THE IMPACT OF WORK–FAMILY PROGRAMS ON THE RELATIONSHIP BETWEEN GENDER DIVERSITY AND PERFORMANCE

MUHAMMAD ALI, ISABEL METZ, AND CAROL T. KULIK

Work–family programs signal an employer’s perspective on gender diversity to employees, and can influence whether the effects of diversity on performance are positive or negative. This article tests the interactive effects of non-management gender diversity and work–family programs on productivity, and management gender diversity and work–family programs on financial performance. The predictions were tested in 198 Australian publicly listed organizations using primary (survey) and secondary (publicly available) data based on a two-year time lag between diversity and performance. The findings indicate that nonmanagement gender diversity leads to higher productivity in organizations with many work–family programs, and management gender diversity leads to lower financial performance in organizations with few work–family programs. The results suggest different business cases at nonmanagement and management levels for the adoption of work–family programs in gender-diverse organizations. © 2014 Wiley Periodicals, Inc.

Keywords: gender diversity, work–family programs, productivity, financial performance

Introduction

Women’s increasing participation in the workforce is reflected in higher levels of gender diversity at nonmanagement and management levels. For instance, women’s representation in the Australian workforce increased from 41.4 percent in 1986 to 47.1 percent in 2010 at nonmanagement levels, and from 22.5 percent in 1986 to 34 percent in 2010 at management levels (Australian Bureau of Statistics, 2009, 2010). Similarly, women’s representation in the United States workforce increased from 45 percent in 1983 to 48 percent in 2010 at nonmanagement levels, and from 32.4 percent in 1983 to 42.6 percent in 2010 at management levels (Bureau of Labor Statistics, 1983, 2011). Women’s increased workforce participation in the workforce is reflected in higher levels of gender diversity at nonmanagement and management levels. For instance, women’s representation in the Australian workforce increased from 41.4 percent in 1986 to 47.1 percent in 2010 at nonmanagement levels, and from 22.5 percent in 1986 to 34 percent in 2010 at management levels (Australian Bureau of Statistics, 2009, 2010). Similarly, women’s representation in the United States workforce increased from 45 percent in 1983 to 48 percent in 2010 at nonmanagement levels, and from 32.4 percent in 1983 to 42.6 percent in 2010 at management levels (Bureau of Labor Statistics, 1983, 2011). Women’s increased workforce participation
participation has changed the traditional family roles of men and women (Powell, 2011). A very high percentage of employees from both genders (about 90 percent) are now trying to manage the dual responsibilities of work and family (Burke, 2007; Lockwood, 2003). Therefore, organizations with high gender diversity might be motivated to offer more work–family (WF) programs. However, the literatures on workforce diversity and WF programs have largely developed independently of one another, and little is known about how a match or mismatch between gender diversity and WF programs impacts organizational effectiveness.

An investigation into the interaction between gender diversity and WF programs is important for multiple reasons. First, the findings may help advance the business case for high gender diversity and many WF programs. WF programs are expensive to devise and implement. The high financial costs involved in offering WF programs prevent organizations from adopting them (Families and Work Institute, 2008). As a result, it is important for organizations to understand the business case for WF programs. Moreover, most WF programs are not mandated by equal opportunity laws and, therefore, many employers offer a minimum number of WF programs in the absence of a business case (Strachan, French, & Burgess, 2010). Among Australian small and medium-sized enterprises, 73 percent of organizations offer flextime, which many employees expect, but only 5 percent of organizations offer a subsidy for child care (Australian Government Office for Women, 2007).

Second, the results can help reconcile the inconsistent findings of past gender diversity research (for reviews, see McMahon, 2010; Shore et al., 2009). Empirical research suggests that diversity can have negative effects (e.g., Jehn, Northcraft, & Neale, 1999; Shapcott, Carron, Burke, Bradshaw, & Estabrooks, 2006; Watson, Cooper, Torres, & Boyd, 2008), positive effects (e.g., Frink et al., 2003; Herring, 2009; Richard, Ford, & Ismail, 2006; Wegge, Roth, Kanfer, Neubach, & Schmidt, 2008), or nonlinear effects (e.g., Ali, Kulik, & Metz, 2011; Richard, Barnett, Dwyer, & Chadwick, 2004) on processes and performance. Thus, the current research investigates whether effective gender diversity management in the form of WF programs helps realize the benefits of organizational gender diversity (McKay, Avery, & Morris, 2009). As a result of the costs involved in offering WF programs and the discretionary nature of these programs, the number of WF programs adopted by an organization sends a signal to employees about the employer's views on gender diversity (Celani & Singh, 2011; Spence, 1973). This signal can influence whether the effects of gender diversity on performance are negative or positive.

We use the number of WF programs offered (not the design, implementation, access, or usage of those programs, or experiences associated with the use of those programs) as a signal to employees for two main reasons. First, the availability of WF programs is a major determinant of employees' perceptions of organizational support (T. D. Allen, 2001; Casper & Harris, 2008), often regardless of the usage of those programs (Grover & Crooker, 1995). Organizations communicate to employees the WF programs on offer more often than the design, implementation, access, and usage of those programs. The offering of WF programs symbolizes how much the organization cares about its employees (Casper & Harris, 2008) and thus is a key signal to employees. Second, as the current study is conducted in a large number of organizations across multiple industries, it aggregates data on WF programs to the organizational level. The design, implementation, access, and usage of those WF programs can vary across the WF programs offered, and across occupations and units/divisions (WorldatWork, 2005). Employees' experiences of WF programs also vary across individuals (Eaton, 2003; Kossek, 2005). Therefore, it would not be appropriate to make direct comparisons across organizations using data on the design, implementation, access, usage,
or experiences of WF programs aggregated to the organizational level.

A lack of investigation into the effects of diversity at various organizational levels on different performance measures might have also contributed toward the inconsistent findings of past research. Unfortunately, the gender diversity literature has frequently focused on diversity at a single level within the organizational hierarchy (e.g., management level, Cordeiro & Stites-Doe, 1997; Richard et al., 2004). When researchers have examined multiple levels, diversity effects were hypothesized to affect the same performance measures across organizational levels (e.g., R. S. Allen, Dawson, Wheatley, & White, 2008). We address this research gap by predicting that the interactive effects of gender diversity and WF programs may be reflected in different performance measures at nonmanagement and management levels. Our arguments are based on evidence that employees at nonmanagement and management levels perform different types of work (Mintzberg, 1973; Tengblad, 2006).

Specifically, this study predicts and tests a moderating effect of WF programs on the relationship between nonmanagement gender diversity and employee productivity. The repetitive nature of the work of nonmanagerial employees and their close contact with customers render employee productivity a suitable measure of their performance (Frink et al., 2003). We also predict and test a moderating effect of WF programs on the relationship between management gender diversity and financial performance. The diverse and strategic nature of managers’ work and the importance of their decisions make organizational financial performance an appropriate measure of managerial performance (Dean & Sharfman, 1996). The predictions are tested using data from a survey of publicly listed organizations and from secondary sources to ensure the temporal precedence of gender diversity over performance (Wright, Gardner, Moynihan, & Allen, 2005), with a two-year time lag between diversity and performance (Menard, 1991).

This study is conducted in organizations listed on the Australian Securities Exchange (ASX). In general, Australian equal opportunity laws center on women (Syed & Kramar, 2009). Under the Equal Opportunity for Women in the Workplace Act of 1999, private-sector companies, community organizations, nongovernment schools, unions, group training companies, and higher education institutions with 100 or more employees are required to report on their gender diversity initiatives to the Equal Opportunity for Women in the Workplace Agency (EOWA). The EOWA has been recently renamed as the Workplace Gender Equality Agency (WGEA) under the Workplace Gender Equality Act of 2012. Australian organizations have autonomy in terms of the targets they set and the equal opportunity programs they develop to reach those targets (Strachan et al., 2010). Australian equal opportunity laws do not explicitly require that employers provide WF programs with the exception of 18 weeks of federal government–funded paid parental leave (Bacchi, 1990; Strachan et al., 2010). Therefore, many organizations make a minimal investment in these programs (Burgess, Henderson, & Strachan, 2007).

Gender Diversity and Performance

Self-categorization and social identity theories suggest that workforce diversity may produce negative processes leading to lower performance (Tajfel, 1978; Turner, Hogg, Oakes, Reicher, & Wetherell, 1987). For instance, a gender-diverse workforce may produce psychological groups of male employees and female employees. As a result, gender diversity may generate negative behaviors such as decreased communication (Kravitz, 2003), stereotype-based role expectations (Elsass & Graves, 1997), a lack of cohesion (Triandis, Kurowski, & Gelfand, 1994) and cooperation (Chatman & Flynn, 2001), and increased conflict (Pelled, 1996) between male and female employees. In contrast, the value-in-diversity perspective suggests that workforce diversity may offer value to an organization leading to higher
Blum, 2001). The unsupportive gender diversity climate refers to the shared perception of employees about the lack of organizational efforts to help gender-diverse employees integrate and succeed (Mor-Barak & Cherin, 1998). These shared perceptions about the lack of support to integrate with other employees can result in strong psychological groups based on the gender identities of employees. Therefore, the negative behaviors associated with gender diversity such as stereotype-based role expectations (Elsass & Graves, 1997), lack of cohesion (Triandis et al., 1994) and cooperation (Chatman & Flynn, 2001), and increased conflict (Pelled, 1996) might prevail in these organizations. Moreover, the lack of WF programs may lead to higher levels of work–family conflict (Jessica & Chockalingam, 2006; Thomas & Ganster, 1995; Thompson, Beauvais, & Lyness, 1999). Work–family conflict is associated with low levels of job and life satisfaction, organizational commitment and productivity, and high levels of absenteeism, intention to turnover, actual turnover, and recruitment costs (Allen, Herst, Bruck, & Sutton, 2000; Comfort, Johnson, & Wallace, 2003; Kossek & Ozeki, 1998, 1999).

In addition to strong negative behaviors associated with gender diversity, the unsupportive gender diversity climate in organizations with few WF programs prevents gender diversity from generating the resources of market insight, creativity and innovation, and improved problem solving (Bassett-Jones, 2005; Rosener, 1995).

The Moderating Role of Work–Family Programs

Based on organizational contingency theory (Galbraith, 1973), we argue that the negative or positive impact of gender diversity on performance is contingent on the WF programs offered by an organization. Specifically, in organizations with few WF programs, the negative behaviors associated with gender diversity might be stronger than the resources associated with gender diversity, leading to inferior performance. Alternatively, in organizations with many WF programs, the resources associated with gender diversity might be stronger than the negative processes associated with gender diversity, leading to improved performance. The proposed contingency effects of WF programs on the relationship between gender diversity and performance are derived from signaling theory. Signaling theory suggests that observable actions of the signaler are perceived by the receiver as reflecting something otherwise unobservable about the signaler (Celani & Singh, 2011; Spence, 1973).

Organizations that offer few WF programs to gender-diverse workforces signal to employees that the organization does not value or support gender diversity, and does little to help its employees integrate work and family responsibilities (Rynes, 1991; Spence, 1973). The employees infer from this signal an unsupportive gender diversity climate and a family-unfriendly organization (Mor-Barak & Cherin, 1998; Powell, 2011; Roman &
creativity and innovation, and improved problem solving to the extent that a high level of participation might produce in organizations with many WF programs (Krawiec & Broome, 2008). In sum, in a gender-diverse organization, the costs of offering few WF programs might exceed the benefits of doing so because those few WF programs are insufficient to enable the gender-diverse organization to realize the potential value of gender diversity (Arthur & Cook, 2003; Page, 2008).

In contrast, a wide portfolio of WF programs in a gender-diverse organization signals to employees that the organization values and supports gender diversity (Celani & Singh, 2011; Spence, 1973). This signal is strong because of the discretionary nature of WF programs and the costs involved in offering these programs. The signal leads to employee perceptions of a supportive gender diversity climate, an inclusive workforce, and a family-friendly organization (T. D. Allen, 2001; Casper & Harris, 2008; Ryan & Kossek, 2008). Although some organizations may offer these programs for merely symbolic reasons, research indicates that the number of WF programs is positively associated with the perception of employees that their organization is family-supportive (T. D. Allen, 2001). These perceptions enable gender diversity to produce the resources of market insight, creativity and innovation, and improved problem solving. For example, a supportive gender diversity climate may enable the full participation by both men and women, thus improving insight into the needs of male and female customers (Krawiec & Broome, 2008; Nkomo & Cox, 1996). Further, WF programs frequently incorporate flexible work arrangements that emphasize the completion of tasks (or effectiveness) instead of the physical presence of employees during business hours (Powell, 2011). Flexible work arrangements have been found to be positively associated with motivation (Kossek & Dyne, 2008), job satisfaction, work schedule satisfaction, and productivity (Baltes, Briggs, Huff, Wright, & Neuman, 1999).

In addition to generating resources from gender diversity, the supportive gender diversity climate in organizations with many WF programs weakens the negative behaviors frequently produced by gender diversity (Tajfel, 1978; Turner et al., 1987). Most women still carry a greater share of the family's responsibilities than men. A higher representation of women in gender-diverse organizations means that a higher proportion of the organization's employees welcome the availability of many WF programs (Blair-Loy & Wharton, 2002; Konrad & Mangel, 2000). The availability of WF programs can help employees balance their work and family responsibilities and help them integrate and succeed. This sense of organizational support weakens the gender psychological groups and the negative employee behaviors associated with gender diversity, such as a lack of cohesion (Triandis et al., 1994) and cooperation (Chatman & Flynn, 2001), and increased conflict (Pelled, 1996). Moreover, many WF programs can lead to higher levels of work–family facilitation and role enrichment (Greenhaus & Powell, 2006; Poelmans, Stepanova, & Masuda, 2008), higher levels of job commitment and satisfaction (R. S. Allen & Montgomery, 2001; Thompson et al., 1999), and higher organizational performance (Perry-Smith & Blum, 2000). In sum, in a gender-diverse organization, the benefits of offering many WF programs can exceed the cost of offering them because the programs will enable the organization to realize the potential value of gender diversity (Arthur & Cook, 2003; Page, 2008).

Based on the preceding arguments, we expect that WF programs will moderate the relationship between gender diversity and performance. Specifically, gender diversity will lead to lower performance in organizations with few WF programs and to higher performance in organizations with many WF programs. There is some empirical support for our argument that gender diversity interacts with WF programs to impact performance. For example, Perry-Smith and Blum (2000) found that the relationship between the number of WF programs and perceived

A supportive gender diversity climate may enable the full participation by both men and women, thus improving insight into the needs of male and female customers.
organizational performance was stronger for organizations with a high representation of women. Similarly, Konrad and Mangel’s (2000) study findings indicated that WF programs had a stronger impact on productivity in organizations with a large representation of women.

**Nonmanagement and Management Gender Diversity and Performance Measures**

The nature of nonmanagerial and managerial work differs, as does the scope and impact of the contributions of nonmanagerial and managerial employees to organizational effectiveness (Mintzberg, 1973, 1994; Tengblad, 2006). Therefore, we further refine the earlier proposed diversity-performance relationships in organizations with few or many WF programs to account for differences in job level. We theorize that the proposed negative and positive relationships should be reflected in different performance measures depending on the level of employees in the organizational hierarchy. Predictors have a stronger impact on more proximate outcomes, and weaker impact on more distal outcomes; the size of the effect decreases as the predictor-outcome “distance” increases (Shrout & Bolger, 2002). For instance, nonmanagement gender diversity is likely to have a stronger impact on productivity and a weaker or even nonsignificant impact on financial performance. Specifically, we theorize that the impact of gender diversity at the nonmanagement level will be reflected in employee productivity, and the impact of gender diversity at the management level will be reflected in financial performance.

At the nonmanagement level, employees are primarily responsible for the completion of functional or technical tasks. Nonmanagerial employees are usually involved in repetitive work with some degree of specialization and concentration (Martin & Fraser, 2002; Mintzberg, 1973). The narrow focus and scope of their work is reflected in performance measures most relevant to the type of work they perform, such as customer satisfaction and employee productivity. In gender-diverse organizations with few WF programs, the negative employee behaviors predicted by self-categorization and social identity theories, such as relationship conflict (Jehn et al., 1999), communication problems, difficulties in working together (Alagna, Reddy, & Collins, 1982), and lower task cohesion (Shapcott et al., 2006) may prevail. These negative employee behaviors can adversely affect employee productivity (Ali et al., 2011).

In contrast, in gender-diverse organizations with many WF programs, gender diversity can produce valuable resources. Some of these resources, such as *market insight* into the needs of different consumer groups (Nkomo & Cox, 1996), are particularly valuable at the nonmanagement level, where employees deal directly with customers. This market insight can help boost sales of the company’s products/services to a gender-diverse set of customers leading to high levels of employee productivity (Frink et al., 2003). In addition, many WF programs may lead to higher levels of job commitment and satisfaction (R. S. Allen & Montgomery, 2001; Thompson et al., 1999). Highly committed and satisfied nonmanagerial employees are likely to provide high-quality customer service, which in turn can improve productivity (Valverde, Tregaskis, & Brewster, 2000). Thus, the proposed negative (in organizations with few WF programs) and positive (in organizations with many WF programs) diversity-performance relationships should be reflected in employee productivity at the nonmanagement level.

In comparison, at the management level, managers are primarily responsible for getting tasks completed through the employees they supervise. Managers perform a diverse set of functions, such as leading and controlling, and they switch among those functions at a rapid pace (Dierdorff, Rubin, & Morgeson, 2009; Mintzberg, 1973; Tengblad, 2006). The broad focus and scope of managerial work is reflected in performance measures such as financial performance and corporate reputation. In gender-diverse organizations with few WF programs, the negative behaviors associated with gender diversity, such as difficulties in working together (Alagna et al., 1982) and relationship conflict (Jehn et al.,
In gender-diverse organizations with many WF programs, gender diversity should produce valuable resources because the WF programs signal a supportive and inclusive climate (T. D. Allen, 2001; Casper & Harris, 2008). The resources of improved problem solving and creativity and innovation are particularly valuable at the managerial level and their impact would be reflected in financial performance measures (Cordeiro & Stites-Doe, 1997; Shrader, Blackburn, & Iles, 1997).

Managers are more involved in decision making than nonmanagerial employees (Richard et al., 2004). In particular, top management and middle management need to process unstructured complex information in order to make effective decisions (Edmondson, Roberto, & Watkins, 2003). Problem-solving resources are particularly valuable when top management teams formulate strategies and middle-management implement those strategies (Raes, Heijltjes, Glunk, & Roe, 2011). The quality of strategic decision making and implementation affects the financial performance of an organization (Dean & Sharfman, 1996; Floyd & Wooldridge, 1997). Further, upper-level managers act as initiators of organizational change, which can lead to higher levels of creativity and innovation (Mintzberg, 1973). Changes introduced at this level can have a long-term impact on organizational financial performance. Thus, the proposed negative (in organizations with few WF programs) and positive (in organizations with many WF programs) diversity-performance relationships should be reflected in financial performance at the management level.

In conclusion, gender diversity can initiate negative as well as positive processes in organizations. Few WF programs signal to employees that the organization has an unsupportive diversity climate. The unsupportive diversity climate allows negative processes to prevail over positive processes. The net negative effects of diversity should be reflected in lower productivity at the nonmanagement level and lower financial performance at the management level. In contrast, many WF programs signal to employees that the organization has a supportive diversity climate. The supportive diversity climate enables positive processes to surpass negative processes. The net positive effects of diversity should be reflected in higher productivity at the nonmanagement level and higher financial performance at the management level.

Thus, based on the rationale regarding the moderating effects of WF programs, and the effects of diversity at nonmanagement and management levels reflected in different performance measures, we propose:

**Hypothesis 1:** Work–family programs moderate the relationship between nonmanagement gender diversity and productivity such that the relationship will be negative in organizations with few programs and positive in organizations with many programs.

**Hypothesis 2:** Work–family programs moderate the relationship between management gender diversity and financial performance such that the relationship will be negative in organizations with few programs and positive in organizations with many programs.

Methods

We used data from multiple sources to examine the impact of WF programs on the relationship between gender diversity and performance, with a two-year time lag between gender diversity and performance (Lavarkas, 2008). A two-year time lag was adopted based on careful consideration of the type of diversity, level of analysis, and outcome variables. Gender diversity is visible and this visibility can quickly initiate diversity dynamics (Richard et al., 2006). Similarly, the availability or absence of WF programs can quickly strengthen or weaken gender
diversity dynamics. However, gender diversity can take a long time to impact organizational level outcomes, especially a distal outcome like financial performance (Huselid & Becker, 1996). Given the strategic focus of this study, a time lag shorter than two years may be insufficient to detect the effect of gender diversity on distal organizational outcomes. In addition, past human resource research studies have used a two-year time lag (e.g., Guest, Michie, Conway, & Sheehan, 2003; Youndt, Snell, Dean, & Lepak, 1996).

Sample and Data Collection

In September 2007, a survey titled “Managing in Today’s Competitive Environment: HR Practices that Make a Difference” and a cover letter were sent to HR decision makers (HR directors/HR managers/managing directors/CEOs) at 1,855 organizations listed on the ASX. A total of 213 organizations completed the survey. The survey respondents reported on gender diversity at nonmanagement and management levels for the year 2005. Data on gender diversity were matched with data on employee productivity and financial performance from financial databases. The survey respondents also reported on their WF programs, organization size, organization age, organization type, and industry type. Of the 213 responses, 198 surveys were usable in terms of having most questions answered, resulting in a response rate of 11.2 percent after adjusting for undelivered surveys (61), organizations that did not meet the study’s selection criteria (15 organizations were no longer listed on the ASX), and organizations that had recently ceased operating (5).

The response rate is low but acceptable when surveying senior executives (Cycyota & Harrison, 2006). A small sample can provide generalizable information if it represents the population of the study (Cook, Heath, & Thompson, 2000; Werner, Praxedes, & Kim, 2007). This study’s final sample of 198 organizations reflects a range of companies in size, women’s representation, and industry. Organization size ranged from no employees except executive board members to 21,268 employees (mean 813). The organizations with no employees except executive board members were not included in statistical analyses because no meaningful measure of gender diversity was available for these organizations. Women’s representation in the remaining organizations ranged from 0 percent to 100 percent (mean 34 percent). Organizational gender diversity data reported by survey respondents were compared with organizational gender diversity data reported by ASX-listed organizations to WGEA. This study’s participating organizations (n = 198) reported a mean organizational gender diversity of .35, and the ASX-listed organizations with 2005 reports in the WGEA database (n = 209) reported a mean gender diversity of .37 for 2005.

The fact that two samples from the same overall population produce gender diversity means with such similar values increases confidence that the responding organizations participating in the survey accurately reflect the gender diversity of the overall population. The participating organizations were drawn from nine out of ten industry groups based on Standard Industrial Classification (SIC) codes; no organization belonged to the Nonclassifiable Establishments category. The major representative groups were Mining (36 percent of organizations); Services (17 percent); Manufacturing (16 percent); and Finance, Insurance, and Real Estate (13 percent). These industry groups also have dominant representation within the ASX, with a 34 percent, 12 percent, 13 percent, and 12 percent share, respectively (ASX, 2011).

Measures

Predictors

Blau’s index of heterogeneity was used to calculate gender diversity at nonmanagement and management levels (Blau, 1977). As per Blau’s index, heterogeneity equals 1 – \( \Sigma p_i^2 \), where \( p_i \) represents the fractions of the population in each category. Blau’s index is based on a ratio or continuous scale (Buckingham & Saunders, 2004). As gender diversity is based on two categories, the index value (level of gender diversity) increases as the representation of men and women in the organization’s
workforce becomes more equal. The index ranges from zero, representing homogeneity (0/100 gender proportions), to 0.5 representing maximum gender diversity (50/50 gender proportions).

Outcomes

A single performance measure does not reflect the effectiveness of different functions of employees in an organization (Veen-Dirks, 2010). This study uses two objective performance measures, which correspond to the focus and scope of nonmanagerial and managerial activities. At the nonmanagement level, the employee productivity measure was selected because productivity is a direct measure of employee performance at the nonmanagement level. Employee productivity is also closely linked with the activities of employees and is thus an important measure of their performance (Delery & Shaw, 2001). Employee productivity was calculated in two steps. In the first step, the operating revenue (obtained from the FinAnalysis database) was divided by the number of employees (obtained from the Datalink database). In the second step, the resultant values were transformed using natural logarithm (Huselid, 1995; Konrad & Mangel, 2000). The final employee productivity values ranged from 1.20 to 20.56. At the management level, the earnings before interest and tax measure was selected. Earnings before interest and tax reflect the financial impact of managerial activities. It takes account of all relevant expenses, but excludes the less relevant expenses of interest and tax. Data on earnings before interest and tax (in millions of Australian dollars) were obtained from the FinAnalysis database.

Moderator

The study focuses on 12 work–family programs and practices (see Appendix). Nine items (Items 1–9) were drawn from Osterman’s (1995) frequently-cited WF scale (e.g., Konrad & Mangel, 2000; Perry-Smith & Blum, 2000; Thompson et al., 1999) with a reported reliability of .75. One item relating to maternity leave policy (Item 10) came from Konrad and Linnehan’s (1995) identity-conscious structures scale, and two items (Items 11–12) were added to cover unpaid and paid parental leave programs. The items relating to maternity/parental leave were included because a growing number of organizations in Australia are offering these leaves to their employees. In 2007, at the time of data collection, about 50.8 percent of private organizations with over 100 employees were offering paid maternity leave (EOWA, 2011). Together, these 12 items cover a range of work–family programs offered in organizations (Giardini & Kabst, 2008; Wood & De Menezes, 2010), and include the most frequently studied WF programs (e.g., Konrad & Mangel, 2000; Perry-Smith & Blum, 2000). All 12 items required “yes” (i.e., the organization offers this program) or “no” (i.e., the organization does not offer this program) answers. Respondents were asked to report the programs offered to the largest occupational group if different WF programs applied to different groups of employees. The total number of “yes” responses indicated the number of WF programs within an organization (Konrad & Mangel, 2000). Cronbach’s alpha (or KR-20 in this case of dichotomous responses) for the WF programs scale is .64 (Nunnally & Bernstein, 1994). The low alpha is acceptable given the formative nature of the WF programs scale. In fact, a high alpha for formative scales indicates multicollinearity, which is undesirable because it suggests that some items are redundant (Diamantopoulos & Siguaw, 2006; Petter, Straub, & Rai, 2007).

Controls

The analyses controlled for organization size, organization age, organization type, and industry type. Compared to small organizations, large organizations have a greater potential to perform better because of the economies of scale. Organization size is linked with HR policies and practices including WF programs (Konrad, 2007; Kotey & Sheridan, 2004). Consistent with previous research, organization size was operationalized as the total number of employees (Alexander, Nuchols, Bloom, & Lee, 1995). Organization age may have an impact on performance. Compared to old firms, new firms with less
formalized structures may be better positioned to capitalize on gender diversity and generate the resource of creativity and innovation. Organization age was operationalized as the number of years since the organization was founded (Jackson et al., 1991; Perry-Smith & Blum, 2000). Organizations that are holding companies or subsidiaries, compared to stand-alone organizations, may benefit from the combined financial resources (Richard, McMillan, Chadwick, & Dwyer, 2003). A dummy variable called “organization type” was created, with “1” representing “holding or subsidiary” and “0” representing “stand-alone.”

The effect of diversity on performance can vary across manufacturing and services industries because of the different levels of interaction among employees as well as between employees and customers (e.g., Ali et al., 2011; Godthelp & Glunk, 2003). The nine Standard Industrial Classification (SIC) industry groups of the sample organizations were categorized into manufacturing and services (Richard, Murthi, & Ismail, 2007). Transportation, Communications, Electric, Gas and Sanitary Services; Wholesale Trade; Retail Trade; Finance, Insurance and Real Estate; and Services constituted the services category. Agriculture, Forestry and Fishing; Mining; Construction; and Manufacturing constituted the manufacturing category (Richard et al., 2007). A dummy variable called “industry type” was created, with “1” representing manufacturing and “0” representing services.

Results

Table I presents the means, standard deviations, and correlation coefficients for all variables. While some studies suggest a significant positive correlation between employee productivity and financial performance (e.g., Richard, 2000), in our dataset “employee productivity” was not significantly correlated with “earnings before interest and tax.” The nonsignificant correlation may reflect particular aspects of the Australian context: Australian organizations demonstrate lower levels of productivity than other developed nations (Hannan & Gluyas, 2012), but still perform well financially because of strict financial regulations and sound organizational financial practices (Forster, 2009). The high correlation between “organization size” and “earnings before interest and tax” suggest that compared to small organizations, large organizations tend to have higher earnings before interest and tax. Therefore, it was important to control for the effects of organization size on outcome variables in the regression analyses. Multicollinearity among the control variables and predictor variables does not seem to be an issue because the results remained unchanged with or without the control variables (Becker, 2005).3

We used hierarchical multiple regression to test the two hypotheses. The interaction terms of gender diversity nonmanagement 2005 × work–family programs and gender diversity management 2005 × work–family programs were created to test the hypotheses. The predictor variables (gender diversity nonmanagement 2005 and gender diversity management 2005) and the moderating variable (work–family programs) were centered (only for regression analyses presented in Table II) to reduce multicollinearity with the interaction terms (Aiken & West, 1991). Hypothesis 1 proposed that nonmanagement gender diversity would be negatively related to productivity in organizations with few WF programs, and nonmanagement gender diversity would be positively related to productivity in organizations with many WF programs. To test Hypothesis 1, control variables were entered in Step 1; gender diversity nonmanagement 2005 and gender diversity management 2005 were entered in Step 2; and work–family programs, gender diversity nonmanagement 2005 × work–family programs, and gender diversity management 2005 × work–family programs were entered in Step 3 (see Table II under employee productivity 2007). The results shown in Table II indicate that the interaction term of gender diversity...
nonmanagement 2005 × work–family programs had a significant effect on employee productivity 2007 ($\beta = .25, p < .01$).4

We plotted the effect of nonmanagement gender diversity on employee productivity in both types of organizations. Figure 1 presents separate regression lines for organizations with few WF programs (one standard deviation below the mean) and for organizations with many WF programs (one standard deviation above the mean). The relationship between nonmanagement gender diversity in 2005 and employee productivity in 2007 was negative (higher nonmanagement gender diversity led to lower productivity) but nonsignificant for organizations with few WF programs ($\beta = -.01$, n.s.). The relationship between nonmanagement gender diversity in 2005 and employee productivity in 2007 was positive (higher nonmanagement gender diversity led to higher productivity) and significant for organizations with many WF programs ($\beta = .53, p < .001$). The significant positive relationship in organizations with many WF programs was consistent with Hypothesis 1.

Hypothesis 2 proposed that management gender diversity would be negatively related to earnings before interest and tax in organizations with few WF programs, and management gender diversity would be positively related to earnings before interest and tax in organizations with many WF programs. The hierarchical multiple regression procedure was repeated to test Hypothesis 2 (see Table II under earnings before interest and tax 2007). The results shown in Table II show that the interaction term of gender diversity management 2005 × work–family programs had a significant effect on earnings before interest and tax ($\beta = .14, p < .05$).5

We plotted the effects of management gender diversity on earnings before interest and tax in the two types of organizations.
Table II: Hierarchical Regression Analyses

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<th>Variable</th>
<th>Gender diversity nonmanagement 2005 predicting employee productivity 2007</th>
<th>Gender diversity management 2005 predicting earnings before interest and tax 2007</th>
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<tr>
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<td>Hypothesis 1</td>
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<td>Organization size</td>
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<td>Organization age</td>
<td>.22**</td>
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<td>predictors</td>
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<tr>
<td>Gender diversity nonmanagement 2005</td>
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<tr>
<td>interaction terms</td>
<td>Gender diversity nonmanagement 2005 \times work–family programs</td>
<td>.25**</td>
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<td>Gender diversity management 2005 \times work–family programs</td>
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<tr>
<td>( R^2 )</td>
<td>.11</td>
<td>.15</td>
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<tr>
<td>( F )</td>
<td>5.11**</td>
<td>4.81***</td>
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<td>( \Delta R^2 )</td>
<td>.11</td>
<td>.04</td>
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<tr>
<td>( F ) for ( \Delta R^2 )</td>
<td>5.11**</td>
<td>3.84*</td>
</tr>
</tbody>
</table>

\( *n = 165 \) (employee productivity), 160 (earnings before interest and tax); \( * \) Standardized coefficients are reported.

\( * p < .05, ** p < .01, *** p < .001 \)

Figure 2 presents separate regression lines for organizations with few WF programs (one standard deviation below the mean) and for organizations with many WF programs (one standard deviation above the mean). The relationship between management gender diversity in 2005 and earnings before interest and tax in 2007 was negative (higher management gender diversity led to lower earnings before interest and tax) and significant for organizations with few WF programs (\( \beta = −.17, p < .05 \)). The relationship between management gender diversity in 2005 and earnings before interest and tax in 2007 was positive (higher management gender diversity led to higher earnings before interest and tax).
The nonsignificant gender diversity–productivity relationship in organizations with few WF programs can be explained by the weak signal these programs generated about the employer’s value of gender diversity. Nonmanagement employees might have been uncertain if the few WF programs should be negatively interpreted as evidence that their employers did not value gender diversity or positively interpreted as suggesting that gender diversity management efforts might improve with

FIGURE 1. Moderating Effect of Work–Family Programs on the Gender Diversity–Employee Productivity Relationship
time. As a result, the weak signal generated by few WF programs led to ambiguous perceptions of the organization’s level of support of gender diversity and, thus, had no effect on productivity.

However, few WF programs seem to convey a more definite and negative signal to managers, possibly because managers have more bargaining power than nonmanagers (Jacobs, 1999) and therefore expect more from organizations. At the management level, the significant negative gender diversity–earnings before interest and tax relationship in organizations with few WF programs implies that few WF programs in a gender-diverse organization signal to managers that their employer does not value gender diversity. As a result, managers may perceive the organization as having an unsupportive gender diversity climate. Such perceptions might contribute to job dissatisfaction, negative group behaviors between male and female managers, and lower managerial and organizational performance (Connelly, Certo, Ireland, & Reutzel, 2011; Kelly, 2003; Sacco & Schmitt, 2005; Spence, 1973). The strong negative diversity dynamics might also prevent gender diversity from producing the resources of improved problem solving and creativity and innovation in these organizations (Rae, 2007). The non-significant gender diversity–earnings before interest and tax relationship in organizations with many WF programs indicates that WF programs are something managers expect from their employers. Therefore, the presence of these programs does not send a sufficiently strong signal capable of making a difference in gender diversity climate perceptions and, ultimately, on the gender diversity–financial performance relationship.

The significant positive relationship between nonmanagement gender diversity and productivity in organizations with many WF programs is consistent with past empirical studies that found interactive effects of WF programs and women’s representation (Konrad & Mangel, 2000; Perry-Smith & Blum, 2000). This study refines Konrad and Mangel’s (2000) and Perry-Smith and Blum’s (2000) arguments that a high representation of women together with many WF programs affect performance. By studying gender diversity (proportional representation of men and women), this research recognizes that both men and women face the challenge of balancing their work and family lives (Byron, 2005; Lambert & Kossek, 2005). The findings indicate that a high proportion of both men

![FIGURE 2. Moderating Effect of Work–Family Programs on the Gender Diversity–Earnings Before Interest and Tax Relationship](image-url)
and women at the nonmanagement level affects productivity, but the impact of this gender diversity on productivity depends on the number of WF programs offered by the organization.

Further, scholars recommend studying diversity dynamics at multiple levels to understand how an effect at one level translates at another level (Jackson, Joshi, & Erhardt, 2003). We take this recommendation a step further and reason that the impact of gender diversity at various organizational levels may be reflected in performance measures most relevant to those levels. Enhanced work–family support for male and female nonmanagerial employees enables them to be more productive, while a lack of support for male and female managerial employees can negatively affect the organization’s financial performance.

**Theoretical and Research Implications**

The study’s results have several theoretical and research implications. The findings of this study show that the value of gender diversity is conditional on the number of WF programs (Rae, 2007; Shin, 2009). Therefore, this research helps to further refine the value-in-diversity perspective, self-categorization and social identity theories, and contingency theory of diversity management (Cox & Blake, 1991; Galbraith, 1973; Tajfel, 1978; Turner et al., 1987). The findings imply that positive effects of diversity suggested by the value-in-diversity perspective and negative effects of diversity suggested by self-categorization and social identity theories are contingent on the number of WF programs. Further, our theoretical arguments for negative or positive relationships address the criticism that contingency theory generally does not specify whether the interaction between two variables will have negative or positive effects on the outcome variable (Schoonhoven, 1981).

This study fills important research gaps in the fields of gender diversity and WF programs and provides future research directions. For example, this research contributes to emerging empirical support for the alignment between gender diversity and WF programs: high gender diversity at the nonmanagement level and many WF programs can lead to high productivity, and high gender diversity at the management level and few WF programs can lead to low financial performance. Further, it contributes to the burgeoning study of the impact of diversity on organizational outcomes (e.g., Richard et al., 2007). More importantly, the findings of this study can help explain inconsistent results of past empirical research by demonstrating that the effects of diversity at different organizational levels are reflected in different performance measures. For instance, Ali et al. (2011) found positive effects of gender diversity at the organizational level on productivity, whereas Richard et al. (2004) found no main effects of gender diversity at the management level on productivity.

Moreover, this study boosts the limited number of studies that have investigated the organizational level outcomes of WF programs from an organization’s perspective (Arthur & Cook, 2003; Clifton & Shepard, 2004; Eby, Casper, Lockwood, Bordeaux, & Brinley, 2005; Roman & Blum, 2001), and bolsters the business case for WF programs (Kelly et al., 2008). It examines multiple organizations and uses objective measures, thus addressing criticism regarding the lack of rigor in studies investigating the business outcomes of WF programs (Kelly et al., 2008).

Future research is needed to continue to examine the interactive effects of gender diversity and WF programs on performance at other organizational levels, such as at the top-management team level. Future research can also benefit from studying a more comprehensive set of WF programs, such as gradual return to work, adoption leave, and spouse placement (Grover & Crooker, 1995). It is also important to understand the processes through which WF programs affect organizational performance. A multilevel study focusing on both the individual and organizational levels can help to investigate mediating factors such as WF conflict/facilitation (Kelly et al., 2008).
Gender diversity can have a positive impact on productivity at the nonmanagement level in the presence of many WF programs, while gender diversity can have a detrimental effect on financial performance at the management level in the presence of few WF programs. In other words, a broad portfolio of WF programs is beneficial at both nonmanagement and management levels. This is especially important because approximately 30 percent of organizations view cost as an important factor in offering work–family benefits (Families and Work Institute, 2008). Future research can investigate the actual return on investment by comparing the measurable benefits of WF programs with the costs of these programs in organizations varying in their level of gender diversity (Clifton & Shepard, 2004; Kelly et al., 2008). This understanding is particularly important in today’s environment, where managers are coping with a weak economy and a talent shortage (Somaya & Williamson, 2008). Organizations need to make informed decisions on WF programs that can contribute to productivity gains and financial loss minimization.

Limitations

This study has three main limitations. First, we could not control for the effects of other forms of diversity, such as racial and ethnic diversity, that can have an impact on performance (Richard et al., 2007). Organizations in Australia are not legally required to conduct racial and ethnic audits of their workforces. However, the Australian population has low levels of racial diversity (Australian Bureau of Statistics, 2006), which suggests that variations in workforce racial diversity are unlikely to have affected the study results.

Second, this study could not take into account who had access to and who benefited from the WF programs offered (Grover & Crooker, 1995). As this study is conducted at the organizational level, we focus on the number of WF programs rather than usage. However, this limitation is unlikely to have affected our findings because signaling effects are driven by the number of programs offered and not the number of people who benefit from those programs (Casper & Harris, 2008). We also could not take into account how effectively the WF programs

Practical Implications

The practical implications of the study’s findings are important as there is a clear theory/research-practice gap. On the theory/research side, scholars are identifying the causes of work–family conflicts, refining theoretical constructs and presenting general recommendations based on empirical research, whereas practitioners seem to be most concerned about specific policies and practices that can help reduce work–family conflict in their organization, leading to improved performance (Ruderman, 2005). The findings of this study inform managers that the effects of gender diversity are contingent both on the number of WF programs and the level at which gender diversity operates in the organizational hierarchy (nonmanagement or management). Gender diversity can have a positive impact on productivity at the nonmanagement level in the presence of many WF programs, while gender diversity can have a detrimental effect on financial performance

Moreover, future research would benefit from broadening the focus from work–family to work–life programs and to work–life climate. Work–life programs go beyond family friendliness by including policies and practices for single employees, such as setting reasonable standards for the number of work hours and providing a support group (Casper, Weltmant, & Kkesiga, 2007; Powell, 2011). Finally, future research should investigate whether the findings of this study generalize to other national contexts. Australia is a moderate to high masculine country (where social roles tend to be based on gender) so results might be different in extremely low masculine countries (where social roles and behaviors tend not to be based on gender), such as Denmark, Netherlands, Norway, and Sweden (Hofstede, 2001).

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were implemented. The implementation of WF programs may strengthen or weaken the signaling effects leading to an impact on the gender diversity–performance relationship (Ryan & Kossek, 2008).

Third, since only for-profit organizations are listed on the ASX, the research results may not be directly generalizable to nonprofit organizations. Moreover, the signaling effects predicted in this study may be less powerful in public (government) sector organizations given that these organizations tend to offer a greater number of WF programs than do private sector organizations (Baird, Frino, & Williamson, 2009).

Conclusion

Overall, this study responds to calls to conduct diversity research outside the United States and at the organizational level (Jonsen, Maznevski, & Schneider, 2011). Specifically, this study contributes to our knowledge of the impact of WF programs on the relationship between gender diversity and performance. Overall, the findings indicate that organizations that have a wide portfolio of WF programs are more likely to benefit from the gender diversity in their workforces than their limited-portfolio counterparts. This study’s findings inform practice by showing that the nature of these benefits varies across organizational levels. Thus, the study highlights the importance of identifying appropriate measures of diversity initiative effectiveness.

Acknowledgments

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Notes

1. In 2007, at the time of data collection for this study, the Workplace Relations (Work Choices) Act 2005 was in place, which was considered employer friendly. The act’s underlying objective was to make businesses in Australia more competitive. Under the act, the individual nature of Australian Workplace Agreements empowered employers to determine working conditions, disadvantaging women employees (Smith, 2008).

2. Data on gender diversity were also collected from Australia’s Workplace Gender Equality Agency (WGEA) database. Of the 213 organizations participating in this study, 145 organizations had equal opportunity reports in the WGEA database. The correlation between the gender diversity data from the two sources (survey and WGEA) for the 145 organizations was \( r = .87, p < .01 \).

3. Incorrect inferences may result from multicollinearity among predictor and control variables (Becker, 2005). We repeated the regression analyses reported in Table II without control variables. In the absence of control variables, the gender diversity nonmanagement 2005 × work–family programs and gender diversity management 2005 × work–family programs terms remain significant.

4. We included both main effect terms and both interaction terms in our regression analysis to capture their simultaneous effects on employee productivity (Kirkman, Cordery, Mathieu, Rosen, & Kukenberger, 2013). However, we repeated the regression analyses reported in Table II (gender diversity nonmanagement 2005 predicting employee productivity 2007) without the extraneous main effect term (gender diversity management 2005) and interaction term (gender diversity management 2005 × work–family programs). In the absence of extraneous terms, the gender diversity nonmanagement 2005 × work–family programs term remains significant.

5. We included both main effect terms and both interaction terms in our regression analysis to capture their simultaneous effects on earnings before interest and tax (Kirkman et al., 2013). We repeated the regression analyses reported in Table II (gender diversity management 2005 predicting earnings before interest and tax 2007) without the extraneous main effect term (gender diversity nonmanagement 2005) and interaction term (gender diversity nonmanagement 2005 × work–family programs). In the absence of extraneous terms, the gender diversity management 2005 × work–family programs term remains significant.
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References


APPENDIX  Work–Family Programs Scale

1. On-site child care is paid or subsidized by the organization.
2. Off-site child care is paid or subsidized by the organization.
3. Child-care subsidies are paid by the organization to the employees directly.
4. Donations are made to local child-care providers in exchange for employee access to child care.
5. Child-care referrals are provided to employees.
6. There is a full-time equivalent position designated to handle work–family issues.
7. Workshops on work–family issues are provided to employees.
8. Elder-care referrals are provided to employees.
9. Flexible hours are offered to most employees.
10. A maternity leave policy exists separately from the disability plan.
11. Unpaid parental leave in excess of the legislated requirement is available to employees.
12. Paid parental leave in excess of the legislated requirement is available to employees.