the consequences of team diversity. Because different theories often make opposing predictions about how the social context is likely to affect work teams, we developed non-directional hypotheses. We simply predicted that the three elements of the social context that we studied would be useful in explaining the effects of team diversity.

Summary of major findings

Overall, we found some support for the general proposition that the effects of team diversity are more predictable when the social context is also taken into account. The social context of teams *does* appear to moderate the effects of team diversity on team performance, and in numerous ways.

Multidimensional diversity

Regarding the multidimensional nature of diversity within teams, we found that the effects on team performance of any one type of diversity—gender, ethnic, or tenure diversity—depended on the other types of diversity present in the team. Our most striking finding, shown in Figure 2, was that team performance was lowest for teams with a combination of relatively high tenure diversity *and* high gender diversity *and* high ethnic diversity.

Manager characteristics

Regarding the characteristics of managers, we found that this element of social context also shaped the consequences of team diversity. However, the pattern of results is not easily explained by any one theory. For female managers only, increasing gender diversity within a team was associated with performance declines. In teams with male managers, gender diversity was unrelated to team performance. In addition to the likely financial consequences of these effects for the firm, these findings also have monetary implications for sales managers, whose compensation depends on their teams' performance. For example, Figure 2 suggests that female managers who are assigned to manage teams with higher levels of gender diversity would be eligible for less incentive pay compared to those who are assigned to manage more homogeneous teams. Yet, it appears that the female managers assigned to manage the less diverse teams may be assigned to teams that are inherently more difficult to manage.

District diversity

The third element of social context that we investigated was diversity among peers and managers in the sales district. Here we found no evidence that social context moderated the effects of team diversity. However, our analysis of district-level effects did reveal significant negative effects of district-level peer tenure and peer tenure diversity. Overall, team performance was lower in districts with lower average tenure and in districts with greater tenure diversity. In contrast, team performance was unrelated to the demographic characteristics of the districts' managerial rank.

Caveats and limitations

Our results indicate that the social context of teams may shape the effects of team diversity on team performance. Before discussing these results in more depth, we wish first to acknowledge the limitations of our data and thus our ability to draw firm conclusions. The most significant limitations include the cross-sectional nature of the data and the inclusion of only three dimensions of team diversity.

The use of cross-sectional data greatly constrains our ability to make claims about the causal direction of reported effects. It is possible, for example, that histories of team performance influence subsequent team composition, including both team diversity and the characteristics of team managers.

This might occur if experienced team managers had observed (or merely believed) that team composition was associated with team performance (e.g., see Mayo, Meindl, & Pastor, 1996), and then used this information when deciding whether to accept a job placement and/or when making decisions that affected the staffing of the teams they managed. For example, if experienced managers observe that diverse teams tend to perform worse than homogeneous teams, they might strive to increase the degree of homogeneity of the teams they manage. Although we think this alternative causal model is an unlikely explanation for our results, we cannot rule it out.

Because we included only three dimensions of diversity in our analyses, it is possible that some important effects of diversity were not detected. It is also possible that some diversity effects were not accurately specified. For example, as we explained, tenure and age were highly correlated in the population. We did not report alternative models that included age effects in place of the tenure effects, but we did test such models. The results were essentially the same regardless of whether we used the age or tenure indicators. Thus, in this organization, it is not possible to disentangle the age and tenure effects. Each of the three attributes we measured—gender, ethnicity, and tenure—may also be associated with other unmeasured but theoretically interesting dimensions of diversity, such as marital status, family status, and/or religion. It is possible that some of the effects we attributed to measured constructs were actually due to unmeasured constructs. Of course, the specific, single-company context in which the study was conducted also limits our ability to draw conclusions about how diversity might affect teams in other organizations.

Finally, we acknowledge that the ideas upon which we developed our three hypotheses imply a much more complex model than we tested here. In particular, in developing Hypothesis 1, we argued (and later showed) that the effects of diversity are best understood when multiple dimensions of diversity are considered in combination. However, subsequently when we examined cross-level diversity effects, we did not attempt to fully model all of the possible interactions among diversity dimensions (within and between levels). Although we had a relatively large sample, the number of potential interaction terms required to test a fully developed model was prohibitively large. Thus, the power of our analysis would have been quite low. Without strong theoretical guidance and no prior research upon which to make predictions, we chose to forego the investigation of these more complex relationships.

Given the caveats and limitations described above, can *any* conclusions be drawn from this study? We believe the answer to this question is 'yes'. Despite the study's limitations, several of its strengths bolster our confidence in the validity of our conclusions. One strength is that data were available for a relatively large number of teams, which were distributed among a large number of districts located throughout all regions of the United States. Thus, the findings describe the effects of diversity across a wide range of conditions, including rural and urban areas, west coast and east coast, economically prosperous and disadvantaged, and so on. Another strength is the use of objective measures of team performance. These performance measures had been carefully calibrated by the organization in order to rule out a variety of irrelevant influences, such as the nature of the equipment being sold, environmental munificence, and the subjective biases that can contaminate more subjective performance measures.

Conclusions about current theory and future research

All research reflects decisions about what to measure and what to ignore. Within the research community, the accepted doctrine is that theoretical considerations should drive decisions about which constructs to measure and which relationships to investigate. Research and theory relevant to understanding 'diversity' have focused on many different social units. Pfeffer's (1983) landmark treatise on organizational demography treats organizations as the unit of analysis. Hambrick and Mason's (1984) seminal article on 'upper echelons' focuses on teams as the unit of analysis, as have many subsequent

studies. In addition, researchers have investigated the effects of diversity at the level of departments within an organization (e.g., see Tolbert et al., 1996) and at the level of dyads (a.k.a. relational demography; see Tsui & Gutek, 1999).

While the body of diversity research and theory as a whole recognizes the complex, multilevel nature of diversity phenomena (e.g., see Jackson et al., 1995; Triandis, 1992; Tsui et al., 1995), most empirical studies ignore the complexity. Instead, they designate only one focal unit for the investigation—individuals, dyads, teams, departments, or organizations. The lack of strong theoretical frameworks specifying cross-level and/or multilevel diversity dynamics provides one explanation for the lack of cross-level and multilevel research. No single theoretical perspective offers parsimonious predictions about the role of the three elements of social context that we investigated. To the extent that researchers find it difficult to gain acceptance for work that is more exploratory and less theory-driven, opportunities for new learning may be overlooked. If no extant theories make predictions about related phenomena at other levels of analysis, researchers may not look for the phenomena.

Diversity research may be particularly prone to the problem of missing theories relevant to the role of social context. Nevertheless, we believe that multilevel and cross-level investigations offer some potential for improving our understanding of diversity dynamics within organizations. Eventually, parsimonious diversity theories will be formulated to guide cross-level diversity research, but this will take time. Meanwhile, exploratory work that examines the usefulness of taking elements of the social context into account seems justified. As Johns (2001) observed, 'There are several reasons why scholars should consider, study, and report organizational context. Perhaps the most central, if mundane, reason is that, like Everest, it is there (p. 34)'. To this we would simply add, 'and there is some evidence that it matters'.

Researchers who explore how social contexts affect the dynamics of team diversity may be rewarded with serendipitous findings. If the level of theory used to develop hypotheses does not match the level of the phenomenon, researchers will fail to see the phenomenon (see Rousseau, 1985; House, Rousseau, & Thomas-Hunt, 1995; Kozlowski & Klein, 2000). If we had followed the most common approach used to study diversity, which is mostly acontextual, we would have ignored the characteristics of team managers and sales district diversity when assessing the effects of team diversity. We would not have discovered that the negative effects of team gender diversity are greater for female managers—a result that we believe would be counterintuitive to most managers in the company we studied, and may also be counterintuitive to many diversity researchers. Are similar results lying undiscovered in other data sets? We suspect the answer is yes, and encourage researchers to search for them if they have the opportunity.

Including district-level predictors enabled us to rule out the possibility that the team-level effects we observed might actually have been artifacts that were caused by district-level phenomena. For example, when we first presented our findings to the company's diversity director, he immediately questioned whether the results were a function of the demographic characteristics of the districts. Because this company made a specific effort to recruit a workforce that was representative of the local labor market, he wondered whether the team effects might disappear when district-level demographics were taken into account. Our multilevel analysis (Model 3) revealed that the three-way interaction effect for team tenure x gender x ethnic diversity could not be explained completely by district-level effects.

Conclusions about the practice of diversity management in organizations

From a practical standpoint, it is difficult to state the implications of the past decade of research on team diversity because there has been little consistency in the reported results. Diversity sometimes is associated with positive outcomes, other times with negative outcomes, and often it has no effects at all (e.g., see Webber & Donahue, 2001; Jackson et al., 2003). This same statement is true of the findings in

this study-no general statement accurately describes the effects of diversity in this organization.' For Company ABC, which has publicly stated that it values diversity and believes that diversity promotes improved organizational performance, the results serve as a reminder that diversity and performance do not always go hand in hand. Despite (or perhaps due to) the company's significant investments aimed at recruiting and retaining a diverse workforce, there is no evidence to support the assertion that diversity is associated with improved performance. The results show that team performance was generally not hindered by gender or ethnic diversity. Perhaps because Company ABC invested heavily in training related to these dimensions of diversity, teams were able to manage gender and ethnic diversity relatively well. On the other hand, there was some evidence that tenure diversity was disruptive for teams-perhaps because employees had not been trained to attend to it.: The evidence also suggests that teams were less effective in managing their diversity to the extent: that several types of diversity were present simultaneously. For Company ABC, a clear implication is that additional efforts are needed to assist teams characterized by a confluence of multiple forms of diversity.

Upon hearing about our results from this study, managers and researchers alike have expressed concern over the possibility that results linking diversity to poor performance might be (ab)used to justify employment discrimination. Diversity practitioners have expressed the concern that the results from Company ABC in particular may cast doubt on the value of investing- corporate resources in efforts intended to increase the representation of women and minorities. In response to such concerns, we urge restraint when making the leap from results to practice. Rather than using the results of the present study to state conclusions and formulate new policies, a more appropriate practical step would be to adopt the general analytic framework as one that can be used to diagnosis diversity issues that need to be addressed in an organization. Another result that might guide additional diagnostic work concerns the positive impact of having a female manager. What accounts for such an effect? Do female managers have skills that male managers should learn? Or, might this effect be caused by practices that result in high-performing male managers being promoted to higher levels more quickly than high-performing female managers? And, why is gender diversity more problematic for teams with female (versus male) managers? Although our analysis cannot answer these questions, it focuses attention on a few specific questions for Company ABC to investigate further. By focusing on the key issues that are evident in this particular organization, Company ABC should be able to better leverage whatever resources they, invest in diversity management activities.

This study also suggests that organizations may find it useful to reassess their diversity management goals and consider alternative measures for evaluating the effectiveness of their change efforts. Currently, when organizations attempt to assess how well they manage diversity, they usually compare the experiences (e.g., hiring rates, pay levels, attitudes, turnover) of one demographic group (e.g., males or whites) to another (e.g., women or ethnic minorities). While such comparisons can be useful, they are only partial indicators of whether diversity is being managed well. Comparing the attitudes and performances of diverse versus homogeneous teams is another approach' to assessing how well an organization is managing its diverse workforce. At a minimum, organizations should consider: monitoring the attitudes and performance of diverse versus homogeneous teams. By taking into account the broader social context of teams, including managers and the demographics within larger work units, an even deeper understanding of the consequences of diversity could be gained by practitioners.

Conclusion

The implications of this study for future research seem quite clear. Perhaps most importantly, this study shows the potential value of adopting a multidimensional, multilevel approach in future *theoretical* and

empirical work. Just as situations can constrain or liberate individual tendencies, so too can situations constrain or liberate the functioning of diverse work teams. Although psychologists often emphasize the role of individual attitudes and behaviors as determinants of team dynamics, our results caution against this tendency to explain team-level phenomena by referring solely to individual-level constructs. A complete understanding of diversity dynamics is not likely to be forthcoming until we develop more complex theories that take into consideration the social context as well (e.g., see Jackson & Joshi, 2001).

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