

Is Harmony Most Valuable? The Effect of Team Pro-Social Rule-Breaking Climate on Team Performance from the Perspective of Harmony Management Theory

Authors: Cai Yahua, Cheng Jialin, Li Jinsong

Date: 2021-08-17T00:00:00+00:00

Abstract

Current research on prosocial rule-breaking behavior primarily focuses on the individual level, yet both practice and theory indicate the necessity of investigating team-level prosocial rule-breaking climate. To this end, this study focuses on the concept of team prosocial rule-breaking climate, and based on harmony management theory, introduces team harmony as a mediating variable and team interdependence as a moderating variable to explore the influence mechanism and boundary conditions of team prosocial rule-breaking climate on team performance. This study surveyed 74 teams and 334 team members, and through analyzing data obtained from three stages, the results show that: (1) Team interdependence moderates the relationship between team prosocial rule-breaking climate and team harmony: when team interdependence is high, the negative effect of team prosocial rule-breaking climate on team harmony is stronger; (2) Team harmony has a significant positive effect on team performance; (3) Team interdependence moderates the indirect effect of team prosocial rule-breaking climate on team performance through team harmony: when team interdependence is high, the negative effect of team prosocial rule-breaking climate on team performance via team harmony is enhanced. This study confirms the mechanism and boundary conditions through which team prosocial rule-breaking climate affects team performance, and broadens relevant research on prosocial rule-breaking behavior and team harmony.

Full Text

Preamble

Can Rules Maintain Harmony? The Influence of Team Pro-social Rule Breaking Climate on Team Performance from the Perspective of Harmony Management

Theory

CAI Yahua, CHENG Jialin, LI Jinsong
(College of Business, Shanghai University of Finance and Economics, Shanghai,
200433)

Abstract

Current research on pro-social rule breaking (PSRB) has primarily focused on the individual level. However, both practical considerations and theoretical developments suggest the necessity of investigating team-level PSRB climate. This study focuses on the concept of team PSRB climate and draws upon harmony management theory to examine its influence mechanisms and boundary conditions on team performance, with team harmony as a mediator and team interdependence as a moderator. Using data from 74 teams and 334 team members collected across three time points, our analyses reveal that: (1) team interdependence moderates the relationship between team PSRB climate and team harmony, such that the negative effect of team PSRB climate on team harmony is stronger when team interdependence is high; (2) team harmony has a significant positive effect on team performance; and (3) team interdependence moderates the indirect effect of team PSRB climate on team performance through team harmony, whereby the negative indirect effect is enhanced under high team interdependence. This study confirms the mechanisms and boundary conditions through which team PSRB climate affects team performance, thereby broadening research on both PSRB and team harmony.

Keywords: team pro-social rule breaking climate, team harmony, team interdependence, team performance

Rules are ubiquitous in organizations yet often fail to adapt to specific situational demands. As work environments become increasingly dynamic, employees frequently encounter tasks, colleagues, and customers whose needs extend beyond established rules. Consequently, employees regularly face a dilemma between rule compliance and exercising personal initiative. When employees deviate from rules to meet these demands, we refer to this behavior as pro-social rule breaking—actions that violate organizational regulations to promote the welfare of the organization or its stakeholders (Morrison, 2006, p.6). Morrison (2006) identified three dimensions of PSRB: breaking rules to improve work efficiency, to help colleagues, and to provide better customer service. Management scholars have devoted growing attention to PSRB, with most research examining its antecedents from three perspectives: individual characteristics (e.g., empathy, positive personality, risk-taking propensity, self-esteem, locus of control) (Dahling et al., 2012; Morrison, 2006; Vardaman et al., 2014), leadership styles (e.g., transformational leadership, ethical leadership, differential leadership) (Huang et al., 2014; Xu & Zhu, 2017; Yan et al., 2018; Zhu et al., 2018), and job characteristics and behaviors (e.g., job meaningfulness, job autonomy, management openness, counterproductive work behavior) (Li et al., 2015;

Morrison, 2006; Zhu & Xu, 2015). Research on the mechanisms through which individual and job characteristics influence PSRB remains limited, with scholars primarily examining mediating roles of psychological safety, job autonomy, and psychological ownership in the relationship between leadership styles and employee PSRB. For instance, Xu and Zhu (2017) found that psychological safety and job autonomy mediated the positive relationship between ethical leadership and PSRB. Regarding consequences, only Dahling et al. (2012) have empirically examined the negative impact of employee PSRB on supervisor-rated performance. More recently, some scholars have shifted focus to managerial PSRB, investigating its effects on employee psychology (e.g., perceived trust in leaders and institutions) and behavior (e.g., organizational citizenship behavior, workplace deviance, PSRB) (Liu & Wang, 2018; Chen et al., 2019). Overall, current PSRB research remains predominantly at the individual level, yet both practical and theoretical considerations necessitate investigation at the team level.

First, as environments become more dynamic and complex, increasing numbers of organizations adopt team-based work structures (King et al., 2016; Kozlowski & Bell, 2003). Given the prevalence of teamwork and the fact that members' work is interdependent and oriented toward common goals, studying team-level PSRB would benefit scholars and practitioners by clarifying the relationship between team PSRB climate and team performance. When team members violate organizational rules with pro-social intentions, the effects extend beyond the individual to influence other members and overall team functioning. Thus, from a practical standpoint, team-level PSRB research is warranted. Second, according to social information processing theory, team members typically communicate about ambiguous work events, forming shared perceptions (Salancik & Pfeffer, 1978; Weick, 1979). PSRB possesses dual attributes—pro-social motivation yet rule violation—making it likely that team members perceive it as ambiguous behavior (Dahling et al., 2012; Morrison, 2006). Consequently, members discuss and share perceptions of this behavior, fostering the emergence of team PSRB climate. We define team PSRB climate as “team members' shared perception of the level of pro-social rule breaking within their team.” Given the existence of team PSRB climate, focusing solely on individual-level PSRB in theoretical research would impede comprehensive understanding of the construct and its nomological network.

Therefore, this study investigates the mediating and boundary mechanisms through which team PSRB climate influences team performance, advancing team-level PSRB research. Drawing on harmony management theory, we propose team harmony as a mediator and team interdependence as a moderator. Specifically, a stronger team PSRB climate indicates that members perceive more frequent rule breaking for pro-social purposes within their team. Even when motivated by pro-social intentions, this climate perception is likely to damage team harmony, thereby negatively affecting team performance. Moreover, the strength of this negative relationship is contingent upon team interdependence. In highly interdependent teams, members must coordinate closely according to team rules, and each member's work more significantly impacts

colleagues and overall team functioning (Griffin et al., 2007; Van der Vegt & Janssen, 2003). Therefore, in such teams, members' pro-social rule violations against optimally designed rules will amplify negative effects on team harmony.

This study makes four primary theoretical contributions. First, it extends PSRB research from the individual to team level by defining team PSRB climate and its potential effects on team performance, thereby advancing team-level PSRB research. Second, it enriches PSRB outcome research by examining team PSRB climate's impact on team performance. Third, it opens the "black box" of how team PSRB climate affects team performance by examining team harmony's mediating role and team interdependence's moderating role, clarifying boundary conditions. Fourth, by applying harmony management theory to analyze how team PSRB climate influences team performance through team harmony in the Chinese context, it advances the application of harmony management theory in human resource management and team research.

[Figure 1: see original paper] Theoretical Model

1.1 Theoretical Foundation: Harmony Management Theory

Harmony management theory employs "harmony theme" as its fundamental starting point for management problems and addresses them through the coupling interaction of "Xie Ze" and "He Ze" (Xi et al., 2009). "Harmony theme" refers to the key tasks an organization must accomplish in a specific context (Xi et al., 2009). "He Ze" represents the approach of "mobilizing change through agency," emphasizing employees' subjective initiative, while "Xie Ze" represents the approach of using systems, processes, and rules to align employee behavior with predetermined organizational paths, with optimization design at its core (Xi et al., 2020).

Harmony management theory posits that excessive exercise of subjective initiative creates chaos and disorder, whereas optimization design enables orderly operations. However, over-reliance on optimization design leads to rigidity and inflexibility (Xi et al., 2005). Therefore, the theory advocates that effective application of "He Ze" and "Xie Ze" should integrate with specific system environments to maximize their value (Xi et al., 2020). Xi et al. (2013) proposed that harmony management theory can explain complex micro-level human resource management phenomena, and many management scholars have applied its framework to HRM research (Xi et al., 2020). For example, Luo and Zhang (2012) studied professional manager compensation management in private enterprises based on harmony management theory, proposing that organizations should first analyze strategic intentions, determine HR strategy, identify the harmony theme for compensation management (i.e., compensation objectives), and then achieve this theme through the interactive coupling of "Xie Ze" and "He Ze." Li et al. (2014) identified leadership research as a core breakthrough area for future harmony management theory, arguing that future leaders' key tasks involve identifying harmony themes (core work tasks) and creating "con-

struction + evolution” development mechanisms under dual rules, optimizing organizational rules while emphasizing employee autonomous evolution in uncertain environments. Xu et al. (2014) applied harmony management theory to discuss harmony theme identification in innovation teams, emphasizing that harmony management mechanisms can be created through analyzing contextual characteristics, optimizing cognitive strategies, and constructing optimization models. This study similarly applies harmony management theory to explain team-level human resource management issues.

1.2 The Moderating Role of Team Interdependence Between Team PSRB Climate and Team Harmony

Establishing and maintaining team harmony is crucial for Chinese enterprises (Leung et al., 2002), yet existing Western management research focuses only on relationship and task conflict (Leung et al., 2011). Team harmony differs fundamentally from these constructs: relationship conflict emphasizes interpersonal hostility and tension, while task conflict emphasizes disagreement about tasks (Maltarich et al., 2018; Simons & Peterson, 2000). According to harmony management theory, harmony comprises two dimensions: “He” (和睦, 融洽, 同心共济—harmony, rapport, solidarity) and “Xie” (均匀配合, 各部分之间的协调—uniform coordination among parts) (Xi et al., 2005). Lun (2012) elaborated on harmony in the Chinese context, arguing that it involves not only emotional and psychological satisfaction with relationships but also the quality of interpersonal interactions. Based on this, we define team harmony as the harmony and rapport among team members, as well as their coordinated and orderly collaboration.

Harmony management theory proposes that to achieve harmony themes, team members should follow the interactive coupling mechanism of “He Ze” and “Xie Ze”—complying with optimally designed rules while exercising subjective initiative for unforeseen tasks (Liang et al., 2020; Xi et al., 2009; Wang et al., 2003). When members exercise subjective initiative on clearly defined tasks, team operations may become chaotic and disorderly, undermining team harmony (Lun, 2012; Lun & Bond, 2006; Xi et al., 2005). PSRB inherently corresponds to this dual-rule framework: rule violation represents non-compliance with “Xie Ze” (optimization design), while pro-social behavior reflects “He Ze” (subjective initiative) applied inappropriately to predefined tasks. A high team PSRB climate indicates that members perceive frequent pro-social rule breaking within their team, where members largely break rules to work more efficiently or help colleagues (Morrison, 2006; Vardaman et al., 2014; Xu & Zhu, 2017). This represents violation of the interactive coupling requirements—non-compliance with predetermined rules while exercising subjective initiative on predefined tasks—likely disrupting team coordination and undermining team harmony. Therefore, based on harmony management theory, we propose that team PSRB climate negatively affects team harmony.

Furthermore, Xi et al. (2005) argued that harmony management theory applies

to complex systems composed of people and various elements, where achieving harmony themes requires real-time analysis of how these elements interact. Effective application of “He Ze” and “Xie Ze” cannot be separated from clear understanding of these interaction processes (Xi et al., 2020). In this study, the team represents a complex system in which team members are the most important elements (Solow et al., 2002). To investigate the degree to which team PSRB, as a violation of the dual-rule coupling mechanism, negatively affects team harmony, we must consider interaction patterns and influence levels among team members. Team interdependence captures the extent to which members must depend on and collaborate with one another to achieve team goals, comprehensively characterizing interaction patterns and mutual influence (Courtright et al., 2015). Highly interdependent teams require high-level interaction, with members needing close coordination to complete work (van der Vegt et al., 2000). Research shows that such teams require more cooperation, communication, and information sharing (Bachrach et al., 2006; Crawford & Haaland, 1972) and, compared to low interdependence teams, greater adherence to rules guiding workflow and resource allocation (Courtright et al., 2015; Wageman, 1999), as rules enable better coordination (Wang et al., 2003).

Based on harmony management theory and considering member interaction patterns, we propose that team interdependence moderates the relationship between team PSRB climate and team harmony. Specifically, high team interdependence indicates that members must coordinate closely according to team rules and are more likely to be affected by others’ behaviors and work styles (Fragale, 2006; Liden et al., 2006; Van der Vegt & Janssen, 2003). Therefore, in highly interdependent teams, when members violate rules to improve efficiency or help colleagues (Dahling et al., 2012)—favoring “He Ze” while violating “Xie Ze”—this undermines coordination and negatively impacts team harmony. Harmony management theory posits that team harmony requires not only harmonious relationships and subjective initiative but also orderly coordination along predetermined behavioral paths (Lun, 2012; Xi et al., 2005). Conversely, low team interdependence indicates that members work independently and are less affected by colleagues’ behaviors (Hu & Liden, 2015; Saavedra et al., 1993), making pro-social rule violations less likely to affect overall team functioning and weakening the negative impact of team PSRB climate on team harmony. We therefore propose:

Hypothesis 1: Team interdependence moderates the relationship between team PSRB climate and team harmony, such that the negative relationship is stronger when team interdependence is high.

1.3 The Mediating Role of Team Harmony

We argue that team harmony promotes team performance by facilitating information sharing and collaboration. First, team harmony indicates that members have harmonious relationships, where expressing different viewpoints is perceived as constructive (Chen et al., 2016). This harmonious atmosphere en-

courages members to voice their ideas during decision-making and actively share information and knowledge, thereby enhancing team performance (Ünal et al., 2017).

Second, team performance largely depends on members' collective effort and collaboration (Denison et al., 1996; Lovelace et al., 2001). Members must integrate knowledge and information to accomplish shared tasks rather than working in isolation (Denison et al., 1996; Lovelace et al., 2001). When team harmony is high, members collaborate effectively with minimal friction in work processes, facilitating performance achievement (Kozlowski & Ilgen, 2006). When harmony is lacking, members struggle to integrate their efforts toward team goals (Chua, 2013), negatively affecting performance. Previous research has confirmed team harmony's positive effect on team performance (Chen et al., 2016; Lun & Bond, 2006; Ünal et al., 2017). We therefore propose:

Hypothesis 2: Team harmony positively influences team performance.

Integrating Hypotheses 1 and 2, we construct a moderated mediation model depicting how team PSRB climate affects team performance. Specifically, in highly interdependent teams, members must coordinate through rules to accomplish tasks (Courtright et al., 2015; Wageman, 1999; Wang et al., 2003). Pro-social rule violations undermine team harmony, thereby hindering performance. In contrast, in low interdependence teams, members work more independently with less rule-based coordination (Hu & Liden, 2015; Saavedra et al., 1993), making pro-social rule violations less damaging to harmony and performance. We therefore propose:

Hypothesis 3: The mediating effect of team harmony between team PSRB climate and team performance is moderated by team interdependence, such that the negative indirect effect is stronger when team interdependence is high.

2.1 Research Sample

This study was conducted in three manufacturing companies located in Shandong, Shanghai, and Shenzhen. After obtaining approval from the CEOs, we consulted with HR departments to identify participants. The final sample comprised knowledge-worker teams (e.g., human resources, finance, R&D, product design, quality assurance). HR provided employee rosters, and we prepared paper questionnaires with identification codes for matching. Participants completed surveys in company meeting rooms in batches. Researchers explained the study's purpose, assured anonymity, distributed questionnaires and small gifts, remained present to answer questions, and collected completed surveys on-site. For employees on business trips, we arranged for them to return completed questionnaires by mail after their return.

Data collection occurred across three time points. At T1, we collected demographic information and team members' assessments of team PSRB climate (374 employee surveys) and team leaders' assessments of team interdependence

(79 leader surveys). At T2 (two months after T1), we collected team members' assessments of team harmony (358 surveys). At T3 (two months after T2), we collected team members' assessments of team performance (345 surveys). After matching across three waves, the final sample included 334 valid employee surveys from 74 valid teams.

Team member demographics were as follows: 58% male, 42% female; ages ranged from 24 to 58, with 11.5% aged 24-30, 40.8% aged 31-40, 37.8% aged 41-50, and 9.9% aged 51-58. Education levels: 1.2% junior high or below, 8.9% technical secondary school, 5.8% high school, 34.6% college, 46.1% bachelor's degree, and 3.4% master's degree or higher. Team size: 75.7% had 5 or fewer members, 21.6% had 6-10 members, and 2.7% had more than 10 members.

Leader demographics were: 64.8% male, 35.2% female; ages ranged from 31 to 59, with 27.8% aged 31-40, 55.5% aged 41-50, and 16.7% aged 51-59. Education levels: 1.4% junior high or below, 6.8% technical secondary or high school, 26% college, 61.7% bachelor's degree, and 4.1% graduate degree or higher.

2.2 Measurement Instruments

All scales underwent back-translation (English-Chinese). All items used 7-point Likert scales (1 = strongly disagree, 7 = strongly agree).

Team PSRB Climate. We used Dahling et al.'s (2012) scale, previously applied in Chinese contexts (Xu & Zhu, 2017). Team-level aggregation required shared perceptions, so we adapted items following Chan's (1998) referent-shift consensus model, changing "I" to "we" to assess perceived team-level PSRB. The 13-item scale included items such as "To complete work more efficiently, we violate organizational rules" and "To help the company save time and money, we violate organizational rules." Team members completed this scale ($\alpha = 0.94$).

Team Interdependence. We used Dean and Snell's (1991) 5-item scale, including "To what extent do team employees need to collaborate with others to complete work?" and "How much do employees in this team depend on other members to complete work?" Team leaders completed this scale ($\alpha = 0.83$).

Team Harmony. We used Chen et al.'s (2016) scale, which includes three dimensions: harmonious affect, balance between group and individual harmony, and collaborative harmony attribution. We selected the collaborative harmony attribution dimension (4 items) that aligns with our definition, including "When team members express different opinions, others consider it normal and constructive" and "When team members voice different views, others see it as contributing to team performance." Team members completed this scale ($\alpha = 0.91$).

Team Performance. We used Kirkman and Rosen's (1999) 6-item scale, including "Our team can achieve or exceed goals" and "Our team can complete tasks on time." Team members completed this scale ($\alpha = 0.96$).

Control Variables. Previous research indicates that demographic characteris-

tics affect PSRB (Dahling et al., 2012; Morrison, 2006). For example, Morrison (2006) found that men, being more risk-taking, engage in more PSRB. Additionally, Chen et al. (2016) found that team size and member age affect team harmony. We therefore controlled for team size, team member gender, age, and education level.

3.1 Confirmatory Factor Analysis

To establish discriminant validity, we conducted CFA on the four variables: team PSRB climate, team interdependence, team harmony, and team performance. Given the limited sample size at the team level ($N = 74$), we created item parcels. Team PSRB climate, team interdependence, and team performance were each parceled into three indicators. As shown in Table 1, the four-factor model fit the data better than alternative models ($\chi^2 = 58.79$, $df = 38$, $CFI = 0.94$, $TLI = 0.91$, $SRMR = 0.09$), supporting the four-factor structure and confirming discriminant validity.

Table 1 Measurement Model Comparison

Model	χ^2	df	CFI	TLI	SRMR	RMSEA
Four-factor model	58.79	38	0.94	0.91	0.09	0.08
Three-factor model	89.45	41	0.87	0.82	0.11	0.12
Two-factor model	145.32	43	0.75	0.68	0.14	0.17
One-factor model	198.76	44	0.62	0.52	0.16	0.21

Note: $N = 74$. Three-factor model: team PSRB climate and team interdependence combined; Two-factor model: team PSRB climate and team interdependence combined, and team harmony and team performance combined; One-factor model: all four variables combined.

3.2 Data Aggregation Tests

Since individual data were nested within teams, we examined ICC(1) and ICC(2) to assess within-group agreement. Team interdependence was rated by leaders only, so we tested aggregation for team PSRB climate, team harmony, and team performance. Results showed significant between-group variance, with $ICC(1) = 0.19$ and $ICC(2) = 0.52$ for team PSRB climate; $ICC(1) = 0.16$ and $ICC(2) = 0.46$ for team harmony; and $ICC(1) = 0.16$ and $ICC(2) = 0.46$ for team performance. These values meet conventional aggregation standards (Bliese, 1998). Additionally, median Rwg values were 0.95 for team PSRB climate, 0.94 for team harmony, and 0.97 for team performance, indicating strong within-group agreement (James et al., 1984).

3.3 Descriptive Statistics and Correlations

Table 2 presents means, standard deviations, and correlations. Team harmony was significantly positively correlated with team performance ($r = 0.43$, $p < .01$), consistent with theoretical expectations.

Table 2 Means, Standard Deviations, and Correlations

Variable	M	SD	1	2	3	4	5	6	7
1. Team size	4.85	2.12	-						
2. Member gender	0.58	0.49	0.08	-					
3. Member age	3.24	0.89	0.15	0.12	-				
4. Member education	3.45	0.92	0.06	0.08	0.21*	-			
5. Team PSRB climate	3.76	0.68	0.11	0.09	0.14	0.07	-		
6. Team interdependence	5.12	0.74	0.18	0.05	0.09	0.03	0.16	-	
7. Team harmony	5.34	0.65	0.12	0.06	0.08	0.04	-	0.32**	-
8. Team performance	5.67	0.71	0.14	0.10	0.11	0.09	-	0.21*	0.28**
							0.18		0.43**

Note: $N = 74$. * $p < 0.05$, ** $p < 0.01$.

3.4 Hypothesis Testing

Since our 74 teams were nested within three companies, we addressed potential non-independence of team-level observations using the sandwich estimator to obtain robust standard errors (Muthén & Muthén, 2007). We implemented this in Mplus 8.3 using TYPE = COMPLEX. For testing moderated mediation, we employed Edwards and Lambert's (2007) path analytic approach and used Monte Carlo methods to derive confidence intervals for indirect effects (Selig & Preacher, 2008).

Hypothesis 1 predicted that team interdependence moderates the relationship between team PSRB climate and team harmony. As shown in Table 3, after controlling for team size, leader and member demographics, and the main effects, the interaction term significantly negatively predicted team harmony ($b = -0.22$, $t = -2.96$, $p < 0.01$). Simple slopes analysis revealed that team PSRB climate significantly negatively affected team harmony at high interdependence ($b = -0.36$, $t = -3.41$, $p < 0.01$) but not at low interdependence ($b = 0.16$, $t = 2.06$, n.s.), with the difference being significant ($b = -0.52$, $t = -2.88$, $p < 0.01$). Thus, Hypothesis 1 was supported. Following Aiken and West (1991), we plotted the

interaction at ± 1 SD of team interdependence (Figure 2 [Figure 2: see original paper]).

Hypothesis 2 predicted that team harmony positively affects team performance. Table 3 shows that, after controls, team harmony significantly predicted team performance ($b = 0.47$, $t = 5.57$, $p < 0.001$), supporting Hypothesis 2.

Hypothesis 3 predicted that team interdependence moderates the indirect effect of team PSRB climate on team performance through team harmony. Using Monte Carlo methods (Selig & Preacher, 2008), we tested whether the indirect effect differed significantly at high (+1 SD) versus low (-1 SD) team interdependence. The indirect effect was significant at high interdependence (effect = -0.11, 95% CI [-0.32, -0.02]) but not at low interdependence (effect = 0.07, 95% CI [-0.05, 0.19]), with the difference being significant (effect = -0.08, 95% CI [-0.42, -0.05]). Thus, Hypothesis 3 was supported.

Table 3 Path Analysis Results

Predictor	Team Harmony (T2)	Team Performance (T3)
Team size (T1)	0.08 (1.12)	0.11 (1.45)
Leader gender (T1)	-0.06 (-0.85)	0.09 (1.21)
Leader age (T1)	0.12 (1.56)	0.08 (1.02)
Leader education (T1)	-0.04 (-0.52)	0.06 (0.78)
Member gender (T1)	0.05 (0.68)	0.07 (0.92)
Member age (T1)	0.09 (1.21)	0.05 (0.68)
Member education (T1)	-0.03 (-0.41)	0.04 (0.55)
Team PSRB climate (T1)	-0.18 (-2.01)*	-0.12 (-1.56)
Team interdependence (T1)	0.22 (2.89)**	0.15 (1.89)
Team PSRB climate × Team interdependence (T1)	-0.22 (-2.96)**	-
Team harmony (T2)	-	0.47 (5.57)***
R ²	0.28	0.41

Note: N = 74. Values are unstandardized coefficients with t-statistics in parentheses. T1 = Time 1, T2 = Time 2, T3 = Time 3. $p < 0.05$, $p < 0.01$, $p <$

0.001.

[Figure 2: see original paper] Interaction Effect of Team PSRB Climate and Team Interdependence on Team Harmony

4.1 Research Findings

Based on harmony management theory, this study examined the mechanisms (team harmony as mediator) and boundaries (team interdependence as moderator) of team PSRB climate' s effect on team performance. Using a multi-wave longitudinal design with 74 teams and 334 members, results show: (1) team interdependence moderates the relationship between team PSRB climate and team harmony, with a significant negative relationship at high but not low interdependence; (2) team harmony significantly positively predicts team performance; and (3) team interdependence moderates the indirect effect of team PSRB climate on team performance through team harmony, strengthening the negative indirect effect at high interdependence.

4.2 Theoretical Contributions

First, this study extends PSRB research from the individual to team level by conceptualizing team PSRB climate and examining its effects on team outcomes. As noted, existing PSRB research has focused on individual-level antecedents and outcomes, neglecting team PSRB climate and its potential team-level consequences. Given that teams are now ubiquitous organizational structures, pro-social rule violations affect not only perpetrators and recipients but also other members and overall team functioning. Moreover, team members develop shared perceptions of PSRB through communication. By proposing and validating team PSRB climate, we advance team-level PSRB research.

Second, this study enriches PSRB outcome research by examining team PSRB climate' s effects on team performance. Bryant et al. (2010) theoretically proposed that even pro-socially motivated rule breaking may produce unintended negative consequences for organizations because complex work environments and bounded rationality prevent individuals from foreseeing all behavioral consequences. However, only Dahling et al. (2012) have empirically examined negative effects on individual performance. PSRB outcome research remains underdeveloped, with scholars offering mixed evaluations (Sun et al., 2016; Xu & Zhu, 2017). Our study, grounded in harmony management theory, demonstrates that team PSRB climate negatively affects team performance, consistent with theoretical arguments about unintended negative consequences (Bryant et al., 2010) and illustrating how bounded rationality at the team level prevents members from considering how PSRB might undermine team harmony.

Third, this study advances team harmony research by examining its mediating role between team PSRB climate and team performance. Lun and Bond (2006) and Lun (2012) called for team-level harmony research, suggesting that

adherence to predetermined rules and role requirements reduces uncertainty and promotes harmony. We respond to this call, particularly by demonstrating how rule compliance contributes to harmony.

Fourth, this study opens the “black box” of team PSRB climate’s effects on team performance and identifies boundary conditions. Current understanding of these mechanisms remains limited. By applying harmony management theory (Xi et al., 2005), we reveal team harmony’s mediating role and team interdependence’s moderating role, providing valuable insights into the processes linking team PSRB climate to team performance.

4.3 Practical Implications

Our findings suggest that team PSRB climate negatively affects team harmony, implying that organizations should not encourage such behavior. Formal rules and systems exist to standardize behavior and enable efficient cooperation and coordination (March et al., 2000). Research and practice demonstrate that rules are crucial for organizational functioning and fairness (Martin et al., 2013). Given bounded rationality, even pro-socially motivated rule violations may produce unforeseen negative consequences. For example, violating rules to improve individual efficiency might disrupt overall team operations, or helping colleagues by breaking rules might undermine team fairness. Adhering to optimally designed rules can mitigate these negative effects of bounded rationality.

However, organizations sometimes have outdated, inefficient rules that members violate to coordinate effectively. We argue that sustainable organizations should not tolerate inefficient rules and recommend that managers rationally design and optimize rules to match work requirements while encouraging subjective initiative for undefined tasks. Future research should examine team rule rationality as a moderator, exploring how PSRB might alert managers to needed changes through team reflection.

Second, our findings indicate that team PSRB climate is more detrimental to performance in high versus low interdependence teams. Managers in high interdependence teams should actively reduce PSRB through rule training and enforcement. Finally, since team harmony enhances performance, managers should cultivate and maintain harmony by establishing clear, fair rules and fostering distributive, procedural, and interactional justice (Ünal et al., 2017).

4.4 Limitations and Future Directions

First, our research design has limitations. Although we used three time points to reduce common method bias (Guo & Cheng, 2021; Podsakoff et al., 2012), all variables were rated by team members and aggregated to the team level, potentially creating same-source bias. Future research should use multi-time, multi-source longitudinal designs (e.g., leader-rated or objective performance data) to validate causal relationships.

Second, our examination of team PSRB climate's effects lacks granularity. Morrison (2006) distinguished three PSRB dimensions (efficiency, helping colleagues, customer service), which may produce different outcomes (Mayer, 2007). Future research should examine how different dimensions of team PSRB climate affect outcomes.

Third, our theoretical perspective is limited. While we proposed team harmony as a mediator based on harmony management theory, other mediating mechanisms likely exist. Scholars view PSRB as a double-edged sword with potential positive and negative effects (Bryant et al., 2010; Liu & Wang, 2018). We only examined the negative path through team harmony; future research should explore other mediating mechanisms from different theoretical perspectives.

Finally, our regression results show non-significant direct relationships between team PSRB climate and team harmony, though coefficients were negative. This warrants reflection. Based on harmony management theory, we argued that team PSRB climate negatively affects team harmony, and our results show negative (though non-significant) coefficients, providing preliminary support. The strength of this negative effect depends on team interdependence, as harmony management theory requires analyzing element interactions within complex systems (Xi et al., 2005, 2020). While we tested team interdependence's moderating role, other team characteristics may also matter. For example, team humility might affect how teams reflect on PSRB (Owens et al., 2013), potentially producing positive outcomes. We encourage future research to examine additional moderators based on other theories.

References

- Aiken, L., & West, S. (1991). *Multiple regression: Testing and interpreting interactions*. Thousand Oaks, CA: Sage.
- Bachrach, D. G., Powell, B. C., Collins, B. J., & Richey, R. J. (2006). Effects of task interdependence on the relationship between helping behavior and group performance. *Journal of Applied Psychology, 91*(6), 1396-1405.
- Bliese, P. D. (1998). Group size, ICC values, and group-level correlations: A simulation. *Organizational Research Methods, 1*(4), 355-373.
- Bryant, P., Davis, C., Hancock, J., & Vardaman, J. M. (2010). When rule makers become rule breakers: Employee-level outcomes of managerial pro-social rule breaking. *Employee Responsibilities and Rights Journal, 22*(2), 101-112.
- Chan, D. (1998). Functional relations among constructs in the same content domain at different levels of analysis: A typology of composition models. *Journal of Applied Psychology, 83*(2), 234-246.
- Chen, C. C., Ünal, A. F., Leung, L. K., & Xin, K. R. (2016). Group harmony in the workplace: Conception, measurement, and validation. *Asia Pacific Journal of Management, 33*(4), 903-934.

- Chen, Y. S., Wang, L., Liu, X., Chen, H., Hu, Y. Y., & Yang, H. L. (2019). The trickle-down effect of leaders' pro-social rule breaking: Joint moderating role of empowering leadership and courage. *Frontiers in Psychology, 9*, 2647-2656.
- Chua, R. Y. (2013). The costs of ambient cultural disharmony: Indirect intercultural conflicts in social environment undermine creativity. *Academy of Management Journal, 56*(6), 1545-1577.
- Courtright, S. H., Thurgood, G. R., Stewart, G. L., & Pierotti, A. J. (2015). Structural interdependence in teams: An integrative framework and meta-analysis. *Journal of Applied Psychology, 100*(6), 1825-1846.
- Crawford, J. L., & Haaland, G. A. (1972). Predecisional information seeking and subsequent conformity in the social influence process. *Journal of Personality and Social Psychology, 23*(1), 112-119.
- Dahling, J. J., Chau, S. L., & Mayer, D. M. (2012). Breaking rules for the right reasons? An investigation of pro-social rule breaking. *Journal of Organizational Behavior, 33*(1), 21-42.
- Dean Jr., J. W., & Snell, S. A. (1991). Integrated manufacturing and job design: Moderating effects of organizational inertia. *Academy of Management Journal, 34*(4), 776-804.
- Denison, D. R., Hart, S. L., & Kahn, J. A. (1996). From chimneys to cross-functional teams: Developing and validating a diagnostic model. *Academy of Management Journal, 39*(4), 1005-1023.
- Edwards, J. R., & Lambert, L. S. (2007). Methods for integrating moderation and mediation: A general analytical framework using moderated path analysis. *Psychological Methods, 12*(1), 1-22.
- Fragale, A. R. (2006). The power of powerless speech: The effects of speech style and task interdependence on status conferral. *Organizational Behavior and Human Decision Processes, 101*(2), 243-261.
- Guo, G. X., & Cheng, B. (2021). Effects of customer empowering behaviors on employees' career growth: Perspective of self-determination theory. *Acta Psychologica Sinica, 53*(2), 215-228.
- Griffin, M. A., Neal, A., & Parker, S. K. (2007). A new model of work role performance: Positive behavior in uncertain and interdependent contexts. *Academy of Management Journal, 50*(2), 327-347.
- Hu, J., & Liden, R. C. (2015). Making a difference in the teamwork: Linking team prosocial motivation to team processes and effectiveness. *Academy of Management Journal, 58*(4), 1102-1127.
- Huang, Y. L., Lu, X. X., & Wang, X. (2014). The effects of transformational leadership on employee' s pro-social rule breaking. *Canadian Social Science, 10*(1), 128-134.

- James, L. R., Demaree, R. G., & Wolf, G. (1984). Estimating within-group interrater reliability with and without response bias. *Journal of Applied Psychology, 69*(1), 85-98.
- King, D. D., Newman, A., & Luthans, F. (2016). Not if, but when we need resilience in the workplace. *Journal of Organizational Behavior, 37*(5), 782-786.
- Kirkman, B. L., & Rosen, B. (1999). Beyond self-management: Antecedents and consequences of team empowerment. *Academy of Management Journal, 42*(1), 58-74.
- Kozlowski, S. W. J., & Bell, B. S. (2003). Work groups and teams in organizations. In I. B. Weiner, N. W. Schmitt, & S. Highhouse (Eds.), *Handbook of psychology, Vol. 12: Industrial and organizational psychology* (pp. 333-375). New York: Wiley.
- Kozlowski, S. W. J., & Ilgen, D. R. (2006). Enhancing the effectiveness of work groups and teams. *Psychological Science in the Public Interest, 7*(3), 77-124.
- Leung, K., Brew, F. P., Zhang, Z. X., & Zhang, Y. (2011). Harmony and conflict: A cross-cultural investigation in China and Australia. *Journal of Cross-Cultural Psychology, 42*(5), 795-816.
- Leung, K., Koch, P. T., & Lu, L. (2002). A dualistic model of harmony and its implications for conflict management in Asia. *Asia Pacific Journal of Management, 19*(2-3), 201-220.
- Li, P. F., Ge, J., & Xi, Y. M. (2014). Leadership studies in hexie management theory: A review and research agenda. *Chinese Journal of Management, 11*(11), 1591-1600.
- Li, R., Tian, X. M., & Ling, W. Q. (2015). Mechanisms of how managerial openness and supervisor-subordinate guanxi impact on employee pro-social rule breaking. *Systems Engineering-Theory & Practice, 35*(2), 342-357.
- Liang, C. G., Han, W., Liu, P., Zhang, J. B., & Xu, S. Q. (2020). Dual coupling theory of constraints-agency and certainty-uncertainty. *Chinese Journal of Management, 17*(1), 40-49.
- Liden, R. C., Erdogan, B., Wayne, S. J., & Sparrowe, R. T. (2006). Leader-member exchange, differentiation, and task interdependence: Implications for individual and group performance. *Journal of Organizational Behavior, 27*(6), 723-750.
- Liu, X. G., & Wang, Z. H. (2018). Influence mechanism of managerial pro-social rule breaking on employee behavior from the perspective of opposition between favor and reason: A cross-levels and longitudinal study. *Advances in Psychological Science, 26*(2), 191-203.
- Lovelace, K., Shapiro, D. L., & Weingart, L. R. (2001). Maximizing cross-functional new product teams' innovativeness and constraint adherence: A con-

- flict communications perspective. *Academy of Management Journal*, 44(4), 779-793.
- Lun, V. M. C. (2012). Harmonizing conflicting views about harmony in Chinese culture. In X. Huang & M. H. Bond (Eds.), *Handbook of Chinese organizational behavior: Integrating theory, research and practice* (pp. 467-480). USA: Edward Elgar Publishing Limited.
- Lun, V. M. C., & Bond, M. H. (2006). Achieving relationship harmony in groups and its consequence for group performance. *Asian Journal of Social Psychology*, 9(3), 195-202.
- Luo, X. P., & Zhang, X. Q. (2012). Study on professional executive compensation management in private enterprises based on Hexie management theory. *Soft Science*, 26(5), 94-99.
- Maltarich, M. A., Kukenberger, M., Reilly, G., & Mathieu, J. (2018). Conflict in teams: Modeling early and late conflict states and the interactive effects of conflict processes. *Group & Organization Management*, 43(1), 6-37.
- March, J. G., Schulz, M., & Zhou, X. (2000). *The dynamics of rules: Change in written organizational codes*. Stanford, CA: Stanford University Press.
- Martin, A. W., Lopez, S. H., Roscigno, V. J., & Hodson, R. (2013). Against the rules: Synthesizing types and processes of bureaucratic rule-breaking. *Academy of Management Review*, 38(4), 550-574.
- Mayer, D. M., Caldwell, J., Ford, R. C., Uhl-Bien, M., & Gresock, A. R. (2007). Should I serve my customer or my supervisor? A relational perspective on pro-social rule breaking. Paper presented at the 67th Annual Meeting of the Academy of Management, Philadelphia, PA.
- Morrison, E. W. (2006). Doing the job well: An investigation of pro-social rule breaking. *Journal of Management*, 32(1), 5-28.
- Muthén, L. K., & Muthén, B. O. (2007). *Mplus user's guide* (5th ed.). Los Angeles: Author.
- Owens, B. P., Johnson, M. J., & Mitchell, T. R. (2013). Expressed humility in organizations: Implications for performance, teams, and leadership. *Organization Science*, 24(5), 1517-1538.
- Podsakoff, P. M., Mackenzie, S. B., & Podsakoff, N. P. (2012). Sources of method bias in social science research and recommendations on how to control it. *Annual Review of Psychology*, 63(1), 539-569.
- Saavedra, R., Earley, P. C., & Van Dyne, L. (1993). Complex interdependence in task-performing groups. *Journal of Applied Psychology*, 78(1), 61-89.
- Salancik, G. R., & Pfeffer, J. (1978). A social information processing approach to job attitudes and task design. *Administrative Science Quarterly*, 23(2), 224-253.

- Selig, J. P., & Preacher, K. J. (2008). Monte Carlo method for assessing mediation: An interactive tool for creating confidence intervals for indirect effects. Retrieved November 20, 2020, from <http://quantpsy.org/>.
- Simons, T. L., & Peterson, R. S. (2000). Task conflict and relationship conflict in top management teams: The pivotal role of intragroup trust. *Journal of Applied Psychology, 85*(1), 102-111.
- Solow, D., Vairaktarakis, G., Piderit, S. K., & Tsai, M. C. (2002). Managerial insights into the effects of interactions on replacing members of a team. *Management Science, 48*(8), 1060-1073.
- Sun, J. Q., Tian, X. M., & Liu, Y. (2016). Employees' pro-social rule breaking in organizations. *Journal of Soochow University Philosophy & Social Science Edition, 6*, 114-121.
- Ünal, A. F., Chen, C. C., & Xin, K. R. (2017). Justice climates and management team effectiveness: The central role of group harmony. *Management and Organization Review, 13*(4), 821-849.
- Van der Vegt, G., Emans, B., & van de Vliert, E. (2000). Team members' affective responses to patterns of intragroup interdependence and job complexity. *Journal of Management, 26*(4), 633-655.
- Van der Vegt, G. S., & Janssen, O. (2003). Joint impact of interdependence and group diversity on innovation. *Journal of Management, 29*(5), 729-751.
- Vardaman, J. M., Gondo, M. B., & Allen, D. G. (2014). Ethical climate and pro-social rule breaking in the workplace. *Human Resource Management Review, 24*(1), 108-118.
- Wageman, R. (1999). The meaning of interdependence. In M. Turner (Ed.), *Groups at work: Advances in theory and research* (pp. 197-218). Hillsdale, NJ: Erlbaum.
- Wang, Q., Xi, Y. M., & Shang, Y. F. (2003). The core of the theory of "hexie" management: The interpretation of the theme of "hexie". *Management Review, 15*(9), 24-30.
- Weick, K. E. (1979). *The social psychology of organization*. Reading, MA: Addison-Wesley.
- Xi, Y. M., Xiao, H. W., & Wang, H. T. (2005). HeXie management theory and its new development in the principles. *Chinese Journal of Management, 2*(1), 23-32.
- Xi, Y. M., Shang, Y. S., Jin, H., & Han, W. (2009). Reflection on hexie management theory and its application. *Chinese Journal of Management, 6*(1), 12-18.
- Xi, Y. M., Liu, P., Kong, F., & Ge, J. (2013). HeXie management theory: Origins, implications and prospects. *Journal of Industrial Engineering, 27*(2),

1-8.

Xi, Y. M., Xiong, C., & Liu, P. (2020). Review and discussion on the application of hexie management theory. *Journal of Management World*, 2, 195-212.

Xu, C. L., Duan, W. C., Sun, Y. H., & Du, Y. W. (2014). Theme discrimination and optimization of hexie management mechanism for innovation team. *Chinese Journal of Management*, 11(3), 390-395.

Xu, C. L., & Duan, W. C. (2015). Integration and optimization of team' s social capital based on harmonic theme drifting. *Science Research Management*, 36(10), 153-160.

Xu, S. Y., & Zhu, J. Q. (2017). Ethical leadership and pro-social rule breaking: A dual process model. *Acta Psychologica Sinica*, 49(1), 106-115.

Yan, S. Z., Xu, H. H., & Zhang, P. (2018). Research of influence on employee pro-social violations of differential leaders. *Business Management Journal*, 44(8), 35-39.

Zhu, J. Q., & Xu, S. Y. (2015). Counter-productive work behavior and pro-social rule breaking behavior: Based on compensatory ethics view. *Economic Management*, 37(10), 75-85.

Zhu, J. Q., Xu, S. Y., Yang, O. K., Herst, D., & Farndale, E. (2018). Ethical leadership and employee pro-social rule-breaking behavior in China. *Asian Business & Management*, 17(1), 59-81.

Appendix: Scales

Team Pro-social Rule Breaking Climate

In our team...

1. We violate organizational rules to complete work more efficiently.
2. We violate organizational rules to help the company save time and money.
3. We ignore organizational rules to simplify work processes for greater efficiency.
4. We violate organizational rules when they interfere with our job responsibilities.
5. We violate inefficient organizational rules.
6. We break organizational conventions to help colleagues with various matters.
7. We violate organizational rules to provide help when colleagues need assistance with work.
8. We break organizational rules to help colleagues complete their work.
9. We help other colleagues even if it means violating organizational rules.
10. We violate organizational rules that hinder good customer service.
11. We ignore rules that hinder service to provide better service.
12. We violate organizational rules to better provide customer service.
13. We violate organizational rules so we can provide customers with the best service.

Team Interdependence

Regarding your team' s work characteristics:

1. To what extent do team employees need to collaborate with others to complete work?
2. What proportion of work in this team must be handled jointly with others?
3. How much does success in this team depend on cooperation among employees?
4. How much do employees in this team depend on other members to complete work?
5. To what extent do team employees frequently need to build on others' work?

Team Harmony

Overall, in our team...

1. When team members express different opinions, everyone considers it normal and constructive for the team.
2. When team members voice different views, everyone sees it as contributing to team performance.
3. When team members argue strongly for their viewpoints, others see it as being for team benefit rather than personal interest.
4. When team members express their views frankly and directly, others see it as coming from genuine concern.

Team Performance

Overall, our team...

1. Can achieve or even exceed goals.
2. Can complete tasks on time.
3. Ensures products and services meet or exceed quality standards.
4. Can respond quickly when problems arise.
5. Is a productive team.
6. Can successfully solve problems that affect progress.

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

Source: ChinaXiv –Machine translation. Verify with original.