The Impact of Team Power Distribution Differences on Team Conflict: The Role of Procedural Justice and Legitimacy

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Abstract

In recent years, the relationship between team power distribution disparity and team conflict has attracted considerable attention from academia, yet research findings remain mixed. Through a survey of 70 work teams, this study investigates the boundary conditions of the effect of team power distribution disparity on team conflict (task conflict, relationship conflict). The results indicate that procedural justice moderates this relationship: when procedural justice is high, team power distribution disparity is negatively correlated with task conflict and relationship conflict; when procedural justice is low, team power distribution disparity is positively correlated with task conflict and relationship conflict. Additionally, mediated moderation model analysis reveals that team legitimacy perception mediates the aforementioned moderating effect of procedural justice.

Full Text

The Impact of Team Power Distribution Disparity on Team Conflict: The Roles of Procedural Justice and Legitimacy

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Abstract

In recent years, the relationship between team power distribution disparity and team conflict has received considerable scholarly attention, yet research findings remain inconclusive. Through a survey of 70 work teams, this study examines

the boundary conditions of the effect of team power distribution disparity on team conflict (task conflict and relationship conflict). The results reveal that procedural justice moderates this relationship: when procedural justice is high, team power distribution disparity is negatively correlated with both task and relationship conflict; when procedural justice is low, team power distribution disparity is positively correlated with both types of conflict. Furthermore, mediated moderation model analysis shows that team legitimacy perception mediates the aforementioned moderating effect of procedural justice.

Keywords: team power distribution disparity; team conflict; procedural justice; team legitimacy perception
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1. Introduction

1.1 Problem Statement

To cope with increasingly fierce market competition, more and more enterprises have adopted team-based work arrangements to enhance organizational efficiency. Consequently, how to improve team performance has become one of the most important research topics in organizational studies. Among numerous influencing factors, team power distribution disparity—the hierarchical differences in power among members—represents a fundamental team structural attribute (Bunderson, van der Vegt, Cantimur, & Rink, 2016). Although power hierarchy differences are ubiquitous within teams, relevant research remains in its infancy. On one hand, scholars argue that team power distribution disparity facilitates role clarification and task division, thereby enhancing team collaboration (Halevy, Chou, & Galinsky, 2011). On the other hand, empirical research has demonstrated that power distribution disparity among members leads to team conflict, which undermines team performance (Bloom, 1999). In light of this, scholars have called for theoretical integration of these two mechanisms to examine how team power distribution disparity influences team processes (Greer, de Jong, Schouten, & Dannals, 2018; Greer & van Kleef, 2010).

Responding to this call, Greer and colleagues propose that team members' willingness to redistribute power is the key factor determining whether team power distribution disparity operates toward conflict or collaboration (e.g., De Hoogh, Greer, & Den Hartog, 2015; Greer, Van Bunderen, & Yu, 2017; Tarakci, Greer, & Groenen, 2016). When team members are dissatisfied with the current power distribution and demand redistribution, team conflict emerges (including both task and relationship conflict). Conversely, when team members accept the current power distribution, internal conflict decreases and collaborative mechanisms strengthen. Furthermore, Greer and colleagues view team conflict as the primary process variable explaining the effects of team power distribution disparity, with reduced team conflict being a prerequisite for achieving team collaboration (Greer et al., 2018; Greer et al., 2017). Although previous scholars have examined boundary conditions affecting the relationship between team

power distribution disparity and team conflict, such research remains scarce. In particular, existing studies have focused either on team task characteristics (Bunderson et al., 2016) or other team structural features (Greer & van Kleef, 2010), with less attention paid to analyzing boundary conditions from an organizational context perspective. In fact, team processes should result from the interaction between team structure and organizational contextual factors (Marks, Mathieu, & Zaccaro, 2001). As one of the most important organizational contexts, procedural justice represents the extent to which members perceive organizational resource allocation processes as unbiased and consistent (Colquitt, 2001). Given that team power distribution disparity reflects the distribution of valuable resources within the team (Magee & Galinsky, 2008), procedural justice may influence members' acceptance of the current power distribution, thereby affecting whether team processes develop toward collaboration or conflict. Therefore, the first objective of this study is to examine the moderating effect of procedural justice on the relationship between team power distribution disparity and team conflict (task conflict, relationship conflict).

But does procedural justice truly influence members' acceptance of the current power distribution, thereby channeling the effects of team power distribution disparity in different directions? To directly test the psychological mechanisms underlying the boundary conditions of team power distribution disparity effects, we propose that team legitimacy perception can mediate the moderating effect of procedural justice. Scholars in the power domain note that to exercise power more effectively, authority figures must convince others that their management and decisions are appropriate and reasonable, thereby fostering legitimacy perception (Tyler, 2006). In this study, we define team legitimacy perception as members' shared perception of the reasonableness and appropriateness of the power distribution structure within the team. The relational model of procedural justice suggests that people rely on fair procedures to interpret whether their situation is reasonable and legitimate (Tyler & Lind, 1992). Therefore, building on procedural justice theory, we propose that procedural justice moderates the relationship between team power distribution disparity and team conflict by influencing team legitimacy perception (see Figure 1 [Figure 1: see original paper]). This constitutes the second objective of this study.

Figure 1 Overall Research Model

1.2 Team Power Distribution Disparity

Power refers to asymmetric control over resources in social relationships (Magee & Galinsky, 2008). Due to the unequal distribution of resources, some individuals possess more valuable resources and thus more power relative to others. Team power distribution disparity reflects the degree of power concentration within a team context; high team power distribution disparity means that valuable resources are concentrated in the hands of a few members (Harrison & Klein, 2007). As mentioned earlier, scholars hold inconsistent views on the functional mechanisms of team power distribution disparity (Anderson & Brown,

2010; Greer et al., 2017). Specifically, scholars advocating the collaboration perspective argue that high team power distribution disparity helps members clarify their roles and promotes task division and collaboration among members. Additionally, team power distribution disparity has motivational effects by demonstrating the internal power hierarchy to members, thereby motivating them to improve their capabilities or team contributions to gain higher power (Halevy et al., 2011). In contrast, scholars advocating the conflict perspective argue that greater team power distribution disparity leads to stronger perceptions of unequal distribution of power and valuable resources among members (Bunderson et al., 2016; Greer & van Kleef, 2010). In this context, low-power members desire more resources and higher power, while high-power members wish to maintain and preserve their existing power advantages (Greer et al., 2017). These differences in motivation and interests create internal team conflict that undermines team performance (Bloom, 1999; Harrison & Klein, 2007).

Greer and colleagues attempt to integrate these two mechanisms by proposing that when members view power differences within the team as unequal distribution of power and resources, they desire redistribution, triggering a power struggle process between high- and low-power members. Conversely, when members accept the current power distribution, they can accept their current role positioning, the power struggle process diminishes, and team collaborative mechanisms emerge (Greer et al., 2017; Greer & van Kleef, 2010; Tarakci et al., 2016). Furthermore, researchers note that the power struggle process can manifest in different types of team conflict (Greer, Caruso, & Jehn, 2011; Greer et al., 2017), including task conflict (i.e., differences in viewpoints regarding task goals and outcomes) and relationship conflict (i.e., interpersonal incompatibilities among members) (Jehn, 1995, 2014). Since task goals and outcomes are closely related to the final distribution of resources and power, low-power and high-power individuals exhibit differences on task-related issues to gain more power or retain existing advantages (Greer et al., 2017; Greer & van Kleef, 2010). Simultaneously, the pursuit of self-interest in power may also trigger interpersonal tension among members, manifesting in competitive and aggressive behaviors that stimulate relationship conflict (Jehn, Northcraft, & Neale, 1999). Building on relevant theoretical work on team power distribution and procedural justice, we expect that different levels of procedural justice can lead team members to either accept or reject the status quo of team power distribution disparity, resulting in different team process mechanisms.

1.3 The Moderating Role of Procedural Justice

The relational model of procedural justice suggests that procedural justice conveys the fundamental values that teams or authority figures follow (Lin & Leung, 2014). When teams or authority figures adhere to relational principles such as bias suppression (i.e., decision-making processes based on objective facts), trust (i.e., decision-making processes that consider members' interests), and status recognition (i.e., decision-making processes that reflect members' importance

in the team) during decision-making, members develop positive procedural justice perceptions (Greenberg, 2011). More importantly, this information conveys respect and recognition from the team and authority figures toward team members, prompting members to further identify with their team membership, enhancing social recognition and legitimacy perception of authority figures, and ultimately voluntarily serving the team and accepting guidance from authority figures (Tyler & Lind, 1992; van Dijke, De Cremer, & Mayer, 2010).

Building on previous research on team power distribution disparity, we propose the moderating effect of procedural justice. High procedural justice means that resource and power allocation processes are based on objective facts and reflect members' capabilities and contributions. The correspondence between power and capability/contribution can effectively activate the motivational effect of team power distribution disparity, making members realize that they can enhance individual power by improving their capabilities or team contributions (Halevy et al., 2011). Additionally, when high power signifies high capability, members can more clearly define their roles and achieve task division. For example, low-power members are more likely to accept influence from high-power members and follow their guidance on task goals and content, thereby reducing task conflict among members. Finally, high procedural justice can also enhance members' team identity, shifting action goals from self-interest satisfaction to achieving overall team objectives (Blader & Tyler, 2009). The alignment of interests among members can effectively reduce relationship conflict caused by power differences among members (Van der Vegt, de Jong, Bunderson, & Molleman, 2010).

Conversely, in low procedural justice situations, team members may reject the status quo of uneven team power distribution. Specifically, low procedural justice conveys information that the basis of power is not capability or team contribution but rather factors such as nepotism with senior management. In this context, the greater the power disparity within the team, the stronger members' willingness for power redistribution. To pursue personal power enhancement, low-power individuals exhibit high levels of competitive behavior, while high-power individuals, feeling threatened, also tend to adopt competitive approaches to maintain their power, leading to interpersonal tension among members (Greer et al., 2017). Additionally, low procedural justice may cause individuals to detach their self-concept from team membership and pursue self-interest. Different interest goals may lead high- and low-power individuals to diverge on team task issues related to resource allocation, proposing different work goals and content to protect or acquire resources and power (Greer et al., 2011). Based on this, we propose:

Hypothesis 1: Procedural justice moderates the relationship between team power distribution disparity and team conflict (task conflict, relationship conflict). When procedural justice is high, team power distribution disparity is negatively related to team conflict; when procedural justice is low, team power distribution disparity is positively related to team conflict.

1.4 The Role of Team Legitimacy Perception

The relational model suggests that procedural justice is a key factor individuals use to judge authority legitimacy (Tyler & Lind, 1992). In the absence of objective standards, the fairness of processes provides important cues for judging decision legitimacy—that is, people use procedural justice as a social heuristic cue to help determine whether an action or decision is appropriate and correct (Blader & Tyler, 2009). Moreover, compared with outcome fairness, procedural justice has characteristics of continuity and long-term effectiveness, because procedural justice not only signifies the appropriateness and reasonableness of current decisions or behaviors but also implies that future decisions or actions will have similar characteristics (Tyler, 2006).

Numerous previous studies at the individual level have supported the positive effect of procedural justice on legitimacy (e.g., Leung, Chiu, & Au, 1993; van Dijke et al., 2010). In fact, team legitimacy perception regarding power distribution is also influenced by procedural justice (Tyler, 2006). Power itself lacks sufficient information to demonstrate its own reasonableness and fairness. In this situation, when team members perceive that the power allocation process is fair—that is, resource and power allocation processes consider member contributions and capabilities and are based on objective factual evidence—members will recognize and accept the current power distribution, forming team legitimacy perception. Additionally, just as team members can develop consistent perceptions of procedural justice (Naumann & Bennett, 2000), members' legitimacy perceptions may also gradually converge. When members face the same team leader and the same rules and systems, they can form similar legitimacy judgments. The team-level construct of legitimacy has received empirical support (Aime, Humphrey, DeRue, & Paul, 2014). Based on the above discussion, we propose:

Hypothesis 2a: Procedural justice is positively related to team legitimacy perception.

Individual-level research has found that legitimacy perception makes people feel obligated to voluntarily obey authority and organizational systems (Hurd, 1999). Additionally, researchers have found that legitimacy perception affects both high- and low-power holders (Anicich, Fast, Halevy, & Galinsky, 2016; Lammers, Galinsky, Gordijn, & Otten, 2008). For high-power individuals, when their power is not respected and recognized by others, they perceive greater threats to their power and exhibit stronger aggressive behaviors (Anicich et al., 2016; Fast, Halevy, & Galinsky, 2012). For low-power individuals, when they believe their low power results from an unreasonable system, they develop stronger intentions to change the power status quo and actively seek power enhancement (Ellemers, Wilke, & van Knippenberg, 1993; Lammers et al., 2008).

Building on previous research, we propose the moderating effect of team legitimacy perception. When power differences within a team are viewed as legitimate, members tend to accept their roles and division of labor (Halevy et al.,

2011). Low-power members recognize the authority status of high-power members and follow their guidance on task goals and content, resulting in lower task conflict within the team. Simultaneously, accepting the current power distribution means that both high- and low-power individuals exhibit less competitive and aggressive behavior, reducing interpersonal conflict. However, illegitimate team power distribution implies the possibility of restructuring the power hierarchy (Lammers et al., 2008). Low-power individuals attempt to change the current power hierarchy and enhance their own power status, while high-power members feel threatened by other members and attempt to maintain or acquire more resources to stabilize their advantages. This creates a power struggle process among members, triggering interpersonal tension and controversial viewpoints on task decisions. Although some scholars have theoretically discussed the moderating role of team legitimacy perception in the effects of team power distribution disparity (Greer et al., 2017; Halevy et al., 2011), few studies have empirically tested this. Based on this, we propose:

Hypothesis 2b: Team legitimacy perception moderates the relationship between team power distribution disparity and team conflict (task conflict, relationship conflict). When team legitimacy perception is high, team power distribution disparity is negatively related to team conflict; when team legitimacy perception is low, team power distribution disparity is positively related to team conflict.

Thus far, we have proposed the moderating effect of procedural justice (Hypothesis 1), the positive relationship between procedural justice and team legitimacy perception (Hypothesis 2a), and the moderating effect of team legitimacy perception (Hypothesis 2b). Based on these hypotheses, this study further proposes a mediated moderation model. Specifically, in high procedural justice situations, team members develop high legitimacy perception of team power distribution disparity, enabling them to recognize and accept the current power distribution, thereby reducing both task and relationship conflict. In low procedural justice situations, team members question the legitimacy of power distribution disparity, and high- and low-power members generate task and relationship conflict to protect their own resources or compete for more resources. In view of this, we propose the following hypothesis:

Hypothesis 2c: Team legitimacy perception mediates the moderating effect of procedural justice on the relationship between team power distribution disparity and team conflict (task conflict, relationship conflict).

2. Method

2.1 Sample and Research Process

The data for this study were collected from two listed manufacturing companies in Zhejiang Province. The human resources departments provided lists of functional department teams and their members in advance, including production, human resources administration, finance, and marketing departments. To

reduce common method bias, this study collected data at two time points, with each employee coded for matching questionnaires across the two phases. At Time 1, researchers distributed 450 questionnaires covering 90 teams on site, measuring team power distribution disparity, procedural justice, team legitimacy perception, and basic demographic information. After eliminating invalid questionnaires with substantial missing information, 376 valid questionnaires were recovered at Time 1, covering 81 teams, with a response rate of 83.5%. One month later (Time 2), the 376 employees from the 81 teams who completed the first phase were surveyed on site and asked to evaluate task conflict and relationship conflict. After eliminating problematic questionnaires, 322 valid questionnaires were obtained at Time 2, covering 70 teams, with a response rate of 85.6%. All employees were assured of the confidentiality of their responses, and completed questionnaires were sealed in prepared envelopes and handed directly to researchers. The average team size for the 70 teams was 4.6 members (ranging from 3 to 9), with an average team coverage rate of 93%. Among them, production teams accounted for 45.7%, human resources administration teams for 37.1%, finance teams for 5.7%, and marketing teams for 11.4%. Of the 322 employees, 61.2% were male, with an average age of 34.0 years (SD = 6.89), and 61.8% held a high school diploma or higher.

2.2 Research Instruments

Team Power Distribution Disparity. Previous questionnaire design research has employed two approaches to measuring power: (1) round-robin design, where other team members rate the power of a target individual, and (2) self-reported power perception (Tarakci et al., 2016). This study adopts the first approach for two main reasons: First, compared with self-report, round-robin design can more effectively avoid common method bias; second, previous definitions of power emphasize the perception of power—that is, power only influences others when it is perceived (Sturm & Antonakis, 2015)—and round-robin design better captures this definition.

The specific procedure for round-robin design was as follows: Researchers provided each member with a list of all team members and asked them to rate the power level of all members (excluding themselves). Since round-robin measurement requires evaluating most team members (2-8 members in this study), it may cause high cognitive load and fatigue among participants. Therefore, following previous relevant research (Bunderson et al., 2016; Cantimur, Rink, & van der Vegt, 2016; Greer et al., 2011; Smith, Houghton, Hood, & Ryman, 2006), we used a single-item questionnaire to measure individual power levels. Referring to Cantimur et al.' s (2016) single-item question and incorporating the power definition adopted in this study (Magee & Galinsky, 2008), we formulated the measurement question as: "In your opinion, how much power does this colleague have in the team (e.g., he/she has asymmetric control over resources and can influence others to carry out his/her will)?" A 5-point Likert scale was used, where 5 indicated "very much" and 1 indicated "almost none."

Each member' s power level was calculated as the average rating given by all other team members. After obtaining each member' s power level, this study calculated the coefficient of variation (CV) to reflect the degree of team power distribution disparity. The coefficient of variation reflects the extent to which organizational resources are concentrated in the hands of a few members and is the most recognized method for measuring organizational hierarchy (Harrison & Klein, 2007). When applied to measuring team power distribution disparity, a larger coefficient of variation indicates higher inequality in power distribution among team members and greater power differentiation. This calculation method has been accepted and applied in numerous power studies (e.g., Hays & Bendersky, 2015; Tarakci et al., 2016).

Procedural Justice. Procedural justice was measured using Colquitt' s (2001) 7-item scale (= 0.80). Adapted to this study' s context, the term "outcomes" in the original questionnaire was specified as "resources and power," with participants instructed: "The following statements concern the procedures used to determine the allocation of your resources and power." A sample item includes "I was able to express my views and feelings during those procedures." A 7-point Likert scale was used, where 7 indicated "strongly agree" and 1 indicated "strongly disagree."

Team Legitimacy Perception. The team legitimacy perception scale was adapted from Lammers et al. (2008) by changing the reference point from "individual" to "team power distribution" (= 0.89). Specific items include: "I believe the power distribution in my team is just,""In my team, those with higher influence and power deserve their positions," "I think the power distribution in my team is legitimate and proper," and "I find the power distribution in my team convincing." A 7-point Likert scale was used, where 7 indicated "strongly agree" and 1 indicated "strongly disagree."

Team Conflict. Team conflict was measured using Jehn' s (1995) 8-item scale, which comprises two dimensions: team task conflict (= 0.86), with a sample item "In this team, there are often differences of opinion about how to do the job," and team relationship conflict (= 0.94), with a sample item "In this team, there is often friction among members." A 7-point Likert scale was used, where 7 indicated "strongly agree" and 1 indicated "strongly disagree."

Control Variables. This study controlled for gender diversity, age diversity, education level diversity, team type, and average team power level, as previous research has shown these team structural attributes can influence interpersonal interactions among members (Greer & van Kleef, 2010; Tarakci et al., 2016). Age diversity and education level diversity were measured using the coefficient of variation, while gender, as a categorical variable, was measured using Blau' s index to reflect the dispersion of male-female ratios within teams (Bezrukova, Spell, & Perry, 2010; Harrison & Klein, 2007). Team type was converted into three dummy variables.

2.3 Aggregation Tests

Since procedural justice, team legitimacy perception, task conflict, and relationship conflict were measured by individual members, it is necessary to test the feasibility of aggregating individual-level data to the team level. The average Rwg(j) values for the four variables were 0.93, 0.93, 0.85, and 0.88, respectively; ICC(1) values were 0.08, 0.20, 0.30, and 0.33, respectively; and ICC(2) values were 0.28, 0.53, 0.67, and 0.69, respectively. The relevant indicators for team legitimacy perception, task conflict, and relationship conflict met aggregation standards (LeBreton & Senter, 2008), but the ICC(1) and ICC(2) values for procedural justice were relatively low. Following Koopmann, Lanaj, Wang, Zhou, and Shi (2016), we calculated the between-group variance ($^2 = 0.044$, $p < 0.05$) and within-group variance ($^2 = 0.52$, $p < 0.01$) for procedural justice. These results indicate that ICC(1) is statistically significant, meaning there are between-team differences in procedural justice. Additionally, research shows that ICC(2) is influenced by ICC(1) and team size (Liao & Chuang, 2012). Given that the ICC(1) and team size (4.6) in this study are relatively small, the ICC(2) value is also lower. However, the Rwg(j) of 0.93 for procedural justice indicates high within-group consistency. Some scholars suggest that if a variable has high Rwg(j) and significant between-group variance, aggregation is feasible even when ICC(2) is low (Liao & Chuang, 2012). In view of this, we also aggregated procedural justice as a team-level variable.

3. Results

3.1 Measurement Model Test

Since procedural justice, team legitimacy perception, task conflict, and relationship conflict are considered team-level constructs, we aggregated all variable items to the team level for measurement model testing (Chen, Mathieu, & Bliese, 2004). According to Bentler and Chou (1987), the sample size required for measurement model testing should be five times or more the number of observed indicators. Due to the relatively small team-level sample size, which could not meet this standard, we used item parceling to combine variable items, forming three new observed indicators for each variable through the item-to-construct balance method (Bian, Che, & Yang, 2007; Little, Cunningham, Shahar, & Widaman, 2002). Using the new observed indicators created through item parceling, we conducted team-level measurement model testing. Results showed that the hypothesized four-factor model had good fit ($^2 = 84.14$, $df = 48$, CFI $= 0.95$, IFI $= 0.95$). Moreover, the four-factor model was significantly superior to other alternative three-factor, two-factor, and one-factor models ($\Delta\ ^2/\Delta df$ values ranged from 13.03 to 50.46), demonstrating discriminant validity among the four variables.

3.2 Descriptive Statistics

Table 1 presents the means, standard deviations, and correlation coefficients of all variables. As shown in Table 1, team power distribution disparity was not significantly correlated with either task conflict ($r = -0.01$, $p > 0.10$) or relationship conflict ($r = 0.01$, $p > 0.10$). Procedural justice was significantly positively correlated with team legitimacy perception ($r = 0.72$, $p < 0.001$).

3.3 Hypothesis Testing

We used hierarchical regression analysis to test the moderating effects of procedural justice and legitimacy. To reduce multicollinearity, we centered both the independent variable (team power distribution disparity) and moderators (procedural justice, team legitimacy perception) when creating interaction terms. Regression results are presented in Table 2 . In the model with team legitimacy perception as the dependent variable (M1), the regression coefficient of procedural justice on team legitimacy perception was significant ($B = 1.00$, $p < 0.001$), supporting Hypothesis 2a.

In the model with task conflict as the dependent variable, M3 shows that the interaction term between procedural justice and team power distribution disparity significantly predicted task conflict ($B = -6.06$, $p < 0.001$). To illustrate the moderating pattern of procedural justice on the relationship between team power distribution disparity and task conflict, we conducted simple slope analysis following Aiken and West' s (1991) recommendations (see Figure 2 [Figure 2: see original paper]). Results show that under high procedural justice, team power distribution disparity was significantly negatively related to task conflict ($k = -2.76$, $p < 0.05$), whereas under low procedural justice, team power distribution disparity was significantly positively related to task conflict ($k = 2.21$, $p < 0.05$).

Additionally, in the model with relationship conflict as the dependent variable, M7 shows that the interaction term between procedural justice and team power distribution disparity significantly predicted relationship conflict ($B = -6.41$, $p < 0.001$). Similarly, simple slope analysis (Figure 3 [Figure 3: see original paper]) shows that under high procedural justice, team power distribution disparity was significantly negatively related to relationship conflict ($k = -2.58$, $p < 0.05$), whereas under low procedural justice, team power distribution disparity was significantly positively related to relationship conflict ($k = 3.06$, $p < 0.01$). Collectively, these results support Hypothesis 1.

To test the moderating effect of team legitimacy perception, we simultaneously entered the interaction terms of procedural justice and team legitimacy perception with team power distribution disparity into regression equations with task conflict and relationship conflict as dependent variables. M5 results show that the moderating effect of team legitimacy perception on the relationship between team power distribution disparity and task conflict was significant ($B = -6.57$, $p < 0.05$), while the moderating effect of procedural justice became

non-significant. Figure 4 [Figure 4: see original paper] shows that under high legitimacy perception, the relationship between team power distribution disparity and task conflict was significantly negative (k = -2.98, $p < 0.05$), whereas under low legitimacy perception, the relationship was significantly positive (k = 4.24, $p < 0.05$). M9 results show that team legitimacy perception significantly moderated the relationship between team power distribution disparity and relationship conflict (B = -5.34, $p < 0.05$), while the moderating effect of procedural justice became non-significant. Figure 5 [Figure 5: see original paper] shows that under high legitimacy perception, team power distribution disparity was negatively related to relationship conflict, but not significantly (k = -1.91, $p > 0.10$), whereas under low legitimacy perception, team power distribution disparity was significantly positively related to relationship conflict (k = 3.96, $p < 0.01$). These results partially support Hypothesis 2b.

Hypothesis 2c proposes a mediated moderation model: team legitimacy perception mediates the moderating effect of procedural justice on the relationship between team power distribution disparity and team conflict. Previous analyses have shown: procedural justice is positively related to team legitimacy perception (Hypothesis 2a), the moderating effect of procedural justice is significant (Hypothesis 1), and after controlling for procedural justice and its interaction with team power distribution disparity, the moderating effect of team legitimacy perception remains significant (Hypothesis 2b). According to Grant and Berry (2011), when the indirect effect of team legitimacy perception is significant (calculated as: path coefficient between procedural justice and team legitimacy perception × path coefficient of the moderating effect of team legitimacy perception), the mediated moderation model is supported. We used Mplus to calculate the indirect effect of team legitimacy perception (Liu, Zhang, & Wang, 2012). Results show that the indirect effect of team legitimacy perception was significant (task conflict: indirect effect = -6.34, 95% CI [-12.83, -1.98]; relationship conflict: indirect effect = -5.15, 95% CI [-11.16, -0.97]), supporting Hypothesis 2c.

4. Discussion

This study proposed and tested the moderating effects of procedural justice and team legitimacy perception on the relationship between team power distribution disparity and team conflict. Results show that when procedural justice is high, team power distribution disparity is negatively related to both task and relationship conflict; when procedural justice is low, team power distribution disparity is positively related to both types of conflict. Similarly, when team legitimacy perception is high, team power distribution disparity can reduce task and relationship conflict, whereas when team legitimacy perception is low, team power distribution disparity triggers task and relationship conflict. Further analysis supports the mediated moderation model, demonstrating that the moderating effect of procedural justice is realized through team legitimacy perception. This study has the following implications:

4.1 Theoretical Implications

Although research on team power distribution disparity and its effects has made significant progress in recent years, more research attention is needed to systematically and deeply understand its utility mechanisms. Scholars have noted that examining the impact of team power distribution disparity on team processes is key to understanding its utility mechanisms (Greer & van Kleef, 2010). In particular, the latest meta-analysis results show that team power distribution disparity primarily affects team performance through conflict processes and suggests that future research should focus more on team conflict processes (Greer et al., 2018). Against this theoretical and empirical background, this study integrates procedural justice into team power distribution disparity research and examines the moderating effects of procedural justice and its legitimacy mechanism on the relationships between team power distribution disparity and task/relationship conflict. Our findings reveal that team power distribution disparity has different effects on team conflict under different levels of procedural justice (team legitimacy perception), expanding our understanding of the boundary conditions of the relationship between team power distribution disparity and team conflict. Moreover, these results have important implications for integrating power theory and procedural justice theory. Although procedural justice has long been mentioned by power scholars, these studies have mostly focused on the moderating effect of procedural justice on the effectiveness of high-power individuals (e.g., leaders) (e.g., De Cremer, 2006; van Dijke et al., 2010). This study explores the joint effects of team power distribution disparity and procedural justice on team processes at the team level, demonstrating that procedural justice can not only affect the effectiveness of individual power exercise but also positively influence the utility of team power structures.

Second, this study' s findings provide empirical support for previous theoretical discussions on team power distribution disparity. For example, Halevy et al. (2011) theoretically proposed the moderating effect of team legitimacy perception on the utility of team power distribution disparity. Greer and colleagues (2017) noted that team members' willingness to redistribute power is the key factor determining whether team power distribution disparity operates toward collaboration or conflict. Given that team legitimacy perception reflects team members' acceptance of current power distribution disparity, by directly measuring and testing the moderating effect of the legitimacy mechanism, this study provides strong empirical support for the above theoretical perspectives and makes an empirical contribution to the further development of team power distribution disparity theory.

Third, this study' s findings also help us further understand and explore the collaborative mechanisms of team power distribution disparity and their boundary conditions. Our results reveal a cross-level moderating pattern of procedural justice and team legitimacy perception—that is, when procedural justice (team legitimacy perception) is high, team power distribution disparity can suppress team conflict; when procedural justice (team legitimacy perception) is low,

team power distribution disparity can trigger team conflict. Considering that suppressing team conflict is a prerequisite for achieving collaboration among members with different power levels (Greer et al., 2017), this implies that under high procedural justice (team legitimacy perception), team power distribution disparity may have positive effects on team collaborative mechanisms. In fact, previous research has explored boundary conditions of team power distribution disparity utility from perspectives such as team structural characteristics (e.g., average team power level, team leader capability) (Greer & van Kleef, 2010; Tarakci et al., 2016) and work task characteristics (e.g., work performance feedback) (Van der Vegt et al., 2010), finding similar cross-level moderating patterns. This study' s findings represent a powerful extension of the above research directions, providing a new research perspective for understanding and integrating the collaborative and conflict mechanisms of team power distribution disparity from the angle of organizational contextual factors.

Finally, following classic team conflict research, this study distinguishes between task conflict and relationship conflict and shows that team power distribution disparity and procedural justice (team legitimacy perception) have the same joint effects on both task and relationship conflict. Meta-analyses on team conflict outcomes have noted that relationship conflict has a clear destructive effect on team performance, whereas the relationship between task conflict and team performance depends on other boundary conditions (e.g., team organizational level), showing either negative or positive relationships (c.f., De Dreu & Weingart, 2003; de Wit, Greer, & Jehn, 2012). However, previous research has indiscriminately viewed team conflict as a negative mechanism of team power distribution disparity (Greer, 2014; Greer et al., 2018), neglecting the differential effects of different types of team conflict. This study' s findings imply that team members' power struggle process is accompanied by their differing viewpoints on task-related issues, a process that has relatively low negative or even potentially positive effects on team performance. Therefore, distinguishing between task conflict and relationship conflict represents a further deepening and refinement of previous research on the relationship between team power distribution disparity and team conflict, helping us better reveal the mechanism processes of team power distribution disparity. Additionally, this study has certain implications for team conflict research. Previous literature has noted that team diversity is a major predictor of team conflict (Chun & Choi, 2014; Jehn et al., 1999; Pelled, Eisenhardt, & Xin, 1999). This study finds that team power distribution disparity, as an important type of team diversity, can not only trigger team conflict but also suppress it under certain contexts (i.e., high procedural justice/team legitimacy perception). This finding expands and enriches our understanding of the relationship between team diversity and team conflict.

In terms of practical implications, this study' s results show that the relationship between team power hierarchy disparity and relationship conflict depends on boundary conditions, with the most direct influencing factor being team members' legitimacy perception of power distribution. When members have

high legitimacy perception of power distribution, they can recognize and accept the current power distribution disparity, accept their current role positioning, reduce internal team conflict, and achieve team task division and collaboration. In response, when establishing or managing power distribution hierarchies within teams, enterprise managers should adopt a series of management measures to help members form perceptions that the current distribution of team resources and power is reasonable and legitimate, thereby reducing the likelihood of relationship conflict. Additionally, managers need to recognize that under low procedural justice (team legitimacy perception), team power distribution disparity has significant positive effects on both task and relationship conflict. In such situations (i.e., low procedural justice), managers can actively guide team members' power struggle process, manifesting it as differences in viewpoints on task-related issues and exploring the potential positive utility behind task conflict.

Finally, this study' s findings also indicate that procedural justice can influence the process of team power distribution disparity by enhancing team members' legitimacy perception. In fact, besides functioning as a moderator that channels team power distribution disparity in a positive direction, procedural justice, as one of the most important organizational contextual factors, also has direct, positive effects on team processes and team performance (e.g., Ehrhart, 2004; Naumann & Bennett, 2000). Therefore, for enterprise managers, procedural justice should be regarded as a priority in daily management work. During resource and power allocation processes, managers should pay attention to and adhere to a series of fairness principles, including allocating resources based on objective facts and standards, reflecting members' importance in the team, and considering members' respective interests and needs.

4.3 Limitations and Future Directions

This study has several limitations. First, it used cross-sectional data to examine relationships among variables. Although the results are consistent with our theoretical hypotheses, the cross-sectional research design cannot test causal relationships. Therefore, future research could employ laboratory designs to further confirm the causal relationships among variables. Second, since procedural justice and team legitimacy perception data were collected at the same time point, there is potential common method bias. Although measurement model testing shows good discriminant validity between the two variables, the influence of common method bias cannot be completely ruled out. However, according to Podsakoff, MacKenzie, and Podsakoff (2012), tests of moderating effects are less susceptible to common method bias, and the moderating effects of procedural justice and legitimacy constitute the important theoretical focus of this study. Therefore, we believe that although some common method bias exists, it does not affect the validity of this study' s conclusions.

Additionally, this study measured team power distribution disparity based on the definition of power, but the scale did not distinguish between types of power.

According to resource type, power can be divided into formal power and informal power. Formal power stems from actual control over tangible resources (Magee & Galinsky, 2008), whereas informal power stems from intangible resources mastered by individuals, such as expertise, information, and knowledge (Blader & Chen, 2012). Previous individual-level research has shown that formal and informal power have differential effects on individual competition and political behavior (e.g., Blader & Chen, 2012; Fast et al., 2012). Therefore, future research could explore the effects of different types of power distribution disparity on team conflict and their underlying mechanisms. Another measurement issue is that this study used a single-item scale to measure individual power. Although previous round-robin research designs have frequently used single-item scales (e.g., Cantimur et al., 2016; Greer et al., 2011; Smith et al., 2006), we still recommend that future research use multi-item power scales to measure and calculate team power distribution disparity to further improve measurement reliability and validity.

Third, future research should also examine how team power distribution disparity influences team outcome variables through team conflict processes. Given that different types of team conflict have differential effects on team performance, we recommend that future research distinguish between task conflict and relationship conflict and explore the differential mediating effects of different conflict types on the relationship between team power distribution disparity and team performance. Finally, future research needs to incorporate other potential influencing factors to build a more comprehensive and systematic model of team power distribution utility. For example, Ma, Yang, Wang, and Li (2017) proposed interest conflict (differences among team members in individual interests such as resources, rewards, and power) and behavioral conflict (including quarrels, competition, political manipulation, and aggression). Since these constructs are closely related to the power distribution and power struggle processes emphasized in this study, future research could examine the effects of team power distribution on team interest conflict and behavioral conflict to expand the theoretical model. Additionally, given that other types of organizational justice (e.g., informational justice, interpersonal justice) also affect team conflict (Kerwin, Jordan, & Turner, 2015), future research should control for these variables to enhance model validity.

Power disparity and team conflict: The roles of procedural Justice and legitimacy

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Abstract

Power disparity refers to the differences in the concentration of power among team members. Although the pervasiveness and importance of power disparity have been well recognized, it is less clear about whether power disparity is functional or dysfunctional. Researchers have suggested that power disparity can facilitate team performance by facilitating coordination, while it has also been shown to trigger team conflict since power disparity may be perceived as unequal and unfair. In this context, our study mains to reconcile the contrasting perspectives by proposing procedural justice and team legitimacy as the contingences of the relationship between power disparity and team conflict (i.e., task conflict and relationship conflict). Drawing on the perspective of power struggle, we propose that in a situation where power disparity is perceived as legitimate due to high level of procedural justice, members are likely to accept the current distribution of power, and thus coordinate with each other. However, when power disparity is perceived as illegitimate, as generated by low level of procedural justice, members are likely to view power disparity as unequal and unfair. In this case, low ranked members may tend to rebel the current power distribution by competing over power, thereby resulting in team conflict.

Data were collected from two manufacturing companies in Zhejiang Province. To reduce the potential influence of common method bias, we used a two-wave design with a one-month interval. At Time 1, 450 employees within 90 teams responded to the questions on power disparity, procedural justice, team legitimacy and control variables. At Time 2, 376 employees within 81 teams who completed Time 1 survey responded to the questions on task conflict and relationship conflict. The final sample contained 322 employees within 70 teams. We measured individuals' power through round-robin design (i.e., asking individual to rate the power of each team member) and calculated the coefficient of variation in individuals' power to indicate the degree of power disparity within a team. Moreover, we aggregated the measures of task conflict, relationship conflict, procedural justice and team legitimacy to the group level for analyses.

Results showed that both procedural justice and team legitimacy moderated the relationship between power disparity and team conflict (task conflict and relationship conflict). When procedural justice was high, power disparity was negatively related to task conflict and relationship conflict, while these relationships became positive when procedural justice was low. In a similar vein, when team legitimacy was high, power disparity was negatively associated with task conflict and relationship conflict, whereas power disparity was positively related to task conflict and relationship conflict when team legitimacy was low. Moreover, procedural justice was shown to positively related to team legitimacy. Finally, following the procedures suggested by Grant and Berry (2011), we conducted a mediated moderation analysis to test the integrative model. Result showed that team legitimacy mediated the moderation effect of procedural justice on the relationship between power disparity and team conflict (task conflict and relationship conflict).

Our findings contribute to literature in two ways. First, this study extends our current understanding of the relationship between power disparity and team conflict by testing procedural justice and team legitimacy as the moderators of this relationship. Second, our findings reveal that power disparity can either decrease or increase team conflict when procedural justice (team legitimacy) is high and low, respectively. By doing so, our study provides a new approach to integrate the functional and dysfunctional perspectives on the effect of power disparity.

Keywords: power disparity; team conflict; procedural justice; legitimacy

Note: Figure translations are in progress. See original paper for figures.