When Does Gender Diversity Enhance Team Performance? The Dual Need for Leader Visionary Leadership and Team Tenure

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Abstract

Teams in organizations are becoming more gender diverse as women continue to participate more in the workforce than ever before. Prior theory and research indicate that the characteristics of the team influence whether gender diversity in a team is an asset or a detriment. As such, this research explores a contingency model of the relation between gender diversity and team performance and looks to understand conditions that make this relation positive or negative. Specifically, we examine how leader vision communication (i.e., visionary leadership) affects the relation between gender diversity and team performance. Results from a sample of 595 full-time employees across 106 teams in China indicate that leader vision communication moderates the relation between gender diversity and team performance such that when leader vision communication is low gender diversity decreases team performance and when leader vision communication is high gender diversity has no significant relation with team performance. We also test whether team tenure changes this relationship. Our results suggest that gender diversity improves team performance when both leader vision communication and team tenure are high. The findings in our sample demonstrate that gender diversity can help teams enhance performance, but only when the conditions are right for gender-diverse teams to flourish.

Keywords: leader vision communication, visionary leadership, diversity, gender diversity, team composition

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Organizations rely on teams to accomplish their goals (Kozlowski & Bell, 2003), and the workforce continues to become increasingly diverse; as such, scholars have sought to understand how demographic diversity affects team performance (e.g., Cunningham, 2009; Nakui et al., 2011; Tasheva & Hillman, 2019; van Knippenberg & Schippers, 2007). Gender diversity, in particular, is an increasing reality for teams as more women join the workforce (Weinstein, 2018). Yet, the effects of gender diversity on team performance are mixed. While some research suggests that gender diversity helps team performance (e.g., Hoogendoorn et al., 2013), prior meta-analytic evidence indicates that the effects are negative (Bell et al., 2011; van Dijk, van Engen, & van Knippenberg, 2012) or neutral (van Dijk et al., 2012). These competing findings are likely due to gender diversity being both an asset and a liability in teams (van Knippenberg et al., 2004; Srikanth et al., 2016; Horwitz & Horwitz, 2007); thus, contextual factors must be considered to best understand the effects of gender diversity on team performance (Guillaume et al., 2017; van Knippenberg & Schippers, 2007). We propose that leader vision communication (also referred to as visionary leadership) may unlock the benefits of gender-diverse teams by helping team members see past surface-level differences and perform better together. In addition, we predict that leader vision communication is most effective for teams with experience working together due to team members' capability to know where unique perspectives and resources lie within the team.

Previous scholars have explored various contextual variables in an attempt to better understand the relation between gender diversity and performance (for a review see, Guillaume et al., 2017). However, although leadership is thought to be an important contextual variable to

understand the relation between workplace diversity and outcomes (Joshi et al., 2011; van Knippenberg et al., 2004), Guillaume and colleagues (2017) noted that "a limited number of studies exist that have examined leadership as a moderator" (p. 287). Hence, we aim to show that that leader vision communication (also referred to as visionary leadership) is a critical leadership behavior that moderators the relation between gender diversity and team performance. We also posit that leader vision communication will help gender-diverse teams the most when those teams have been together longer. We draw upon the Categorization Elaboration Model (CEM; van Knippenberg et al., 2004) to hypothesize how leader vision communication and team tenure have the potential to affect the relation between gender diversity and team performance. Despite the theoretical claims that leadership is an important moderator to consider when understanding the effects of gender diversity on team performance, prior research has yet to test this relation. Further, research has yet to specify what type of leadership is important for gender-diverse teams.

We hope to make three distinct contributions to various management literatures. First, we endeavor to make a contribution to the leadership literature by showing additional benefits of leader vision communication. Previous research has shown that it can increase follower adaptivity and proactivity (Griffin et al., 2010), spur organizational change (Awamleh & Gardner, 1999), and boost organizational growth (Baum et al. 1998). We hope to show that leader vision communication can help teams benefit from gender diversity as well. Second, we seek to contribute to the diversity literature by exploring what conditions help facilitate a positive relation between gender diversity and team performance. Although an increase in gender diversity has the potential to increase performance by providing the team with diverse knowledge and complementary perspectives (Wood, 1987), prior research has shown that it is

often difficult to create the conditions where this potential strength can be utilized (e.g., Bell et al., 2011). Third, we aim to make a contribution to the teams literature by illustrating how teams can best be structured in order to help organizations benefit most from gender diversity. In what follows we will first discuss the rationale for our study by drawing on the CEM, then present the study, and conclude with implications our results have for theory and future research in diversity, teams, and leadership. Figure 1 presents our proposed model.

Insert Figure 1 about here

Gender Diversity & the Categorization-Elaboration Model

Because women continue to integrate more into the workplace, the impact gender diversity has on team performance is more relevant now than ever before. As noted previously, we turn to the CEM to understand how leader vision communication and team tenure can influence the effects of gender diversity on team performance. The CEM has been well supported by empirical evidence (e.g., Homan et al., 2008; Homan et al., 2007; Kearney & Gebert, 2009; Kearney et al., 2009) and is considered one of the best models to understand the effects of workgroup diversity (Guillaume et al., 2017; van Dijk et al., 2012). The CEM indicates that there are two competing perspectives to understand the effects of diversity in teams – the information/decision-making perspective and the social categorization perspective. According to the information/decision-making perspective, the increase in gender diversity will benefit teams and organizations because differences between genders will provide complementary perspectives and experiences (van Knippenberg et al., 2004; Wood, 1987). Thus, gender diversity allows teams to have success as it allows teams to draw on different pools of resources and can lead to

greater informational elaboration (Rico et al., 2012). Indeed, many voices calling for more gender-diverse leadership teams have noted that businesses are missing out on important and unique perspectives when they do not have gender diversity (Stephenson, 2004). However, according to the social categorization perspective, the increase in gender diversity can harm teams and organizations because gender differences can create harmful tension and conflict within the team due to differences between team members (Jehn et al., 1999; van Knippenberg et al., 2004).

Based on the CEM, contextual factors are important to consider when studying the effects of diversity in teams because they can suppress or exacerbate social categorization and information elaboration processes (Guillaume et al., 2017). How contextual factors influence social categorization and information elaboration processes can alter how team diversity characteristics affect performance. By suppressing social categorization and by increasing information elaboration, contextual factors can moderate the relation between gender diversity and team performance and create a positive relation between team diversity and performance. Some prior research has explored different moderators and found circumstances when gender diversity increases team performance. For example, gender-diverse teams have been found to perform better at tasks that require a high degree of innovation (e.g., Diaz-Garcia et al., 2013). Group efficacy has also been found to enable higher performance for gender-diverse teams (e.g., Lee & Farh, 2004).

Yet, most research that has explored potential moderators between gender diversity and team performance have found either no effects (e.g. Ely, 2004; Jehn & Bezrukova, 2004), negative effects (e.g., Jackson & Joshi, 2004; Zoogah et al., 2011), or effects that simply reduce a negative relation between gender diversity and team outcomes (Ely, 2004). For example, Ely

(2004) used a sample of banks and found that diversity training programs and team cooperation and teamwork did not moderate the relation between gender diversity and sales productivity, new sales revenue, aggregate performance, or customer satisfaction. The study found that diversity training programs only moderated the relation between gender diversity and customer referrals by reducing the negative effect between gender diversity and referrals. Also, work by Jackson and Joshi (2004) found that gender diversity and manager gender significantly interacted to affect team sales achievement such that gender diversity hurt team sales performance but only for female managers. And Zoogah and colleagues (2011) found that the relation between gender diversity and team performance was negative and the negative relation was strengthened when teams had more coordination. In sum, gender diversity may enhance team performance under certain settings, but prior research has demonstrated that harnessing the benefits of gender diversity and leveraging those benefits to increase performance may be difficult. However, leader vision communication and team tenure are potential moderators that may work interactively to allow gender diversity to positively affect team performance because they should decrease social categorization processes and enhance information elaboration processes.

The Moderating Role of Leader Vision Communication

While effective leadership, in general, is key to team and organizational functioning (Morgeson et al., 2010), we argue that leader vision communication plays an especially important role in gender-diverse teams. Specifically, we posit that leader vision communication should moderate the gender diversity-team performance relation by helping teams overcome social categorization processes and by helping teams increase information elaboration as they strive to attain the leader's vision. Leader vision communication is a facet of transformational leadership (Bass, 1985). However, leadership scholars have noted a myriad of issues with the

transformational leadership construct and have advocated for research to "examine more empirically distinct aspects of leadership" (Van Knippenberg & Sitkin, 2013, p. 2). Indeed, many researchers have begun to examine leader vision communication in isolation, and vision communication is a growing construct in leadership research (e.g., Carton & Lucas, 2018; Kearney et al., 2019; van Houwelingen et al., 2017; Venus et al., in press).

Leader vision communication in teams includes providing a compelling idealization of the future for the team and its members, inspiring team members about the future, and getting team members to jointly buy into the leader's goals and future plans (Podsakoff et al., 1990). Leader vision communication has been found to help followers and teams in several ways. Prior research finds that it creates a shared sense of purpose among followers (Carton et al., 2014) and helps individuals see how their work fits into overarching goals (Taylor et al., 2014). It also helps followers create an ideal self and assists them to make their ideal self a reality (Stam et al., 2010a). Leader vision communication also helps followers understand what behaviors to avoid (Stam et al., 2010b). This leadership behavior has been found to increase overall firm performance (Ashford et al., 2018). In sum, when leaders articulate a vision for their followers or team they facilitate a shared sense of purpose for the future that inspires and motivates individuals and teams to strive for shared goals.

These outcomes of leader vision communication – creating a shared sense of purpose for the future and generating shared goals – should help teams see past surface-level gender differences because team members will focus on the vision of the future and be motivated to work together to attain the leader's vision. Indeed, prior research finds that teams with a shared vision are able to overcome team diversity and leverage differences for the benefit of the team (Hofhuis et al., 2018). Further, leaders who communicate a vision will likely make demographic

diversity less pertinent by getting employees to buy into a larger cause (Greer et al., 2012; Homan et al., 2012) and share an ultimate goal (Carton et al., 2014). Thus, these leaders will help followers focus less on the differences among themselves and more on the vision of the leader. These aspects of leader vision communication should dampen the negative effects of social categorization processes in gender-diverse teams allowing them to overcome this potential negative aspect derived from being gender-diverse.

Leader vision communication, through helping teams strive to attain the shared goal given by the leader's vision, should also encourage teams to engage in information elaboration. Teams led by a leader high in vision communication should capitalize on the wide range of perspectives and knowledge derived from gender differences as they seek to attain the shared vision given by the leader. This capacity is important because a team with a variety of unique and valuable resources among its members may or may not effectively use those resources to increase team performance (Stewart, 2006; Barton & Bunderson, 2014). Teams striving for a shared vision laid out by their leader will be more likely to capitalize on qualitative differences of gender compared to those teams that do not have a clear vision set forth by their leader. In conclusion, we argue that gender diversity will have a more positive impact on team performance when the team has a leader high in vision communication.

Hypothesis 1: Leader vision communication moderates the relation between team gender diversity and team performance, such that gender diversity has a more positive relation with team performance for teams that are led by a leader high in vision communication.

The Three-way Interaction between Gender Diversity, Leader Vision Communication, and Team Tenure

Now we turn to team tenure, or the amount of time teams have spent working together. Prior research suggests that team tenure has important implications for team performance (Carter et al.; Gonzalez-Mulé et al., in press; Smith et al., 1994). We posit that gender-diverse teams led by a leader high in vision communication should benefit more from the gender-diverse composition of their team when they have more time working together; this will occur because teams will better recognize one another's expertise and will thus have enhanced information elaboration. Notably, with regards to the CEM model, tenure can lead to better information elaboration, as time together can help members recognize each other's areas of expertise (Bunderson, 2003), can improve communication and coordination (e.g., Gersick & Hackman, 1990; Katz, 1982), and can help them know where key information resides within the team (Gonzalez-Mule et al., in press). Teams need to be able to accurately assess where expertise and unique information lie if they are to capitalize on the unique differences and perspectives of team members. This issue is particularly vital for gender-diverse teams because individuals often discount the expertise of others based on gender (Joshi, 2014).

Importantly, we argue that the moderating effects of team tenure will only occur for teams when their leader is high in vision communication because teams with a leader low in vision communication may suffer from social categorization issues. Prior research provides competing evidence about team tenure's ability to reduce a demographically diverse team's social categorization processes. Some research has found that team tenure can increase group socialization (e.g., Levine & Moreland, 1994) and that demographic diversity, like gender diversity, becomes less salient in teams over time (e.g., Harrison et al., 2002). But other research has found that demographic diversity can increase its negative impact on outcomes as team tenure increases (Watson et al., 1998). Relatedly, Mohammed and Angell (2004) found that the

correlation between team gender diversity and relationship conflict stayed almost the exact same at two measurement points. These competing findings make it unclear if team tenure can suppress social categorization issues faced by gender-diverse teams. Thus, team tenure may not always lead to information elaboration in gender-diverse teams because they may suffer from social categorization issues which can obstruct information elaboration processes. However, leader vision communication should help information elaboration to occur in longer-tenured teams that are gender-diverse because leader vision communication should suppress social categorization processes.

In summary, leader vision communication should help suppress social categorization processes for gender-diverse teams by helping them jointly focus on their team's future and leader's vision. This suppression of social categorization in the team should then allow gender-diverse teams with a leader high in vision communication to have enhanced information-elaboration due to team tenure. Thus, given a team has both a visionary leader and tenure working together they will effectively be able to tap into and utilize the unique and differing perspectives of those in the team both by knowing where the unique information lies within the team (Bunderson, 2003) and by engaging in a shared vision that allows them to look past surface-level differences. Leader vision communication may also push teams to access relevant team information gained from experience working together in order to achieve the leader's vision. Gender-diverse teams who have a leader high in vision communication should have higher performance when they have higher tenure compared to those that have relatively lower tenure. We thus predict that the vision communication behaviors for leaders of gender-diverse teams will be more effective when the team has more time working together.

Hypothesis 2: There is a three-way interaction between gender diversity, leader vision communication, and team tenure such that gender diversity will be most positively related to team performance when both leader vision communication and team tenure are high.

Method

Procedure and Sample

The participants in this study were 655 full-time employees and 120 direct supervisors. Participants came from a variety of corporations belonging to several different industries (e.g., information technology, construction, banking, manufacturing, education, service, culture, wholesale, and retail). The contact information of these participants was provided by 113 MBA students who were participating in a part-time MBA program at a large university located in east China. Two types of questionnaires were distributed via express mail, one for employees on the teams and the other for the team's supervisor. Completed surveys were returned to the authors within four weeks. In response, we received 595 employee questionnaires, which constituted a response rate of 90.8 percent. We received 107 questionnaires from supervisors, constituting a response rate of 89.1 percent. The overall response rate (followers and supervisors combined) was 90.6 percent. The mean age of followers was 32.2 years old (range from 22 to 60), and 63.6 percent of them were male. About half of the followers had at least a bachelor's degree (66.2 percent).

One team was excluded from the final analysis due to a lack of responses on team tenure measures, thus bringing our final sample to 106 teams[1]. The team that was excluded from the

[1] Of the 106 teams in the final sample, 87 teams had all respondents provide gender information, and 16 were missing the gender information of only a single team member. In order to ensure that our results were not affected by missing gender responses, we re-tested all of our hypotheses with only the 87 teams with full responses on gender. Our significant results remained significant.

final analysis was not meaningfully different from those included in the sample (i.e., the excluded team's average age and size were similar to their respective sample averages). Of the 106 teams in our final sample, 34% of our teams had a female majority, 7% were equally male-female, and 59% had a male majority. Fourteen teams were composed of only female members and twenty-six were composed of only male members.

Measures

Gender diversity. Gender diversity was calculated using Blau's (1977) index. Blau's index is the most common way to measure gender diversity, and in a recent meta-analysis, 23 of the 26 field studies used this measure (Bell et al., 2011). The formula to calculate the index is $1 - \mathbf{\Sigma} p_k^2$, where p is the proportion of team members in the kth category. In other words, Blau's index sums the squared proportion of team members in each category and then subtracts that summed value from one. Values of the index range from 0 to 1 and capture the group member diversity over a categorical demographic variable, with higher values indicating that members are more evenly spread across all categories of the measured demographic variable. In our sample, there were only two reported values for gender 0 and 1. Thus, for Blau's index, a team composed of only males (i.e., all team members reported 0) or a team composed of only females (i.e., all team members reported 1) would result in a gender diversity value of zero. Meaning that all-female or all-male teams have the same value of diversity (i.e., zero) when using Blau's index. These all-male and all-female teams were included in the sample and represent teams with low gender diversity.

Leader vision communication. Leader vision communication was assessed using the 5-item scale of leader vision communication developed by Podsakoff et al. (1990) and was completed by followers ($\alpha = .93$). Example items were, "Our leader inspires others with his/her

plans for the future," "Our leader paints an interesting picture of the future for the group," and "Our leader is able to get others committed to his/her dream." Responses were given on a seven-point Likert scale (1 = "strongly disagree" to 7 = "strongly agree"). Follower responses on each team were aggregated by taking the average to make a single value for each leader. Interrater reliability measures indicated a sufficient level of agreement among team members (Median r_{WG} = .92, Mean r_{WG} = .84, *SD* = .21; ICC[1] = .22, ICC[2] = .55, F [105, 467] = 2.24, $p < .001$).

Team Average Tenure. In order to measure team tenure, participants responded to the following prompt: "How long have you been working in this team?" Team average tenure was calculated by taking the average response of member's tenure on each team. This type of aggregation method for team tenure is in line with previous research (Carter et al., 2019).

Team Performance. Team performance was assessed using a five-item scale adapted from Alper et al., (2000) and was completed by supervisors (α = .94). It assessed teams concerning certain performance criteria suggested by Van der Vegt and Bunderson (2005) – efficiency, productivity, and general performance. An example item was, "Team members work effectively." Responses were given on a seven-point Likert scale (1 = "strongly disagree" to 7 = "strongly agree").

Control variables. We included three control variables that are related to team outcomes and our measures: team size, the standard deviation of team members' tenure, and interdependence. Team size was measured by the number of people on the team. The standard deviation of team members' tenure was included as a control to consider the effects outliers may have on our measure of team tenure. Finally, to assure we were measuring teams we controlled for interdependence. Interdependence was assessed using an adapted 6-item scale developed by Van der Vegt et al., (1999) and was completed by followers (α = .92). An example item was, "I

will benefit if other team members complete their work," and responses were given on a seven-point Likert scale (1 = "strongly disagree" to 7 = "strongly agree"). Responses on each team were aggregated by taking the average to make a single value for each team, and again, interrater reliability measures indicated a sufficient level of agreement among team members (Median r_{WG} = .92, Mean r_{WG} = .89, *SD* = .09; ICC[1] = .27, ICC[2] = .63, F [105, 467] = 2.67, $p < .001$).

Results

Table 1 presents the means, standard deviations, and correlations for the variables used in the study. We mean-centered our dependent variable of team performance to provide a meaningful zero (i.e., scores of zero represent the average team performance in our sample). In order to test our hypotheses, we used hierarchical linear regression and followed the recommendations provided by Cohen and colleagues (2003). As suggested by several researchers (e.g., Becker, 2005; Carlson & Wu, 2012; Spector & Brannick, 2011) we tested our hypotheses without the inclusion of our controls and then entered our controls. First, in Step 1, we mean-centered all of our predictor variables and entered them into the model. Then, in Step 2, to test Hypothesis 1 we entered the product term for the interaction between gender diversity and leader vision communication. Next, in Step 3, we entered the product terms of gender diversity/team tenure, and leader vision communication/team tenure. Then, in Step 4, to test Hypothesis 2, we entered the product term of gender diversity, leader vision communication, and team tenure. Table 2 shows the results of our analysis predicting team performance. Finally, we retested our hypotheses with our controls and those are reported in Table 2, Models 5 and 6. As seen in Table 2, significant results remain unchanged with or without controls.

Insert Table 1 and 2 about here

The interaction term of gender diversity and leader vision communication in Table 2, Model 2 was significant (b = 1.68, p = .0299, Δ adjusted R^2 = .04), offering support to Hypothesis 1. To further explore this relation, we conducted simple slopes analysis (Aiken & West, 1991) and plotted the moderator variable of leader vision communication at 1 *SD* above and below the mean. Figure 2 depicts the interaction effect plotted at +/- 1 *SD* of leader vision communication. At high levels of leader vision communication (+1 *SD*) team gender diversity had a positive, but insignificant relation with team performance (β = .63, *ns*). However, at low levels of leader vision communication (-1 *SD*) team gender diversity negatively affected team performance (β = -1.41, p < .05).

Insert Figure 2 about here

The three-way interaction term between gender diversity, leader vision communication, and team tenure (shown in Table 2, Model 4) was significant (b = .96, p = .0098, Δ adjusted R^2 = .05) providing support for Hypothesis 2. To further explore the interaction effect we conducted simple slopes analysis. Simple slope analysis revealed that when leader vision communication and team tenure were high (+1 *SD*) the relation between gender diversity and performance was positive and significantly different from zero (β = 2.76, p < .01). However, when leader vision communication was high (+1 *SD*) but team tenure was low (-1 *SD*) there was no significant relation between gender diversity and team performance (β = -1.07, *ns*). Figure 3 shows the three-way interaction of gender diversity, leader vision communication, and team tenure.

Insert Figure 3 about here

Discussion

Our study has sought to shed light on the effects of gender diversity in teams and follows the recommendations of prior scholars by exploring moderators of the relation between gender diversity and team performance (e.g., Guillaume et al., 2017; van Dijk et al., 2012). In our sample, we found evidence for the benefits of gender diversity to team performance. We also found evidence for its detriments. This is in line with prior scholars, who have suggested that the effect of gender diversity on performance has the potential to be both positive and negative (e.g., van Knippenberg et al., 2004). Indeed, we found that leader vision communication moderated the relation between gender diversity and team performance, such that team performance was negatively affected by gender diversity when vision communication was low. Yet, leader vision communication alone was not sufficient to lead to a positive relation between gender diversity and team performance. Our study found that vision communication enabled gender diversity to positively impact team performance, but only if the team had been together longer than average for the sample. Related to our findings, several studies have failed to find moderators that lead to a positive relation between gender diversity and team performance (e.g., Jackson & Joshi, 2004; Zoogah, et al., 2011). Considering our findings, previous work, and two recent meta-analyses that looked at the relation between gender diversity and team performance that found either a negative relation or no relation (Bell et al., 2011; van Dijk et al., 2012), the positive effects of gender diversity may be difficult to exploit. Hence, our work provides a compelling way to harness the positive benefits of gender diversity in a team. These findings have important implications for researchers and practitioners alike.

Theoretical Implications

The results of our findings have at least three important theoretical contributions to leadership, diversity, and team literatures. First, we add to theoretical work on leadership in teams (Morgeson et al., 2010). Leadership scholars have long noted the importance of leadership in understanding organizational phenomena. Having a leader low in vision communication may exacerbate gender-diverse teams' issues of social categorization. Namely, leaders low in vision communication may not be effective in providing a vision for the team and pushing team members to maximize their efforts. Our results add to the notion that effective leadership is essential for teams to perform at their highest level.

Second, gender diversity (Harrison & Klein, 2007) has the potential to yield both positive and negative outcomes for team performance. Our hypothesized relations drew from the Categorization Elaboration Model (van Knippenberg et al., 2004), which suggests a contingency view of the diversity-team performance relation, and found support with respect to gender diversity. We highlight how leader vision communication is an important contextual variable to understand the performance of gender-diverse teams. When leader vision communication was low, gender diversity lowered team performance. However, when leader vision communication and team tenure were both high, gender diversity improved team performance. It appears that the benefits of gender diversity can be exploited when teams have a leader who displays vision communication and have been together for a longer period of time because in these circumstances teams are able to overcome biases and they are able to capitalize on different knowledge sources effectively. Yet, teams likely succumb to the disadvantages of gender diversity when they are unable to overcome biases and when gender differences become pertinent.

Third, our findings highlight how team tenure plays an important role in helping gender diversity drive team performance. We found that gender-diverse teams perform best when they have a leader who displays vision communication and have been together longer. Prior researchers have called for researchers to explore factors that allow tenure to improve diverse teams' performance (e.g., van Knippenbeg & Mell, 2016), and our results indicate that leader vision communication is an important variable to consider. This contribution also adds to previous work on team composition. Clearly, the characteristics of team members matter for team success. For example, we know that personality (e.g., Bell, 2007; Morgeson et al., 2005), and demographic characteristics (e.g., Bell et al., 2011; van Dijk et al., 2012) are important for team success. In our study, we specifically add gender composition to this body of evidence and show that its impact on team performance may best be understood through a contingency perspective.

Managerial Implications

As organizations continue to rely on teams to solve their complex problems (Kozlowski & Bell, 2003), our study provides several important implications for both organizations and practicing managers. First, our research gives further evidence of the importance of having leader vision communication. The ability organizations have to select, train, and retain leaders who can effectively communicate vision has important repercussions for team performance. Based on our findings, and ample evidence from previous scholars (e.g., Stam et al., 2010a; 2010b; Taylor et al., 2014; Westley & Mintzberg, 1989), organizations need to be aware of their leader's abilities and provide resources for leader vision communication development so that leaders can develop the behaviors needed to lead gender-diverse teams effectively. Our findings also provide insight into team design and personnel selection. Creating

gender-diverse teams can be an advantage that leads to improved performance, but managers need to be careful to make sure that gender-diverse teams have capable leaders who can effectively convey a vision. Otherwise, teams led by one who is low in vision communication will have decreased team performance. Also, keeping gender-diverse teams together longer will help them better reap the benefits of gender diversity they can receive when led by a leader high in vision communication.

Beyond managers and organizations creating gender-diverse teams strategically in an effort to improve performance, organizations may have gender-diverse teams whether they want them or not. Legal protection around hiring workers regardless of gender is common practice in most industrialized countries. Gender-diverse teams will likely become the norm for many organizations as women continue to integrate more into the workforce, and into industries that have traditionally had lower gender diversity. Therefore, the results of this study have a wider application beyond just managers and organizations seeking to create gender-diverse teams and speak to the larger social trend of more gender-diverse teams in general. Another important takeaway for managers is that seeing the benefits of gender-diverse teams may take time and may only manifest in longer-tenured teams. In the fast pace business economy, managers often seek immediate fixes and quick solutions to problems. Yet, certain things take time to develop, and our findings suggest that unlocking the positive aspects of gender-diverse teams led by a leader who displays vision communication may require teams to work together longer to result in enhanced performance.

Limitations and Future Directions

Our study is not without limitations. First, our sample was cross-sectional. Another limitation of our sample is that we utilized a subjective measure of team performance because

our sample came from teams in a variety of organizations. Future research could explore the moderators of the relation between gender diversity and team performance using longitudinal data and more objective measures of performance (van Dijk et al., 2012). Finally, we did not include any mediating mechanisms in our model. Future work could study the mediating mechanisms that help deepen our understanding of the conditional effect found in our study. Future research could also look at other leadership styles as potential moderators. Prior scholars have noted that leadership could be a potential moderator between gender diversity and team performance (Guillaume et al. 2017), and this study only explored one type of leadership behavior – vision communication. In addition to leader vision communication, other leadership behaviors should be studied, because they may be able to unlock the benefits of gender diversity or exacerbate the costs of gender diversity. Humble leadership, in particular, may be a beneficial leadership style to improve the performance of gender-diverse teams. Humble leaders acknowledge follower contributions, are self-aware of weaknesses, and model teachability (Owens & Heckman, 2012). These behaviors may thus have the potential to diminish team members' biases and facilitate a team environment where diverse knowledge sources are used for the team's benefit. Future research would benefit from understanding which types of leadership work best for gender-diverse teams because leadership can often be contingent on follower and team characteristics (e.g., Perry et al., 2010; Van Kleef et al., 2009).

Future research should also adopt a more dynamic view of team gender diversity. Our study assumed a relatively stable perspective of how gender diversity affects teams. However, it is likely that social categorization and information elaboration processes are not static in gender-diverse teams and these two processes likely ebb and flow in a dynamic manner. Indeed, exploring the dynamic effects of leadership is an important way to understand leaders and

leadership (Kelemen et al., 2020; McClean et al., 2019). Understanding the potentially dynamic way in which gender diversity and leadership affect teams can broaden understanding and invite novel insights into the processes of how to deal with gender diversity in teams.

Conclusion

Gender diversity in a team can improve or hurt team performance (van Knippenberg et al., 2014). Our findings provide important insights that show how teams can take gender diversity, a potential disadvantage that often leads to decreased performance (Bell et al., 2011), and turn it into an asset to increase performance. We find in our study that one promising path to maximizing the benefits of gender diversity in teams is to have gender-diverse teams stay together longer and be led by a leader who effectively communicates a vision.

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