

ABSTRACT

Title of Dissertation: PAY SYSTEM EFFECTIVENESS IN
 ORGANIZATIONAL CHANGE:
 UNDERSTANDING HOW AND WHEN
 PERCEIVED PAY EQUITY AND PAY
 EQUALITY AFFECT ADAPTIVE TEAM
 PERFORMANCE

Ning Li, Doctor of Philosophy, 2017

Dissertation directed by: Professor Hui Liao
 Department of Management and Organization

In today's fast-paced economy, organizations undergo changes almost constantly in order to survive or maintain competitive. Under such backdrop, it is important to understand how pay system can help teams adapt and perform well when organizational change disrupts existing ways of collective functioning. However, little theoretical effort has been given to this important topic. The main purpose of this dissertation is to develop theory that explains how pay system can be leveraged to facilitate adaptive team performance. I extend the management literature by clarifying 1) *what* pay system characteristics are important for promoting adaptive team performance, 2) *how* such pay system characteristics take effects to shape adaptive team performance and, 3) *when* such pay system characteristics are more or less instrumental for benefiting adaptive team performance. Specifically, I first propose

that adaptive team performance is a function of two pay system characteristics: pay equity and pay equality. Next, I argue that pay equity and pay equality contribute to adaptive team performance through distinct mechanisms. That is, the pay equity operates through facilitating planned coordination; while pay equality operates through facilitating emergent coordination. Last, I predict that interdependence uncertainty serves as a boundary condition to weaken the effects of pay equity on team coordination and adaptive team performance, but strengthen the effects of pay equality on team coordination and adaptive team performance. I tested these hypotheses in a manufacturing firm during a period it went through a major organizational change. Using a sample of 207 production teams, I found evidence that largely supported my theoretical model. This dissertation not only offers a more sophisticated understanding of pay system effectiveness in organizational change, but also provides improved prescriptions for organizations and managers.

PAY SYSTEM EFFECTIVENESS IN ORGANIZATIONAL CHANGE:
UNDERSTANDING HOW AND WHEN PERCEIVED PAY EQUITY AND PAY
EQUALITY AFFECT ADAPTIVE TEAM PERFORMANCE

by

Ning Li

Dissertation submitted to the Faculty of the Graduate School of the
University of Maryland, College Park, in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy
2017

Advisory Committee:
Professor Hui Liao, Chair
Professor Rellie Derfler-Rozin
Professor Subra Tangirala
Professor M. Susan Taylor
Professor Paul J. Hanges

© Copyright by
Ning Li
2017

ACKNOWLEDGMENTS

I would like to thank all professors and students of the Management and Organization department at University of Maryland. First, I thank my dissertation chair, Hui Liao, for her mentoring and training in the past 5 years. Your dedication has inspired and challenged me to produce my best work. Moreover, I particularly thank Subra Tangirala for his encouragement and enthusiasm during the dissertation process and throughout my doctoral training.

Second, I would like to thank many friends who have been riding with me along this long journey including Michael Parke, Elijah Wee, Bradford Baker, Anubhuti Mishra, Shuye Lu, Insiya Hussain, and Rujiao Cao. In particular, I am especially grateful to Elad Sherf, Tom Yan, Beth Campbell, and Brady Firth who have been tremendously generous and helpful to me at my difficult times. Most important, I want to thank Justina Blanco who helps me meet all deadlines so that I can come to this point. Last, I want to thank my wife, Monica Zhan, for her unconditional support and love. I feel really lucky and privileged to spend the past 5 years with all of you here.

Table of Contents

CHAPTER 1: INTRODUCTION.....	1
CHAPTER 2: THEORY AND HYPOTHESES DEVELOPMENT	7
Pay System Characteristics and Adaptive Team Performance	7
Planned Coordination and Emergent Coordination as Explanatory Mechanisms ..	10
The Asymmetric Effects of Pay Equity and Pay Equality	16
Interdependence Uncertainty as a Boundary Condition	21
CHAPTER 3: METHODOLOGY	26
Sample and Procedures	26
Measurement strategy	27
Measures	28
<i>Pay equity and pay equality</i>	28
<i>Interdependence uncertainty</i>	30
<i>Planned coordination and emergent coordination.</i>	30
<i>Team performance.</i>	31
Analytical Strategy.....	32
CHAPTER 4: RESULTS	33
Confirmatory Factor Analysis.....	33
Tests of Hypotheses	34
CHAPTER 6: DISCUSSION.....	40
Summary of Findings.....	40
Theoretical Implications	40
Practical Implications.....	45
Limitations and Future Research	46
Conclusions.....	49
Appendix A: IRB Approval Letter	50
Appendix B: English Version of Survey Questionnaires	51
References.....	65

List of Tables

Table 1	
A Comparison of Planned and Emergent Coordination	53
Table 2	
Descriptive Statistics and Correlations for Study Variables.....	54
Table 3	
Model Fit Indices for Measurement Models.....	55
Table 4	
Regression Results: Team Performance at Time 3 as the Dependent Variable.....	56
Table 5	
Regression Results: Planned Coordination as the Dependent Variable.....	57
Table 6	
Regression Results: Emergent Coordination as the Dependent Variable.....	58
Table 7	
Bootstrapping Results of Indirect Effects	59
Table 8	
Results of the Conditional Indirect Effects	60

List of Figures

Figure 1. Hypothesized Model.....	61
Figure 2. The Interactive Effect of Pay Equality and Interdependence Uncertainty on Emergent Coordination.....	62
Figure 3. The Interactive Effect of Emergent Coordination and Interdependence Uncertainty on Adaptive Team Performance	63
Figure 4. The Interactive Effect of Pay Equality and Interdependence Uncertainty on Adaptive Team Performance	64

CHAPTER 1: INTRODUCTION

In today's increasingly volatile, complex, and dynamic business environment, organizations undergo changes almost constantly in order to survive or remain competitive. Under such backdrop, it is important to understand how pay system, as a powerful managerial tool, can be designed to help teams adapt and perform well, when organizational change disrupts existing ways of collective functioning (Gerhart, Barry, & Fulmer, 2009; Gupta & Shaw, 2014; Kozlowski & Bell, 2012). However, research has given little attention to this important topic. To advance our knowledge, this study develops theory to explain how pay system can be leveraged to facilitate *adaptive team performance*—that is, members use their complementary resources to functionally change goal-directed actions to meet expected or unexpected demands (Burke, Stagl, Salas, Pierce, & Kendall, 2006).

Teams confronted with organizational change are often required to operate in novel performance environments—i.e., unfamiliar or unexpected situations in which team members have to carry out their tasks in ways that are different from their previous experience or entrenched routines (Marks, Zaccaro, & Mathieu, 2000). While novel performance environments need teams to achieve the same core objectives as more familiar environments do, they are different in terms of necessary task requirements, technical specifics, or tactical approaches. Scholars have noted that pay system has great potential to shape the extent to which teams effectively adapt to novel performance environments (e.g., Baard, Rench, & Kozlowski, 2014; Deutsch, 1985; Kozlowski et al., 1999). However, it remains unclear about *what* pay system

characteristics are instrumental for teams to successfully change collective functioning in response to exogenous demands. In this study, I attempt to bring in the needed theoretical clarity.

Specifically, I identify two pay system characteristics that might be critical for promoting adaptive team performance: *pay equity* and *pay equality*. Pay equity refers to a shared belief about pay system—i.e., the extent to which team members receive rewards according to their contribution to team goal attainment. In contrast, pay equality captures another shared belief about pay system—i.e., the extent to which members receive equal or comparable rewards for team goal attainment. I integrate equity theory (Adams, 1963) with social interdependence theory (Deutsch, 1949) to propose that each of these pay system characteristics plays an indispensable role to facilitate adaptive team performance. Specifically, pay equity motivates team members to focus on individual roles and responsibilities embedded in collective functioning (Pearsall, Christian, & Ellis, 2010); while pay equality leads members to be cooperative and flexible so that they attend to common goals and spontaneously adjust behaviors to benefit the collective (Griffin, Neal, & Parker, 2007; Siegel & Hambrick, 2005; Shaw, Gupta, & Delery, 2002).

I further clarify the enabling mechanisms through which pay equity and pay equality respectively exert influence on adaptive team performance. It has been established that, in the context of teams where task interdependence is essential to collective success, pay system should be structured to ensure effective team coordination—i.e., the central mechanism to manage task interdependence (e.g., Deutsch, 1949; Marks et al., 2001; Okhuysen & Bechky, 2009). Drawing on

coordination theories (Argote, 1982; Ben-Menahem et al., 2016), I propose that pay equity and pay equality contribute to adaptive team performance through asymmetrically benefiting distinct team coordination processes. Specifically, pay equity is likely to be particularly instrumental for facilitating *planned coordination*—i.e., team members integrate interrelated job activities through anticipatory planning; in contrast, pay equality is likely to be particularly instrumental for facilitating *emergent coordination*—i.e., team members integrate interrelated job activities through mutual adjustment.

I also theorize boundary conditions for the effects of pay equity and pay equality. In the context of organizational change, teams often only have incomplete information about how to integrate members' differentiated yet interrelated job activities for new tasks (Jarzabkowski, Lê, & Feldman, 2012), and therefore face some level of *interdependence uncertainty*—i.e., the extent to which the interlinkage among members' job activities cannot be well understood and clearly specified prior to task engagement. I propose that interdependence uncertainty may operate as a contingency factor to strengthen or weaken the impact of pay equity and pay equality. This is because, in the course of organizational change, interdependence uncertainty dictates the extent to which team members can be effective as a whole by simply focusing on their conjectural individual roles and responsibilities, or they can only be effective by mutually adjusting behaviors according to emergent demands.

Overall, this dissertation makes three contributions to the management literature. First, I develop and test an integrative theoretical account to cast light on how pay system influences adaptive team performance in the context of

organizational change. As an initial attempt, such theoretical effort is warranted due to two ongoing trends in the organizational landscape—that is, change has become an ever present reality for organizations (Lindenberg & Foss, 2011) and teams are increasingly used as building blocks to structure work (Mathieu, Maynard, Rapp, & Gilson, 2008; Kozlowski & Bell, 2012). My emphasis on the context, a transition period following major organizational change, also addresses recent calls (e.g. Conroy and colleagues, 2015; Maloney, Bresman, Zellmer-Bruhn, & Beaver, 2016; Maynard, Kennedy, & Sommer, 2015) to contextualize compensation research. Since context acts as “situational opportunities and constraints that affect the occurrence and meaning of organizational behavior as well as functional relationships between variables” (Johns, 2006, p.389), positioning theorizing in contexts leads to richer and deeper understanding of compensation-related phenomena as well as improved prescriptions for HR practices.

Second, I extend our knowledge with regard to how pay equity and pay equality operate and take effects. Research has theorized and found that team coordination benefits more from pay equality than from pay equity because the former makes members attend to common goals and therefore more cooperative (Deutsch, 1949). I argue that this view is limited as it fails to recognize that there are different means to enable team coordination (Faraj & Xiao, 2006). For instance, team members can coordinate their interrelated task activities through either anticipatory planning or mutual adjustment (Ben-Menahem et al., 2016). Pay equality, compared with pay equity, might be only more conducive to the coordination that is based on mutual adjustment (i.e., emergent coordination); pay equity, compared with pay

equality, might be more conducive to coordination that is based on anticipatory planning (i.e., planned coordination). By highlighting the asymmetric effects of pay equity and pay equality on the two distinct forms of team coordination, this study shows that pay equity and pay equality influence collective functioning through different mechanisms, thus leading to a better appreciation of the unique contribution of each to team effectiveness.

Third, I also introduce a new contingency perspective to understand pay system effectiveness. Task interdependence, as the defining characteristic of teams, has been identified as a key boundary condition for the impact of pay system on team outcomes. This line of thinking holds that pay system in teams should enable members to manage the task-based interdependencies among them effectively (e.g., Deutsch, 1949; Shaw, Gupta, & Delery, 2002). Though insightful, this perspective is incomplete because it treats task interdependence as a unitary construct. Recent research has pointed out that collective success often requires teams to simultaneously manage distinct forms of task interdependencies (Ben-Menahem et al., 2016). For instance, in the context of organizational change, novel performance environments give rise to interdependence uncertainty (Rafferty & Griffin, 2006); thus, teams have to manage both conjectural and emergent task interdependencies. As the two forms of task interdependencies pose qualitatively different challenges (Faraj & Xiao, 2006), the pay system instrumental for managing one form of task interdependence might not help teams manage the other. Hence, it is reasonable to expect that the effectiveness of pay system varies as a function of interdependence uncertainty. By highlighting interdependence uncertainty as a potential boundary

condition, this study shifts the focus of our theorizing to consider the *nature* of task interdependence in understanding when pay system is more or less effective.

CHAPTER 2: THEORY AND HYPOTHESES DEVELOPMENT

Pay System Characteristics and Adaptive Team Performance

Building on distributive justice literature (Deutsch, 1949; Leventhal, 1980), I use *pay equity* and *pay equality* to capture two distinct aspects of pays system. Pay equity, rooted in the equality-based distributive rule, refers to the extent to which team members receive rewards according to their contribution to team goal attainment. In contrast, pay equality, rooted in the equality-based distributive rule, refers to the extent to which members receive equal or comparable rewards for team goal attainment. Pay equity and pay equality often coexist and vary independent of each other. While it is tempting to place a singular focus on the benefit of one and the detriment of the other, organizations, in reality, allocate monetary rewards among team members using both equity-based and equality-based distributive rules (Kozlowski & Ilgen, 2006; Rosenbaum, Moore, Cotton, Cook, Hieser, Shovar, & Gray, 1980). Both pay equity and pay equality are critical for team success, and each serves an important function. That is, pay equity drives members to fulfill their individual responsibilities and duties; while pay equality ensures integration of expertise and knowledge that are essential for collective functioning (DeMatteo, Eby, & Sundstrom, 1998).

It has been well established that financial incentives, such as pay, contribute to team performance by shaping how members generate and strive for their goals (Chen & Kanfer, 2006; De Dreu & Nauta, 2009). This view dates back to the early work by Locke and Bryan who (1969, p. 104) argued that “monetary incentives would affect task performance only through or by means of their effects on the individual's goals

or intentions.” Goals are posited to influence performance as they direct members’ attention to goal-relevant activities, mobilize and sustain effort, and promote the use of task-relevant knowledge (Locke, Shaw, Saari, & Latham, 1981). Building on this line of reasoning, my theoretical development is grounded on the premise that pay takes effect through setting goals for team members—i.e., what (i.e., individual or collective performance) is rewarded for.

Research has identified both the bright and down sides of pay equity and pay equality. Specifically, although pay equity promotes work motivation by establishing a strong link between personal effort and desirable benefits, it leads members to focus on personal goals rather than doing what is best for the team (Barnes et al., 2011). In contrast, although pay equality results in motivational losses (e.g., social loafing) because of reduced personal accountability (Rosenbaum et al., 1980; Wright, 1989), it leads members to prioritize team goals over individual goals by establishing a strong sense of “common fate”. Given the advantages and disadvantages associated with each, I argue that pay equity and pay equality operate differently to facilitate adaptive team performance.

It is important to clarify the relationship between pay equity and pay equality. Traditionally, the majority of experimental studies put pay equity and pay equality on a continuum as two extreme ends. However, in this study, I take a different approach to conceptualize the relationship between pay equity and pay equality. Deutsch (1985) identify 11 different distributive rules. As explained earlier, pay equity is also known as rewards based on equity rule and pay equality is also known as rewards based on equality rule. In organizational reality, beyond equity and equality, many

other distributive rules are also commonly employed, such as skill-based rule or seniority-based rule. Hence, pay equity and pay equality are not perfectly related in an inversed manner. For this reason, I argue that pay equity and pay equality vary independent of each other from a theoretical point of view.

In the course of organizational change, collective success largely depends on teams' ability to deal with situations of uncertainty and novelty. In such settings, rewards should be distributed in more equality-based approaches, such as high levels of team-based incentives or low levels of pay disparity among members, because such approaches facilitates cooperation and flexibility (Gomez-Mejia & Balkin, 1994; Shaw, Gupta, & Delery; 2001; Shaw, Gupta, & Delery, 2002). In light of this view, pay equality is likely to be critical for promoting adaptive team performance.

However, another stream of thinking and evidence also points out that the importance of pay equity does not melt away in favor of more equality-based approaches as there is always a need for holding members accountable for their respective responsibilities in team tasks (Pearsall, Christian, & Ellis, 2010). Indeed, in interdependent work systems, failure on the part of one member may spread through task-based interlinkage to make the whole system collapse. Hence, it is unwise to overlook or downplay the importance of fostering and maintaining individual motivation and performance in team settings. These two perspectives, in combination, reveals that either pay equity or pay equality plays an indispensable role to enable adaptive team performance.

H1a: *Pay equity is positively related to adaptive team performance.*

H1b: *Pay equality is positively related to adaptive team performance.*

Planned Coordination and Emergent Coordination as Explanatory Mechanisms

To explain how pay equity and pay equality influence team performance, I focus on the mediating role of team coordination—a team process through which members orchestrate the sequence, timing, and distribution of their interdependent actions (Marks et al., 2001; Okhuysen & Bechky, 2009). It has been pointed out that pay system affects collective outcome through shaping the team processes whereby members manage their task-based interdependencies (cf. Wageman 1995; DeMatteo, Eby, & Sundstrom, 1998). As a central mechanism to ensure that members operate as a unified whole (Brannick & Prince, 1997; Malone & Crowston, 1994; Van de Ven, Delbecq, & Koenig, 1976), team coordination allows members to organize their resources, skills, and actions in a coherent fashion, so that the interrelated components of collective tasks are integrated, synchronized, and completed within established temporal constraints (Cannon-Bowers, Tannenbaum, Salas, & Volpe, 1995). In other words, the main purpose of team coordination is to allow members to manage the multiple interdependencies among their interrelated tasks. Hence, pay equity and pay equality is likely to operate through facilitating team coordination.

In the coordination literature, two distinct approaches— i.e., *design-based* perspective and *practice-based* perspective (Ben-Menahem et al., 2015)—have emerged to help us understand how teams manage conjunctural and emergent task interdependencies respectively. Traditionally, a design-based perspective, rooted in the research on organizational design (Tushman & Nadler, 1978), has been formulated to guide teams that deal with conjunctural task interdependencies. The key premise underlying this perspective is that well-conceived plans enable teams to meet

coordination needs during task engagement (Mathieu & Rapp, 2009; Mathieu & Schulze, 2006). Hence, it emphasizes the importance of *prespecified plans*, such as formal structures, preset procedures, and formulated roadmap to achieve the integration of members' interdependent actions. By specifying members' roles, behavioral protocols, and interaction patterns, pre-action planning enables the interlinked job activities dispersed among members to be temporally synchronized and technically aligned.

In the literature of work teams, planning has been generally defined as laying out a course of action to achieve a chosen goal (McGrath, 1984; Weingart, 1992). Marks and colleagues (2001) further broken down planning into three subcategories: (1) deliberate planning, or the formulation of a principal course of action for mission accomplishment; (2) contingency planning, or a priori formulation of alternative courses of actions in response to anticipated changes; and, (3) reactive planning, or the alteration of exiting plans in reaction to unanticipated changes in the performance environment. In the present study, I use the term *anticipatory planning* to capture the first two forms of planning because, for these two, planning occurs ahead of task execution. Whereas, for reactive planning, as the planning of actions temporally overlaps with the execution of actions, it does not fit in the conventional definition of planning (cf. McGrath, 1984), but falls in the domain of improvisation—i.e., the planning and execution of an action converge in time (Moorman & Miner, 1998a). Hence, I exclude reactive planning from my discussion of planning and instead consider it as a form of improvisation, a point I will elaborate on soon. In short, by “plans”, I mean both deliberate plans and contingency plans; by “planned

coordination”, I refer to the coordination that is based on deliberate planning and contingency planning.

Recently, a burgeoning stream of research takes a practice-based perspective to advance our knowledge of how teams maintain functional coordination when dealing with nonroutine events, unanticipated contingencies, and unfamiliar situations (Ben-Menahem et al., 2015; Kellogg, Orlikowski, & Yates, 2006). This perspective is “practice-based” in the sense that it is built upon a practical logic—“a recognition of novel task demands, emergent situations, and the unpredictability of evolving action” (Faraj & Xiao, 2006: 1157). It complements the design-based perspective by explicating how members coalesce their interdependent actions when a variety of unforeseeable disruptions make useless plans sketched prior to task engagement. The practice-based perspective argues that theoretical accounts of team coordination cannot be reduced to explaining how to best plan members’ actions within static systems of interdependencies. Taking a dynamic view of coordination, the practice-based perspective posits that teams primarily rely on *mutual adjustment* to maintain smooth workflow in highly volatile environments. For example, in a study focusing on medical trauma teams that coped with highly fluctuating patient arrival rates, Faraj and Xiao (2006) showed that interdependent medical work depended on improvised coordination practices to work together effectively. Similarly, Bechky and Okhyusen (2011) showed that, in face of unexpected events, police SWAT teams and film production crews coordinated in an unscripted and impromptu manner by swiftly shifting roles, reorganizing routines, and reassembling teamwork. Together, these descriptive studies revealed the emergent aspect of team coordination. That is, when

teams cope with unpredictable and emergent task interdependencies, effective coordination requires members to dynamically adjust how they organize and combine the interrelated actions within severe temporal constraints.

The above analysis suggests that distinct forms of task interdependencies demand qualitatively different coordination practices. Specifically, to manage conjunctural task interdependencies, teams need to engage in *planned coordination*, or members rely on prespecified plans to orchestrate the sequence, timing, and distribution of their interdependent actions. In contrast, to manage emergent task interdependencies, teams need to engage in *emergent coordination*, or members rely on mutual adjustment to orchestrate the sequence, timing, and distribution of their interdependent actions. My conceptualization of planned and emergent coordination is an extension and refinement of two related concepts developed by Argote (1982), i.e., programmed and nonprogrammed coordination. According to her theorizing, “The basic distinction between programmed and nonprogrammed coordination centers around the extent to which job activities can be specified in advance. In programmed coordination, the activities of organization members are dictated by plans, programs, and relationships specified in advance by the organization. Programmed means of achieving coordination used in this study are rules, scheduled meetings, and authority arrangements. In nonprogrammed coordination, integrated activities are not specified in advance by the organization, but rather are worked out on the spot by organization members.” (Argote, 1982, p. 423)

Planned coordination and emergent coordination play similar roles in team functioning—that is, allowing members to orchestrate a smooth pattern of synergy to

integrate individual effort in the pursuit of collective goals. However, there are critical differences between them, see Table 1. First, the two forms of coordination are divided by their fundamental assumptions about coordination processes. Planned coordination rests on a view that regards coordination as *mechanical* by nature. In light of this perspective, in the course of task execution, members' primary responsibility is to undertake actions in accordance with the predetermined blueprints or outlines that prescribe the needed interactions among members. In contrast, emergent coordination rests on a view that regards coordination as an unfolding process of input integration (Faraj & Xiao, 2006)—i.e., members choose, alter, and adjust their behaviors in reaction to real-time data. Thus, emergent coordination has an *adaptive* nature because it recognizes that “coordinated actions are enacted within a specific context, among a specific set of actors, and following a history of previous actions and interactions that necessarily constrain future action” (Faraj & Xiao, 2006, p. 1157). According to this perspective, effective integration of individual efforts requires members to take a more adaptive approach by attending to and accommodating contextualized needs in evolving operating environments.

Second, the two forms of coordination differ in underlying mechanisms. Planned coordination is empowered by anticipatory planning, which arranges the technical and temporal linkages among members' job activities in advance. In other words, well-conceived plans are the key to effective coordination. In contrast, emergent coordination is empowered by *collective improvisation*, defined as a spontaneous and creative team process through which members try to achieve an objective in a novel way (Vera & Crossan, 2005). Evidence of improvisation at work

is abundant in the context of arts, sports, and crisis management. Although collective improvisation builds on the improvisation of individual members, collective improvisation is more than just the sum of individual improvisations because the joint elements of teamwork make the fusion of individual improvisations a coalesced system of collective creation (Hatch, 1998, Moorman & Miner 1998b, Weick, 1998). An apt example here is a case reported by Hutchins's (1991), in which the navigational system of a ship broken down unexpectedly when steering into a harbor; under severe time constant, its crew developed a new social structure "on the fly" and made through the crisis safely. In the coordination process, no crew member understood the complete system they improvised, but a functional work configuration emerged out of initial chaos and enabled them to avoid a potential disaster. This case demonstrates that a team can design a new action pattern without prior planning and even without members' awareness of the pattern as they execute it.

Third, the two forms of coordination contrast sharply in enabling behaviors. Planned coordination is enabled through heedful conforming, or members methodically and diligently implement the specifics sketched in anticipatory planning. Specifically, planned coordination processes are characterized by members' engagement in the following behaviors: (1) scrupulously fulfilling their predefined responsibilities and roles in undertaking interlinked tasks; (2) carefully following established protocols, preset procedures, and formalized rules to collaborate with teammates; (3) attentively sticking to preset guidelines, schedules, and interaction modes to achieve the integration of interdependent actions. In contrast, emergent coordination is enabled through mutual adjustment, or members dynamically modify

how their job activities are interrelated in response to unanticipated problems during task execution. Emergent coordination processes are characterized by members' engagement in the following behaviors: (1) spontaneously monitoring the progress of teamwork and changing behavior on an ongoing basis to best align members' actions; (2) constantly adjusting and refining the configuration of workflow based on real-time data; (3) actively scanning performance environment and making swift changes accordingly to accommodate unforeseen demands in novel situations.

I argue that both planned coordination and emergent coordination are critical to adaptive team performance in the course of organizational change. Specifically, on the one hand, there are many predictable aspects of teamwork, members can manage them through planning before task engagement. On the other hand, there are many unpredictable problems or contingencies, members have to manage them through mutually adjust their behavior on the spot. Taken together, I propose:

H2a: Planned coordination is positively related to adaptive team performance.

H2b: Emergent coordination is positively related to adaptive team performance.

The Asymmetric Effects of Pay Equity and Pay Equality

I propose that pay equity and pay equality differ from each other in shaping planned and emergent coordination. My theoretical development begins with the acknowledgement that pay equity and pay equality can both positively impact planned coordination and emergent coordination. However, I do not expect pay equity and pay equality to equally contribute to each form of team coordination.

Instead, I propose that the *relative utility* of pay equity and pay equality is likely to vary according to the means of team coordination under consideration because the two pay system characteristics differ in implications for members' goal pursuit. Specifically, pay equity directs members' attention and effort to focus on the pursuit of individual goals (Locke, 1996; Locke et al., 1981). As a result, members have less regard for the goals pursued by fellow members or the team. In contrast, pay equality enables members to prioritize collective goals over individual goals; hence, team members attend to common goals, and consider fellow members' interest and needs (Deutsch, 1949; Locke, 1996).

Through the lens of goal striving (Locke & Latham, 1990, 2002; McClintock, 1977; Mitchell & Silver, 1990), planned coordination is likely to benefit more from pay equity than from pay equality. By linking rewards directly to individual performance and contribution, pay equity promotes a strong sense of individual achievement (Adam, 1963), which direct members' attention and effort to pursue personal gains (De Dreu, Nijstad, & van Knippenberg, 2008; Locke & Bryan, 1969). As discussed previously, in order to establish planned coordination, members need to carry out their respective tasks and responsibilities methodically and diligently. Hence, planned coordination is likely to benefit particularly from pay equity as the latter makes members accountable for and mindful of their own parts of team task (DeMatteo, Eby, & Sundstrom, 1998; Locke & Latham, 1984). Taken together, it reasonable to expect pay equity to exert strong positive influence on planned coordination.

Pay equality, compared with pay equity, tends to be less beneficial for planned coordination because it is less efficacious in motivating members to carry out their respective job activities methodically and diligently (Locke & Latham, 1990; Liden, Wayne, Jaworski, & Bennett, 2004; Locke, 1997; McClintock, 1972). By distributing rewards equally among team members, pay equality facilitates a strong sense of “common fate” and shared accountability (Deutsch, 1949), which inevitably attenuates individual accountability and increases dispensability of personal effort because each member’s responsibility becomes diluted and blurry (Harkins & Petty, 1982; Karau & Williams, 1993). For instance, one common downside of pay equality is social loafing, manifested as less than ideal levels of work engagement (cf. Price, Harrison, & Gavin, 2006). In support of this view, research has demonstrated that team members under higher levels of pay equality failed to reach their full performance potential (Barnes et al., 2008; Erez & Somech, 1996). Such suboptimal collective performance is attributable to the absence of a tight and direct link between individual effort and ensuing rewards. Building on this line of thinking and evidence, I propose that pay equality, compared with pay equity, contributes less positively to planned coordination as it is less efficient in motivating members to perform their respective tasks and responsibilities methodically and diligently, one key requisite condition of planned coordination. Taken together, I propose:

H3a: Pay equity, compared with pay equality, has a stronger positive relationship with planned coordination.

In contrast, emergent coordination is likely to benefit more from pay equity than from pay equality. By rewarding members equally for collective success, pay

equality facilitates a strong sense of mutual responsibilities, which directs members' attention and effort away from personal goals and toward collective goals (De Dreu et al., 2008; Locke & Latham, 2006). As discussed above, in order to establish emergent coordination, members need to be (1) attentive to joint situations and (2) flexible about their roles as solutions to novel problems or unanticipated contingencies are not prespecified but are generated through mutual adjustment. These two conditions are likely to be met as a result of pay equality. Specifically, by channeling members' persona resources toward the pursuit of joint goals, pay equality (1) leads members to attend to joint performance environments, therefore forming a more holistic cognitive representation of the situation faced by the team and, (2) make members willing to take on tasks or roles that are undesirable for individuals but necessary for team success (Hu & Liden, 2015; Pfeffer, 1998; Pfeffer & Langton, 1993). For instance, when a sudden disruption makes existing ways to coordinate fail, pay equality is more likely to enable members to reestablish functional coordination in an emergent manner (Maynard, Kennedy, & Sommer, 2015). This is because members make sense of the joint situation confronted by all members, and then adjust their actions to accommodate the contextualized demands both for themselves via context-specific proactive behavior (Grant, 2000), and for teammates via backing up behavior (Barnes et al., 2011).

Pay equity, compared with pay equality, tends to be less beneficial for emergent coordination because it is less likely to make members prioritize team goals over individual goals. To the extent that rewards are distributed according to individual performance and contribution, pay equity leads members to maintain or

improve personal gains (Huber & Lewis, 2010; Locke, 1991); hence, members search, encode, retrieve, and share information that is particularly relevant to their own interests (De Dreu, Nijstad, & van Knippenberg, 2008 ; Locke & Latham, 2006; Willer, 2009). Such narrow approach of information processing tends to do a disservice to emergent coordination as the success of which requires members to process information globally so that they can keep track of joint progress and act in the best interest of the team (McGraw, 1978). Moreover, when teamwork is disrupted by sudden surprise, a key condition for emergent coordination to establish is that members are willing to take actions that are essential to resume functional teamwork but escape their job descriptions, such as backing up behavior (Porter, Hollenbeck, Ilgen, Ellis, West, & Moon, 2003; Wageman, 2001; Weick & Roberts, 1993) and reactive helping (Spitzmuller & Van Dyne, 2013). However, through promoting focus on personal goals, pay equity drives members to focus on their own interests rather than to do what is best for the team, which seem to keep members from meeting the above requisite condition of emergent coordination. In a similar vein, Wageman, (1995) pointed out that equity-based reward distribution tends to introduce a sense of bounded responsibilities, a normative belief that members' duties and obligations to the team are confined to their own positions and formal roles. Such belief may discourage members from stepping out of their own "territories" to do what is needed to reestablish coordination when unforeseen problems strike. Taken together, I propose:

H3b: Pay equality, compared with pay equity, have a stronger positive relationship with emergent coordination.

I further specify the enabling mechanism through which pay equity and pay equality contribute to adaptive team performance. First, integrating Hypothesis H2a with Hypothesis H3a, I further propose that pay equity exerts positive influence on adaptive team performance by strongly facilitating planned coordination. Moreover, combining Hypothesis H2b with Hypothesis H3b, I further predict that pay equality exerts positive influence on adaptive team performance by strongly facilitating emergent coordination. Taken together, I argue that pay equity and pay equality travel through distinct pathways to shape adaptive team performance.

H4a: Pay equity is positively related to adaptive team performance through facilitating planned coordination.

H4b: Pay equality is positively related to adaptive team performance through facilitating emergent coordination.

Interdependence Uncertainty as a Boundary Condition

I further theorize the conditions that may qualify the effects of pay equity and pay equality on team coordination and adaptive team performance. Specifically, I focus on the moderating role of interdependence uncertainty, defined as the extent to which the interlinkage among members' job activities cannot be well understood and clearly specified prior to task engagement. Teams are social systems that are subject to the influence of their operating environment. Organizational change, as an external force, often gives rise to interdependence uncertainty as it disrupts existing ways of collective functioning (Jarzabkowski & Feldman, 2012). I argue that interdependence uncertainty operates as a contingency factor to strengthen or weaken the impact of pay equity and pay equality.

First, I propose that interdependence uncertainty weakens the effects of pay equity on planned coordination and emergent coordination. Research has suggested that the utility of equity-based rewards is largely dependent on the extent to which individual performance or contribution can be clearly identified (Lawler, 1971; Leventhal, 1980; Jones, 1984; Thompson, 1967). When interdependence uncertainty is lower, team members share a clear understanding of “who does what” for teamwork, which makes individual work inputs to teamwork highly identifiable. In such context, the effects of pay equity on planned coordination and emergent coordination are likely to be stronger because individual contribution or performance are highly visible to others and can be evaluated in a more unambiguous manner; hence, members are tightly held accountable for their roles and responsibilities. By contrast, when interdependence uncertainty is higher, there is a lack of clear expectation of individual roles and responsibilities to teamwork. In such context, the effects of pay equity on planned and emergent coordination are likely to be weaker because it is difficult to assess individual contribution and performance. Taken together, I predict that pay equity exerts stronger influence on planned coordination and emergent coordination when interdependence uncertainty is lower than when interdependence uncertainty is higher. This is because pay equity can better motivates members to perform their parts of teamwork when interdependence uncertainty is lower.

Second, I propose that interdependence uncertainty strengthens the effects of pay equality on planned coordination and emergent coordination. It has been pointed out that pay equality benefits teamwork by promoting cooperation among members

(Colquitt & Jackson, 2006; Van der Vegt, & Bunderson, 2005; Van der Vegt, Emans, & Van de Vliert, 2000). However, the importance of cooperation to successful teamwork varies across situations. In particular, the impact of cooperation on teamwork is likely to be stronger in ambiguous task environment, but weaker in unambiguous task environment (Liu, Gong, & Liu, 2014; Organ, Podsakoff, & MacKenzie, 2006; Spitzmuller & Van Dyne, 2013). Research has suggested that when rewards are distributed equally, members are more flexible about their roles in teamwork and more willing to help fellow members spontaneously (Lindenberg & Foss, 2011). In support of this view, empirical evidence has showed that equality-based rewards led members to engage in helping and backing up behavior (Barnes et al., 2011; Beersma et al., 2003; Turner, Oakes, Haslam, & McGarty, 1994). Building on this line of reasoning and evidence, I argue that pay equality is likely to exert stronger influence on planned coordination and emergent coordination when interdependence uncertainty is higher—a situation where members’ cooperative behavior is particularly essential to effective teamwork. That is, when interdependence uncertainty is higher, team members face a great degree of ambiguity as to how they should work together to make the team function as a unified whole. In such context, if teams were to establish functional coordination, members need to be flexible about their roles and adapt their behavior to accommodate others’ needs. In contrast, when interdependence uncertainty is lower, team members share a better understanding of “who does what”, and therefore cooperation among members, such as helping and backing up behavior, plays a less important role to enable team coordination.

Taken together, I expect interdependence uncertainty to operate as a critical boundary condition that moderates the effects of both pay equity and pay equality on team coordination. However, I do not expect the direction of the relationship to be the same. That is, interdependence uncertainty is likely to weaken the influence of pay equity on planned coordination and emergent coordination, but strengthen the influence of pay equity on planned coordination and emergent coordination.

Therefore, I propose:

H5: Interdependence uncertainty moderates the positive effects of pay equity on (a) planned coordination and (b) emergent coordination, such that the positive effects are stronger when interdependence uncertainty is lower.

H6: Interdependence uncertainty moderates the positive effects of pay equality on (a) planned coordination and (b) emergent coordination, such that the positive effects are stronger when interdependence uncertainty is higher.

Combining Hypothesis H4a with Hypothesis H5a, I further propose that the indirect effect of pay equity on adaptive team performance via planned coordination varies as a function of interdependence uncertainty. Specifically, I predict that pay equity is likely to have a stronger positive impact on adaptive team performance through facilitating planned coordination when interdependence uncertainty is lower. Further, combining Hypothesis H4b with Hypothesis H6b, I further propose that the indirect effect of pay equality on adaptive team performance via emergent coordination varies as a function of interdependence uncertainty. That is, I predict that pay equality is likely to have a stronger positive impact on adaptive team

performance through facilitating emergent coordination when interdependence uncertainty is higher.

H7a: The positive indirect effect of pay equity on adaptive team performance via planned coordination is contingent on interdependence uncertainty, such that the positive indirect effect is stronger when interdependence uncertainty is lower.

H7b: The positive indirect effect of pay equality on adaptive team performance via emergent coordination is contingent on interdependence uncertainty, such that the indirect effect is stronger when interdependence uncertainty is higher.

CHAPTER 3: METHODOLOGY

Sample and Procedures

To test my hypotheses, I collected data from a large manufacturing firm in Eastern China. With support from the firm's top management, I partnered with the firm's HR department to administer data collection. Multiple waves of surveys and different data sources were employed. This study captured a period during which the firm went through a major organizational change. Specifically, the firm introduced a variety of new technology and refined work procedures in response to recently imposed government regulation.

The firm's HR department helped me identify 248 production teams. These teams shared three common features. First, the core tasks of these teams were to transform raw materials into final products. Second, all teams enacted team-based task structures that required members to rely on one another to accomplish their tasks, so that the teams were all high on task interdependence (Wageman, 1995). Third, although the firm had set up some general guidelines for team goals, such as qualification standards of products, the teams, as work units, were highly autonomous in terms of managing their own activities, such as setting weekly objectives, allocating resources to meet production demands, and tracking progress towards goals. Although some members had their specialized roles and positions in the production processes, coordination among members was substantial on daily basis. For instance, team members needed to communicate frequently to update one another about a variety of operating parameters. If unexpected problems emerged, collective

decision making and coordinated actions were often required because of the intertwined workflow.

Measurement strategy

My measurement strategy was designed to diminish the effects of common method variance (CMV; Podsakoff, MacKenzie, & Podsakoff, 2003) while simultaneously ensuring that I tap sources that have the most complete information on the constructs. Hence, I collected pay equity and pay equality (independent variables) from team members at Time 1, interdependence uncertainty (moderator) from team leaders at Time 1, planned coordination and emergent coordination (mediators) from team members at Time 2, and team performance (dependent variable) from archival records at Time 1 and Time 3. By using three different sources of data, I diminished the potential common method variance—i.e., perception-to-perception inflation (Podsakoff, MacKenzie, & Podsakoff, 2003). However, as pay system characteristics (i.e., pay equity and pay equality) and team coordination (i.e., planned coordination and emergent coordination) are most visible to team members themselves, and therefore the best source of team coordination should be team members themselves (cf. Argot, 1982; Lewis, 2003). Hence, I collected the two forms of team coordination from team members.

At Time 1, approximately 3 to 4 weeks before the firm introduced organizational change, I obtained the first wave of data, which included pay equity and pay equality reported by team members as well as team performance by archival data. Moreover, I obtained the second wave of data, which included interdependence uncertainty reported by team leaders. At Time 2, approximately 4 weeks after the

firm introduced organizational change, I obtained the third wave of data, which included planned and emergent coordination reported by team members. At Time 3, approximately 8 weeks after the firm introduced organizational change, I obtained the fourth wave of data, which included post-change team performance by archival data.

The surveys were completed anonymously during work hours, supervised by members of the research team. All participants were assured of anonymity and returned their surveys in sealed envelopes, with team identity on the cover, to members of the research team. All employees who agreed to participate in the study received a small gift as a token of appreciation. To ensure anonymity, I did not solicit demographic information from team members. Instead, I obtained such information from the firm's HR department. Taken together, the final sample consisted of 248 teams. Of the targeted participants, the average age was 35.7 years, and 78.12% were male. Team size varied from 5 to 8, with an average of 6.07. I was able to successfully match the data for 207 teams out of 248 teams targeted across time and sources— a response rate of 83.47% at the team level. Within-team response rate varied from 60% to 100%, with an average of 83.62% for Time 1 and 82.80% for Time 2. To ensure equivalence of the translated Chinese items, the translation-back-translation procedure was followed (Brislin, 1970).

Measures

Pay equity and pay equality. I used an 8-item scale to measure pay equity and pay equality (4 items for each). These scales were adapted from established measures of distributive equity and distributive equality (Colquitt, 2001; Colquitt & Jackson, 2006). Since the original scale was designed to measure constructs at the individual or

dyadic level, I slightly modified the wording to make it serve the purpose of the present team-level study. For instance, two example items for pay equity read: “Overall, monetary rewards (i.e., base pay and bonus) for collective success in my team were distributed in ways that reflected what members have contributed to the team,” and “Overall, monetary rewards (i.e., base pay and bonus) for collective success in my team were distributed in ways that reflect the effort members put into their work.” Two example items for pay equality read: “Overall, monetary rewards (i.e., base pay and bonus) for collective success in my team were distributed in ways that ensured that all members received comparable rewards,” and “Overall, monetary rewards (i.e., base pay and bonus) for collective success in my team were distributed in ways that ensured that rewards were distributed equally across members.” The alpha coefficient for pay equity and pay equality were .85 and .90, respectively.

To justify aggregation, I calculated within-group interrater reliability statistic, $r_{wg(j)}$ (James, Demaree, & Wolf, 1993), and intraclass correlation indices ICC(1) and ICC(2) (Bliese & Halverson, 1998). The mean $r_{wg(j)}$ for pay equity was .84, varying from .67 to .99; further, ICC(1) was .21 ($F = 2.314, p < .01$) and ICC(2) was .57. The mean $r_{wg(j)}$ for pay equality was .84, varying from .68 to .98; further, ICC(1) was .23 ($F = 2.50, p < .01$) and ICC(2) was .60. The ICC(2)s for pay equity and pay equality were somewhat below .70. This is most likely because my sample consisted of teams with small team sizes (Bliese, 2000). However, the ICC(1) and $r_{wg(j)}$ values were within acceptable ranges (Bliese, 2000; LeBreton & Senter, 2008). Further, F values indicated significant ($p < .01$) between-team differences in mean levels of both measures, which supported our decision to aggregate the two forms of pay

characteristics to the team level. As these aggregation statistics fell in acceptable regions (Bliese, 2000), aggregation was supported.

Interdependence uncertainty. I used a 5-item scale to measure interdependence uncertainty. This scales was adapted from an established measure of job ambiguity (Breugh & Colihan, 1994; Grant & Rothbard, 2013). Two example items for interdependence uncertainty read: “It is hard to predict how our task activities will be interrelated,” and “We are not sure about the sequencing of members’ job activities (i.e., when to do what).” The alpha coefficient for pay equity and pay equality was .87.

Planned coordination and emergent coordination. I used a 10-item scale to measure planned coordination and emergent coordination (5 items for each). These scales were adapted from established measures of team coordination (cf. Lewis, 2003). Two example items for planned coordination read: “members of my team relied on pre-specified plans to integrate our job activities,” and “members of my team followed established protocols to combine our task inputs.” Two example items for emergent coordination read: “members of my team mutually adjusted behavior to establish or re-establish functional coordination” and “members of my team jointly modified the way we coordinated according to real-time data.” The alpha coefficient for planned coordination and emergent coordination were .88 and .91, respectively.

To justify aggregation, I calculated within-group interrater reliability statistic, $r_{wg(j)}$ (James, Demaree, & Wolf, 1993), and intraclass correlation indices ICC(1) and ICC(2) (Bliese & Halverson, 1998). The mean $r_{wg(j)}$ for planned coordination was .88, varying from .70 to .99; further, ICC(1) was .22 ($F = 2.43, p < .01$) and ICC(2) was

.59. The mean $r_{wg(j)}$ for emergent coordination was .86, varying from .64 to .98; further, ICC(1) was .31 ($F = 3.23, p < .01$) and ICC(2) was .69. Given that these aggregation statistics fell in acceptable regions (Bliese, 2000), aggregation to the team-level analyses was supported.

Team performance. I collected data for team performance at Time 1 as well as Time 3 using the firm's existing evaluation metrics. Team performance was operationalized as the percentage of team outputs that met established qualification criteria, which were held constant after the organizational change. Percentage scores provide conceptual and practical advantages for operationalizing team performance. First, from a conceptual point of view, team performance is the extent to which the teams helped organizations achieve desired goals (Hackman, 1987). Hence, conceptualizing team performance as the extent of satisfaction of the goals set by critical stakeholders (i.e., as a percentage measure) is closely aligned with the definition of team performance (see Pritchard, Jones, Roth, Stuebing & Ekeberg, 1988 for a discussion). From a practical point of view, percentage scores make it possible to use the same metric to compare the performance of teams operating on different production lines. Given that my dependent variable was post-change adaptive team performance and a major organizational change occurred between Time 1 and Time 2, adaptive team performance was operationalized as change in team performance. Specifically, I controlled for team performance at Time 1, when examining team performance at Time 3. To facilitate comparability of results, I followed prior research (Liao et al., 2010; Mathieu, Gilson, & Ruddy, 2006) to standardize team performance before testing my hypotheses. Given that this merely

represented a linear transformation of the dependent variable, such a transformation was not expected to change the substantive interpretation of the parameter estimates for the independent variables.

Analytical Strategy

All analyses were performed in Mplus 7.0. First, I conducted regression analyses to test hypotheses that involved main effects or moderation effects. Second, I used bootstrapping analyses to test hypotheses that involved mediation effects. Bootstrapping avoids power problems derived from asymmetric and other nonnormal sampling distributions of an indirect effect (Edwards & Lambert, 2007; Switzer, Paese, & Drasgow, 1992). It is the most powerful method for obtaining confidence intervals to test indirect effects (Preacher, Rucker, & Hayes, 2007). Last, I followed a statistical procedure laid out by Edwards and Lambert (2007) to test hypotheses that involved moderated mediation effects.

CHAPTER 4: RESULTS

Table 2 shows the correlations, means, and standard deviations for the variables of interest. In general, the patterns of the correlations were consistent with my expectation. For instance, both pay equity and pay equality were positively related to team performance at Time 3 ($r = .23, p < .01$ and $r = .22, p < .01$, respectively). Moreover, planned coordination and emergent coordination were both positively related to team performance at Time 3 ($r = .34, p < .01$ and $r = .26, p < .01$, respectively). Though these correlation patterns were informative, more rigorous analyses need to be conducted to reveal the true relationship among variables of interest.

Confirmatory Factor Analysis

First, I conducted confirmatory factor analyses to examine whether pay equity and pay equality, which were reported by team members at Time 1, represented distinct constructs. As reported in Table 3, results showed that the hypothesized 2-factor model fit the data well (Hu & Bentler, 1999), $\chi^2 (19) = 91.68$, comparative fit index (CFI) = .98, root-mean-square error of approximation (RMSEA) = 0.06, and Tucker Lewis index (TLI) = .97. Relative to the hypothesized model, an alternative 1-factor model in which indicators of pay equity and pay equality were loaded on a single factor fit the data significantly worse, $\Delta\chi^2 (1) = 2401.12, p < .01$, CFI = .44, RMSEA = .34, and Tucker Lewis index (TLI) = .21.

In addition, I also conducted confirmatory factor analyses to examine whether planned coordination and emergent coordination, which were reported by team members at Time 1, represented distinct constructs. Results showed that the

hypothesized 2-factor model fit the data well (Hu & Bentler, 1999), $\chi^2 (34) = 129.25$, comparative fit index (CFI) = .98, root-mean-square error of approximation (RMSEA) = .05, and Tucker Lewis index (TLI) = .98. Relative to the hypothesized model, an alternative 1-factor model in which indicators of planned coordination and emergent coordination were loaded on a single factor fit the data significantly worse, $\Delta\chi^2 (1) = 3213.93$, $p < .01$, CFI = .46, RMSEA = .30, and Tucker Lewis index (TLI) = .30.

Tests of Hypotheses

Hypotheses 1a and 1b predicted that pay equity and pay equality each exerted unique influence on adaptive team performance. To test this set of predictions, I regressed team performance at time 3 on pay equity and pay equality simultaneously, controlling for team performance at time 1. As shown in model 1 of Table 4, only pay equality was significantly related to adaptive team performance ($b = .20$, $p < .01$), whereas pay equity did not show a meaningful impact on adaptive team performance ($b = .00$, $p > .05$). These findings supported Hypothesis 1b, but did not support Hypothesis 1a.

Hypothesis 2a and Hypothesis 2b predicted that planned coordination and emergent coordination each exerted unique influence on adaptive team performance. To test this set of predictions, I regressed team performance at time 3 on planned coordination and emergent coordination simultaneously, controlling for team performance at time 1. As shown in model 5 of Table 4, planned coordination was significantly related to adaptive team performance ($b = .36$, $p < .01$), and emergent coordination also showed a meaningful impact on adaptive team performance ($b =$

.15, $p < .05$). Hence, this set of findings supported Hypothesis 2a and Hypothesis 2b.

Hypothesis 3a predicted that pay equity, compared with pay equality, had a stronger positive relationship with planned coordination. To test this hypothesis, I regressed planned coordination on pay equity and pay equality simultaneously, controlling for team performance at time 1. Further, I also conducted the Wald Test (Harrell, 2001) to examine whether the effects of pay equity and pay equality on planned coordination were significantly different. As shown in model 3 of Table 5, pay equity was significantly related to planned coordination ($b = .26, p < .01$), whereas pay equality did not show a meaningful impact on planned coordination ($b = .05, p > .05$). Moreover, Wald Test indicated that pay equity had stronger influence on planned coordination than did pay equality ($\theta = 4.17, p < .05$). Taken together, this set of findings supported Hypothesis 3a.

Hypothesis 3b predicted that pay equality, compared with pay equity, had a stronger positive relationship with emergent coordination. To test this hypothesis, I regressed emergent coordination on pay equity and pay equality simultaneously, controlling for team performance at time 1. Further, I also conducted the Wald Test to examine whether the effects of pay equity and pay equality on emergent coordination were significantly different. As shown in model 3 of Table 6, pay equality was significantly related to emergent coordination ($b = .17, p < .05$), whereas pay equity did not show a significant impact on emergent coordination ($b = .13, p > .05$). Moreover, Wald Test indicated that pay equality did not show a stronger influence on emergent coordination than did pay equity ($\theta = .09, p > .05$). Taken together, this set of findings did not support Hypothesis 3b.

Hypothesis 4a predicted that pay equity was positively related to adaptive team performance through facilitating planned coordination. To test this hypothesis, I conducted bootstrapping test recommended by Preacher, Rucker, and Hayes (2007). As shown in Table 7, bootstrapping results supported the indirect effect of pay equity on adaptive team performance via planned coordination because 95% confidence interval (CI) did not include zero [.04, .20]. Hence, Hypothesis 4a was supported.

Hypothesis 4b predicted that pay equality was positively related to adaptive team performance through facilitating emergent coordination. To test this hypothesis, I again conducted bootstrapping test. As shown in Table 7, bootstrapping results supported the indirect effect of pay equality on adaptive team performance via emergent coordination because 95% confidence interval did not include zero [.00, .07]. Therefore, Hypothesis 4b was supported.

Hypothesis 5a and Hypothesis 5b predicted that interdependence uncertainty moderates the effects of pay equity on planned coordination and emergent coordination. To test Hypothesis 5a, I introduced the interaction between pay equity and interdependence uncertainty in model 4 of Table 5. Results showed that the interaction was not significantly related to planned coordination ($b = -.10, p > .05$). To check the robustness of this interactive effect, I simultaneously included the interaction between pay equity and interdependence uncertainty and the interaction between pay equality and interdependence uncertainty in Model 6 of Table 5. Results showed that none of the interaction items was significantly related to planned coordination ($b = -.11, p > .05$; $b = .08, p > .05$; respectively). To test Hypothesis 5b, I introduced the interaction between pay equity and interdependence uncertainty in

model 4 of Table 6. Results showed that the interaction was not significantly related to emergent coordination ($b = .01, p > .05$). Taken together, this set of findings did not support Hypothesis 5a and Hypothesis 5b.

Hypothesis 6a and Hypothesis 6b predicted that interdependence uncertainty moderates the effects of pay equality on planned coordination and emergent coordination. To test Hypothesis 6a, I introduced the interaction between pay equality and interdependence uncertainty to predict planned coordination in model 5 of Table 5. Results showed that the interaction was not significantly related to planned coordination ($b = .07, p > .05$). To test Hypothesis 6b, I introduced the interaction between pay equality and interdependence uncertainty in model 5 of Table 6. Results showed that the interaction was significantly related to emergent coordination ($b = .18, p < .01$). To check the robustness of this interactive effect, I simultaneously included the interaction between pay equality and interdependence uncertainty and the interaction between pay equity and interdependence uncertainty in Model 6 of Table 6. Results showed that only the interaction between pay equality and interdependence uncertainty was significantly related to emergent coordination ($b = .19, p < .01$). Figure 2 graphically presents this moderation effect. The results of simple slope test (Aiken, West, & Reno, 1991) indicated that pay equality did not show a meaningful impact on emergent coordination ($b = -.00, p > .05$) under the condition of low interdependence uncertainty (1 *SD* below the mean); whereas, pay equality showed a significant impact on emergent coordination ($b = .38, p < .01$) under the condition of high interdependence uncertainty (1 *SD* above the mean). Taken together, this set of findings lent strong support to Hypothesis 6b.

Hypothesis 7a predicted that the indirect effect of pay equity on adaptive team performance via planned coordination varied as a function interdependence uncertainty. To test this hypothesis, I followed a statistical procedure recommended by Edwards and Lambert (2007). As shown in Table 8, results did not support Hypothesis 7a because the indirect effect of pay equity on adaptive team performance via planned coordination did not differ across levels of interdependence uncertainty ($\Delta b = .20$, 95% CI [-.32, .01]).

Hypothesis 7b predicted that the indirect effect of pay equality on adaptive team performance via emergent coordination varied as a function interdependence uncertainty. To test this hypothesis, I again conducted the analysis of moderated mediation. As shown in Table 8, results supported Hypothesis 7b because the indirect effect of pay equality on adaptive team performance via emergent coordination differed across levels of interdependence uncertainty ($\Delta b = .14$, 95% CI [.03, .24]).

The moderated mediation analyses also revealed some interesting patterns that were not parts of my hypotheses. First, results indicated that interdependence uncertainty also moderated the relationship between emergent coordination and adaptive team performance ($\Delta b = .30$, 95% CI [.06, .58]). Figure 3 graphically presents this moderation effect. The results of simple slope test indicated that emergent coordination did not show a meaningful impact on adaptive team performance ($b = .00$, $p > .05$) under the condition of low interdependence uncertainty (1 *SD* below the mean); whereas, emergent coordination showed a significant impact on adaptive team performance ($b = .30$, $p < .01$) under the condition of high interdependence uncertainty (1 *SD* above the mean). Second, the

moderated mediation analyses also indicated that interdependence uncertainty also moderated the total effect of pay equality on adaptive team performance ($\Delta b = .36$, 95% CI [.09, .65]). Figure 4 graphically presents this moderation effect. The results of simple slope test indicated that pay equality did not show a meaningful impact on adaptive team performance ($b = .03$, $p > .05$) under the condition of low interdependence uncertainty (1 *SD* below the mean); whereas, pay equality showed a significant impact on adaptive team performance ($b = .39$, $p < .01$) under the condition of high interdependence uncertainty (1 *SD* above the mean).

CHAPTER 6: DISCUSSION

Summary of Findings

In this dissertation, I develop an integrative theoretical account to explain why, how, and when pay system contributes to adaptive team performance. My theoretical model was largely supported by findings based on a sample of 207 production teams from a manufacturing company. First, pay equality showed a significant main effect on adaptive team performance. Second, pay equity had a significant main effect on planned coordination; while pay equality had a significant main effect on emergent coordination. Moreover, pay equity, compared with pay equality, showed a stronger positive impact on planned coordination. Third, pay equity and pay equality shaped adaptive team performance through distinct mechanisms. That is, pay equity exerted influence on adaptive team performance through affecting planned coordination; while pay equality exerted influence on adaptive team performance through affecting emergent coordination. Fourth, interdependence uncertainty strengthened the effects of pay equality on emergent coordination and adaptive team performance. Last, the indirect effect of pay equality on adaptive team performance via emergent coordination varied as a function of interdependence uncertainty. This set of findings expands our knowledge regarding how pay system influences adaptive team performance and provide improved prescriptions for compensation design in teams.

Theoretical Implications

Change is an ever present reality of modern business environment and therefore adaptation is essential for organizational life (Burke et al., 2006). Successful

teams must be able to adapt to changing demands. For instance, work teams often need to operate in novel performance environments, which take members into domains that differ from their explicit training or previous experience (Marks et al., 2000). Due to the unfamiliar or novel nature of new tasks, it is often impractical or impossible to train teams preemptively for every situation that they may encounter. Thus, teams must be prepared to adjust quickly and effectively in response to changing performance conditions. Unfortunately, the management literature has provided little insight into how collective effectiveness in such settings can benefit from compensation design—“perhaps the most powerful tool for engineering successful management of human capital and thereby promoting organizational effectiveness.” (Gupta & Shaw, 2014, p.2) In my dissertation, I set out to fill this critical gap in the management literature because our knowledge on compensation design in teams is less complete without understanding the impact of pay system on adaptive team performance.

I explain why pay equity and pay equality each plays an indispensable role to enable collective effectiveness by disengaging the differential effects of pay equity and pay equality on planned coordination and emergent coordination. Although prior research has pointed to the importance of both pay equity and pay equality to team functioning (Pearsall, Christian, & Ellis, 2010), there is still a lack of in-depth analysis and examination of the underlying causal pathways (Gerhart et al., 2009; Shaw, 2014; Siegel & Hambrick, 2005). In this study, I extend our knowledge in this regard by clarifying how pay equity and pay equality differ from each other in benefiting key team processes. Specifically, I found that pay equity, compared with

pay equality, had a stronger positive effect on planned coordination. This finding suggested that pay equity operated as a more powerful force to facilitate members' behavioral integration. Moreover, results also showed that, of pay equity and pay equality, only the latter exerted meaningful influence on emergent coordination. This finding revealed that pay equality was particularly instrumental for teams to adapt and establish functional collaboration when they are confronted by disruption or surprise at work. Taken together, as both forms of team coordination are essential to collective effectiveness, this set of findings indicated that either pay equity or pay equality deserves appreciation based on its own merit.

This study sheds new light the ongoing debate about when pay equity and pay equality are more important to team effectiveness. Research has offered valuable insight into this topic (e.g., Deutsch, 1985; Johnson et al., 2006). For instance, Pearsall, Christian, and Ellis (2010) highlighted that the utility of equity-based and equality-based rewards is contingent on task interdependence. That is, as the degree of task interdependence escalates, teams face increasing coordination needs. In such context, pay equality shows growing importance because it enables teams to better coordinate interdependent actions by facilitating cooperative behavior. Whereas, the utility of pay equity pales increasingly because it is less able to promote, or even undermine, cooperative behavior (Deutsch, 1949). However, empirical evidence has not offered unequivocal support for the moderating effect of task interdependence (e.g., Shaw et al. 2002). In a recent review, Shaw (2014: 534) pointed out that such mixed findings in the literature suggest that existing theory might fail to consider the true underlying factor: the identifiability of individual work inputs—i.e., the extent to

which individual contribution and performance can be clearly identified. Heeding to this call, I focus on interdependence uncertainty as a key factor in understanding when pay equity and pay equality are more or less beneficial to team effectiveness. In doing so, I expand the scope of existing theory to better capture organizational complexity in explaining the utility of pay equity and pay equality.

I also bring conceptual clarity and coherence to the research on team coordination. Although the last two decades have seen a growing interest in the topic of how members integrate their interdependent actions in teams, this line of research as a whole remains splintered into a diverse array of fragmented insights (Pine & Mazmanian, 2016; Kozlowski & Bell, 2012). Building on the foundational work by March and Simon (1958), I conceptually identify two distinct forms of coordination—i.e., planned and emergent coordination. By clarifying the commonalities and contrasting the differences between them, I make an initial step toward synthesizing existing wisdom and recent advances into a coherent framework.

Interestingly, inconsistent with my expectation, several hypotheses were not supported. First, the relationship between pay equality and emergent coordination, though significant, was not stronger than that between pay equity and emergent coordination. This finding suggested that the relative importance of pay equality versus pay equity to enabling interdependent tasks (cf. Johnson et al., 2006) might be overrated. Indeed, in order to establish functional coordination in novel performance environment, members not only need to be cooperative with one another and attentive to collective goals, but also need to diligently fulfill their own duties by adapting to changes that affect their parts of team tasks (Griffin, Neal, Parker, 2007; Pulakos,

Arad, Donovan, & Plamondon, 2000). Second, interdependence uncertainty only moderated the effect of pay equality on emergent coordination, but did not moderate the effect of pay equity on team coordination. Hence, this set of findings suggested that pay equity contributed to planned coordination in a consistent and stable manner independent of whether requirements for teamwork is ambiguous.

Last, it is also worth of noting that interdependence uncertainty also moderated the relationship between emergent coordination and adaptive team performance. This unexpected finding suggested that emergent coordination is more instrumental for facilitating adaptive team performance when interdependence uncertainty is higher. This is presumably due to increased demands for on-the-spot mutual adjustment and collective improvisation on the part of team members (Siemsen, Balasubramanian, & Roth, 2007; Vera & Crossan, 2005) when interdependence uncertainty is higher than when interdependence uncertainty is lower. Indeed, when interdependence uncertainty is higher, although team could also attempt to rely on planned coordination to manage task-based interdependencies among members, planned coordination was less effective because anticipatory planning could not consider unexpected contingencies confronted by teams. In contrast, although teams might also use emergent coordination when interdependence uncertainty is lower, such coordination based on mutual adjustment is less efficient and effective than planned coordination because members need to take more time to establish functional coordination in an emergent manner.

Practical Implications

Given that organizations spend as much as half of their operating budget on payroll or payroll-related expenses (Mitra, Gupta, & Jenkins, 1995), it is crucial to understand how pay system can be structured effectively. It has been well established that pay plays a powerful role to shape team performance in organizations (Gupta & Shaw, 2014; Jenkins, Mitra, Gupta, & Shaw, 1998; Rynes, Gerhart, & Minette, 2004; Wageman & Baker, 1997), decisions regarding compensation design for teams should be taken seriously. As pointed out by scholars (e.g., Gerhart & Fang, 2014), the issue may not be whether to use equity-based rewards or equality-based rewards, a focus of prior theorizing, because most organizations now use hybrid pay systems involving both equity-based and equality-based rewards (Milkovich, Newman, & Gerhart, 2013). Instead, the focus should be on how to design pay system in a way to maximize the desired outcomes. I believe it is time for research to catch up with practice and begin theoretical development toward this end.

This study provides several improved prescriptions that allow organizations to better leverage the power of pay system to enhance adaptive team performance. First, when organizations seek to enhance adaptive team performance, they should distribute rewards among team members in more equality-based approaches, such as lower levels of pay dispersion or higher levels of team-based incentive (e.g., Shaw, 2014), because the shared belief that members are rewarded equally for collective success is critical for members to form and maintain behavioral integration in novel performance environment. At the same time, the importance of pay equity should not be overlooked or underestimated as it is also crucial for organizations to hold

members accountable for their assigned tasks or duties. Failing to do so leads to suboptimal adaptive team performance because team members are less able to integrate their job activities as planned before task engagement.

Organizations should consider the nature of performance environment when designing pay system for teams. Teams are open social systems and thus are subject to the influence of external environment (Alison, Power, van den Heuvel, & Waring, 2015; Ancona & Caldwell, 1982; Argote, Turner, & Fichman, 1989). This study, in particular, highlights interdependence uncertainty as a key boundary condition to dictate the utility of pay equity and pay equality. When performance environment is highly volatile, dynamic, and unpredictable, organizations need to set up pay system in ways that make members feel everyone equally benefits or suffers from collective outcomes. Such shared belief is particularly important for members to mutually adjust behavior to establish functional coordination when they cannot anticipate how to collaborate with one another prior to task engagement.

Limitations and Future Research

Several limitations of the present research should be noted. First, I used perception-based measures to capture pay equity and pay equality. The characteristics of pay system can be assessed from either an objective or a subjective perspective (Leana & Meuris, 2015). Although the objective characteristics of pay system can affect how members behave, their influence on collective outcomes fundamentally operates through shaping members' cognitive awareness and subjective interpretation (Harkins, 1987; Hockey, 1997; Vohs, Mead, & Goode, 2006; Vohs, Mead, & Goode, 2008) and expectancies based upon past experience (Kahneman, 2003; Kahneman &

Tversky, 1979). In reality, the discrepancy between objective characteristics and subjective perceptions is inevitable and often attributable to a number of factors (see Leana & Meuris, 2015 for a review). For instance, the absence of widely shared pay information, i.e., pay secrecy, can lead to misperceptions about the actual pay system. Nevertheless, despite shortcomings, there are reasons to believe that subjective measures of pay system can reliably reflect managerial reality and should serve as a more proximal antecedent to influence collective functioning and outcomes at the team level of analysis. For instance, indirect evidence has demonstrated that, in a rare direct comparison of objective income and subjective construal, Ackerman and Paolucci (1983) found that subjective income adequacy explained more variance in overall life quality than objective income measures, although both were significant predictors.

Second, I tested my hypotheses in a manufacturing firm, which comes with both strengths and limitations. On the positive side, I excluded confounding factors that could exist had I used multiple organizations. On the negative side, the generalizability of my findings may be limited because the characteristics of the industry may have influenced my results. Future research using different organizational contexts and industries would be valuable for the purpose of cross-validation. Third, my theoretical model implies causal relationship, but my research design (i.e., collecting data in a naturally occurring environment) cannot rule out alternative directionality. Although I took precautions such as collection of data in four phases and including controls for prior performance in the analyses, future

research needs to conduct experiments to conclusively establish causality for the relationships proposed here.

Fourth, although my theorizing and hypotheses are not bounded by cultural characteristics, the cultural context where I conducted the study (i.e., China) may have affected my results nonetheless. Conventional wisdom suggests that organizations from more collectivistic countries such as China and Japan tend to be less likely to use equity-based rewards (i.e., differentiating pay based on individual contribution or performance) than are organizations from individualistic countries like the United States (cf. Hofstede, 1991). In contrast, organizations from collectivistic countries tend to rely more on equality-based rewards. However, recent empirical findings (e.g., Fischer & Smith, 2003) show that such differences, when they exist, are generally very small in practical terms (Gerhar & Fang, 2014; Milkovich, Newman, & Gerhart, 2013). For example, in a study by Zhou and Martocchio of Chinese and U.S. respondents, individual performance explained 64.2% of the variance in bonus allocations, indicating the dominance of equity-based rewards across nationalities. In contrast, the interaction between nationality and use of the equity-based rewards explained only 1.1% of the variance (Gerhart, 2009). Based on this evidence, Gerhar and Fang (2014, p. 50) concluded that “it is perhaps not surprising that recent empirical evidence indicates that country and/or national culture differences are less of a contingency variable than expected.” Taken together, recent evidence mitigates the concern that culture-related factors constrained the generalizability of my findings. However, it would be informative for future research to examine how my findings generalize to other cultural contexts.

Last but not least, I encourage scholars to further investigate how pay equity and pay equality might influence other domains of team performance, such as proactive team performance (e.g., Griffin et al., 2007). I only touch on a small part of a bigger puzzle. Future work needs to continue exploring how other outcomes and moderators of pay equity and pay equality. In addition, future research can examine other underlying mechanisms linking pay equity and pay equality to their outcomes at the team level analysis.

Conclusions

I develop and test a theoretical account that explains how pay system contributes to adaptive team performance in naturalistic settings. Such conceptual and empirical effort addresses a puzzle incisively highlighted by scholars (Gerhart, Rynes, & Fulmer, 2009, p. 264): “reward systems for small work groups or teams, where evidence (particularly outside of the laboratory) is scarce, and the results much less clear.” I theorize and found that pay equity contributes to adaptive team performance by facilitating planned coordination, and that pay equality contributes to adaptive team performance by facilitating emergent coordination. More important, I also theoretically and empirically establish that the positive effects of pay equality on emergent coordination and adaptive team performance are stronger when team members cannot predict how their job activates would be interrelated before task engagement. Overall, this study deepens our understanding of pay system effectiveness in the context of teams and offers more sophisticated and nuanced guidance for organizations and managers.

Appendix A: IRB Approval Letter



1204 Marie Mount Hall
College Park, MD 20742-5125
TEL 301.405.4212
FAX 301.314.1475
irb@umd.edu
www.umresearch.umd.edu/IRB

DATE: July 7, 2015

TO: Ning Li
FROM: University of Maryland College Park (UMCP) IRB

PROJECT TITLE: [770739-1] Reward distribution and performance
REFERENCE #:
SUBMISSION TYPE: New Project

ACTION: APPROVED
APPROVAL DATE: July 7, 2015
EXPIRATION DATE: July 6, 2016
REVIEW TYPE: Expedited Review

REVIEW CATEGORY: Expedited review category # 7

Thank you for your submission of New Project materials for this project. The University of Maryland College Park (UMCP) IRB has APPROVED your submission. This approval is based on an appropriate risk/benefit ratio and a project design wherein the risks have been minimized. All research must be conducted in accordance with this approved submission.

Prior to submission to the IRB Office, this project received scientific review from the departmental IRB Liaison.

This submission has received Expedited Review based on the applicable federal regulations.

This project has been determined to be a Minimal Risk project. Based on the risks, this project requires continuing review by this committee on an annual basis. Please use the appropriate forms for this procedure. Your documentation for continuing review must be received with sufficient time for review and continued approval before the expiration date of July 6, 2016.

Please remember that informed consent is a process beginning with a description of the project and insurance of participant understanding followed by a signed consent form. Informed consent must continue throughout the project via a dialogue between the researcher and research participant. Unless a consent waiver or alteration has been approved, Federal regulations require that each participant receives a copy of the consent document.

Please note that any revision to previously approved materials must be approved by this committee prior to initiation. Please use the appropriate revision forms for this procedure.

All UNANTICIPATED PROBLEMS involving risks to subjects or others (UPIRSOs) and SERIOUS and UNEXPECTED adverse events must be reported promptly to this office. Please use the appropriate reporting forms for this procedure. All FDA and sponsor reporting requirements should also be followed.

All NON-COMPLIANCE issues or COMPLAINTS regarding this project must be reported promptly to this office.

Appendix B: English Version of Survey Questionnaires

Pay equity and pay equality

To what extent do you agree with the following descriptions ...

- 1= Not at all
- 2= Very Little
- 4= To Some Extent
- 6= To a Great Extent
- 7= To a Very Great Extent

Pay equity

1. reflected what members have contributed to the team
2. reflect the effort members put into their work
3. were justified given members' performance
4. were appropriate, given the work members completed for the team.

Pay equality

1. ensured that all members received comparable rewards
2. guaranteed members got the same level of rewards
3. ensured that rewards were distributed equally across members
4. ensured that members were given similar rewards

Interdependence uncertainty

To what extent do you agree with the following descriptions ...

- 1= Not at all
- 2= Very Little
- 4= To Some Extent
- 6= To a Great Extent
- 7= To a Very Great Extent

1. It is hard to predict how our task activities will be interrelated.
2. We don't know how we should work together to perform well.
3. It is unclear about how members will collaborate with one another.
4. We don't know how members will rely on one another to do their jobs
5. We are not sure about the sequencing of members' job activities (i.e., when to do what)

Planned coordination and emergent coordination.

- 1= Not at all

- 2= Very Little
- 4= To Some Extent
- 6= To a Great Extent
- 7= To a Very Great Extent

Planned coordination

1. relied on pre-specified plans to integrate our job activities
2. followed established protocols to combine our task inputs
3. depended upon pre-specified plans to synthesize interrelated tasks
4. coordinated activities as planned prior to execution
5. used preset plans to maintain smooth workflow

Emergent coordination

1. mutually adjusted behavior to establish or re-establish functional coordination.
2. jointly modified the way we coordinated according to real-time data
3. mutually adjusted behavior to keep the team's workflow smooth
4. whenever necessary, jointly changed collaborative actions on the spot.
5. mutually adjusted behavior to integrate our effort

Table 1

A Comparison of Planned and Emergent Coordination

Characteristics	Planned Coordination	Emergent Coordination
<i>Commonalities</i>		
Function	<ul style="list-style-type: none"> • Allow members to manage the multiple interdependencies among members in the course of collective goal pursuit. 	
<i>Distinctions</i>		
Fundamental assumption	<ul style="list-style-type: none"> • Built upon a view that regards coordination processes as <i>mechanical</i> by nature. 	<ul style="list-style-type: none"> • Built upon a view that regards coordination processes as <i>adaptive</i> by nature.
Underlying mechanism	<ul style="list-style-type: none"> • Is empowered by anticipatory planning. 	<ul style="list-style-type: none"> • Is empowered by collective improvisation.
Enabling behaviors	<ul style="list-style-type: none"> • Fulfill predefined responsibilities and roles in undertaking interlinked tasks. • Follow established protocols, standardized procedures, and formalized rules to collaborate with teammates. • Stick to preset guidelines, schedules, and interaction modes to achieve the integration of interdependent actions. 	<ul style="list-style-type: none"> • Monitor the progress of teamwork and changing behavior on an ongoing basis to best align members' actions. • Adjust and refine the configuration of workflow based on real-time data. • Scan performance environment and make swift changes accordingly to accommodate unforeseen demands in novel situations.

Table 2

Descriptive Statistics and Correlations for Study Variables

	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7
1. Team size	6.07	.92							
2. Pay equity	5.40	.60	.08	(.85)					
3. Pay equality	5.04	.67	-.02	.30**	(.90)				
4. Planned coordination	5.51	.57	.03	.31**	.16*	(.88)			
5. Emergent coordination	5.15	.72	-.05	.17*	.20**	.32**	(.91)		
6. Interdependence uncertainty	4.61	1.03	-.04	.02	.01	-.21**	.25**	(.87)	
7. Team performance	0	1	.12	.27**	.13	.14*	.13	.06	
8. Team performance	0	1	.11	.23**	.22**	.34**	.26**	-.01	.73**

Note. $n = 207$. Alpha coefficients are reported on the diagonal in parentheses.

* $p < .05$, ** $p < .01$.

Table 3

Model Fit Indices for Measurement Models

	χ^2	<i>df</i>	$\Delta\chi^2 / \Delta df$	CFI	RMSEA	TLI
Pay equity and pay equality as one factor	2492.80	20		.44	.34	.21
Pay equity and pay equality as two factors	91.68	19	2401.12/ 1	.98	.06	.97
Planned coordination and emergent coordination as one factor	3343.18	35		.46	.30	.30
Planned coordination and emergent coordination as two factors	129.25	34	3213.93/ 1	.98	.05	.98

Note. $n = 207$. CFI = comparative fit index, RMSEA = root-mean-square error of approximation, and TLI = Tucker Lewis index.

Table 4

Regression Results: Team Performance at Time 4 as the Dependent Variable

Variables	Team performance					
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
<i>Intercepts</i>	-1.12 (.59)	1.47 (2.23)	3.82* (1.73)	4.95* (2.51)	-2.88** (.56)	.09 (2.22)
<i>Control variables</i>						
Team size	.02 (.05)	.01 (.05)	.01 (.05)	.01 (.05)	.02 (.05)	.02 (.05)
Team performance (T1)	.71** (.05)	.71** (.05)	.70** (.05)	.70** (.05)	.69** (.05)	.63** (.05)
<i>Main effects</i>						
Equity	.00 (.09)	-.41 (.39)	-.02 (.08)	-.25 (.39)		
Equality	.20** (.07)	.19** (.07)	-.71* (.31)	-.68 (.32)		
Uncertainty		-.55 (.46)	-1.06** (.34)	-1.30 (.52)		-.69 (.46)
Planned coordination					.36** (.08)	.66 (.36)
Emergent coordination					.15* (.06)	-.70** (.26)
<i>Interactive effects</i>						
Equity* Uncertainty		.09 (.08)		.05 (.08)		
Equality* Uncertainty			.20** (.07)	.19** (.07)		
Planned coordination * Uncertainty						-.07 (.07)
Emergent coordination * Uncertainty						.20** (.06)
<i>Wald Test</i>	2.48				3.38	

Note. $n = 207$. Unstandardized regression coefficients are reported.
T1= Time1, * $p < .05$, ** $p < .01$. Two-tailed tests.

Table 5

Regression Results: Planned Coordination as the Dependent Variable

Variables	Planned coordination					
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
<i>Intercepts</i>	4.00** (.43)	4.84** (.40)	3.8** (.47)	1.96 (1.75)	5.99** (1.35)	3.48 (2.00)
<i>Control variables</i>						
Team size	.00 (.04)	.01 (.04)	.01 (.04)	.00 (.04)	-.00 (.04)	.01 (.04)
Team performance (T1)	.04 (.04)	.07 (.04)	.03 (.04)	.05 (.04)	.04 (.04)	.04 (.04)
<i>Main effects</i>						
Pay equity	.28** (.07)		.26** (.07)	.69* (.31)	.26** (.07)	.76* (.31)
Pay equality		.12* (.06)	.05 (.06)	.06 (.06)	-.26 (.25)	-.32 (.25)
Interdependence uncertainty				.40 (.36)	-.47 (.27)	.07 (.42)
<i>Interactive effects</i>						
Pay equity *						
Interdependence uncertainty				-.10 (.07)		-.11 (.07)
Pay equality *						
Interdependence uncertainty					.07 (.05)	.08 (.05)
<i>Wald Test</i>				4.17*		

Note. $n = 207$. Unstandardized regression coefficients are reported. T1= Time1, * $p < .05$, ** $p < .01$. Two-tailed tests.

Table 6

Regression Results: Emergent Coordination as the Dependent Variable

Variables	Emergent coordination					
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
<i>Intercepts</i>	4.53** (.55)	4.45** (.50)	3.93** (.61)	3.30 (2.26)	7.37** (1.72)	6.67** (2.55)
<i>Control variables</i>						
Team size	-.06 (.05)	-.05 (.05)	-.05 (.05)	-.05 (.05)	-.05 (.05)	-.05 (.05)
Team performance (T1)	.07 (.05)	.08 (.05)	.06 (.05)	.05 (.05)	.04 (.05)	.04 (.05)
<i>Main effects</i>						
Pay equity	.18* (.09)		.13 (.09)	.09 (.39)	.11 (.08)	.25 (.39)
Pay equality		.20** (.07)	.17* (.08)	.17* (.07)	-.66* (.32)	-.68* (.32)
Interdependence uncertainty				.13 (.47)	-.75* (.35)	-.60 (.53)
<i>Interactive effects</i>						
Pay equity * Interdependence uncertainty				.01 (.08)		-.03 (.08)
Pay equality * Interdependence uncertainty					.18** (.07)	.19** (.07)
<i>Wald Test</i>			.09			

Note. $n = 207$. Unstandardized regression coefficients are reported.
T1= Time1, * $p < .05$, ** $p < .01$. Two-tailed tests.

Table 7

Bootstrapping Results of Indirect Effects

Indirect effects	Estimates	95 % Bias-corrected Confidence Interval	
		Lower Bound	Upper Bound
<i>Hypothesized mediating paths</i>			
The indirect effect of pay equity on adaptive team performance via planned coordination	.11**	.04	.20
The indirect effect of pay equality on adaptive team performance via emergent coordination	.02*	.00	.07
<i>Non-hypothesized mediating paths</i>			
The indirect effect of pay equity on adaptive team performance via emergent coordination	.02	-.00	.08
The indirect effect of pay equality on adaptive team performance via planned coordination	.02	-.02	.08

Note. $n = 207$. Bootstrapping = 2000.

* $p < .05$, ** $p < .01$. Two-tailed tests

Table 8

Results of the Conditional Indirect Effects

Moderators	Stage		Effect		
	First	Second	Direct	Indirect	Total
Interdependence uncertainty	Pay equity → Planned coordination	Planned coordination → Team performance (T4)			
High	.13	.23	-.03	.03	.00
Low	.36**	.52**	-.23*	.19**	-.04
Differences	-.23	-.29	.20	-.16	.05
95% CI for the differences	[-.52, .08]	[-.62, .03]	[-.11, .56]	[-.32, .01]	[-.24, .38]
Interdependence uncertainty	Pay equality → Emergent coordination	Emergent coordination → Team performance (T4)			
High	.38**	.30**	.27*	.12**	.39**
Low	-.00	.00	.03	.00	.03
Differences	.38*	.30*	.24	.12**	.36*
95% CI for the differences	[.03, .75]	[.06, .58]	[-.06, .56]	[.03, .24]	[.09, .65]

Note. $n = 207$. Low moderator variable refers to one standard deviation below the mean of the moderator; high moderator variable refers to one standard deviation above the mean of the moderator.

CI=95 Bias-corrected confidence interval.

* $p < .05$, ** $p < .01$. Two-tailed tests.

Figure 1. Hypothesized Model

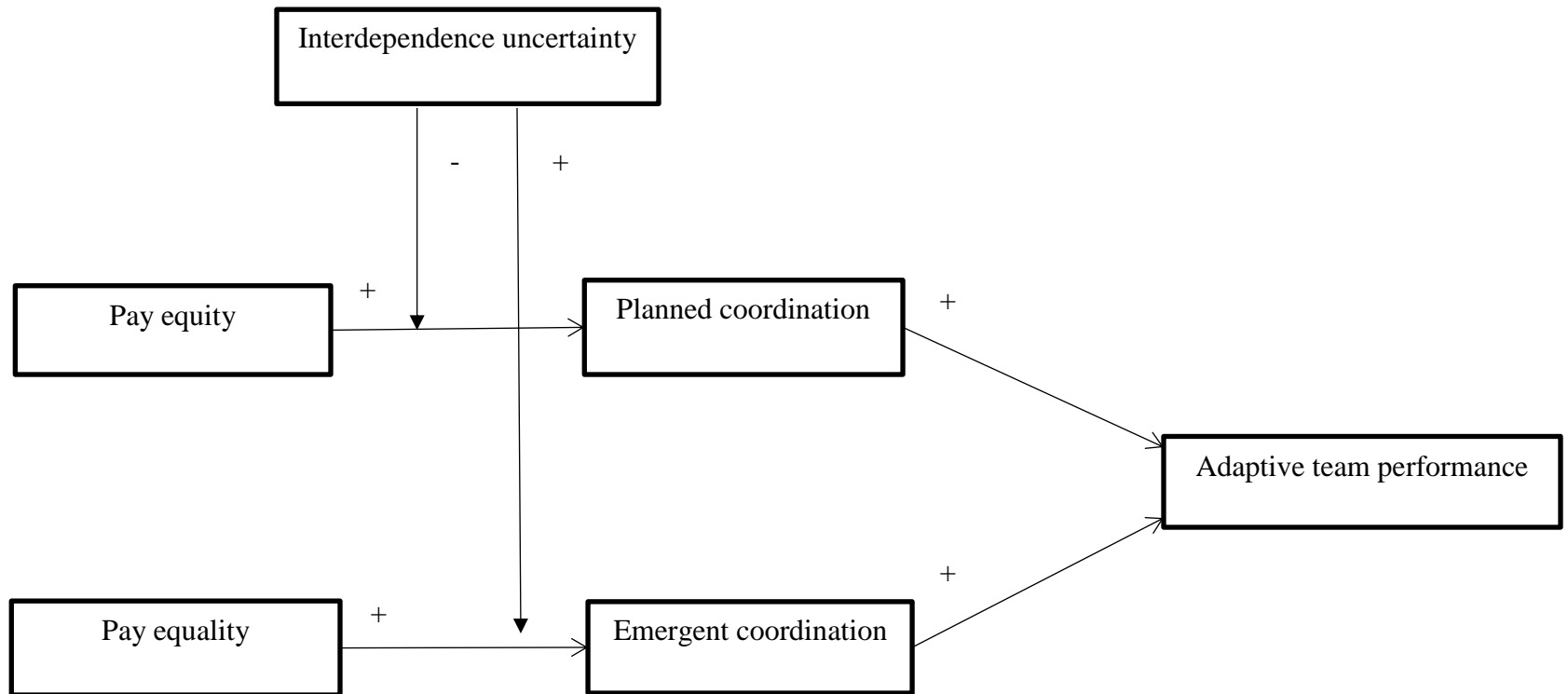


Figure 2. The Interactive Effect of Pay Equality and Interdependence Uncertainty on Emergent Coordination

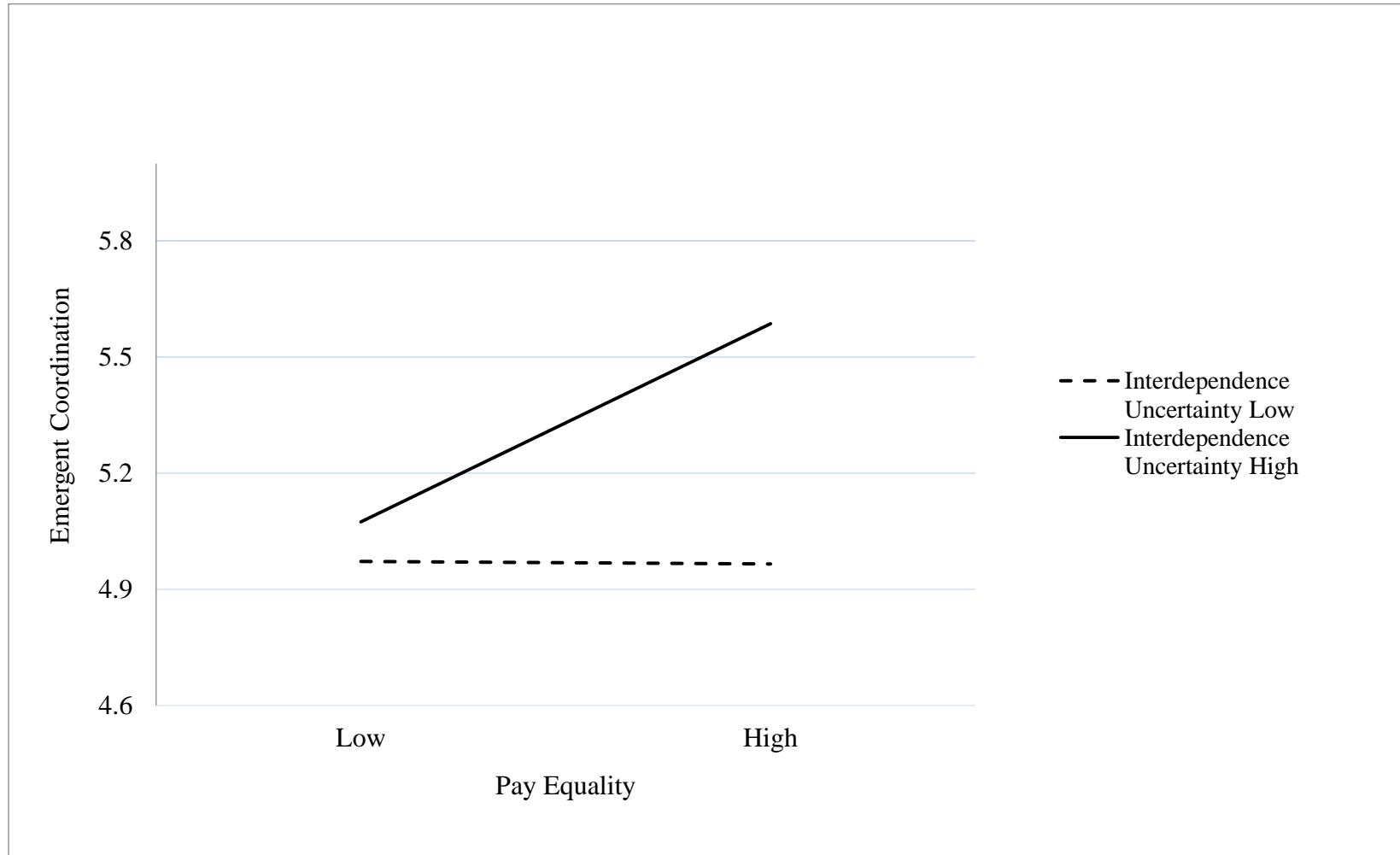


Figure 3. The Interactive Effect of Emergent Coordination and Interdependence Uncertainty on Adaptive Team Performance

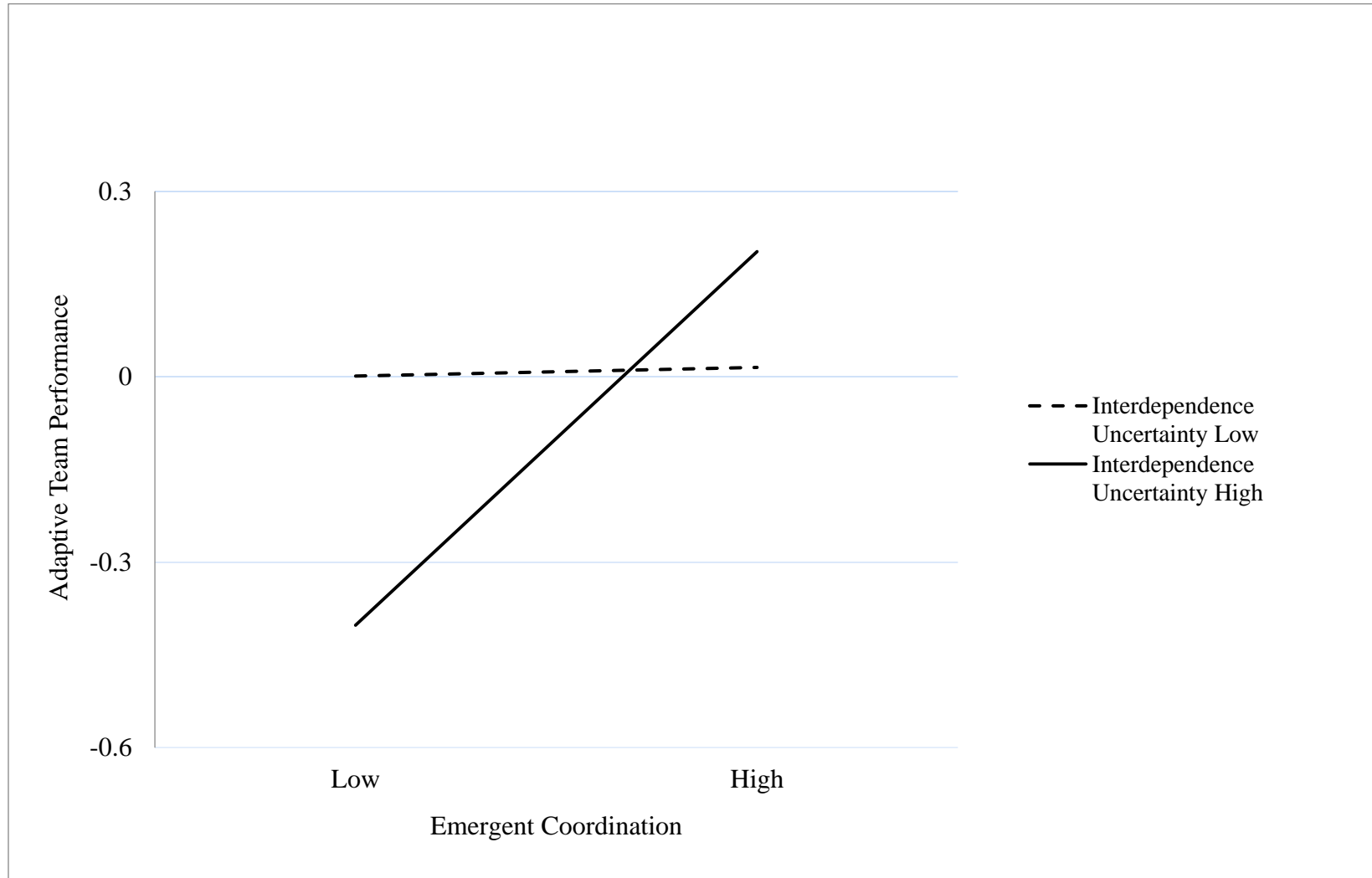
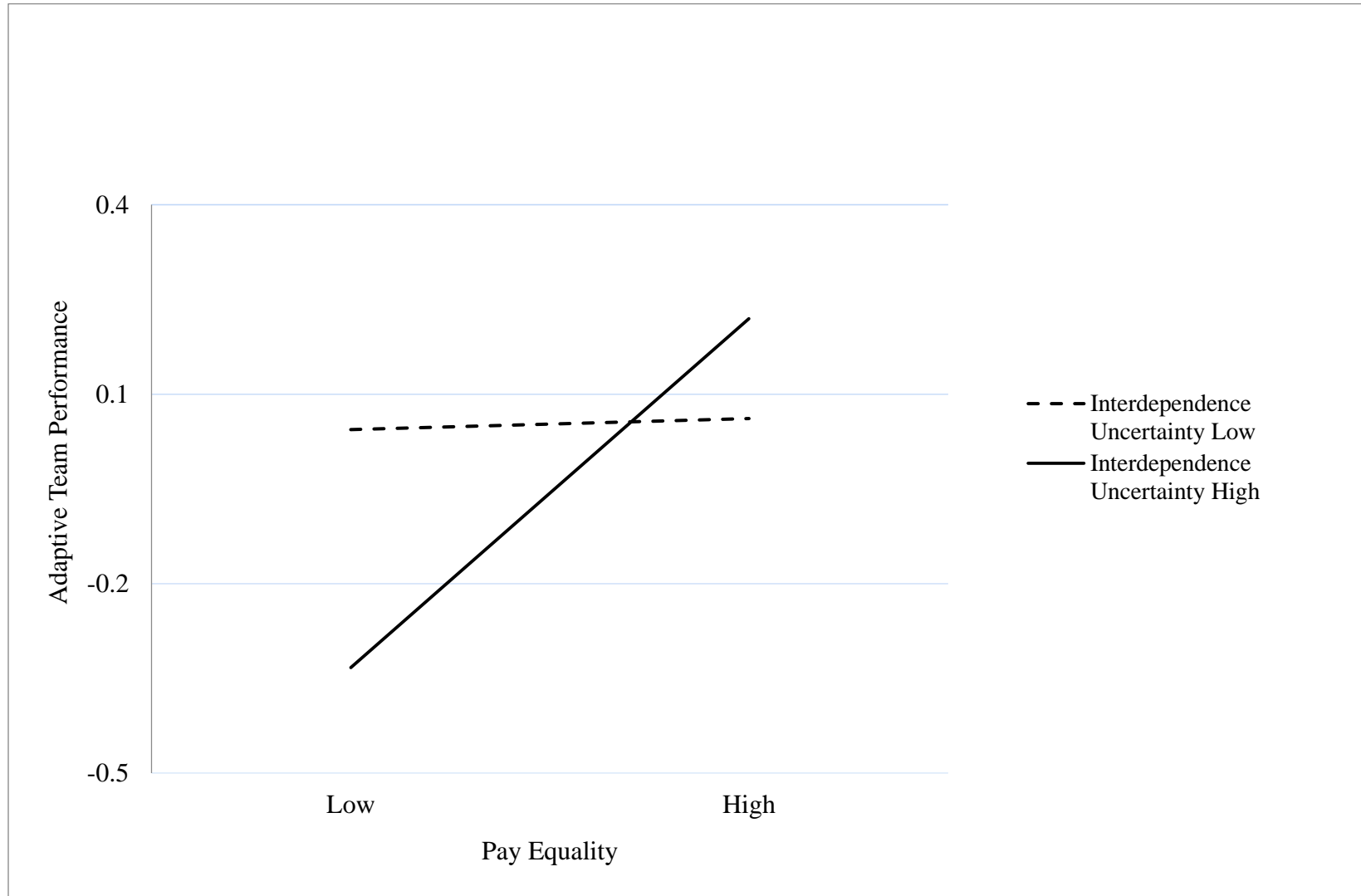


Figure 4. The Interactive Effect of Pay Equality and Interdependence Uncertainty on Adaptive Team Performance



References

- Ackerman, N., & Paolucci, B. (1983). Objective and subjective income adequacy: Their relationship to perceived life quality measures. *Social Indicators Research*, 12, 25–48. doi:10.1007/bf00428859
- Adams, J. S. (1963). Toward an understanding of inequity. *Journal of Abnormal and Social Psychology*, 67, 422–436.
- Aiken, L. S., West, S. G., & Reno, R. R. (1991). *Multiple regression: Testing and interpreting interactions*. Thousand oaks, CA: Sage.
- Alison, L., Power, N., van den Heuvel, C., & Waring, S. (2015). A taxonomy of endogenous and exogenous uncertainty in high-risk, high-impact contexts. *Journal of Applied Psychology*, 100, 1309-1318. doi: 10.1037/a0038591
- Ancona, D. G. & Caldwell, D. F. (1992). Bridging the boundary: External activity and performance in organizational teams. *Administrative Science Quarterly*, 37, 634-665. doi: 10.2307/2393475
- Argote, L. (1982). Input uncertainty and organizational coordination in hospital emergency units. *Administrative Science Quarterly*, 27, 420-434. doi: 10.2307/2392320
- Argote, L., Turner, M. E., & Fichman, M. (1989). To centralize or not to centralize: The effects of uncertainty and threat on group structure and performance. *Organizational Behavior and Human Decision Processes*, 43, 58-74. doi: 10.1016/0749-5978(89)90058-7
- Baard, S. K., Rench, T. A., & Kozlowski, S. W. J. (2014). Performance Adaptation. *Journal of Management*, 40, 48–99. doi:10.1177/0149206313488210

- Barnes, C. M., Hollenbeck, J. R., Wagner, D. T., DeRue, D. S., Nahrgang, J. D., & Schwind, K. M. (2008). Harmful help: The costs of backing up behavior in teams. *Journal of Applied Psychology, 93*, 529-539. doi: 10.1037/0021-9010.93.3.529
- Barnes, C. M., Hollenbeck, J. R., Jundt, D. K., DeRue, D. S., & Harmon, S. J. (2011). Mixing individual incentives and group incentives: Best of both worlds or social dilemma? *Journal of Management, 37*, 1611-1635. doi: 10.1177/0149206309360845
- Bechky, B. A. & Okhuysen, G. A. (2011). Expecting the unexpected? How SWAT officers and film crews handle surprises. *Academy of Management Journal, 54*, 239-261. doi: 10.5465/amj.2011.60263060
- Beersma, B., Hollenbeck, J. R., Humphrey, S. E., Moon, H., Conlon, D. E., & Ilgen, D. R. (2003). Cooperation, competition, and team performance: Toward a contingency approach. *Academy of Management Journal, 46*, 572–590. doi: 10.2307/30040650
- Bliese, P. D. (2000). Within-group agreement, non-independence, and reliability: Implications for data aggregation and analysis. In K. J. Klein & S. W. Kozlowski (Eds.), *Multilevel theory, research, and methods in organizations* (pp. 349–381). San Francisco, CA: Jossey-Bass.
- Brannick, M. T., & Prince, T. (1997). An overview of team performance measurement. In E. Salas & C. Prince (Eds.), *Team performance assessment and measurement* (pp. 3–16). Mahwah, NJ: Lawrence Erlbaum Associates.
- Breaugh, J. A., & Colihan, J. P. (1994). Measuring facets of job ambiguity: Construct validity evidence. *Journal of Applied Psychology, 79*, 191– 202. doi:10.1037/0021-9010.79.2.191
- Brislin, R. W. (1970). Back-translation for cross-cultural research. *Journal of Cross-Cultural*

Psychology, 1, 185-216. doi:10.1177/135910457000100301

- Cannon-Bowers, J. A., Tannenbaum, S. I., Salas, E., & Volpe, C. E. (1995). Defining team competencies and establishing team training requirements. In R. Guzzo & E. Salas (Eds.), *Team effectiveness and decision making in organizations* (pp. 333-380). San Francisco: Jossey-Bass.
- 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*, 234–246. doi: 10.1037/0021-9010.83.2.234
- Chen, G., & Kanfer, R. (2006). Toward a systems theory of motivated behavior in work teams. *Research in Organizational Behavior, 27*, 223-267. doi: 10.1016/s0191-3085(06)27006-0
- Colquitt, J. A. (2001). On the dimensionality of organizational justice: A construct validation of a measure. *Journal of Applied Psychology, 86*, 386-400. doi: 10.1037/0021-9010.86.3.386
- Colquitt, J. A., & Jackson, C. L. (2006). Justice in teams: The context sensitivity of justice rules across individual and team Contexts¹. *Journal of Applied Social Psychology, 36*, 868-899.
- Conroy, S. A., Yoon, Y. J., Bamberger, P. A., Gerhart, B., Gupta, N., Nyberg, A. J., ... Sturman, M. C. (2015). Past, Present and Future Compensation Research Perspectives. *Compensation & Benefits Review, 47*, 207–215. doi:10.1177/0886368716681677
- Grant, J. M. (2000). Proactive behavior in organizations. *Journal of Management, 26*, 435–462. doi: 10.1177/014920630002600304
- De Dreu, C. K. W. (2007). Cooperative outcome interdependence, task reflexivity, and team

- effectiveness: A motivated information processing approach. *Journal of Applied Psychology*, 92, 628–638. doi: 10.1037/0021-9010.92.3.628
- De Dreu, C. K. W., & Carnevale, P. J. (2003). Motivational bases of information processing and strategy in conflict and negotiation. *Advances in Experimental Social Psychology*, 35, 235–291. doi: 10.1016/s0065-2601(03)01004-9
- De Dreu, C. K. W., & Nauta, A. (2009). Self-concern and other-orientation in organizational behavior: Implications for task performance, pro-social behavior, and personal initiative. *Journal of Applied Psychology*, 94, 913–926. doi: 10.1037/a0014494
- De Dreu, C. K. W., Nijstad, B. A., & Van Knippenberg, D. (2008). Motivated information processing in group judgment and decision making. *Personality and Social Psychology Review*, 12, 22–49. doi: 10.1177/1088868307304092
- Deutsch, M. (1949). An experimental study of the effects of cooperation and competition upon group process. *Human Relations*, 2, 199-231. doi: 10.1177/001872674900200301
- DeMatteo, J. S., Eby, L. T., & Sundstrom, E. S. (1998). Group rewards and group effectiveness: A critical review. *Research in Organizational Behavior*, 20, 141–183.
doi:10.1177/1046496404268538
- Deutsch, M. (1985). *Distributive justice: A social-psychological perspective*. New Haven, CT: Yale University Press.
- Edwards, J. R., & Lambert, L. S. (2007). Methods for integrating moderation and mediation: A general analytical framework using moderated path analysis. *Psychological Methods*, 12, 1-22. doi:10.1037/1082-989x.12.1.1
- Erez, M., & Somech, A. (1996). Is group productivity loss the rule or the exception? Effects of

- culture and group-based motivation. *Academy of Management Journal*, 39, 1513–1537.
doi: 10.2307/257067
- Fischer, R., & Smith, P. (2003). Reward allocation and culture: A meta-analysis. *Journal of Cross-Cultural Psychology*, 34, 251–268. doi:10.1177/0022022103034003001
- George, J. M. (1992). Extrinsic and intrinsic origins of perceived social loafing in organizations. *Academy of Management Journal*, 35, 191-202. doi: 10.2307/256478
- Gerhart, B., & Fang, M. (2014). Pay for (individual) performance: Issues, claims, evidence and the role of sorting effects. *Human Resource Management Review*, 24, 41–52.
doi:10.1016/j.hrmr.2013.08.010
- Gerhart, B., Rynes, S. L., & Fulmer, I. S. (2009). 6 pay and performance: Individuals, groups, and executives. *The Academy of Management Annals*, 3, 251-315. doi:
10.1080/19416520903047269
- Gupta, N., Conroy, S., & Delery, J. E. (2012). The many faces of pay variation. *Human Resource Management Review*, 22, 100–115. doi: 10.1016/j.hrmr.2011.12.001
- Grant, A. M., & Rothbard, N. P. (2013). When in doubt, seize the day? Security values, prosocial values, and proactivity under ambiguity. *Journal of Applied Psychology*, 98, 810–819.
doi:10.1037/a0032873
- Gupta, N., & Shaw, J. D. (2014). Employee compensation: The neglected area of HRM research. *Human Resource Management Review*, 24(1), 1–4. doi:10.1016/j.hrmr.2013.08.007
- Hackman, J. (1987). The design of work teams. In J. Lorcsch (Ed.), *Handbook of Organizational Behavior* (pp. 315-342). Englewood Cliffs, NJ: Prentice-Hall.
- Harrell, F. E. (2001). Regression modeling strategies: with applications to linear models, logistic

- regression, and survival analysis. New York: Springer.
- Hatch, M. J. (1998). Jazz as a metaphor for organizing in the 21st century. *Organization Science*, 9, 556–557. doi: 10.1287/orsc.9.5.556
- Harkins, S. G. (1987). Social loafing and social facilitation. *Journal of Experimental Social Psychology*, 23, 1–18. doi: 10.1016/0022-1031(87)90022-9
- Harkins, S. G., & Petty, R. E. (1982). Effects of task difficulty and task uniqueness on social loafing. *Journal of Personality and Social Psychology*, 43, 1214-1229. doi: 10.1037/0022-3514.43.6.1214
- Hockey, G. R. J. (1997). Compensatory control in the regulation of human performance under stress and high workload: A cognitive-energetical framework. *Biological Psychology*, 45, 73–93. doi: 10.1016/s0301-0511(96)05223-4
- Huber, G. P., & Lewis, K. (2010). Cross-understanding: implications for group cognition and performance. *Academy of Management Review*, 35, 6–26. doi:10.5465/amr.2010.45577787
- Hofstede, G. (1991). *Cultures and Organizations: Software of the Mind*. Maidenhead, UK: McGraw-Hill.
- Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, 1(6), 1–55. doi:10.1080/10705519909540118
- Jarzabkowski, P. A., Lê, J. K., & Feldman, M. S. (2012). Toward a Theory of Coordinating: Creating Coordinating Mechanisms in Practice. *Organization Science*, 23, 907–927. doi:10.1287/orsc.1110.0693

- Jenkins, G. D., Jr., Mitra, A., Gupta, N., & Shaw, J. D. (1998). Are financial incentives related to performance? A meta-analytic review of empirical research. *Journal of Applied Psychology, 83*, 777–787. doi:10.1037/0021-9010.83.5.777
- Johnson, M. D., Hollenbeck, J. R., Humphrey, S. E., Ilgen, D. R., Jundt, D., & Meyer, C. J. (2006). Cutthroat cooperation: Asymmetrical adaptation to changes in team reward structures. *Academy of Management Journal, 49*, 103–119. doi: 10.5465/amj.2006.20785533
- Jones, G. R. (1984). Task visibility, free riding, and shirking: Explaining the effect of structure and technology on employee behavior. *Academy of Management Review, 9*, 684–695. doi: 10.5465/amr.1984.4277404
- Kahneman, D. (2003). A perspective on judgment and choice: Mapping bounded rationality. *American Psychologist, 58*(9), 697–720. doi:10.1037/0003-066x.58.9.697
- Kahneman, D., & Tversky, A. (1979). Prospect theory: An analysis of decision under risk. *Decision, Probability, and Utility*, 183–214. doi:10.1017/cbo9780511609220.014
- Karau, S. J., & Williams, K. D. (1993). Social loafing: A meta-analytic review and theoretical integration. *Journal of Personality and Social Psychology, 65*, 681–706. doi: 10.1037/0022-3514.65.4.681
- Kellogg, K. C., Orlikowski, W. J., & Yates, J. A. (2006). Life in the trading zone: Structuring coordination across boundaries in postbureaucratic organizations. *Organization Science, 17*, 22-44. doi: 10.1287/orsc.1050.0157
- Leana, C. R., & Meuris, J. (2015). Living to Work and Working to Live: Income as a Driver of Organizational Behavior. *The Academy of Management Annals, 9*, 55-95. doi:

10.1080/19416520.2015.1007654

- Lewis, K. (2003). Measuring transactive memory systems in the field: Scale development and validation. *Journal of Applied Psychology, 88*, 587-603. doi:10.1037/0021-9010.88.4.587
- Leventhal, G. S. (1980). What should be done with equity theory? In K. O. Gezgen, (Ed.) *Social Exchange Theory* (pp. 27-55). New York: Johh Wiley.
- Liao, H., Liu, D., & Loi, R. (2010). Looking at both sides of the social exchange coin: A social cognitive perspective on the joint effects of relationship quality and differentiation on creativity. *Academy of Management Journal, 53*, 1090-1109.
doi:10.5465/AMJ.2010.54533207
- Liden, R. C., Wayne, S. J., Jaworski, R. A., & Bennett, N. (2004). Social loafing: A field investigation. *Journal of Management, 30*, 285–304. doi: 10.1016/j.jm.2003.02.002
- Lindenberg, S., & Foss, N. J. (2011). Managing Joint Production Motivation: The Role of Goal Framing and Governance Mechanisms. *Academy of Management Review, 36*, 500–525.
doi:10.5465/amr.2011.61031808
- Liu, W., Gong, Y., & Liu, J. (2014). When do business units benefit more from collective citizenship behavior of management teams? An upper echelons perspective. *Journal of Applied Psychology, 99*, 523-525. doi:10.1037/a0035538
- Locke, E. A. (1991). The motivation sequence, the motivation hub and the motivation core. *Organizational Behavior and Human Decision Processes, 50*, 288–299.
doi:10.1016/0749-5978(91)90023-m
- Locke, E. A. (1996). Motivation through conscious goal setting. *Applied and Preventive Psychology, 5*, 117-124. doi:10.1016/s0962-1849(96)80005-9

- Locke, E. A. (2001). Self-set goals and self-efficacy as mediators of incentives and personality. In M. Erez, H. U., Kleinbeck, & H. Thierry (Eds.), *Work Motivation in the Context of A Globalizing Economy* (pp. 13–26). Mahwah, NJ: Erlbaum.
- Locke, E. A., & Bryan, J. (1969). The directing function of goals in task performance. *Organizational Behavior and Human Performance*, 4, 35–42. doi: 10.1016/0030-5073(69)90030-0
- Locke, E. A., & Latham, G. P. (1984). *Goal setting: A motivational technique that works*. Englewood Cliffs, NJ: Prentice-Hall.
- Locke, E.A., & Latham, G.P. (1990). *A theory of goal setting and task performance*. Englewood Cliffs, NJ: Prentice-Hall.
- Locke, E.A., & Latham, G.P. (2002). Building a practically useful theory of goal setting and task motivation: A 35-year odyssey. *American Psychologist*, 57, 705–717. doi: 10.1037//0003-066x.57.9.705
- Locke, E. A., Shaw, K. M., Saari, L. M., & Latham, G. P. (1981). Goal setting and task performance: 1969-1980. *Psychological Bulletin*, 90, 125-152. doi: 10.1037/0033-2909.90.1.125
- Malone, T. W., & Crowston, K. (1994). The interdisciplinary study of coordination. *ACM Computing Surveys*, 26, 87–119. doi: 10.1145/174666.174668
- Maloney, M. M., Bresman, H., Zellmer-Bruhn, M. E., & Beaver, G. R. (2016). Contextualization and context theorizing in teams research: A look back and a path forward. *The Academy of Management Annals*, 10, 891–942. doi:10.1080/19416520.2016.1161964
- March, J. G. & Simon, H. A. (1958). *Organizations*. New York, NY: Wiley.

- Marks, M. A., Mathieu, J. E., & Zaccaro, S. J. (2001). A temporally based framework and taxonomy of team processes. *Academy of Management Review*, *26*, 356–376. doi: 10.5465/amr.2001.4845785
- Mathieu, J. E., Gilson, L. L., & Ruddy, T. M. (2006). Empowerment and team effectiveness: An empirical test of an integrated model. *Journal of Applied Psychology*, *91*, 97–108. doi:10.1037/0021-9010.91.1.97
- Mathieu, J. E., Maynard, M. T., Rapp, T., & Gilson, L. (2008). Team effectiveness 1997–2007: A review of recent advancements and a glimpse into the future. *Journal of Management*, *34*, 410–476. doi: 10.1177/0149206308316061
- Mathieu, J. E., & Rapp, T. (2009). Laying the foundation for successful team performance trajectories: The roles of team charters and performance strategies. *Journal of Applied Psychology*, *94*, 90–103. doi: 10.1037/a0013257
- Mathieu, J. E., & Schulze, W. (2006). The influence of team knowledge and formal plans on episodic team process-performance relationships. *Academy of Management Journal*, *49*, 605–619. doi:10.5465/AMJ.2006.21794678
- Maynard, M. T., Kennedy, D. M., & Sommer, S. A. (2015). Team adaptation: A fifteen-year synthesis (1998–2013) and framework for how this literature needs to “adapt” going forward. *European Journal of Work And Organizational Psychology*, *24*, 652-677. doi:10.1080/1359432X.2014.1001376
- McClintock, C. G. (1972). Social motivation—A set of propositions. *Behavioral Science*, *17*, 438-454. doi: 10.1002/bs.3830170505
- McClintock, C. (1977). Social motives in settings of outcome interdependence. In D. Druckman

- (Ed.), *Negotiations: Social psychological perspective* (pp. 49-77). Beverly Hills, CA: Sage.
- McGrath, J. E. (1984). *Groups: Interaction and performance*. Englewood Cliffs, NJ: Prentice-Hall.
- McGraw, K. O. (1978). The detrimental effects of reward on performance: A literature review and a prediction model. In M. R. Lepper & D. Greene (Eds.) *The hidden costs of reward: New perspectives on the psychology of human motivation* (pp. 33-60). London, UK: Taylor & Francis Group.
- Milkovich, G. T., Newman, J. M., & Gerhart, B. (2013). *Compensation* (11th ed.) New York: McGraw-Hill/Irwin.
- Mitchell, T. R., & Silver, W. S. (1990). Individual and group goals when workers are interdependent: Effects on task strategies and performance. *Journal of Applied Psychology, 75*, 185-193. doi: 10.1037/0021-9010.75.2.185
- Mitra, A., Gupta, N., & Jenkins, G. D. (1995). The Case of the Invisible Merit Raise: How People See Their Pay Raises. *Compensation & Benefits Review, 27*, 71–76.
doi:10.1177/088636879502700313
- Moorman, C., & Miner, A. S. (1998a). The convergence of planning and execution: Improvisation in new product development. *Journal of Marketing, 62*, 1-20. doi: 10.2307/1251740
- Moorman, C., & Miner, A. S. (1998b). Organizational improvisation and organizational memory. *Academy of Management Review, 23*, 698-724. doi: 10.2307/259058
- Okhuysen, G. A. & Bechky, B. A. (2009). Coordination in organizations: An integrative

- perspective. *Academy of Management Annals*, 3, 463-502. doi:
10.1080/19416520903047533
- Organ, D. W., Podsakoff, P. M., & MacKenzie, S. B. (2006). *Organizational citizenship behavior: Its nature, antecedents and consequences*. Thousand Oaks, CA: Sage Publications.
- Pfeffer, J. (1998). Six dangerous myths about pay. *Harvard Business Review*, 76, 107–119.
- Pfeffer, J., & Langton, N. (1993). The Effect of Wage Dispersion on Satisfaction, Productivity, and Working Collaboratively: Evidence from College and University Faculty. *Administrative Science Quarterly*, 38(3), 382. doi:10.2307/2393373
- Pine, K., & Mazmanian, M. (2016). Artful and contorted coordinating: The ramifications of imposing formal logics of task jurisdiction on situated practice. *Academy of Management Journal*, Advance Online. doi: 10.5465/amj.2014.0315
- Porter, C. O. L. H., Hollenbeck, J. R., Ilgen, D. R., Ellis, A. P. J., West, B. J., & Moon, H. (2003). Backing up behaviors in teams: The role of personality and legitimacy of need. *Journal of Applied Psychology*, 88, 391-403. doi: 10.1037/0021-9010.88.3.391
- Preacher, K. J., Rucker, D. D., & Hayes, A. F. (2007). Addressing moderated mediation hypotheses: Theory, methods, and prescriptions. *Multivariate Behavioral Research*, 42, 185-227. doi: 10.1080/00273170701341316
- Price, K. H., Harrison, D. A., & Gavin, J. H. (2006). Withholding inputs in team contexts: Member composition, interaction processes, evaluation structure, and social loafing. *Journal of Applied Psychology*, 91, 1375– 1384. doi: 10.1037/0021-9010.91.6.1375
- Pritchard, R. D., Jones, S. D., Roth, P. L., Stuebing, K. K., & Ekeberg, S. E. (1988). Effects of

- group feedback, goal setting, and incentives on organizational productivity. *Journal of Applied Psychology*, 73, 337-358. doi:10.1037/0021-9010.73.2.337
- Pulakos, E. D., Arad, S., Donovan, M. A., & Plamondon, K. E. (2000). Adaptability in the workplace: Development of a taxonomy of adaptive performance. *Journal of Applied Psychology*, 85, 612–624. doi: 10.1037/0021-9010.85.4.612
- Rafferty, A. E., & Griffin, M. A. (2006). Perceptions of organizational change: a stress and coping perspective. *Journal of Applied Psychology*, 91(5), 1154-1162. doi:10.1037/0021-9010.91.5.1154
- Rosenbaum, M. E., Moore, D. L., Cotton, J. L., Cook, M. S., Hieser, R. A., Shovar, M. N., & Gray, M. J. (1980). Group productivity and process: Pure and mixed reward structures and task interdependence. *Journal of Personality and Social Psychology*, 39, 626-642. doi: 10.1037/0022-3514.39.4.626
- Rynes, S. L., Gerhart, B., & Minette, M. A. (2004). The importance of pay in employee motivation: discrepancies between what people say and what they do. *Human Resource Management*, 43, 381–394. doi: 10.1002/hrm.20031
- Scott, W. R. (1987). *Organizations: Rational, natural, and open systems*. Englewood Cliffs, NJ: Prentice- Hall.
- Siemens, E., Balasubramanian, S., & Roth, A. (2007). Incentives that induce task-related effort, helping, and knowledge sharing in workgroups. *Management Science*, 53, 1533–1550. doi: 10.1287/mnsc.1070.0714
- Spitzmuller, M., & Van Dyne, L. (2013). Proactive and reactive helping: Contrasting the positive consequences of different forms of helping. *Journal of Organizational Behavior*, 34, 560-

580. doi: 10.1002/job.1848

Switzer, F. S., Paese, P. W., & Drasgow, F. (1992). Bootstrap estimates of standard errors in validity generalization. *Journal of Applied Psychology, 77*, 123–129. doi:10.1037/0021-9010.77.2.123

Thompson, J. D. (1967). *Organizations in action: Social science bases of administrative theory*. New York: McGraw-Hill.

Turner, J. C., Oakes, P. J., Haslam, S. A., & McGarty, C. (1994). Self and collective: Cognition and social context. *Personality and Social Psychology Bulletin, 20*, 454-463. doi:10.1177/0146167294205002

Tushman, M. L. & Nadler, D. A. (1978). Information processing as an integrative concept in organizational design. *Academy of Management Review, 3*, 613-624. doi: 10.5465/amr.1978.4305791

Van der Veegt, G., Emans, B., & Van de Vliert, E. (2000). Team members' affective responses to patterns of intragroup interdependence and job complexity. *Journal of Management, 26*, 633–655. doi: 10.1177/014920630002600403

Van der Veegt, G. S., & Bunderson, J. S. (2005). Learning and performance in multidisciplinary teams: The importance of collective team identification. *Academy of Management Journal, 48*, 532-547. doi:10.5465/amj.2005.17407918

Van de Ven, A. H., Delbecq, L. A., & Koenig, R. J. (1976). Determinants of coordination modes within organizations. *American Sociological Review, 41*, 322–338. doi: 10.2307/2094477

Vera, D., & Crossan, M. (2005). Improvisation and innovative performance in teams.

- Organization Science*, 16, 203-224. doi: 10.1287/orsc.1050.0126
- Vohs, K. D., Mead, N. L., & Goode, M. R. (2006). The psychological consequences of money. *Science*, 314, 1154–1156. doi: 10.1126/science.1132491
- Vohs, K. D., Mead, N. L., & Goode, M. R. (2008). Merely activating the concept of money changes personal and interpersonal behavior. *Current Directions in Psychological Science*, 17, 208–212. doi: 10.1111/j.1467-8721.2008.00576.x
- Wageman, R. (1995). Interdependence and group effectiveness. *Administrative Science Quarterly*, 40, 145–180. doi: 10.2307/2393703
- Wageman, R. (2001). How leaders foster self-managing team effectiveness: Design choices versus hands-on coaching. *Organization Science*, 12, 559–577. doi: 10.1287/orsc.12.5.559.10094
- Wageman, R., & Baker, G. (1997). Incentives and cooperation: The joint effects of task and reward interdependence on group performance. *Journal of Organizational Behavior*, 18, 139–158. doi: 10.1002/(sici)1099-1379(199703)18:2<139::aid-job791>3.0.co;2-r
- Weick, K. E. & Roberts, K. H. (1993). Collective mind in organizations: Heedful interrelating on flight decks. *Administrative Science Quarterly*, 38, 357-381. doi: 10.2307/2393372
- Weingart, L. R. (1992). Impact of group goals, task component complexity, effort, and planning on group performance. *Journal of Applied Psychology*, 77, 682–693. doi:10.1037/0021-9010.77.5.682
- Willer, R. (2009). Groups reward individual sacrifice: The status solution to collective action problems. *American Sociological Review*, 74, 23–43. doi: 10.1177/000312240907400102
- Xiao, Y., Hunter, W. A., Mackenzie, C. F., Jeffries, N. J., & Horst, R. L. T. (1996). Task

complexity in emergency medical care and its implications for team coordination. *Human Factors*, 38, 636–645. doi: 10.1518/001872096778827206.