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경영학박사 학위논문

**TRANSLATING PROACTIVE AND
RESPONSIVE CREATIVITY TO
INNOVATION IMPLEMENTATION
IN WORK TEAMS:
CONTRASTING INTERNAL AND EXTERNAL TEAM
RESOURCING BEHAVIORS**

적극적, 수동적 팀 창의성의 혁신실행으로 전환:

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ABSTRACT

TRANSLATING PROACTIVE AND RESPONSIVE CREATIVITY TO INNOVATION IMPLEMENTATION IN WORK TEAMS: CONTRASTING INTERNAL AND EXTERNAL TEAM RESOURCING BEHAVIORS

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Innovation is critical to the growth and competitiveness of contemporary organizations operating in the dynamic business environment, and work teams are becoming the most essential source of organizational innovation (Anderson et al., 2014; Lopez Cabrales et al., 2009). Given that unrealized creative ideas are useless, this dissertation focuses on the intermediate mechanisms that connect innovative idea generation to implementation in work teams. Teams do not work independently of their organizational and broader industrial context, particularly when they are performing non-routine work such as innovation (Ancona & Caldwell, 1992; Gist, Locke, & Taylor, 1987; Yan & Louis, 1999). Thus, teams are required to manage internal and external activities effectively to translate their innovative ideas into implementation successfully. This dissertation shows how teams manage their various internal and external activities throughout the innovation implementation process, and particularly, how these internal and external activities are affected by the underlying motivational drivers (i.e., proactive vs. responsive) at the beginning of the innovative idea generation. This dissertation is composed of two studies. The first study examines how work teams with proactive and responsive motivation mobilize their internal resources (i.e., team implementation efficacy and team cooperation) and external resources (i.e., external resource acquisition and external legitimacy) to achieve team innovation

implementation effectiveness. The second study examines how work teams with proactive and responsive motivation engage in internal resource utilization and external resource acquisition to accomplish team innovation implementation effectiveness. Both studies show how work teams with proactive motivation are in an advantageous position for utilizing internal resources, whereas disadvantageous in acquiring external resources, and vice versa for those with responsive motivation. The second study further shows how boundary-spanning leadership and internal integrating leadership could complement work teams with proactive and responsive motivation, respectively, in engaging in internal and external resourcing behaviors, resulting in successful team innovation implementation effectiveness. Both studies were empirically tested with field survey data conducted in the US (online) and South Korea (offline). The present analysis explores an important but largely neglected phenomenon of the connection between idea generation and implementation and offers new theoretical and practical insights into the underlying mechanisms of realizing the benefit of team creativity.

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Keywords: creativity, innovation, resourcing, motivation, work teams

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CHAPTER 1: INTRODUCTION

Introduction

This chapter comprises of six main sections that begin with the background and overview of the study. The first section starts with the background, followed by a discussion of the main problems about the topic in the second section. The third section of the study lays out the full research questions, followed by the objectives of the study in the fourth section. The fifth section highlights the significance of this study in theory and practice. This chapter concludes with a discussion of the organization of the entire study, along with a brief description of each chapter.

Background of the Dissertation

Intermediate Process of Translating Idea Generation to Implementation

Innovation is critical to the growth and competitiveness of organizations (Roth & Sneader, 2006; Tellis, Prabhu, & Chandy, 2009), particularly in dynamic and challenging environments (Bledow, Frese, Anderson, Erez, & Farr, 2009; Choi & Chang, 2009; Hansen & Levine, 2009). Work teams are becoming a critical source of organizational innovation (Anderson et al., 2014) as organizations increasingly depend on team-based structures (Anderson & King, 1993; Edmondson, 1999; Ilgen, Hollenbeck, Johnson, & Jundt, 2005; West, 2002b). Work teams involve in innovation processes composed of the generation and implementation of new and useful ideas, processes, products, or procedures (West & Farr, 1990). Unfortunately, despite numerous research on innovation, most studies only refer to innovation as a general concept, and the subfields of innovative idea generation and idea implementation remain doggedly disconnected from one another (Anderson, Potočnik, & Zhou, 2014; George, 2007; van Knippenberg, 2017).

Internal and External Resource Acquisition and Utilization as Core Intermediate

Processes

Among various intermediate processes in translating innovative idea generation to idea implementation, acquiring relevant resources, such as human, capital, or knowledge, is critical in shaping team outputs (Amabile, Conti, Coon, Lazenby, & Herron, 1996; Sonenshein, 2014). Traditionally, researchers considered resource as a fixed entity and examined mostly the number of resources available for innovation (Amabile et al., 1996; Barney, 1991; Pfeffer & Salancik, 1978). However, more recently, the perspective of deeming resource as a malleable has evolved (Dutton, Worline, Frost, & Lilius, 2006; Feldman, 2004; Feldman & Worline, 2012; Sonenshein, 2014). Research on resourcing drives this trend, arguing that resources remain an object and become valuable only after team members take action on those objects (Feldman, 2004; Feldman & Worline, 2012; Sonenshein, 2014).

In addressing how resources shape innovation implementation over time in work teams, it is critical to acquire and utilize resources within and outside the team boundary. To successfully implement innovative ideas, close collaboration with ongoing coordination among team members is necessary (Burpitt & Bigoness, 1997; West, 2002b). Moreover, given that innovative ideas can challenge the status quo, building support and mobilizing resources from external stakeholders, such as other teams, top management, suppliers, and vendors, are more critical in realizing ideas into an actual implementation (Alexander, 2014; Ancona & Bresman, 2002; Howell & Shea, 2006). However, managing both internal and external resources is not easy because conducting either internal or external resourcing behaviors may reduce resources available for the other (Choi, 2002). The current dissertation focuses on how work teams achieve a balance between internal and external resourcing activities to create synergy during the translation of idea generation to implementation.

The Effect of Proactive vs. Responsive Creativity on the Following Resourcing Behaviors

Creativity, a novel and useful idea (Amabile, 1983; Mumford & Gustafson, 1988), has been treated as “a unitary concept, regardless of the type of idea, the reasons behind its production, or the starting point of the process” (Unsworth, 2001). This unitary approach limits a fine-grained analysis of the processes and factors involved in both creativity and subsequent implementation. The importance of such a conceptual sub-distinction is spreading in organizational research, such as task-related versus relationship-related conflict (Jehn, 1995) or OCB-I versus OCB-O (Podsakoff, MacKenzie, Paine, & Bachrach, 2000). Similarly, creativity may also encompass types that are fundamentally different from one another. (Unsworth, 2001). Some scholars examined different levels (mostly degrees of novelty) of creative contributions, such as radical versus incremental creativity (Gilson & Madjar, 2011). They showed how different factors lead to different degrees of novelty, such as intrinsic motivation or problem-driven relating to radical versus extrinsic motivation or solution-driven relating to incremental creativity (Gilson & Madjar, 2011).

Recently, creativity has been examined as proactive versus responsive creativity based on the driver or initiating force (Sung, Antefelt, & Choi, 2017). Based on self-determination theory, behaviors are initiated either through self-determined choice or because of external demands (Deci & Ryan, 1985). Self-determined behaviors are those that are autonomous expressions of oneself, such as the personal wish to be creative or a desire to solve a problem. Externally driven behaviors are those that are responsive or coerced by environmental forces, such as job descriptions or a request from seniors (Deci & Ryan, 1985). Thus, proactive creativity is a creative idea generation when one engages in creative endeavors with self-determined intentions, whereas responsive creativity is a creative idea generation when one engages in creative endeavors with

externally driven intentions (Unsworth, 2001; Sung et al., 2017). Sung et al. (2017) showed the validity of proactive versus responsive creativity constructs and further argued that job complexity affects the proactive and responsive creativity of employees via the psychological empowerment and cognitive overload at the individual level.

The underlying motivations of those who engage in the innovation process have been widely studied because either employees or work teams need to “personally or collectively direct significant efforts to generate and implement new processes, procedures, or products” (Chen et al., 2013, p. 1018). Among various motivational aspects, intrinsic motivation (Ryan & Deci, 2000) versus extrinsic motivation (i.e., doing something because it leads to a separable outcome, Ryan & Deci, 2000) has been examined much in relations with creativity and innovation at the individual (Amabile et al., 1996) and team levels (Chen, Farh, Campbell- Bush, Wu, & Wu, 2013). Proactive creativity is similar to creativity based on intrinsic motivation, given that both emphasize autonomy. Intrinsic motivation is enabling team members to direct their energy, direction, and persistence in achieving their creative goals (Eccles & Wigfield, 2002). Compared with assigned goals, self-chosen goals are known to be more effective in one’s performance according to goal-setting theory (Eccles & Wigfield, 2002; Locke & Latham, 1990; 2002; 2006), and personal choice operates as an inner resource for task engagement (Kark & Van Dijk, 2007) based on self-determination theory (Ryan & Deci, 2000). At the team level, scholars have shown how team context, such as a supportive climate for innovation, indirectly affects the collective perception of teams on their creative ability, resulting in innovative behaviors (Chen et al., 2013; Hülshager, Anderson, & Salgado, 2009). Thus, the positive influence of proactivity or intrinsic motivation on creativity and innovation is pervasive.

However, more controversy lies in the effect of responsive creativity or creativity based on extrinsic motivation. Responsive creativity is similar to creativity based on

extrinsic motivation because both emphasize non-autonomy. Traditionally, extrinsic motivation was known to reduce intrinsic motivational states (Deci, 1971), thereby harming the creative outcomes. More recently, another view emerged about the extrinsic motivation that can boost intrinsic motivational states (Cameron & Pierce, 1994). Some studies show that the degree of internalization of extrinsic motivation, such as whether or not one agrees to engage in the activity, could determine its effect on behaviors (Ryan & Connell, 1989). Although the findings from extrinsic motivation are somewhat mixed, its effect on creativity or innovation has not been studied extensively (Gong, Wu, Song, & Zhang, 2017). One exception is Gong et al.'s (2017) work, which showed how intrinsic and extrinsic motivations coexist and synergize to strengthen personal creativity goals, thereby impacting the performance of innovative idea generation. However, not much is known on how innovative ideas responsively generated will affect the process of innovation implementation.

When we consider resources required for implementing innovation as malleable objects that need to be shaped by work teams, the motivational driver of work teams to initiate the innovation process could impact the work teams' behavior to secure resources required for innovation implementation. To generate and implement new processes, procedures, or products, employees need to personally and collectively direct significant efforts (Baer, 2012; Klein & Sorra, 1996), which makes motivation a critical driver in innovation implementation behaviors (Chen et al., 2013). Hence, examining how work teams that proactively or responsively generated ideas act on their resources to translate their ideas into an actual implementation is an important endeavor.

Problem Statements

Unpacking Intermediate Process of Translating Innovative Idea Generation to Implementation

Understanding the intermediate process of translating innovative idea generation to implementation in work teams is critical because ideas that are not implemented are useless. However, surprisingly, this link between innovative idea generation to implementation has been largely neglected in extant research, particularly at the work team level (van Knippenberg, 2017). Innovation is composed of the development and implementation of new and useful ideas, processes, products, or procedures (West & Farr, 1990). Unfortunately, perhaps because of the clear distinction between idea generation or creativity and innovation implementation, the literature on these two sub-processes of innovation remains disconnected from each other (N. Anderson et al., 2014; George, 2007; van Knippenberg, 2017). The generation of creative ideas by no means guarantees their implementation (e.g., Cooper, 2008; Obstfeld, 2005; Sohn & Jung, 2010; West, 2002a). Organizations often fail to accrue benefits from creative ideas not because of the weaknesses of the ideas but because of inadequate or insufficient implementation efforts (Klein & Sorra, 1996). Creative ideas may often fail to be implemented because they carry a higher risk of failure than incremental, routine ideas (van Knippenberg, 2017).

A few previous that examined sub-processes of innovation mostly focused on each process separately (Mumford, Lonergan, & Scott, 2002; Nijstad & De Dreu, 2002; Perry-Smith & Mannucci, 2017; West, 2002a) or identified boundary conditions that promote the transition from idea generation to implementation, such as individual motivation, ability (Baer, 2012), and perceived supervisor support (Škerlavaj, Černe, & Dysvik, 2014). Investigation of the creativity-to-implementation process at the team level is particularly lacking (van Knippenberg, 2017). An exception is Somech and

Drach-Zahavy's (2013) study involving 96 primary care teams, in which they showed that team creativity promotes innovation implementation when the climate for innovation is high.

Complementing previous research on the prevailing attention to moderators, this dissertation theorizes and examines empirically the intervening processes that connect the generation of ideas to their implementation. Understanding the intervening process is essential because it allows us to conduct scientific investigations and, in particular, explain the black box of a sequence of effects that leads innovative ideas into implementation at the work team level (Kenny, 2008). The translation of idea generation to implementation may involve various intermediate processes, such as elaborating ideas for implementation, championing ideas to obtain external support, and mobilizing motivation and resources needed for converting ideas to tangible outcomes (Perry-Smith & Mannucci, 2017). These intermediate mechanisms are likely shaped by the social and motivational underpinnings of the idea in question. In this respect, the present study highlights the role of the motivation that underlies creative ideas in shaping subsequent processes toward idea implementation.

Dynamic View of Resourcing as an Intermediate Process

Among the potential intermediate mechanisms in translating innovative idea generation to implementation, understanding how work teams secure and manage resources is imperative. Traditionally, a resource was regarded as a fixed entity, and the quantity and appropriate allocation of resources are considered core organizational contexts that facilitate innovation (Amabile et al., 1996). For example, whether limited or abundant resources are more advantageous in creative actions has been discussed often (Cohen & Levinthal, 1990; Ohly & Fritz, 2010). Abundant resources are known to be prerequisites to creative actions by allowing learning and experimentations (Cohen &

Levinthal, 1990) or by signaling the commitment of an organization to a project (Amabile et al., 1996). Some scholars argue that limited resources can foster innovative behaviors by generating a sense of urgency (Baker & Nelson, 2005), whereas abundant resources could lead organizations to wasteful spending and a lack of urgency (Ohly & Fritz, 2010).

However, this view on the number of resources limitedly focuses on static aspects of utilizing resources and overlooks team processes that could explain how teams, regardless of the number of resources, recombines and manipulate resources dynamically throughout the innovation implementation (Sonenshein, 2014). When we approach to resource and innovation with only a static view at the team level, we neglect the capability of work team members to utilize resources and achieve the creative goal creatively. Aligned with this notion of emphasizing the role of agency, a recent resourcing perspective highlights a critical distinction between an object and a resource, wherein an object is a tangible or intangible assets that one can act on, and a resource is an object that has been acted on to be useful (Feldman, 2004; Feldman & Worline, 2012). Only when one takes action on the objects can the objects accomplish their potential as a resource (Sonenshein, 2014).

The mixed findings on the relationship between the number of resources and creativity are probably due to the disregard for actors' behaviors on utilizing resources. Viewing the resource as a malleable object could also be highly relevant to this dissertation focusing on the team level as it could also naturally highlight work team dynamics on crafting resources. Thus, this dissertation will focus on the work team's behaviors on resources, internally and externally to work team boundary, as a core intermediate process of translating ideas into implementation.

How Resourcing Depends on the Motivational Drivers of Idea Initiation

In creative idea generation, previous research emphasized the importance of proactive motivation over responsive motivation states because the former can lead a team's energy, direction, and persistence to generate creative ideas (Eccles & Wigfield, 2002). However, in translating creative ideas into implementation, not much is known on how proactive versus responsive motivation affects the subsequent process. In implementing innovation, teams need to mobilize support and acquire resources, typically from outside of the team (e.g., Alexander & van Knippenberg, 2014). Attracting financial support in implementation is a constant challenge, and work teams are known to face deficiencies in knowledge and skills throughout the innovation implementation process (Kanter, 1988; Leifer et al., 2000). Work teams typically acquire these deficient resources by tapping into their external network (Alexander & van Knippenberg, 2014). In securing external resources, work teams must actively promote their ideas beyond their team to build organizational support (Howell & Shea, 2006; Sandberg, 2007). This is why some researchers argue that the main challenges to successful innovation implementation lie outside the team, specifically in obtaining support from senior management and collaborations from other departments or external organizations (Leifer et al., 2000).

Although work teams who proactively generate innovative ideas will be proactive in promoting their ideas and gaining legitimacy from external stakeholders (Grant & Ashford, 2008), acquiring support and resources could be still limited. Creative ideas are, by nature, risky, and challenge those with power, so securing external legitimacy to acquire resources is not a simple task (van Knippenberg, 2017). How proactive versus responsive creativity would affect translation to implementation could work differently from how proactive versus responsive motivation affects creative idea generation. The current dissertation seeks to examine how creative ideas developed with distinct

motivational drivers result in distinct resource acquisition and utilization process both internally and externally.

Research Questions

General Research Questions

How do work teams translate proactively or responsively generated innovative ideas into implementation, and how do the team's internal and external activities mediate this translation process?

Specific Research Questions

- To translate ideas into innovation implementation, how do work teams acquire and utilize team resources internally within the team and externally to the team boundary?
- How do the team's resourcing behaviors vary depending on whether teams proactively or responsively generated ideas?
- Under what conditions do work teams engage in certain resourcing behaviors?

Objectives

General Objective

The objective of this dissertation is to explore how innovative idea generation can be translated into implementation in work teams. The study aims to examine the intermediate process of the translation by focusing on how work teams acquire and utilize resources and how the process could differ depending on the motivational driver of innovative idea generation.

Specific Objectives

- In translating innovative ideas into implementation, this dissertation aims to understand how work teams manage the competing relationships between the team's internal and external activities. It helps to understand when work teams show strength either in internal-focus and in external-focus.
- In acquiring internal resources for translating ideas into implementation, this dissertation aims to understand how work teams with proactive creativity are advantageous in forming and utilizing internal team resources compared to work teams with responsive creativity.
- In acquiring external resources for translating ideas into implementation, this dissertation aims to understand how work teams with responsive creativity are advantageous in forming external parties' support and acquiring external parties' resources compared to those with proactive creativity.

Significance of the Study

This study contributes to organizational literature in several ways. First, this work addresses the serious chasm between creativity and innovation implementation at the team level by investigating the intermediate mechanism connecting the two sub-processes of organizational innovation. In addressing this gap, this study provides a fine-grained understanding of how ideas are realized at the team level by clarifying the link between idea generation and implementation. By going beyond the study on boundary conditions of this linkage as previous research did, this dissertation explores the black box of the intermediate process.

Second, this dissertation sheds light on how work teams manage the team's internal and external activities competing against each other throughout the translation from ideas into implementation. By contrasting how team manifests internal versus external idea elaboration (Study 2), and how the team engages in internal versus

external resource acquisition and utilization processes during idea implementation (Study 1 and Study 2), this study shows how the team manages the trade-off relationships in the translation processes. In addition, this dissertation will show how the team eventually leverages internal-focused versus external-focused team leaders' championing roles (Study 2) to create a competing relationship between internal and external activities into synergistic relationships. This dissertation will extend the recent trend of studying boundary-spanning, external activities in work team research by emphasizing the importance of balancing both internal and external activities.

Third, by specifying different motivations underlying team creativity, this work elaborates the notion that proactive and responsive types of team creativity may activate different team behaviors in idea elaboration, idea championing, and idea implementation processes. When the implementation stage is also considered, proactively initiated innovative idea generation may not always generate additional favorable innovation outcomes because of its limitation on securing external support. Moreover, responsively initiated innovative idea generation may not always be undesirable because it could secure external support necessary for implementing ideas. This dissertation will contribute to the controversy around the effect of intrinsic and extrinsic motivation on creativity and innovation. It will likewise highlight the distinct roles that proactive and responsive motivational drivers could play in managing both internal and external team activities for implementation.

Fourth, this study significantly contributes to the dynamic view of resources based on empirical data. Recent research on resourcing emphasized the importance of considering resource as a malleable object. However, few studies used empirical data in a real organizational setting. By examining internal vs. external resource acquisition (Study 1), and further contrasting external resource stock acquisition and internal

resource utilization processes (Study 2), this dissertation explores the dynamic view of resources and its effect on translating ideas into implementation.

Lastly, given recent individual-level studies on the multifaceted nature of creativity (e.g., Madjar et al., 2011; Sung et al., 2017), we extend the literature by examining different types of team-level creativity that were initiated by different team member motivation concerning the subsequent process of idea implementation. Creativity, a novel and useful idea (Amabile, 1983; Mumford & Gustafson, 1988), has been treated as “a unitary concept, regardless of the type of idea, the reasons behind its production, or the starting point of the process” (Unsworth, 2001). This unitary approach limits a fine-grained analysis of the processes and the factors involved in both creativity and its subsequent implementation. Among the few efforts of going beyond the homogeneity of creativity, radical versus incremental creativity (Gilson & Madjar, 2011) that considers different levels (mostly degree of novelty) of creative contribution has been mostly discussed in previous research. Only recently, creativity, as proactive versus responsive creativity, was examined based on the driver or initiating force at the individual level (Sung et al., 2017). The current dissertation extends this recent stream of literature on creativity as multifaceted to the work team level. In addition, it extends how the aftermath of proactive versus responsive creativity results in different processes in idea implementation.

Definition of Key Terms

Work Teams

Previous research defined group and work teams in various ways (DeLamater, 1974), and although some variations exist, definitions of a work group and a team have similar elements in their descriptions. A work group is generally defined as “group of individuals who interact on a regular basis, satisfying their (basic) needs within the

group, and working on the same goal and being behaviorally interdependent” (Cartwright & Zander, 1968; Levine & Moreland, 1998). A work team is defined as “a bounded and stable set of individuals, working interdependently to complete a common goal ” (Mortensen, 2013). Although there are many similarities in defining a group and a work team, some researchers argued that a work team, in contrast to groups, have “a clear and common purpose and their members have an understanding of their interdependence on one another.” (Fisher, Hunter, & Macrosson, 1997). Similarly, G.M.Parker (1990) firmly argues that a team requires a higher degree of interdependence geared toward the achievement of a goal or completion of a task. Thus, while a group composes two or more people who work together to achieve a goal, a team go beyond this simple requirement and incorporates a higher degree of interdependence and shares the responsibility of achieving the common goal effectively (Fisher et al., 1997; G.M. Parker, 1990).

In this dissertation, I define a work team as *a bounded and stable set of individuals, working interdependently on a regular basis to complete a common goal*. Thus, a team that does not work interdependently regularly, such as a team with insurance sales associates, would not be included as a work team. In addition, a team that does not work to complete a common goal, such as a team with lawyers all working on different individual cases, also will not be classified into a work team. A team which has a permeable team boundary where the team members switch all the time, such as task force team (TFT), would also not be included as a work team. With this definition, I assume that work teams have the motivation and a system to work closely together to implement creative ideas.

When mentioning the boundary of work teams in this dissertation, I assumed that team leaders and team members are classified as *within* the work team boundary. On the other hand, other teams and executives in the team’s host organization, and customers,

suppliers, co-working companies are all classified into *outside* the work team boundary. Thus, all the activities performed by team leaders and team members are assumed as internal activities, and all the activities performed with the participation of external parties are defined as external activities.

Creative Ideas as a Target for Implementation of Work Team

Creativity is defined as *ideas that are novel and useful* (Amabile et al., 1996). Unlike innovation adopted by an organization and implemented at the enterprise-level, creative ideas, in this dissertation, are developed by work teams. Thus, creative ideas developed by work teams could be ideas around changes in the work process, products, or services, that mostly apply within the team boundary, but could have an impact on the outside of the team boundary (Anderson et al., 2014). For instance, changing the vendor selection process within the team could impact the ways of vendors' working process. In addition, given that this dissertation studies how creative ideas with different motivational drivers affect the team's way of securing and utilizing team resources internally and externally, I implicitly assume that teams work interdependently with external parties to some degree so that getting support from external parties is necessary to implement the ideas.

Proactive and Responsive Creativity

Proactive creativity is defined as “creative idea generation when teams actively and voluntarily search for opportunities and generate ideas to address the problems they discover, thus offering suggestions for further improvement without a specific problem to solve at hand” and responsive creativity is defined as “creative idea generation when teams submit ideas as a response to the requirements of a situation and as a reactive effort to address a specified and presented problem” (Sung et al., 2017, pp 4). For

instance, teams exert proactive creativity when team members suggest innovative ideas for improving the service delivery process to overcome their inconvenience. On the contrary, teams exert responsive creativity when the manager in the headquarter orders team to improve the service delivery process. The two types of creativity differentiate in the initiating driver for the engagement, whether internally motivated to initiate voluntary creative endeavors vs. whether externally directed to submit ideas (Unsworth, 2001).

The two types of creativity could be highly related to idea generation based on intrinsic versus extrinsic motivation (Ryan & Deci, 2000), but proactive and responsive creativity differs from motivations as they are the outcome of idea generation with distinct motivational drivers. Proactive creativity could be highly related to “taking charge” construct proposed by Morrison and Phelps (1999), but it differs as taking charge includes the implementation behaviors, whereas proactive vs. responsive creativity includes only the idea generation (Morrison & Phelps, 1999; Unsworth, 2001). Proactive creativity also has some overlap with “voice citizenship behavior” construct, making innovative suggestions for change, and recommending modifications to standard procedures even when others disagree (Van Dyne & LePine, 1998). However, the way voice citizenship behavior operationalized shows that it does not emphasize creativity much, but more focused on involvement, speaking up, and keeping informed.

The importance of understanding proactive and responsive creativity in the innovation implementation process is that the differences in motivational drivers in initiating idea generation could generate different consequences on behaviors and performance (Fox, Spector, Goh, Bruursema, & Kessler, 2012; Unsworth, 2001). Unsworth (2001) suggested the importance of seeing creativity in a multifaceted way as viewing creativity as a unitary construct hinders a finer-grained analysis of the

processes and the factors involved in creativity. Unsworth (2001) further argues how different types of creativity could impact behaviors throughout the creative process, such as scanning behaviors becoming essential for proactive creativity.

Organization of the Study

This dissertation is organized into three chapters. Chapter 1 discusses the core background of the study and addresses the main problems, followed by the core research questions and objectives of the dissertation. Chapter 2 presents Study 1, which focuses on defining internal versus external intermediate processes in translating creativity to implementation depending on the motivational driver of idea generation. Specifically, it shows how teams that proactively versus responsively generated creative ideas engage in distinct internal versus external intermediate processes, operationalized by internal implementation efficacy, internal team cooperation, and external legitimacy, external resource acquisition. Chapter 3 discusses Study 2, which focuses on how teams with proactive versus responsive creativity build external resource stock and facilitate internal resource utilization via internal versus external elaboration, and how internal-versus external-focused team leadership affects this mediated relationship.

CHAPTER 2: TRANSLATING PROACTIVE AND RESPONSIVE CREATIVITY TO INNOVATION IMPLEMENTATION IN WORK TEAMS: CONTRASTING INTERNAL AND EXTERNAL RESOURCES (STUDY 1)

Introduction

This chapter shows Study 1, which examined the intermediate process of how work teams that proactively vs. responsively generated creative ideas translate ideas into implementation via internal and external resources. This study shows that when teams generate creative ideas proactively, they can quickly mobilize internal resources, but they have difficulty securing external resources. Conversely, when teams generate creative ideas responsively, they are advantageous in acquiring external resources but are disadvantageous in developing internal resources needed for innovation implementation.

This chapter starts with the background of the study on translating team innovative idea generations into implementation, followed by highlighting internal and external resources as the core intermediate processes depending on the motivational drivers of idea generation. Then, this chapter notes on the most urgent problems to be solved, followed by the core research questions and suggesting the expected significance of the study. Afterward, this chapter thoroughly reviews relevant previous literature on translating creativity to innovation implementation via internal and external resources. Based on this, this study forms hypotheses and suggests methods for an empirical study to test the hypotheses. Lastly, this chapter shows the results, followed by discussion.

Background and Significance of the Study

Innovation is critical to the growth and competitiveness of contemporary organizations operating in rapidly changing business environments (Bledow et al., 2009; Roth & Sneader, 2006; Tellis et al., 2009). Innovation is composed of the

development and implementation of new and useful ideas, processes, products, or procedures (West & Farr, 1990). Unfortunately, perhaps because of the clear distinction between idea generation or creativity and innovation implementation, the literature on these two sub-processes of innovation remains disconnected from each other (Anderson et al., 2014; George, 2007; van Knippenberg, 2017). However, the development of creative ideas never ensures their implementation (e.g., Cooper, 2008; Obstfeld, 2005; Sohn & Jung, 2010; West, 2002b). Even though the creative ideas are solid, organizations often fail from achieving effectiveness from creative ideas because of inadequate or insufficient implementation efforts (Klein & Sorra, 1996). Consequently, the cleavage in studies on creativity versus innovation implementation limits our complete understanding of the entire innovation process. Thus, the present study addresses this critical issue of successful translation of ideas into innovation implementation that has been mostly overlooked in the previous research.

Previous studies specified factors that affect each stage of the innovation process separately (Mumford et al., 2002; Nijstad & De Dreu, 2002; Perry-Smith & Mannucci, 2017; West, 2002a), but remained silent on the process through which creativity is translated to innovation implementation. As regards the connection between creativity and implementation, several studies identified boundary conditions that promote the stage-transition from idea generation to implementation, such as individual motivation, ability (Baer, 2012) and perceived supervisor support (Škerlavaj et al., 2014).

Investigation of the creativity-to-implementation process at the team level is particularly lacking (van Knippenberg, 2017). One notable exception is Somech and Drach-Zahavy's (2013) study involving 96 primary care teams, in which they showed that team creativity promotes innovation implementation when the climate for innovation is high but not when it is low. Given that organizations rely increasingly on teams (Edmondson, 1999; Ilgen, Hollenbeck, Johnson, & Jundt, 2005; M. A. West, 2002b)

and teams are becoming the principal source of organizational innovation (Anderson et al., 2014; Lopez Cabrales, Pérez Luño, & Cabrera, 2009), this study focuses on the translation of creative idea generation to implementation at the team level of analysis. The consideration of the team level may be more critical in understanding the connection between idea generation and implementation because implementation often requires collective endorsement and engagement as compared to idea generation (Anderson & King, 1993; Reiter-Palmon, 2017).

The investigation of the team-level translation process from creativity to implementation departs from the current focus on the boundary conditions that modify the strength of the creativity–implementation relationship. Complementing how previous studies focused on defining boundary conditions, this study theorizes and examines empirically the intervening processes that connect the generation of ideas to their implementation. The translation of idea generation to implementation may involve various intermediate processes, such as further elaborating ideas for implementation, championing ideas to obtain external support, and mobilizing motivation and resources needed for converting ideas to tangible outcomes (Perry-Smith & Mannucci, 2017). These intermediate mechanisms are likely shaped by the social and motivational underpinnings of the idea in question. In this respect, the present study highlights the role of the motivation that underlies creative ideas in shaping subsequent processes toward idea implementation.

Creativity literature has acknowledged the multifaceted nature of creativity and recognized that creative ideas could be developed for open and close problems imposed by internal or external forces (Unsworth, 2001). Highlighting distinct motivational drivers, Sung et al. (2017), adopting Unsworth’s (2001) work on the multifaceted nature of creativity, identified two distinct forms of creativity: proactive creativity and responsive creativity (follows the definition specified in Chapter 1 – “Definitions of

Key Terms”). The translation of idea generation to implementation could differ importantly depending on the motivational underpinnings of the creative ideas. The literature on creativity mostly highlighted the critical role of proactive or intrinsic motivation that results in spontaneous extra efforts to search for new opportunities and innovative solutions as compared to responsive extrinsic motivation (Amabile, 1983; Hu & Liden, 2015; X. Zhang & Bartol, 2010). However, in translating idea generation to implementation in work teams, this study proposes that ideas based on proactive and responsive processes may activate distinct intermediate processes.

Proactive creativity based on the members’ intrinsic or self-initiated motivation may enable a team to mobilize its internal resources among members by earning their cooperation, commitment, and spontaneous efforts (Amabile, 1983; 1988; Cooper & Jayatilaka, 2010; E. T. Higgins & Kruglanski, 2000; Hu & Liden, 2015; Staw & Fox, 1977; X. Zhang & Bartol, 2010). By contrast, responsive creativity driven by external or other situational demands promotes a team’s acquisition of external resources needed for implementation, such as support, collaboration, or investments from external constituents (Alexander & van Knippenberg, 2014). This consideration of different types of resources activated by various categories of creativity may enrich the theoretical discussion by revealing distinct values of intrinsic and extrinsic motivation in the conversion of creativity to innovation implementation and accruing the expected benefit from the idea. Thus, this study will specify how creative ideas developed with proactive and responsive motivation engage in the varying intermediate processes during implementation, resulting in varying team implementation effectiveness.

This study contributes to organizational literature in several ways. First, this work addresses the serious chasm between creativity and innovation implementation, particularly at the team level by investigating the intermediate mechanism connecting the two sub-processes of organizational innovation. In addressing that gap, the current

study provides a fine-grained understanding of how ideas are realized at the team level by clarifying the link between idea generation and implementation. Second, based on the recent individual-level studies on the multifaceted nature of creativity (e.g., Madjar et al., 2011; Sung et al., 2017), this study extends the creativity literature by examining different types of team-level creativity that reflect different team member motivation concerning the subsequent process of idea implementation. Third, by specifying different motivations underlying team creativity, this work elaborates further the notion that proactive and responsive types of team creativity may activate internal and external resources that facilitate idea implementation. When the implementation stage is also considered, proactive creativity based on intrinsic motivation might not always generate additional favorable innovation outcomes, and responsive creativity might not always be undesirable. The current theoretical framework is empirically tested using data collected from 124 members of 62 teams in North American and European organizations.

Theoretical Background and Hypotheses

In the current literature, creativity and innovation implementation are treated as separate, disconnected phenomena (van Knippenberg, 2017). For example, studies showed personal, job-related variables promote idea generation, whereas social, organizational factors contribute to idea implementation (Axtell, Holman, & Wall, 2006; Clegg, Unsworth, Epitropaki, & Parker, 2002; Frese, Teng, & Wijnen, 1999). Accordingly, research on the link between idea generation and implementation remain inceptive. Baer (2012) showed that the individual's motivation and his/her social network interact to affect the translation of ideas into implementation. Skerlavaj et al. (2014) identified supervisor support as a negative moderator of the curvilinear relationship between idea generation and implementation. At the team level, Somech and Drach-Zahavy (2011) defined climate for innovation as a core boundary condition

in translating team creativity to innovation implementation. Complementing these efforts in identifying boundary conditions that facilitate the connection between idea generation and implementation, the present study focuses on the actual translation process that explains the path from team creativity to innovation implementation. In doing so, this study specifies the motivational processes that underlie team creativity and shapes the pattern and intervening processes toward implementation (See Figure 1).

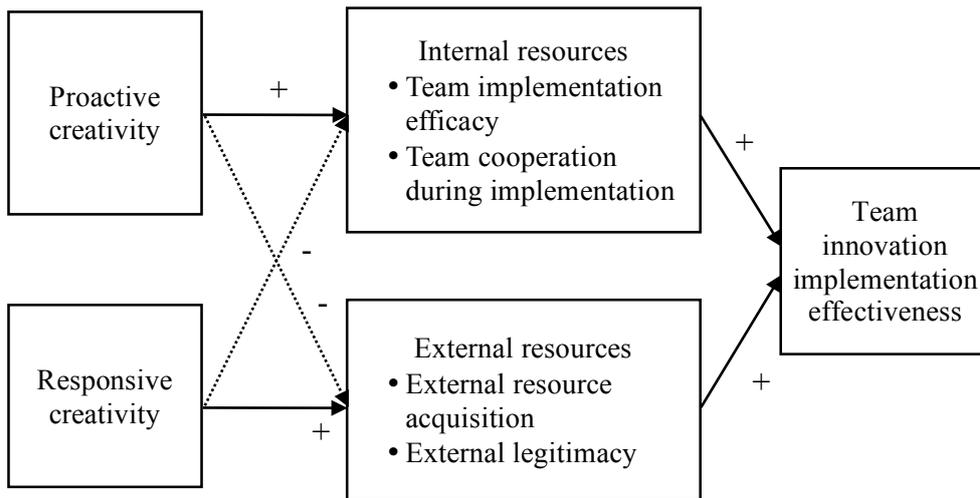


Figure 1. Conceptual Framework for Study 1

Proactive and Responsive Team Creativity

The generation of creative ideas could be driven by various motivational forces (Kanfer, Frese, & Johnson, 2017) that may influence the team members' subsequent actions in implementing the generated idea. The present study draws on the distinction between proactive and responsive creativity that reflect ideas generated by intrinsic, spontaneous motivation and ideas driven by external demands and situational requirements, respectively (Sung et al., 2017; Unsworth, 2001). Understanding these different motivational drivers behind a team's idea generation may be critical in predicting how creative ideas will be translated into actual implementation within the team. Creative ideas that arise from different types of motivation will be affected by diverse types of energy, direction, and persistence when implemented (Eccles &

Wigfield, 2002). Goal-setting theory suggests behavior reflects conscious goals and intentions, and thus a person's effort level and performance are influenced by whether goals are assigned from without or self-chosen (Eccles & Wigfield, 2002; Locke & Latham, 1990; 2002; 2006). Likewise, self-determination theory (Ryan & Deci, 2000) and self-regulation theory (Brockner & E.T. Higgins, 2001; E. T. Higgins, 1997; 1998) endorse the importance of personal choice that operates as an inner resource for task engagement (Kark & Van Dijk, 2007). Similar goal-driven, regulatory motivational processes also occur at the team level (Park, Spitzmuller, & DeShon, 2013). Hence, the current study proposes that the underlying motivation of how creative ideas are generated within the team will determine the team's behaviors toward implementing the ideas.

Internal and External Resources for Innovation Implementation

A team's proactive and responsive creativity may affect implementation outcomes by shaping the distinct intermediate processes linking idea generation and implementation. To explore this motivation-laden idea implementation, I draw on the social cognitive theory of efficacy that accounts for the relationship between social cognitive beliefs and performance (Bandura, 1997; 2001). Social cognitive theory has been applied successfully to the performance at various levels (including teams and organizations) and specific performance domains (such as innovation implementation) (Bandura, 2000; Choi & Chang, 2009; Gibson, 2001). According to the internal-external efficacy model (Eden, 2001), task performance is facilitated by one's overall efficacy assessment of all available *resources* that can be applied toward performing a job, including resources that are internal and external to the person (Eden, Ganzach, Flumin- Granat, & Zigman, 2010). Internal resources refer to individuals' skills, talent, knowledge, and any other traits, such as the strong motivation to perform well. External resources include any means from external environments that help individuals form a

belief in the utility of the tools available for performing the job (Eden, 2001). Eden et al. (2010) highlighted internal and external resources as being complementary to each other to form the complete evaluation of one's belief on performance.

The distinction between internal and external resources seems pertinent to understanding the implementation outcomes of creative ideas that are driven by internal versus external reasons concerning a team. When teams proactively generate creative ideas, they could become well-equipped to gather internal resources from their own members for implementing ideas based on the members' buy-in and ownership that can be directed towards implementing the ideas (Grant & Parker, 2009; S. K. Parker, Williams, & Turner, 2006; Tornau & Frese, 2012). However, such teams could experience difficulty in securing external support because their creative ideas could challenge those with power. Conversely, when teams generate ideas responsively, teams might be unlikely to develop internal commitment and vigor to engage in implementation but could be well-equipped for mobilizing external resources. Thus, proactive and responsive types of team creativity may lead to implementation outcomes by activating internal and external resources for implementation, respectively.

Among various internal resources, this study focuses on team implementation efficacy and team cooperation for implementation. Team implementation efficacy reflects a team's possession of the knowledge, experiences, and commitment necessary for actualizing creative ideas as perceived by members (Choi & Chang, 2009). Team cooperation for implementation represents members' coordinated collective efforts to promote idea implementation (Hülshager et al., 2009; West, 2002b). For the numerous resources external to the team, the current study focuses on acquiring external resources and external legitimacy. Given the necessity of extra resources for challenging the status quo, teams must acquire external resources, such as information, knowledge, and other task assistance or investment from other teams or the management (Perry-Smith and

Shalley, 2003). Innovation implementation is known to be a social–political process (Dean, 1987; Dyer & Page, 1988; Wolfe, 1994), and thus, teams need to secure social and political legitimacy of their idea implementation from relevant external constituents (Tolbert & Zucker, 1983; Westphal, Gulati, & Shortell, 1997). This study investigates how proactive and responsive team creativity translates to implementation outcomes through their distinct effects on internal and external resources.

Team implementation efficacy. Based on social cognitive theory, team implementation efficacy emphasizes an agent-based perspective wherein members behave depending on their proactive motivation through anticipative, purposive, and self-evaluating regulations (Bandura, 2001). When teams generate creative ideas proactively, members may develop proactive motivation and a collective efficacy belief that they can realize their ideas successfully (Pescosolido, 2001). Proactivity tends to initiate an automatic goal-driven process of setting and striving toward goals (S. K. Parker, Bindl, & Strauss, 2010). In addition to the proactive pursuit of idea implementation, proactive team creativity may increase members' cognitive flexibility and problem-solving capacity in actualizing their ideas, thereby enhancing team implementation efficacy (Cooper & Jayatilaka, 2010; Amabile, 1996; E. T. Higgins & Kruglanski, 2000; Staw, 1977).

On the contrary, when teams generate ideas responsively in reaction to task requirements and organizational directives, members may regard idea generation as a compulsory in-role behavior rather than proactive, extra-role engagement (S. Fox et al., 2012). When perceiving creative processes as externally driven or directed by extrinsic reasons, members are unlikely to develop proactive motivation and efficacy beliefs regarding innovation implementation (Cole, Walter, & Bruch, 2008). Responsive team creativity may channel members' attention to the expectation and evaluation criteria

imposed by others, further constraining their spontaneous engagement and sense of control in the entire innovation process (Malik & Butt, 2017).

Hypothesis 1a. Proactive team creativity is positively related to team implementation efficacy.

Hypothesis 1b. Responsive team creativity is negatively related to team implementation efficacy.

Team cooperation during implementation. Team cooperation refers to the willful contribution of team members' efforts to the completion of an interdependent task (Anderson et al., 2014; Gibson, Randel, & Earley, 2000; Hülshager et al., 2009), which generates synergistic gains when collective efforts are higher than the simple aggregation of independent individual achievements (Larson, 2010). Achieving team cooperation is a critical factor for innovation implementation (Baer, 2012; Janssen, Van De Vliert, & West, 2004). For example, Tjosvold, Tang, and West (2004) show that teams can realize innovation effectively only to the extent that they can adequately coordinate their internal functioning.

Team members must frequently interact with one another to allocate roles and resources, coordinate the interdependent activities, and also plan and monitor the implementation process to actualize creative ideas (Ancona & Bresman, 2002). Innovation in organizations is known to be a collaborative process with ongoing coordinated efforts to realize creative ideas (Burpitt & Bigoness, 1997; West, 2002b). When teams generate creative ideas proactively, their sense of responsibility in successfully realizing the ideas will be heightened and shared among members (Gong et al., 2017; S. K. Parker et al., 2010). The shared sense of responsibility and ownership enable team members to move toward a common goal and effectively reduce conflicts or clashes related to idea implementation (Lovelace, Shapiro, & Weingart, 2001).

Accordingly, proactive team creativity is likely to increase team cooperation during implementation.

However, when teams engage in responsive creativity, team members are less likely to share responsibility and ownership of creative ideas for their actualization, thereby becoming hesitant to cooperate during implementation (S. K. Parker et al., 2010). Responsive team creativity may fail to activate proactive striving toward implementing ideas based on goal alignment, thereby inviting clashes rather than coordinated implementation efforts among members (Hu & Liden, 2015). Moreover, when members do not commit to idea implementation collectively, they are apt to take advantage of others' efforts, and thus engage in social loafing instead of cooperation for implementation (Latane, Williams, & Harkins, 1979).

Hypothesis 2a. Proactive team creativity is positively related to team cooperation during implementation.

Hypothesis 2b. Responsive team creativity is negatively related to team cooperation during implementation.

External resource acquisition. To implement creative ideas, teams must promote their concepts to build support and mobilize resources from external constituents affected by the ideas, such as other teams, top management, suppliers, and vendors (Alexander, 2014; Ancona & Bresman, 2002; Howell & Shea, 2006). Mobilizing external resources (such as financial, human, and informational means) from external actors is a constant challenge for successful implementation because creative ideas have a high risk of failure and thus of rejection by or even resistance from others (Perry-Smith & Mannucci, 2017). Creative ideas may fail to achieve anticipated payoffs, and those who provided resources to support the implementation effort suffer losses of their resources and reputation (Yuan & Woodman, 2010). Thus, without a

strong belief that the ideas in question will offer significant returns, external parties will naturally hesitate to offer resources (Dutton & Ashford, 1993).

This challenge might be noticeable particularly when teams who generate creative ideas proactively reach out to external parties, because those spontaneously generated ideas can be riskier and more likely to challenge the status quo or power of other parties as compared to ideas developed by external directives and precise task demands (Baer, 2012; Damanpour, 1988). Therefore, when teams generate creative ideas proactively, external parties may be unwilling to supply the resources needed for actualizing those ideas. By contrast, when teams generate creative ideas responsively following external request or specific task requirements, teams may entertain higher possibilities of acquiring external resources, because they already have the support or involvement of key external parties from the beginning or have a clear rationale for the idea in question (Kanter, 1988). Also, responsively generated ideas are less likely to challenge the existing practices or power structures, thereby having a greater likelihood of being accepted by other actors (Janssen, 2004).

Hypothesis 3a. Proactive team creativity is negatively related to external resource acquisition.

Hypothesis 3b. Responsive team creativity is positively related to external resource acquisition.

External legitimacy. By definition, creative ideas are novel and inherently ambiguous, and thus, implementing them often involves multiple constituents who may disagree about their value (Baer, 2012). Thus, acquiring legitimacy in the eyes of stakeholders is another core external resource that must be mobilized (Birkinshaw, Hamel, & Mol, 2008; Perry-Smith & Mannucci, 2017; Rao, Chandy, & Prabhu, 2008). According to Suchman (1985), teams implementing creative ideas may need to secure three primary forms of legitimacy. First, teams must obtain pragmatic legitimacy in that

their ideas should appeal to the self-interested calculation of relevant parties. Second, teams must gain moral legitimacy in the sense that implementing their ideas is consistent with the organization's moral system. Third, teams have to earn cognitive legitimacy in that their ideas should be sound solutions to specific challenges faced by external parties. Gaining these legitimacies from stakeholders could also help teams to acquire support and necessary resources from other parties (Birkinshaw et al., 2008; Rao et al., 2008).

When teams generate ideas proactively, gaining external legitimacy could become challenging because of the high likelihood that parties outside the team will disagree on the value of the ideas (Baer, 2012). Ideas generated spontaneously in an effort to find new opportunities or search for novel solutions based on a team's own position may be regarded as undesirable, unrealistic, and unhelpful to the organization's goals (Perry-Smith & Mannucci, 2017; Suchman, 1985). Conversely, when teams generate ideas per external request or precise task requirements, others are likely to acknowledge pragmatic, normative, and cognitive legitimacy. Thus, for responsive team creativity, building legitimacy around idea implementation may become easier than doing so for proactive team creativity.

Hypothesis 4a. Proactive team creativity is negatively related to external legitimacy.

Hypothesis 4b. Responsive team creativity is positively related to external legitimacy.

Internal and external resources mediating the creativity–implementation relationship. Thus far, this study has explored how internal and external resources for idea implementation are aligned closely with proactive and responsive team creativity. I further propose these internal and external resources mediate the relationship between team creativity and innovation implementation. As hypothesized above, when teams

proactively generate ideas, members will develop stronger motivation to realize their ideas, which will enhance internal resources necessary for effective innovation implementation, such as team efficacy and cooperation (Anderson et al., 2014; Gibson et al., 2000; Hülshager et al., 2009). Hence, teams with proactive creativity can achieve successful innovation implementation through increased efficacy and cooperation that promote further idea elaboration and realization.

Proactively generated ideas can also challenge existing routines and other parties in power, thereby being viewed as too risky with questionable benefits (Baer, 2012; Janssen et al., 2004). Given that external resource availability (Ancona & Bresman, 2002) and legitimacy (Rao et al., 2008) are the core factors of achieving effective implementation, proactive creativity will be negatively associated with innovation implementation via the decreased supply of external resources. Hence, internal and external team resources will constitute positive and negative pathways, respectively, between proactive team creativity and innovation implementation.

Hypothesis 5. Proactive team creativity has positive indirect effects on innovation implementation through internal resources and negative indirect effects on innovation implementation through external resources.

Conversely, teams who generate creative ideas responsively may experience difficulty in developing a commitment to and engagement with implementation. Consequently, they will display lower efficacy and cooperation in realizing their ideas, which, in turn, may result in less successful implementation. Responsive creativity of teams, however, may facilitate innovation implementation by promoting the acquisition of external resources as hypothesized earlier. From the organization's perspective, a decision to allocate or redirect resources often involves multiple constituents likely to have different views on the value of ideas, especially for those that are novel and inherently ambiguous (Green, Welsh, & Dehler, 2003). Considering that mobilizing

external resources is subject to social–political maneuvers (Kanter, 1988), teams with responsive creativity may be in an excellent position to take advantage of external resources.

Hypothesis 6. Responsive team creativity has negative indirect effects on innovation implementation through internal resources and positive indirect effects on innovation implementation through external resources.

Method

Sample and Data Collection

Data were collected from work teams in organizations in the U.S. to test the present hypotheses empirically. I asked students from a university in California to provide contact information on work teams, including those of the team leader and two representative team members, for course credit. Initially, I obtained contact information for 119 teams and distributed the online survey questionnaires by creating personalized survey links for each leader and team member. The participants were instructed to record their survey code number (which was provided in the instruction e-mail) at the beginning of the survey such that I could cross-check their identities and match the surveys from team leaders and team members.

Of the 119 teams contacted, 237 participants, including leaders and members from 106 teams, returned completed surveys (response rate = 91%). I applied various screening methods to exclude dishonest responses to increase the validity of the online survey responses. At the end of the survey, the participants reported the honesty level of their responses (e.g., “Your honest response to our study is very important for obtaining accurate data. Should we use your data?”) (E. J. Jung & Lee, 2015). I removed teams that included one or more participants who responded “no” to this screening question. I also excluded teams that included one or more participants who took less than 1 minute

to respond to our survey, which was calculated as the minimum amount of time to read all questions.

In addition to these dishonest and clearly unreliable responses, I removed teams with only one member remaining in the data set or those without leader responses. Accordingly, I obtained 62 work teams comprising 124 members and 62 leaders for the final analysis sample. This sample included teams from various industries, such as professional services (27.1%), consumer services (42.4%), sales (20.3%), and construction/production (4%). The final sample of team members involved 60.5% females with a mean age of 27.8 years ($SD = 10.42$). In this sample, 24.58% of team members graduated high school, 42.74% completed two years of college, 24.19% held a bachelor's degree, and 9.6% had a graduate degree. On average, team members reported 2.90 years ($SD = 4.24$) of team tenure and 3.52 years ($SD = 3.83$) of organizational tenure. The average team size as reported by team leaders was 5.61 ($SD = 3.30$), ranging between 2 to 16 members.

Measures

Data were collected from team members and leaders of the participating teams. Team members reported on their team's creativity patterns and internal and external resources for implementation. Team leaders rated innovation implementation effectiveness. Study variables were assessed using multi-item scales with acceptable levels of internal consistency, within-group agreement (r_{wg}), and intraclass correlations that reflected between-groups variations in individual ratings (Chen, Mathieu, & Bliese, 2005). All items were rated on a five-point Likert scale ranging from "strongly disagree" to "strongly agree."

Proactive and responsive team creativity. I used the proactive and responsive creativity scales developed by Sung et al. (2017) to assess whether participating teams

tend to generate creative ideas proactively or responsively. I shifted the referent of scale items from “I” to “my team members” to evaluate the two forms of creativity at the team level. Members reported their team’s proactive creativity by responding to a five-item scale ($\alpha = .92$, $r_{wg(5)} = .97$, $ICC(1) = .69$, $ICC(2) = .92$, $F = 12.21$, $p < .001$, e.g., “My team members suggest new ways of performing work in a proactive manner”). Each team’s responsive creativity was assessed by a five-item scale ($\alpha = .72$, $r_{wg(5)} = .95$, $ICC(1) = .29$, $ICC(2) = .67$, $F = 3.07$, $p < .001$, e.g., “My team members come up with creative solutions only with specific directions”).

Team implementation efficacy. I adapted Bandura’s (1986) team efficacy scale in the context of innovation implementation. Specifically, I used four items that address internal resources, particularly those related to members’ efficacy beliefs regarding implementation. Members reported team implementation efficacy by responding to a four-item scale ($\alpha = .86$, $r_{wg(4)} = .96$, $ICC(1) = .62$, $ICC(2) = .87$, $F = 7.55$, $p < .001$, e.g., “My team has confidence in implementing [the] creative ideas we generated”).

Team cooperation during implementation. To measure cooperation among members in implementing their ideas, I used the cooperation scale developed by Chatman and Flynn (2001). I customized the original items for the context of idea implementation. Members reported team cooperation during implementation by responding to a five-item scale ($\alpha = .82$, $r_{wg(5)} = .95$, $ICC(1) = .71$, $ICC(2) = .91$, $F = 10.62$, $p < .001$, e.g., “While implementing our own ideas, team members are willing to sacrifice their self-interests for the benefit of the team”).

External resource acquisition. I used Spreitzer’s (1996) measure of access to external resource, changed the referent from “I” to “my team,” and customized the context to implementing innovation. Team members reported an external resource

acquisition by responding to a three-item scale ($\alpha = .90$, $r_{wg(3)} = .96$, $ICC(1) = .76$, $ICC(2) = .90$, $F = 10.38$, $p < .001$, e.g., “My team can obtain extra external resources necessary for implementing our own ideas”).

External legitimacy. I leveraged Seibert, Kraimer, and Liden’s (2001) measure to assess sociopolitical support or legitimacy in implementing innovation. Referents in items were transformed from “I” to “my team.” Team members reported legitimacy by responding to a three-item scale ($\alpha = .74$, $r_{wg(3)} = .97$, $ICC(1) = .52$, $ICC(2) = .76$, $F = 4.19$, $p < .001$, e.g., “My team has the support we need to implement our own ideas from other teams, top management, and other external constituents”).

Innovation implementation. To evaluate innovation implementation, I asked team leaders to assess their own team’s effectiveness in implementing the creative ideas they generated and achieving the goals as intended. I used Klein et al.’s (2001) innovation implementation effectiveness measure and changed the referent from “this employee” to “my team.” Team leaders measured their team’s success in implementing their ideas by responding to a four-item scale ($\alpha = .92$, e.g., “By implementing our own ideas, the quality of my team’s product, service, or work processes is improved”).

Control variables. In this analysis, I controlled for team size and the industry to which a particular team belongs. I also included an innovation climate that has been associated closely with team creativity and innovation (Hulsheger et al., 2009; Somech & Drach-Zahavy, 2013). Innovation climate refers to the extent to which innovation is encouraged (West, 1990; West & Anderson, 1996). A high innovation climate could mean that organizations are mostly supportive of innovation implementation when work teams proactively generate creative ideas. This aspect could affect our hypothesis on proactive creativity and external resource acquisitions; hence, I included it as a control variable. I also included team status because it can affect a team’s acquisition of external resources and legitimacy regardless of their creativity patterns (Anderson,

John, Keltner, & Kring, 2001). Leaders from each team reported the number of team members and the industry they belong to by choosing one of seven industry categories: (a) professional services, (b) consumer services, (c) sales, (d) farming/fishing/forestry, (e) construction/maintenance, (f) production/transportation, and (g) government. In addition, leaders evaluated their team's innovation climate and team status using a five-point Likert-type scale. Team leaders assessed innovation climate by responding to five items adapted from Klein et al. (2001) ($\alpha = 0.92$, e.g., "Innovations are a top priority at my organization"). Team leaders also gauged their team's status in organizations on a three-item scale adapted from Flynn (2003) ($\alpha = 0.70$, e.g., "My team is well respected in my organization").

Results

Although I used multi-source data, the predictors were all gathered at the same time and collected on psychometric scales rated by team members. Hence, prior to hypothesis testing, I verified the empirical distinctiveness of the main study variables reported by team members and leaders by conducting exploratory factor analysis (EFA) and confirmatory factor analysis (CFA). First, I executed an EFA using oblique CF-varimax rotation with a maximum likelihood extraction method, which is known to produce a plausible factor structure in social science research (Browne, 2001). The results of the rotated factor matrix of EFA produced seven factors following the expected seven-factor structure.

Second, I conducted a CFA with seven study variables. The results affirmed a good fit to the data ($\chi^2 (254) = 332.10$, $p < .01$, CFI = .94, RMSEA = .06). I also performed alternative CFAs on plausible six-factor or five-factor models by combining proactive/responsive team creativity and team implementation efficacy/cooperation and external resource acquisition/external legitimacy, but none of those models exhibited

better fit than the hypothesized seven-factor model (all $\Delta\chi^2$ tests, $p < .01$). Those models also demonstrated a less desirable model fit (all CFIs $< .90$). Given the empirical confirmations from EFA and CFA, I proceeded to test the hypothesized relationships. Table 1 provides descriptive statistics and correlations among the variables examined. The control variables, especially innovation climate and team status, exhibit significant correlations with our variables of interest.

Hypothesis Testing

Given that the present hypotheses are all at the team level, I aggregated the responses of individual team members to the team level after assessing the empirical appropriateness of aggregation with three criteria, ICC(1), ICC(2), and r_{wg} (Bartko, 1976; James, 1982; James, Demaree, & Wolf, 1984; Shrout & Fleiss, 1979). All variables were appropriate for aggregation to the team level¹; hence, I conducted hierarchical regression analyses to test the hypotheses. I incorporated the variables for regression analysis through three hierarchical steps: (1) the control variables, (2) proactive and responsive creativity, and (3) internal and external resources. Tables 2 and 3 summarize the results. Although not hypothesized, the relationship between proactive/responsive team creativity and innovation implementation was assessed. Innovation implementation effectiveness does not exhibit a significant relationship with either proactive team creativity ($\beta = -.11$, *n.s.*) or responsive team creativity ($\beta = -.06$, *n.s.*). This finding is perhaps because proactive and responsive team creativity has both positive and negative effects on securing internal and external resources. In this analysis, I applied one-tailed tests for our hypothesis testing instead of two-tailed tests as the directions of the hypothesized relationships are apparent and the team-level sample size is relatively small (Ruxton & Neuhäuser, 2010).

¹See the specific values of ICC(1), ICC(2), and r_{wg} for each variable under the Method section

Table 1

Descriptive Statistics and Correlations of Variables (Study 1)

Variables	M	SD	1	2	3	4	5	6	7	8	9	10	11
1. Team size	5.61	3.29	1.00										
2. Industry (Professional)	0.35	.48	-.03	1.00									
3. Innovation climate	3.24	.97	.13	.18	1.00								
4. Team status	3.98	.83	.13	.03	.43***	1.00							
5. Proactive creativity	3.71	.71	.04	-.29*	.20	.10	1.00						
6. Responsive creativity	2.69	.49	.09	.13	-.04	-.03	-.45***	1.00					
7. Team implementation efficacy	3.82	.60	-.10	-.36**	.01	.03	.62***	-.54***	1.00				
8. Team cooperation during implementation	3.83	.60	.11	-.14	.08	-.05	.58***	-.42***	.43***	1.00			
9. External resource acquisition	2.41	.71	-.10	.20	-.13	-.10	-.57***	.42***	-.61***	-.52***	1.00		
10. External legitimacy	2.47	.69	.05	.26*	-.01	-.19	-.52***	.34**	-.48***	-.52***	.53***	1.00	
11. Team innovation implementation effectiveness	3.99	.83	.08	.03	.47***	.59***	.02	-.07	.06	.02	.07	-.08	1.00

Note: n = 62. *p < .05, **p < .01, ***p < .001

Predicting team implementation efficacy. In Hypotheses 1a and 1b, I predicted that proactive and responsive team creativity will respectively be positively and negatively related to team implementation efficacy. The results reported in Model 1 of Table 2 confirm a significant positive relationship between proactive team creativity and team implementation efficacy ($\beta = .57, p < 0.001$). In addition, responsive team creativity exhibited a significant negative relationship with team implementation efficacy ($\beta = -.24, p < .05$). Hence, findings support Hypotheses 1a and 1b.

Predicting team cooperation during implementation. In Hypotheses 2a and 2b, I theorized that proactive and responsive team creativity will be positive and negative predictors, respectively, of team cooperation during implementation. Results in Model 2 of Table 2 confirm a positive relationship between proactive team creativity and team implementation cooperation ($\beta = .25, p < .05$) and a negative relationship between responsive creativity and implementation cooperation ($\beta = -.31, p < .10$). These patterns support Hypotheses 2a and 2b.

Predicting external resource acquisition. Hypotheses 3a and 3b posited that external resource acquisition is negatively related to proactive team creativity but positively related to responsive team creativity. Model 3 of Table 2 exhibits that the relationship between proactive team creativity and external resource acquisition is negative ($\beta = -.27, p < .05$), whereas the relationship involving responsive team creativity is positive ($\beta = .52, p < .001$). Thus, Hypotheses 3a and 3b are supported.

Predicting external legitimacy. I argued in Hypotheses 4a and 4b that proactive and responsive team creativity are negatively and positively related to gaining external legitimacy of idea implementation, respectively. Model 4 of Table 2 indicates that only proactive team creativity exhibited a significant negative relationship with external legitimacy ($\beta = -.41, p < 0.01$) and that responsive creativity did not show any significant relationship ($\beta = .18, ns.$). These patterns support only Hypothesis 4a.

Internal/external resources and innovation implementation. In Table 3, team implementation efficacy, team cooperation during implementation, and external resource acquisition exerted significant positive effects on innovation implementation ($\beta = .44, .28, \text{ and } .33$, respectively, all $p < .05$), while external legitimacy was not a statistically significant factor.

Mediation by internal/external resources. In Hypotheses 5 and 6, I proposed that internal and external resources for implementation mediate the relationship between proactive/responsive team creativity and innovation implementation. I employed mediation analysis based on Hayes' (2013) macro PROCESS in SPSS 2.16.3. I used a parametric bootstrap procedure that ran 5,000 Monte Carlo replications to estimate a confidence interval (CI) around the indirect effects to test the significance of the hypothesized indirect effects (Preacher & Selig, 2010). Table 4 presents a significant positive indirect effect of proactive team creativity (estimate = .29, 95% CI = .03, .55) and a significant negative indirect effect of responsive team creativity (estimate = $-.08$, 95% CI = $-.13, -.03$) on innovation implementation via team implementation efficacy. For team cooperation during implementation, the results affirmed a significant positive effect of proactive team creativity on innovation implementation (estimate = .10, 95% CI = .01, .22), but such team cooperation did not significantly mediate the relationship between responsive creativity and innovation implementation. For external resources, the same analysis confirmed a significant negative indirect effect of proactive team creativity (estimate = $-.10$, 95% CI = $-.19, -.02$) and a significant positive indirect effect of responsive team creativity (estimate = .14, 95% CI = .02, .29) on innovation implementation via external resource acquisition. However, external legitimacy did not mediate the relationship between team creativity and innovation implementation. Thus, Hypotheses 5 and 6 are supported only for team implementation efficacy and external

Table 2

Hierarchical Linear Regressions of the Relationship between Proactive/Responsive Creativity and Internal/External Resources (Study 1)

Variables	Outcome: Team implementation efficacy Model 1	Outcome: Team cooperation during implementation Model 2	Outcome: External resource acquisition Model 3	Outcome: External legitimacy Model 4
Constant	2.36(.62)***	3.46(.88)***	2.30(.86)**	3.81(.86)***
<u>Step 1: Controls</u>				
Team size	-.01(.02)	.02(.03)	-.01(.03)	.01(.02)
Professional	-.01(.13)	.08(.19)	.20(.18)	.18(.17)
Innovation climate	.01(.07)	.14(.10)	-.01(.10)	.10(.09)
Team status	-.01(.08)	-.06(.12)	-.07(.12)	-.19(.11)*
ΔR^2	0.01	0.02	0.02	0.04
$F(df)$	1.18	1.19	1.28	1.63
<u>Step 2: Main effects</u>				
Proactive creativity	.57(.09)***	.25(.13)*	-.27(.13)*	-.41(.13)**
Responsive creativity	-.24(.13)*	-.31(.18)*	.52(.18)***	.18(.17)
ΔR^2	0.48	0.42	0.31	0.30
Adjusted R^2 for total equation	0.49	0.44	0.33	0.34
$F(df)$	10.88	2.53	4.37	2.78
ΔF	9.70***	1.34*	3.09**	1.15*

Note: N = 62. Values in parentheses are standard errors. * $p < .05$, ** $p < .01$, *** $p < .001$ (one-tailed test)

Table 3

Hierarchical Linear Regressions of the Relationship between Proactive/Responsive Creativity and Team Innovation Implementation Effectiveness via Internal/External Resources (Study 1)

Variables	Outcome: Innovation implementation	Outcome: Innovation implementation	Outcome: Innovation implementation
Constant	1.37(.45)**	1.53(.87)*	-1.43(.95)
<u>Step 1: Controls</u>			
Team size	-.00(.03)	.00(.03)	-.01(.02)
Professional	.02(.18)	-.02(.19)	-.05(.17)
Innovation climate	.24(.10)*	.26(.10)*	.18(.09)*
Team status	.47(.12)***	.47(.12)***	.53(.11)***
ΔR^2	.37	.37	.37
$F(df)$	6.50	6.50	6.50
<u>Step 2: Main effects</u>			
Proactive creativity		-.11(.13)	
Responsive creativity		-.06(.18)	
Team implementation efficacy			.44(.18)*
Team cooperation during implementation			.28(.14)*
External resource acquisition			.33(.13)**
External legitimacy			.05(.14)
ΔR^2		.01	.09
Adjusted R^2 for total equation		.38	.46
$F(df)$		7.43	9.83
ΔF		.93	3.33*

Note: N = 62. Values in parentheses are standard errors. * p < .05, **p < .01, ***p < .001 (one-tailed test)

Table 4

Bootstrapped Mediation Analysis of the Relationship between Proactive/Responsive Creativity and Team Innovation Implementation Effectiveness (Study 1)

Independent variable	Mediator	Indirect effect	Product of coefficients			Bootstrapping bias-corrected 95% CI	
			SE	Z	P	Lower	Upper
Proactive creativity	Team implementation efficacy	.29	0.13	2.22	<.05	.03	.55
	Team cooperation during implementation	.10	0.06	1.80	<.05	.01	.22
	External resource acquisition	-.10	0.04	-2.33	<.05	-.19	-.02
	External legitimacy	.00	0.03	0.03	<i>n.s.</i>	-.06	.06
Responsive creativity	Team implementation efficacy	-.08	0.05	-0.50	<.05	-.13	-.03
	Team cooperation during implementation	-.07	0.05	-1.46	<i>n.s.</i>	-.16	.02
	External resource acquisition	.14	0.07	1.92	<.05	.02	.29
	External legitimacy	.03	0.05	0.53	<i>n.s.</i>	-.07	.12

Note: N = 62

resource acquisition, and they are partially supported for team cooperation during implementation.

Discussion

This investigation offers a promising first step in understanding the largely neglected but important organizational phenomenon involving the relationship between creativity and implementation at the team level (van Knippenberg, 2017). This study demonstrates that teams with different motivational drivers in generating creative ideas exhibit various patterns in mobilizing relevant resources for implementing their ideas. Specifically, teams that proactively developed creative ideas could secure internal team resources, but they had difficulty obtaining the external resources needed for innovation implementation.

On the contrary, teams that responsively developed ideas to address specific tasks and organizational demands could acquire external resources with ease, but they encountered lukewarm internal support among members for implementing their ideas. This revelation of the underlying mechanisms of how proactive and responsive team creativity translates to innovation implementation by activating distinct resources has critical implications for researchers and practitioners. Below I discuss the significance of the current findings and limitations of this work that indicate the directions for future research.

Theoretical Implications

The importance of leveraging teams to achieve innovation has been increasingly acknowledged in the management literature (Ilgen et al., 2005; van Knippenberg, 2017). Given intensive attention to team creativity and innovation implementation as two separate stages of innovation (N. Anderson et al., 2014; Hülsheger et al., 2009), extant studies developed separate, highly disjointed research streams on creativity and implementation (Perry-Smith & Mannucci, 2017). In effect, previous investigations

failed to consider the subsequent processes of creativity, thereby overlooking that ideas are useless unless implemented (N. Anderson et al., 2014; van Knippenberg, 2017). Accordingly, the literature remains unable to explain how idea generation translates into idea implementation (N. Anderson et al., 2014; van Knippenberg, 2017). Several investigations on the connection between idea generation and implementation focused on identifying boundary conditions that strengthen the link between the said concepts (Baer, 2010; Somech & Drach-Zahavy, 2013; Škerlavaj et al., 2014). By contrast, this work advanced team innovation literature by revealing the still mostly unknown mechanisms that connect team creativity to implementation.

To examine the underlying mechanisms that explain the creativity–implementation relationship, I focused on how teams mobilize resources, support, and collaboration internally and externally. Compared with more mundane ideas, creative ideas are known to be disadvantageous in acquiring the resources necessary for their implementation (Baer, 2012; Damanpour, 1988). Thus, successful idea implementation depends on whether teams can secure relevant internal and external resources, such as cognitive, motivational, and socio-political efforts and various resource support (Alexander & van Knippenberg, 2014; Janssen et al., 2004; Kanter, 1988). Our analysis confirmed that the innovation implementation of teams is positively associated with their internal resources (team implementation efficacy and cooperation) and an external resource (external resource acquisition). Moreover, team implementation efficacy and external resource acquisition mediated the effects of team creativity on innovation implementation, thereby demonstrating their intervening role between idea generation and implementation in teams.

Previous studies on internal and external efficacy at the individual level demonstrated that the two types of efficacy exist independently, and maximal performance results are achieved when workers believe that they are highly skilled at

what they do (i.e., high internal resources) and they have at their disposal the external support needed to achieve their aims (i.e., high external resources). Moreover, the innovation implementation of teams can be successful when they have sufficient internal and external resources. I examined this possibility by testing the statistical significance of the interactions between the two internal resource variables and the two external resource variables. This follow-up analysis infers that none of these interaction terms were significant predictors of innovation implementation. However, when the two variables that each comprise internal and external resources were combined as single overall factors for the two resources, their interaction exhibited statistical significance ($\beta = .38, p = .05$). The current findings indicate the significance of internal and external resources in increasing the likelihood for ideas to actually produce results (Ancona & Bresman, 2002; Kanter, 1988; van Knippenberg, 2017). Hence, further conceptual and empirical efforts should clarify the potential synergistic or complementary effects of internal and external resources in shaping innovation implementation.

More importantly, this study explained the distinct motivational processes that underpin the creativity–implementation relationship. Notably, this work theorized and empirically tested how teams that developed creative ideas with dissimilar motivational drivers (i.e., proactive or responsive) mobilize resources differently from within and outside their team boundaries. The distinct motivation of teams that drive their idea generation could affect the way they behave while executing the ideas. Specifically, teams that generate ideas proactively have advantages in securing team implementation efficacy and cooperation, but they fail to mobilize external resources. By contrast, teams that generate ideas responsively have a clear advantage in securing external resources, but they have difficulty in achieving team efficacy and cooperation for implementation.

By distinguishing the effects of proactive and responsive team creativity on innovation implementation through internal and external resources for implementation,

this study offers new theoretical insights into the creativity–implementation relationship. Previous research reported relatively weak linear or nonlinear relationships between idea generation and implementation that require significant boundary conditions (Somech & Drach-Zahavy, 2013; Škerlavaj et al., 2014). The present empirical analysis also confirmed that proactive and responsive forms of team creativity by themselves do not have a definite effect on innovation implementation because their advantages and disadvantages in securing internal and external resources off-set each other. Therefore, the relationship between creativity and implementation cannot be clarified without considering the intermediate mechanisms. Further studies should explore other potential underlying mechanisms beyond the current focus on resources for implementation.

This research also deepens the understanding of the functions of the different types of creativity based on disparate motivational drivers. Until recently, creativity has mostly been examined as a broad and unitary construct (Unsworth, 2001). Several studies explored the multifaceted nature of creativity (Mumford & Gustafson, 1988; Sung et al., 2017; Unsworth, 2001), but they only concentrated on what different factors led to the various types of creativity. The present analysis considerably extends this recently emerging stream of research by examining the consequences of different types of creativity in terms of mobilizing internal and external resources and ultimate innovation implementation. At the individual level, intrinsic or proactive motivation has been acknowledged as more effective in generating and implementing innovative solutions at work relative to extrinsic, passive motivation (N. Anderson et al., 2014; Grant & Ashford, 2008; S. K. Parker et al., 2010). Rather than addressing team motivation directly at the team level, most research emphasized team contexts, such as support for innovation that may promote team members' motivation for idea generation and implementation (Cadwallader, Jarvis, Bitner, & Ostrom, 2009; G. Chen et al., 2013;

Hülshager et al., 2009). This work offers an elaborate knowledge on how the proactive and responsive motivation underlying creativity activates distinct intermediate team actions involving the internal and external resources needed for innovation implementation in organizational teams. Thus, to fully comprehend a team's innovation implementation, further studies should consider the manner through which teams were motivated to generate ideas in the first place.

Practical Implications

Given that the motivation underpinnings at the idea generation phase lasts throughout the innovation implementation phases affecting work team's behaviors in securing internal and external resources, it is important for managers and team leaders to understand the motivational drivers, and support the work teams that they could be in disadvantageous positions due to their motivational underpinnings at the idea generation phase. Specifically, when work teams proactively generated innovative ideas, it should be managers and team leaders' roles to support work teams with enough external resources and provide external legitimacy in a timely manner, so that work teams do not fail in translating ideas effectively. When work teams responsively generated innovative ideas, managers and team leaders should provide other guidance so that work teams could heighten their internal team implementation efficacy and team cooperation. Providing an appropriate incentive for implementing ideas or organizing innovative climate could be representative examples for activities that managers and team leaders could be involved in for work teams with responsive creativity.

Study Limitations and Future Research Directions

Despite the significant implications, the current findings should be interpreted with some limitations in mind. First, given that the study variables were collected concurrently, the causal relationships among them cannot be ascertained. Understanding whether proactive or responsive creativity changes team behavior and resources during

implementation or whether the teams' different behaviors and resource availability lead to different types of creativity is worth investigating. Such efforts will provide additional clarification regarding the underlying mechanisms of the relationship between team creativity and implementation. To explore these alternative causal possibilities, future studies can employ longitudinal panel data or laboratory experiments. Second, the data were collected through an Internet-based survey, which represents a method increasingly adopted in scholarly research (Alessi & Martin, 2010). I conducted multiple steps to eliminate possible dishonest responses following previous research (Sills & Song, 2002; Witte, Amoroso, & Howard, 2000), but insincere responses might still be present in the final sample given the limitation of the current data collection strategy. Thus, future research should replicate this work with different approaches for data gathering.

Despite these potential shortcomings, this study contributes to the exploration of "the black box" regarding the relationship between idea generation (i.e., creativity) and implementation (i.e., innovation). Accordingly, this work responds to the calls for linking the largely disconnected research streams of creative idea generation and implementation (N. Anderson et al., 2014; van Knippenberg, 2017) and expands our understanding of the different types of creativity based on different motivational drivers in facilitating subsequent implementation (Madjar, Greenberg, & Chen, 2011). The current theoretical framework and empirical analyses could be enriched in several ways. First, although I verified how proactive and responsive idea generation result in diverse implementation processes, I still have limited insight into what exactly led team members to behave in different ways. In this regard, further studies may examine members' psychological framing or the attribution processes involved in the creativity–implementation relationship to achieve finer-grained understanding. Second, I focused on the way teams acquire relevant resources when transforming their creative ideas into

achievements. Future research could explore alternative pathways, such as knowledge management, experimentation, and other team processes (Hülshager et al., 2009). Finally, determining boundary conditions for how teams with proactive or responsive creativity could further strengthen their acquisition of internal or external resources would be interesting. Ascertaining how various contextual factors, such as a team's membership composition, status, organizational support, or incentive system, interact with the process of translating creativity to innovation implementation will be fruitful with the interactionist perspective of innovation.

Conclusion

Creative ideas not implemented are useless until they are effectively implemented. This study highlights how innovative ideas developed with proactive and responsive motivation results in distinct behaviors during idea implementation, consequently affecting team implementation effectiveness. When teams proactively generated innovative ideas, they are advantageous in securing internal team implementation efficacy and team cooperation during implementation but could be in a disadvantageous position in securing external resource acquisition and external legitimacy. On the contrary, when teams responsively generated innovative ideas, they are advantageous in securing external resources but disadvantageous in securing internal resources during implementation. These off-setting behaviors during implementation for both teams with proactive and responsive creativity, respectively, results in not effective innovation implementation.

CHAPTER 3: TRANSLATING PROACTIVE AND RESPONSIVE CREATIVITY TO INNOVATION IMPLEMENTATION IN WORK TEAMS: CONTRASTING TEAM'S INTERNAL AND EXTERNAL RESOURCING BEHAVIORS AND TEAM LEADERSHIP FOR IMPLEMENTATION (STUDY 2)

Introduction

This chapter presents Study 2, which examined the intermediate process of how work teams that proactively versus responsively generated creative ideas translate innovative ideas into effective idea implementation by managing a team's internal and external activities around managing resources and specifying the role of team leadership on balancing a team's internal and external activities.

The chapter starts with a background of the current literature on translating team innovative idea generation into implementation. The critical gaps in the current literature will be addressed in this study. The core research questions and objectives of this study will also be defined, followed by the expected significance of the study. The chapter will also provide a thorough review of relevant previous literature on translating innovative idea generation to innovation implementation via a team's internal and external resourcing behaviors and the role of team leadership in these processes. This study will examine further the specific mediating mechanism during the idea elaboration stage to enrich our understanding of why certain types of idea generation translate into specific team resourcing behaviors in implementation. Then, this study forms hypotheses and suggests methods for an empirical study to test the hypotheses. Lastly, this chapter will highlight the potential implications for future studies.

Background of the Study

Innovation is critical to the growth and competitiveness of contemporary organizations operating in dynamic business environments (Bledow et al., 2009; Roth & Sneider, 2006; Tellis et al., 2009). As organizations rely increasingly on team-based

structures (N. Anderson & King, 1993; Edmondson, 1999; Ilgen et al., 2005; M. A. West, 2002b), work teams become the critical source of organizational innovation (N. Anderson et al., 2014; Lopez Cabrales et al., 2009). Work teams engage in various innovation processes, such as innovations in product or service development, work team procedures and processes, IT/system, etc. Organizations may sometimes initiate these innovations in response to external requests, but at other times, they proactively initiate such innovation based on their own needs and interests. Depending on the motivational drivers of how work teams initiate the generation of innovative ideas, the translation of idea generation to implementation could differ significantly. Thus, understanding how teams with varying motivational drivers in generating innovative ideas engage in internal and external team activities is critical to translating their ideas into successful implementation.

The literature on creativity has traditionally highlighted the importance of proactive or intrinsic motivation that results in spontaneous additional efforts to search for new opportunities and innovative solutions as compared with passive and extrinsic motivation (Amabile, 1983; Hu & Liden, 2015; X. Zhang & Bartol, 2010). However, in translating innovative ideas into implementation in work teams, executing ideas with proactive or intrinsic motivation may not always be advantageous because key external challenges may arise, such as support from top management teams or other departments (Leifer et al., 2000). This concern is particularly true for work teams of mid-to-large organizations where teams need to interact constantly with other external parties spanning the boundaries of their work teams. Thus, the present study explores how work teams with different motivational drivers at the starting point of idea generation engage in different intermediate processes to translate innovative idea generation into implementation.

Having resources is generally considered crucial for success in any context, particularly in implementing innovation (Amabile et al., 1996; Sonenshein, 2014). Without sufficient knowledge, human resources, investment, or support, successful implementation of innovative ideas successfully is impossible (Somech & Drach-Zahavy, 2013). Thus, this study will focus on a team's behavior to acquire and utilize resources as a core intermediate process in translating ideas to implementation. The unique aspect of innovation implementation is that it often requires not only utilizing resources effectively within the team, but also securing resources from external parties spanning the boundaries of the work teams (van Knippenberg, 2017). A team's current resources are usually equipped to perform current team task; hence, when teams need to implement non-routine, innovative ideas, securing extra resources from external parties to implement an innovation is crucial. Thus, for many innovations, such as new product development or business model innovation, teams typically need to mobilize resources, support, and collaboration outside the team to achieve innovation (Alexander, 2014). Several studies have shown that the biggest challenge in team innovation lies outside of the team in terms of gaining support from senior management, collaborations with other departments, and so forth (Leifer et al., 2000). Moreover, managing external activities is in a competing relationship with managing internal activities in a team's research (Choi, 2002; Janis, 1982; Boyd, Dess, & Rasheed, 1993) because a team has limited resources.

Team resourcing behaviors within and across the team boundary could vary depending on how teams generate ideas from the beginning, that is proactively or responsively. Specifically, when work teams generate innovative ideas proactively, they might be more eager and engaged to work toward actual implementation. With heightened motivation, they might be able to utilize resources more effectively within the team. However, these teams might also face difficulties in acquiring external

legitimacy because their ideas might challenge the status quo of external parties, resulting in difficulties in securing sufficient external resource stock. By contrast, when work teams generate innovative ideas per the request of external parties, they might easily acquire relevant resources with the support from external parties, but they might lack a strong motivation to utilize resources internally. Thus, this study focuses on how work teams who proactively or responsively generate innovative ideas engage in external resource acquisition and internal resource utilization as core intermediate processes in translating innovative idea generation into implementation.

In addition, given that teams with proactive and responsive creativity could face challenges in securing the two facets of resourcing behavior in translating ideas into implementation, team leaders could play a pivotal role in fostering innovation by providing a work context supportive of innovation (Bledow et al., 2009; George, 2007; Oldham & Cummings, 1996) or by complementing what team members lack (Sung & Choi, 2012). Based on the theory of when work teams have limited resourcing behaviors to implement ideas, the team leader could help teams focus on their weak area of resourcing, such as boosting internal resource utilization for teams with responsive creativity and supporting external resource acquisition for teams with proactive creativity. In such cases, the teams could achieve innovation implementation effectively by engaging in building external resource stocks and facilitating internal resource utilization, regardless of how they engaged in the innovation process from the start. Thus, this study will examine how team leadership, specifically boundary-spanning leadership, and internal integrating leadership, serves as critical boundary conditions for work teams with proactive vs. responsive creativity that translate ideas into implementation through team resourcing behaviors.

Significance of the Study

Theoretically, this study contributes to organizational literature in several ways. First, along with Study 1, this work addresses the serious chasm between creativity and innovation implementation, particularly at the team level, by investigating the intermediate mechanism connecting the two sub-processes of organizational innovation. In addressing this gap, this study provides a fine-grained understanding of how ideas are realized at the team level by clarifying the link of how teams balance the competing relationship between a team's internal and external activities throughout the translation process from idea generation to implementation.

Second, this study contributes to research on motivation and innovation implementation by showing how motivational underpinnings at the innovative idea generation has an effect throughout the subsequent innovation implementation processes. This study will show how teams with proactive versus responsive creativity activate different internal versus external focuses of affective and cognitive states during idea elaboration, resulting in distinct innovation implementation behavior during idea implementation. This study will also complement preconception of the importance of intrinsic or proactive motivation by highlighting how idea generation based on proactive motivation creates a disadvantageous position in conducting external activities throughout innovation implementation. Idea generation is also based on responsive or extrinsic motivation, which might not always be undesirable considering its advantageous position in securing external support.

Third, this study will contribute to boundary-spanning and innovation research by highlighting the importance of considering internal team activities together with boundary-spanning external activities. Given the increased interdependence of teams with other external parties, managing and spanning team boundaries has been explored considerably (e.g., Marrone, 2010), but most studies focused on examining boundary

spanning activities without considering how boundary spanning activities affect internal activities. Given that internal and external activities could be in competing relationships (Choi, 2002) because of limited resources (e.g., time, effort, and personnel), understanding boundary-spanning external activities with the consideration of managing internal activities is critical. This study attempts to do so by considering both internal and external team activities together.

Fourth, this study enriches research on resourcing and innovation by enriching the understanding of using team resources as core team intermediate processes in translating innovative ideas into implementation. This study adopts a resourcing perspective, particularly in an empirical setting, which emphasizes the importance of considering the utilization of resources and not only the acquisition of resources.

Finally, this study focuses on the effect of boundary spanning leadership vs. internal integrating leadership complement the resourcing behavior of work teams. This study also shows the specific mechanisms of how leadership affects team behaviors by examining how team leadership affects team resourcing behaviors through collective psychological ownership.

Theoretical Background and Hypotheses

Linking Innovation Idea Generation and Implementation with Team Resourcing Behaviors

Innovation includes various steps, such as idea generation (or creativity), idea elaboration, idea championing, and idea implementation (Fleming, Mingo, & Chen, 2007; Obstfeld, 2005; Perry-Smith & Mannucci, 2017). Once ideas are generated and elaborated, they need to be promoted to obtain the green light and push them forward and consequently secure funding, talent, and political support (Perry-Smith & Mannucci, 2017). Ideas are converted into a tangible outcome and subsequently diffused and adopted by relevant parties (Perry-Smith & Mannucci, 2017). Although

many scholars recognize the various steps required throughout innovation, most previous studies neglected the translation across different innovation processes and treated it as a generic concept, focusing only on one stage, such as creativity (idea generation) or implementation effectiveness (Perry-Smith & Mannucci, 2017; Somech & Drach-Zahavy, 2013; van Knippenberg, 2017; West, 2002b).

Some scholars argue that differentiating idea generation and implementation within innovation is not necessary because of the high correlation between the two (Janssen, 2004). However, this argument could be misleading. For example, Frese et al. (1999) conceptualized and operationalized creativity as the number of ideas that employees generate and suggest, regardless of the quality of ideas or the underlying process of ideas developed. Given that implementation could not occur without ideas, measuring creativity only with quantity has indicated positive associations between idea generation and implementation, causing scholars to place less urgency on separating them (Baer 2012).

In more recent literature, conceptual clarification was conducted regarding creativity and innovation implementation. Anderson et al. (2014) proposed that “the creativity stage of this process refers to idea generation and innovation refers to the subsequent stage of implementing ideas toward better procedures, practices, or products” (Anderson et al., 2014, p.1298). Most scholars seem to follow this definition. Perry-Smith and Mannucci (2017) suggested the four innovative idea journey phases, namely, idea generation, idea elaboration, idea championing, and idea implementation. Idea generation refers to “the process of generating a novel and useful idea,” including selecting ideas after brainstorming. Idea elaboration refers to “the process of systematically evaluating a novel idea’s potential and further clarifying and developing the idea.” Idea championing refers to “the process of active promotion of a novel idea, aimed at obtaining approval to push the idea forward and, consequently, also

obtaining resources.” Idea implementation pertains to “production or impact,” in which production includes turning ideas into a tangible outcome and impact includes innovation being accepted, recognized, and used by the field (Perry-Smith & Mannucci, 2017; p.58-59). This study will follow Anderson et al.’s (2014) definitions of creativity and innovation implementation by defining creativity as idea generation and innovation as implementation. This study will also follow the four phases of the idea journey of Perry-Smith & Mannucci (2017) when linking creativity and innovation implementation. Examining creativity and innovation with this clear picture of the sub-paths of innovation implementation will help us understand the intermediating processes of translating idea generation into implementation.

Even with the recent clear conceptualization between creativity and innovation implementation, our understanding on the link between creativity and innovation implementation is still limited, particularly at the team level (Anderson et al., 2014; van Knippenberg, 2017). When we lack understanding of how ideas can be translated into actual implementation, we could lose opportunities in realizing innovation. Around 80% of innovations fail in the market annually (Schneider & Hall, 2011). Several studies have investigated the breakdown of innovation, but the examination of the unique antecedents for each stage of the innovation process is constrained (van Knippenberg, 2017). For example, studies showed that personal, job-related variables promote idea generation, whereas social, organizational factors contribute to idea implementation (Axtell et al., 2006; Clegg et al., 2002; Frese et al., 1999). However, examining antecedents for each stage of innovation still does not explain each stage can be linked to realize innovation implementation.

A few studies focused on the linkages across the stages of innovation, but they are limited to specifying boundary conditions or are focused on the individual level. Two representative empirical studies exist at the individual level, both of which specified

boundary conditions for translating creativity to implementation. For instance, Baer (2012) examined how the relationship between creativity and innovation implementation is regulated by individuals' motivation to pursue ideas and their ability to maintain strong relationships. Specifically, when individuals feel strongly about implementation instrumentality and hold strong social ties, then the relationship between creativity and innovation implementation becomes strong. Skerlavaj et al. (2014) showed how high levels of perceived supervisor support provide employees with access to resources and the support needed for idea implementation, thereby making creative ideas more implementable. Perry-Smith and Mannucci (2017) divided the innovation process into four phases, namely, idea generation, elaboration, championing, and implementation, and argued how different social networks are adequate for each stage. They did not focus on the translation process from creativity to innovation but rather on defining the relevant social networks that could facilitate each sub-process of innovation.

Team-level studies on translation from creativity to innovation implementation are even more limited. The only empirical paper recognized in organizational behavior is the work by Somech and Drach-Zahavy (2011). Individual-level translation process emphasizes the role of social relations (with leaders or other social networks) or individual motivations, whereas the team-level translation process highlights the role of team composition and team climates. Specifically, Somech and Drach-Zahavy (2011) showed how team composition (aggregated individual creative personality and functional heterogeneity) affects innovation implementation through team creativity. They further showed how the climate for innovation (vision, participative safety, task orientation, and support for innovation) strengthens the translation from team creativity to implementation. West (2002) specified the factors that could affect creativity (idea generation) and innovation implementation separately and suggested an integrative

model of creativity and innovation in work groups. For instance, West (2002) argued the importance of team composition (e.g., diversity of knowledge and skills) in predicting innovation implementation, similar to Somech and Drach-Zahavy's (2011) work. However, he further emphasized the importance of group processes and argued that integrating group processes and competencies is necessary to achieve implementation.

This study theorizes and examines empirically the intervening processes that connect the generation of innovative ideas to their implementation. It focuses on the actual translation process that explains the path from team creativity to innovation implementation. Comprehending the intervening process is essential because it allows us to conduct scientific investigations and in particular, explain the black box of a sequence of effects that leads innovative ideas into implementation at the work team level (Kenny, 2008).

Team's internal and external resourcing behaviors as intermediating processes

Among the various potential intermediating mechanisms between creativity and innovation implementation, this study focuses on a team's internal and external resourcing behaviors and the underlying motivational, affective, and cognitive team states that lead to certain behaviors. Innovative activities are known to require teams to mobilize resources within and outside the team to translate innovative ideas successfully into implementation (e.g., Alexander & van Knippenberg, 2014). Based on the literature of boundary-spanning and literature on team external activities, teams in contemporary organizations inevitably requires working interdependently with external parties beyond their team boundaries (Ancona & Caldwell, 1992; Gist et al., 1987; West, 2002b). Interdependence between teams and external actors exists because of a specialization where a focal team depends on the inputs of others as prerequisites to accomplish its task or where a focal team's outcome flows into the activities of external teams (Marks,

Mathieu, & Zaccaro, 2001; Marrone, 2010). The environment external to the team also offers various types of resources not present within a focal team (Aldrich & Herker, 1977; Ancona & Caldwell, 1992; van Knippenberg, 2017), which could be useful for implementing non-routine, innovative task.

With the heightened importance of managing external activities, work teams are facing complex dynamics, so much so that a team's internal and external activities could be in a competing relationship (Choi, 2002). Given that a team has limited resources, executing either internal or external activities could reduce resources available for the other (Boyd, Dess, & Rasheed, 1993). However, although internal and external activities compete for limited resources within a team, these activities could promote each other by playing complementary roles in achieving a common goal (Choi, 2002). For example, when a team's internal activities create constructive internal group functioning, such as psychological safety (Edmondson, 1999) or collective team-efficacy (E. Peterson, Mitchell, Thompson, & Burr, 2000), then this positive group climate could be associated positively with the level of a team's boundary-spanning activities (Edmondson, 1999). Thus, it is crucial for work teams in modern organizations to understand how to create relationships between the team's internal and external activities synergistically. Much research pointed out that previous research on teams has neglected to study this balance between the team's internal and external activities (Choi, 2002; Marrone, 2010).

Notably, in engaging in innovative work as opposed to more mundane, routine work, balancing a team's internal and external activities could become more critical because of the potential for more severe, competing relationships. For instance, in translating innovative ideas into implementation, teams are engaging frequently in performing innovative work in addition to their mundane, routine work. Thus, internally, teams need to exert extra efforts to create constructive internal group

dynamics, and at the same time, externally, teams need to reach out to external parties to secure relevant resources it needs to execute the extra work. Securing external resources could also be challenging for work teams with innovative ideas because innovative ideas could contest the status quo of its stakeholders (van Knippenberg, 2017). This is the reason why much research has pointed out that acquiring external resources and addressing external demands is crucial for work teams embedded in a larger organization and external environment in implementing innovation (Ancona & Caldwell, 1992; Hammond, Neff, Farr, Schwall, & Zhao, 2011; Hülshager et al., 2009; Keller, 2001). Drawing from the literature on team's internal and external activities for team performance, this study will examine a team's internal and external resourcing behaviors as core intermediate processes in translating innovative ideas into implementation.

In addressing how resources shape innovation implementation in organizations over time, researchers traditionally regarded resources as fixed entities and examined the number of resources available for innovation as a critical antecedent for successful implementation (Amabile et al., 1996; Barney, 1991; Pfeffer & Salancik, 1978). More recently, research on resourcing has evolved to consider resources as arising from malleable objects shaped by agents (Dutton et al., 2006; Feldman, 2004; Feldman & Worline, 2012; Sonenshein, 2014). This resourcing perspective makes a clear distinction between an object (i.e., a tangible and intangible assets that employees must act on) and a resource (i.e., an object that has been acted on to make it useful) (Feldman, 2004; Feldman & Worline, 2012; Sonenshein, 2014). It is the individuals or work teams who act on objects that may make objects useful (Sonenshein, 2014). Thus, when considering teams' resourcing behavior, securing the quantity of resource and utilizing the flow of resources become critical. However, in creativity and innovation literature, resources for implementation has been approached mostly with a static view of

resources (Anderson et al., 2014). This view impedes understanding of the dynamics of team processes in utilizing resources to translate ideas into implementation.

Thus, in this study, the team's resourcing behavior will be examined in two spectrums of team resourcing behavior: external resource acquisition and internal resource utilization. As discussed earlier, building resource stock successfully in translating ideas into implementation depends mostly on the degree of securing external resources. Meanwhile, utilizing resources requires teams to explore and exploit resources (Tiwana & McLean, 2005) and conduct in-depth processing of acquired resources, which is geared naturally toward the team's internal activities. Thus, *external* resource acquisition and *internal* resource utilization will be the core intermediating processes in translating innovative ideas into implementation.

The Effect of Proactive vs. Responsive Idea Generation on the Team's Internal And External Resourcing Behaviors

In determining a team's internal and external resourcing behaviors in translating innovative ideas into implementation, how teams were motivated to generate ideas at the beginning, could affect the subsequent translation processes, particularly on balancing team's internal and external resourcing behaviors. Previous research on motivation and creativity have highlighted the importance of proactive or intrinsic motivation because it can lead the energy, direction, and persistence of a team to generate creative ideas (Eccles & Wigfield, 2002). By contrast, responsive or extrinsic motivation states are traditionally considered ineffective in creative idea generation, except when extrinsic motivation is internalized to boost internal motivation (Gong et al., 2017). A few studies have investigated how motivation could enable employees to engage in innovation implementation by boosting their internal motivation (G. Chen et al., 2013). However, to my knowledge, no research has compared explicitly the effects of intrinsic versus extrinsic motivations on innovation implementation.

Different dynamics in the innovation implementation process compared to the idea generation process could make the effect of motivational states different. In implementing ideas, for example, teams need to mobilize support, collaboration, human capital, or financial capital, typically from external sources (Alexander & van Knippenberg, 2014). In securing external resources, work teams must actively champion their ideas beyond their team to secure organizational support and gather sufficient resources (Howell & Shea, 2006; Sandberg, 2007). This is the reason why some researchers argue that the main challenges to successful innovation implementation lie outside the team, specifically in obtaining support from senior management and collaborations from other departments or external organizations (Leifer et al., 2000).

Although work teams that generate innovative ideas proactively might drive promoting their ideas to external parties (Grant & Ashford, 2008), securing the external resources could still be limited compared with work teams who responsively generate innovative ideas. Creative ideas are risky by nature and challenge those with power, and thus, securing external legitimacy to acquire resources is not a simple task (van Knippenberg, 2017). Work teams that generated creative ideas proactively are naturally positioned to have limitations in establishing resource stock compared with work teams who responsively generate creative ideas. However, work teams who proactively generated creative ideas could sustain their strong motivation throughout the translation process, which might help them to utilize limited resources effectively. Hence, going beyond the idea that proactive motivation is always helpful for team innovation, it may be imperative to understand how work teams with proactively or responsively generated innovative ideas engage in different team resourcing behaviors to translate ideas into implementation could be imperative. This study focuses on work teams with proactive versus responsive creativity (Sung et al., 2017; Unsworth, 2001).

Proactive versus responsive creativity. Creativity is a novel and useful idea (Amabile, 1983; Mumford & Gustafson, 1988) that has been treated as “a unitary concept, regardless of the type of idea, the reasons behind its production, or the starting point of the process” (Unsworth, 2001). This unitary approach limits the fine-grained analysis of the processes and factors involved in creativity and its subsequent implementation. The importance of such a conceptual sub-distinctions is spreading in organizational research, such as task-related conflict versus relationship-related conflict (Jehn, 1995) or OCB-I versus OCB-O (Podsakoff et al., 2000). In much the same way, creativity may also encompass types fundamentally different from one another. (Unsworth, 2001). Among the few efforts of going beyond homogeneity of creativity, some scholars examined different levels (mostly degrees of novelty) of creative contributions, such as radical versus incremental creativity (Gilson & Madjar, 2011). Scholars showed how different factors lead to different degrees of novelty, such as intrinsic motivation or problem-driven relating to radical versus extrinsic motivation or solution-driven relating to incremental creativity (Gilson & Madjar, 2011).

Recently, creativity has been examined in terms of proactive versus responsive creativity based on the driver or initiating force (Sung et al., 2017). Based on the self-determination theory, behaviors are initiated either through self-determined choice or due to external demands (Deci & Ryan, 1985). Self-determined behaviors are those that are autonomous as an expression of oneself, such as their own wish to be creative or a desire to solve a problem, whereas externally driven behaviors are those that are responsive or coerced by environmental forces, such as job descriptions or a request from seniors (Deci & Ryan, 1985). Thus, proactive creativity is the generation of creative ideas when one engages in creative endeavor with self-determined intentions, whereas responsive creativity refers to creative idea generation when one engages in a creative endeavor with externally driven intentions (Sung & Choi, 2017). Sung et al.

(2017) showed the validity of proactive versus responsive creativity constructs and argued further that job complexity affects the proactive and responsive creativity of employees via psychological empowerment and cognitive overload at the individual level.

The underlying motivations of teams who engage in the innovation process have been widely studied because employees and work teams need to “personally or collectively direct significant efforts to generate and implement new processes, procedures, or products” (Chen et al., 2013, pp.1018). Among the various motivational aspects, intrinsic (Ryan & Deci, 2000) versus extrinsic motivation has been examined considerably in relation to creativity and innovation at the individual (Amabile et al., 1996) and team levels (G. Chen et al., 2013). According to Ryan and Deci (2000), extrinsic motivation is the act of doing something because it leads to a separable outcome. Proactive creativity is similar to creativity based on intrinsic motivation because both emphasize autonomy. Intrinsic motivation enables team members to direct their energy, direction, and persistence in achieving their creative goals (Eccles & Wigfield, 2002). Goal-setting theory indicates that compared to assigned goals, self-chosen goals are more effective in one’s performance (Eccles & Wigfield, 2002; Locke & Latham, 1990; 2002; 2006), whereas self-determination theory (Ryan & Deci, 2000) states that personal choice operates as an inner resource for task engagement (Kark & Van Dijk, 2007). At the team level, scholars have shown how team context, such as an innovation-supportive climate, indirectly affects teams’ collective perception on their creative ability, thereby resulting in innovative behaviors (G. Chen et al., 2013; Hülshager et al., 2009). Thus, proactivity or intrinsic motivation has a pervasive positive influence on creativity and innovation.

However, more controversy lies in the effect of responsive creativity or creativity based on extrinsic motivation. Responsive creativity is similar to creativity based on

extrinsic motivation because both emphasize non-autonomy. Traditionally, extrinsic motivation is known to reduce intrinsic motivational states (Deci, 1971), which causes harm to creative outcomes. More recently, a study claimed that extrinsic motivation boosts intrinsic motivational states (Cameron & Pierce, 1994). Some studies also show that the degree of internalization of extrinsic motivation, such as one's agreement on the reasons to engage in the activity, could determine its effect on behaviors (Ryan & Connell, 1989). Although findings pertaining to extrinsic motivation are mixed, its effects on creativity or innovation have not been widely studied (Gong et al., 2017). One exception is Gong et al.'s (2017) work, which showed how intrinsic and extrinsic motivations coexist and synergize to strengthen personal creativity goals, thereby influencing the performance of innovative idea generation. However, the responsive generation of innovative ideas or the effect of extrinsic motivation on innovation implementation remains unknown.

When we consider the resources required for implementing innovation not merely as a static fixed entity but rather malleable objects that need to be shaped by work teams, the motivational driver of work teams to initiate the innovation process can affect their behavior toward securing resources required for innovation implementation. Employees need to direct significant efforts personally and collectively in generating and implementing new processes, procedures, or products (Baer, 2012; Klein & Sorra, 1996), making motivation as a critical driver in innovation implementation behaviors (G. Chen et al., 2013). Hence, an examination of how work teams that proactively or responsively generated ideas act on their resources to translate their ideas into an actual implementation is essential.

Proactive versus Responsive Creativity and Team Resourcing Behaviors

Internal resource utilization. The predominant perspective on resource is to treat it as a fixed entity and focus on its quantity of resources. However, some scholars

suggest resource could be defined as a malleable object that becomes useful only after someone acts on it (Dutton et al., 2006; Feldman, 2004; Feldman et al., 2012). An object is anything with innate qualities, and until individuals or teams act on those qualities, the object does not fulfill its potential as a resource. Feldman (2004) suggests that the typical view of resources hinders scholars' understanding of how resources are useful in organizations. This view of resource defines a resource as "anything that allows an actor to enact a schema" (Feldman 2004; Feldman et al., 2012). This definition suggests that things have innate qualities (e.g., rocks are heavy) and that these qualities give them potential as resources (e.g., rocks can be used as a building material). This view also emphasizes how teams act in shaping and generating the very resources necessary for facilitating creative actions (Sonenshein, 2014). For example, Sung and Choi (2012) showed how teams could engage separately in securing knowledge stock and utilizing knowledge with knowledge content from various resources. Previous literature on knowledge assumes that knowledge content provides raw materials for generating new knowledge (Cruz, Perez, & Fernandez Ramos, 2007; Mathieu & Schulze, 2006), whereas knowledge utilization enables teams to handle, share, and utilize knowledge, thereby activating the value of such knowledge (Liang, Moreland, & Argote, 1995; Moreland & Myaskovsky, 2000).

Resource utilization is critical in translating ideas into implementation because it is the only way that teams can access, explore, and exploit the resources they possess (Tiwana & Mclean, 2005). This utilization requires team members to exert significant efforts in stimulating proactive learning and activating higher-order forms of thinking (Feldman, 2004; Gino, Argote, Miron-Spektor, & Todorova, 2010). In addition, the effective use of resources involves the process of close collaboration among team members, which encourages the flow of resources within the team (Wilson, Goodman, & Cronin, 2007). Thus, when work teams generate innovative ideas proactively, the

underlying strong and proactive motivation of idea generation drives team members to engage in positive group functioning of proactive learning and increases the flow of resources with close cooperation. In turn, this increase enables resource utilization. On the contrary, when teams engage in responsive creativity, team members are less likely to share responsibility and ownership of creative ideas for their actualization, which may lead team members to feel controlled or constrained by external forces (Amabile, 1993). Hence, teams with responsive creativity will become hesitant to cooperate (S. K. Parker et al., 2010) and fail to act proactively and strive toward implementing ideas aligned with the goals, instead inviting clashes rather than coordinated resource utilization efforts (Hu & Liden, 2015). Thus, the current study hypothesizes that teams with proactive creativity will engage in facilitating resource utilization even with the constraints on the number of resources they acquired. By contrast, teams with responsive creativity will be limited in facilitating resource utilization even with the abundant resources they can acquire from external parties.

Hypothesis 1a: Work teams with proactive creativity are positively associated with internal resource utilization.

Hypothesis 1b: Work teams with responsive creativity are negatively associated with internal resource utilization.

External resource acquisition. Resources are traditionally known as a fixed entity and are known as tangible or intangible assets with some innate qualities that can be possessed or owned (Amit & Shoemaker, 1993; Barney, 1991). In keeping with this view, Eisenhardt and Martin (2000, p.1107) defined resource as “specific physical (e.g., specialized equipment, geographic location), human (e.g., expertise in some areas), and organizational assets that can be used to implement innovation.” Based on this view, organizational scholars on creativity and innovation studied how slack versus limited resources help achieve innovation (Amabile, 1996). Some scholars argue that more

abundant resources are a prerequisite because they provide individuals or teams with what they need for innovation and are a symbolic effect of showing an organization's commitment toward an innovation (Amabile, 1996). With slack resources, organizations can experiment with new strategies and innovative projects that might not be approved in a resource-constrained environment (Cohen & Levinthal, 1990; Nohria & Gulati, 1996). However, some scholars argue that more constrained resources are better for innovation because limited resources enhance task challenge (Ohly & Fritz, 2010) and generate urgency (Baker & Nelson, 2005). These scholars argue that too abundant resources can make individuals and teams become less selective and disciplined toward their projects (Staw, Sandelands, & Dutton, 1981).

The view of resource as a fixed entity for innovation indicates a critical difference in resource quantity that relies on whether teams can mobilize resources from outside to the team, such as support, collaboration, human, or capital (e.g., Alexander & van Knippenberg, 2014). Innovative behavior requires a multitude of resources, not all of which are available within a focal team (N. Anderson et al., 2014; Choi, 2002; Hammond et al., 2011; Marrone, 2010). Attracting financial support in implementation is a constant challenge and work teams are known to face deficiencies in knowledge and skills throughout the innovation implementation process (Leifer et al., 2000).

Furthermore, work teams typically acquire these deficient resources by tapping into their external network (Alexander & van Knippenberg, 2014). In securing external resources, work teams must promote their ideas actively beyond their team to build organizational support (Howell & Shea, 2006; Sandberg, 2007). This finding explains why some researchers argue that the main challenges to successful innovation implementation lie outside of the team, specifically in obtaining support from senior management and collaborations with other departments or external organizations (Leifer et al., 2000).

Although work teams that generated innovative ideas might lead to the promotion of their ideas to external parties (Grant & Ashford, 2008), securing the external resources could still be limited compared to work teams that seek resources to implement ideas based on the request of external parties. By nature, creative ideas are risky and challenge those with power, and thus, securing external legitimacy to acquire resources is not a simple task (van Knippenberg, 2017). The proactively generated ideas of the team might not be able to obtain sufficient internal resources as well. Particular time commitment is required to compel team members endorse the implementation of ideas (Agrawal, Catalini, Goldfarb, & Luo, 2018). However, if teams with proactive creativity fail to gain an adjustment on their routine work schedules to implement additional out-role innovative tasks, then they will not have enough internal human resources to implement on innovation.

On the contrary, when teams generate innovative ideas responsively following an external request or specific task requirements, teams may entertain higher possibilities of acquiring external resources because they already have the support or involvement of key external parties from the beginning (Kanter, 1988). Thus, external parties will be providing relevant resources for implementation with a clear rationale for the idea in question, such as rearranging current roles to engage in extra-roles for implementing innovation.

Hypothesis 2a: Work teams with proactive creativity are negatively associated with external resource acquisition.

Hypothesis 2b: Work teams with responsive creativity are positively associated with building external resource acquisition.

The Effect of Team Resourcing Behaviors on Innovation Implementation Effectiveness

Both external resource acquisition and internal resource utilization are critical in translating ideas into innovation implementation. The availability of resources does not

translate automatically to innovation implementation unless team members utilize those resources effectively (Basadur & Gelade, 2006). Likewise, acquiring external resource stock serves as a platform for translating ideas into implementation (Damanpour, Walker, & Avellaneda, 2009). When sufficient resource is provided, teams are in a better position to utilize diverse sets of resources. Although few studies have examined the interaction between resource acquisition and resource utilization explicitly, studies on sub-parts of resources, such as knowledge (Sung & Choi, 2018) and learning (Bontis et al., 2002), can provide inference regarding this concern. The two dimensions of team resourcing behavior complement each other and their coexistence allows synergistic interaction for innovation implementation. Thus, both team resourcing behaviors will be high and create synergistic interactions to increase innovation implementation when leadership complements work teams on their limited ability on a specific team resourcing behavior.

Hypothesis 3a: Internal resource utilization is positively associated with team innovation implementation effectiveness.

Hypothesis 3b: External resource acquisition is positively associated with team innovation implementation effectiveness.

Team Resourcing Behavior as a Mediating Mechanism Between Innovative Idea Generation and Implementation Outcome

In this study, team resourcing behavior includes building resource stock and facilitating resource utilization. Acquiring relevant resources, such as human, capital, or knowledge is critical in shaping innovative outputs (Amabile et al., 1996; Sonenshein, 2014). Sufficient resources for implementing new initiatives could free teams from constraints arising out of their new trials. Most of the previous research on resourcing and innovation emphasized the importance of this quantity of resources in implementing innovation (Sung & Choi, 2014; Van de Ven, 1986). However, ideas will not be

realized into implementation until action is taken to use these resources. Thus, internal resource utilization and external resource acquisition, respectively play important intervening roles in the relationship between proactive versus responsive creativity and innovation implementation.

Hypothesis 4a: Internal resource utilization mediates the relationship between proactive team creativity and team innovation implementation effectiveness.

Hypothesis 4b: External resource acquisition mediates the relationship between responsive team creativity and team innovation implementation effectiveness.

Leadership in Managing Internal and External Team Activities as Boundary Conditions

Team leadership is known to play a critical role in innovation implementation (Elkins & Keller, 2003; D. I. Jung, Chow, & Wu, 2003). Leading for innovation is unique from other forms of performance in terms of its disparity, demand, and unpredictability (F. Hunter, 2017). Considerable research has emphasized the distinct requirements for leadership in innovation, which might not be present for typical leader performance (Benner & Tushman, 2003; Bledow et al., 2009; March, 1991). The distinct leadership requirements for innovation arises from the requirement of paradoxical processes: exploration that helps team members pursue new ideas and the ability to adapt and exploitation that requires efficiency, alignment, and continuous improvement of processes and product (Rosing, Frese, & Bausch, 2011). Researchers argue that exploration is required in the early stage of innovative idea generation, whereas exploitation is required in the latter stage of innovation implementation (Rosing et al., 2011). According to a meta-analysis of leadership-innovation relationship, transformational or participative leadership behaviors stimulate idea generation in the idea generation stage, whereas transactional or directive leadership behaviors are more effective in the idea implementation stage (Amabile, Schatzel, Moneta, & Kramer, 2004; Rosing, Frese, & Bausch, 2011; Wang & Noe, 2010). A large

number of studies on leadership in innovation have focused on studying ambidextrous leadership shifting between exploration and exploitation as the situation demands (Benner & Tushman, 2003; Bledow et al., 2009; Rosing et al., 2011).

However, when innovative ideas are already generated by team members either proactively or responsively and the work teams are in the latter stage of innovation, such as championing ideas and securing resources for implementation, the critical aspects of team leadership should involve other aspects than exploitation versus exploration. Drawing on balancing the team's internal and external activities in innovation implementation discussed earlier, another important yet challenging role for leaders in innovation implementation is balancing the team's internal and external activities. After team leaders play a leading role in idea generation, they are required to manage internal team activities in the implementation of innovation, such as leading projects, sponsoring/coaching within the team, and motivating team members to realize their ideas (Elkins & Keller, 2003). At the same time, leaders in innovation implementation are required to go beyond the team boundaries and play a gatekeeping role by disseminating knowledge and coordinating outside of the team (Elkins & Keller, 2003). The importance of team leaders' internal and external activities in facilitating team effectiveness has been widely studied (Benoliel & Somech, 2014; Drach-Zahavy & Somech, 2010; Druskat & Wheeler, 2003), but its relationship with promoting innovation process has not been examined extensively. In this study, leadership in managing a team's internal and external activities, specifically *boundary-spanning and internal integrating leadership* will be considered as boundary conditions for the translation process.

Even with the importance of considering the leader's roles in both internal and external activities, previous research on leadership and innovation implementation has remained quite simple, that is, they emphasize the role of transformational leadership

(Rosing et al., 2011). Transformational leadership, which is defined as moving followers beyond their immediate self-interests through idealized influence, inspiration, intellectual stimulation, or individualized consideration (Bass, 1999), is traditionally known to motivate team members to engage more in innovation. However, it has also been critiqued by having a too broad conceptualization of leadership and a wide variance in its effective sizes on innovation (Rosing et al., 2011). Recently, complementary leadership behaviors have been emphasized to accommodate more complex relationships between innovation and leadership (Rosing et al., 2011). Given that the innovation process entails a complex and ambidextrous process of exploration and exploitation (J. Jansen & Van Den Bosch, 2006), an effective leadership style for innovation should complement the behaviors of followers by reducing and increasing variances in their behaviors (Rosing et al., 2011). Teams with proactive and responsive creativity have limitations on their team resourcing behaviors, thus, an effective leadership style for these work teams will be the one that can complement the teams' constraints. The core characteristics of effective team leadership should support the team's strong areas and improve the weak areas (Day, Gronn, & Salas, 2004). In the current study, given that work teams with different motivational drivers might engage in limited resourcing behaviors, team leadership that complements the work team's limited resourcing behavior and the specific mechanism of how leadership translates into team behaviors should be determined.

Role of boundary spanning leadership for teams with proactive creativity. Team boundary spanning leadership in innovation implementation refers to leadership that focuses on managing external activities to obtain resources and information to facilitate effective work team activities (Hirst & Mann, 2004). It is a highly task-focused leadership (Burke, Stagl, Salas, Pierce, & Kendall, 2006; Ceri-Booms, Curşeu, & Oerlemans, 2017; Pratoom, 2018) characterized by intervening aggressively on

initiating, organizing activities, defining roles, assigning tasks, and monitoring operations (Burke et al., 2006). Team boundary spanning leadership helps team members secure critical resources, manage information needs, and delineate and reinforce team boundaries so that team members are protected from external interference and can focus on the translation to innovation implementation (Faraj & Yan, 2009). Team leaders must exert upward and outward influences across boundaries to connect with several constituencies (Howell & Shea, 2006). Different behaviors could be included as a manifestation of team boundary spanning leadership (Yukl, 2012) and could be highly related to success in innovation implementation (Hargadon, 1998).

The typical behaviors of boundary spanning leadership include representing the team by lobbying for resources and assistance, promoting and defending the reputation of the team, and coordinating related activities (Yukl, 2012). These behaviors could be critical particularly for teams with proactive creativity because the most significant challenge they face in implementation is gaining external legitimacy for their creative ideas to acquire relevant resources. Another behavior that pertains to boundary spanning leadership is networking by building and maintaining favorable relationships with peers, superiors, and outsiders who can provide information, resources, and political support (Ibarra & Hunter, 2007). Attending meetings, participating in professional conferences, and joining relevant associations are good examples. Teams with proactive creativity could also benefit from the leader's networking behavior because when the leader has built good networking with stakeholders, the team will be situated in a more favorable stance when seeking resources. Lastly, boundary spanning leadership includes external monitoring of analyzed information on relevant events and changes in the external environment, as well as identifying threats and opportunities for the work team (Yukl, 2012). This kind of leadership could also give teams with proactive creativity

more advantage because the pre-identification of threats and opportunities for their ideas could help them build a smarter strategy in building relevant external resource stock.

Thus, task-focused boundary spanning leadership will help teams become well connected with external stakeholders and more importantly help them gain legitimacy for the ideas from external stakeholders. With the potential favorable support from external parties from boundary spanning leadership, teams will be able to acquire resources required for implementation. With sufficient resource acquisition through boundary-spanning leadership, teams with proactive creativity can secure both internal resource utilization and external resource acquisition, resulting in high potential for successful innovation implementation effectiveness. Hence, I propose that boundary spanning leadership moderates the relationship between teams with proactive creativity and external resource acquisition, such that when boundary spanning leadership is high, the relationship becomes stronger, resulting in higher innovation implementation effectiveness.

Hypothesis 5a: Boundary-spanning leadership moderates the relationship between work teams with proactive creativity on team innovation implementation effectiveness, such that when boundary-spanning leadership is high, work teams with proactive creativity will have a positive relationship with external resource acquisition.

Hypothesis 5b: Boundary-spanning leadership moderates the mediated relationship between work teams with proactive creativity on team innovation implementation effectiveness via external resource acquisition, such that when boundary-spanning leadership is high, work teams with proactive creativity will have a positive relationship on team innovation implementation effectiveness via external resource acquisition.

Role of internal integrating leadership for teams with responsive creativity.

Team leaders need to integrate teams internally to engage internal team members who have started the innovation process responsively from the beginning. When going through challenging and stressful processes, such as conducting innovation implementation responsively, team leaders need to motivate team members, increase their efficacy, set the vision, and help members to identify personally and socially with the team's vision and goals, and provide them with emotional support (House, 1981; Yukl, 2002). This internal integrating leadership is related to people-oriented leadership that deals with team interaction and/or development (Pratoom, 2018). It needs to be sensitive to team members' needs and encourage team members to engage in tasks and emphasize the good quality of relationships, such as open interactions based on team trust among team members (Banai & Reisel, 2007; Choi, 2004; J. P. Jansen, Kostopoulos, Mihalache, & Papalexandris, 2016; Rafferty & Griffin, 2010).

Internal integrating leadership could be influential for work teams with responsive creativity by playing a complementary role within the internal team activities (Elkins & Keller, 2003). One of the most salient behaviors of internal integrating leadership is the provision of emotional support to team members (Rafferty & Griffin, 2010). Specifically, internal integrating leaders provide sympathy by expressing concern for their team members and showing evidence of liking and listening to team members who are stressed out due to compulsory engagement in the innovation process from the request of external stakeholders (Rafferty & Griffin, 2010). Internal integrating leadership is especially helpful for those experiencing stress (Rafferty & Griffin, 2010) by providing emotional support and personal care to de-motivated and stressed teams with responsive creativity, which could be contribute extremely in boosting their motivation.

Another distinct behavior of internal integrating leadership is encouraging good quality team interactions, such as seeking ideas from team members and providing feedback to facilitate team performance (Choi, 2004; J. P. Jansen et al., 2016). When teams with responsive creativity are situated to translate their ideas into implementation, their limited motivation around obligatory extra-role tasks could impede team interactions (Drach-Zahavy & Somech, 2001). When internal integrating leaders focus on emphasizing the value of implementing the ideas at hand, encouraging open interactions among team members, building team trust, and boosting team morale, they could help the team amplify a collaborative working context, which is critical in utilizing resources effectively within the team.

Finally, internal integrating leadership includes the behaviors of clarifying responsibilities among team members (J. P. Jansen et al., 2016), assisting in decision making, and providing realistic sets of plans to guide actions (Banai & Reisel, 2007). With specific actions around the internal coordination of team activities, internal integrating leaders provide practical suggestions that enable de-motivated teams to cooperate effectively. Considering these characteristics of internal integrating leadership, this study argues that internal integrating leadership could enable work teams with responsive creativity to engage in facilitating resource utilization.

Previous research on internal integrating leadership shows how internal integrating leaders have a critical effect on the formation of the attitudes and team efficacy of positive followers (House et al., 2004), which in turn have a positive influence on team performance (Bandura, 1986). Some researchers showed how internal integrating leadership enabled increasing commitment and motivation of team members to use their cognitive skills to their full capacity (Mumford, Scott, Gaddis, & Strange, 2002; Rhoades & Eisenberger, 2002). Thus, internal integrating leadership could provide personal emotional caring to team members (Rafferty & Griffin, 2006) and

encourage their commitment and motivation toward translating ideas into implementation by reminding the teams to value their ideas and align their task orientations (Jansen et al., 2016). By internalizing the extrinsic motivation, work teams with responsive creativity could increase its ability to facilitate internal resource utilization, which in turn will increase innovation implementation effectiveness.

Hypothesis 6a: Internal integrating leadership moderates the relationship between work teams with responsive creativity on team innovation implementation effectiveness, such that when internal integrating leadership is high, work teams with responsive creativity will have a positive relationship with internal resource utilization.

Hypothesis 6b: Internal integrating leadership moderates the mediated relationship between work teams with responsive creativity on team innovation implementation effectiveness via internal resource utilization, such that when internal integrating leadership is high, work teams with responsive creativity will have a positive relationship with team innovation implementation effectiveness via internal resource utilization.

Internal and External Elaboration as Underlying Mechanism Between Creativity and Team Resourcing Behaviors

This study examines further why work teams with different motivational drivers engage in distinct team resourcing behaviors through investigating idea generation in detail and breaking down the idea generation phase into the pure idea generation stage and the idea elaboration stage. The idea elaboration stage is “the process of systematically evaluating a novel idea’s potential and further clarifying and developing the idea” (Perry-Smith & Mannucci, 2017; p.56). After a core idea is generated and before ideas are actually implemented, teams often engage in a series of activities to clarify the initial ideas and reduce any initial resistance to the idea. In this phase, work

teams need support in two forms, inside and outside their team. First, within the team, they need team members' motivational and cognitive support to push the idea further constantly and not abandon it (Madjar, Oldham, & Pratt, 2002) because many innovative ideas initially look like bad ideas, only to reveal their full potential after the elaboration phase (Catmull & Wallace, 2014; Harvey, Peterson, & Anand, 2014). Team members need to be active cognitively in elaborating ideas as well as have strong motivation to pursue their ideas with strong ownership of their ideas. Thus, for elaboration within the team, team psychological ownership and idea reflexivity will be

Second, teams need to engage in external parties outside of their team boundary during the idea elaboration phase. Teams require constructive feedback and suggestions to help them identify ways to improve and expand their ideas (Harrison & Rouse, 2015). Particularly, when innovative ideas are unique and potentially discomfiting, teams need to balance some uncertainty and risk with the degree of idea radicalness (Criscuolo, Haas, Wal, & Salter, 2018; Staw, 1990). Engaging external parties early on to obtain constructive feedback on reducing the uncertainty of ideas is critical at this stage. Thus, for elaboration outside the team, endorsement from constituents and social reflexivity should be considered.

Team psychological ownership for team elaboration. The critical difference between work teams with proactive versus responsive creativity is the team's emergent states of team psychological ownership. Team psychological ownership refers to "the collectively held sense (feeling) that this target of ownership (or a piece of that target) is collectively ours." (J. L. Pierce & Jussila, 2010). The target for team psychological ownership is usually to one's job, the organization, or the team's creative ideas because individuals can feel ownership toward their actual work (Beaglehole, 1932), the products they create, and specific issues within their organization (Pratt & Dutton, 2000). Team psychological ownership has some conceptual overlap with group identity,

but psychological ownership differs from group identity because it is aroused unintentionally (i.e., not goal-driven) as an emergent group-level phenomenon that has been constructed socially through group processes (Gibson & Earley, 2007).

The core characteristics of team psychological ownership are its cognitive and affective aspects. It has a *cognitive* aspect because it is a shared mental model developed based on cognitive interdependence (Wegner, Giuliano, & Hertel, 1985). Furthermore, it has an *affective* aspect because it emerged from frequent and consistent experience and the relationship with a given object (J. L. Pierce, Kostova, & Dirks, 2001; 2003) that causes members to have concern and take responsibility for and develop attachments (Dipboye, 1977; Korman, 1970). Team psychological ownership is often an outcome of an intimate relationship because team members invest time, energy, and aspects of themselves into the object (Van Dyne & Pierce, 2004).

Considering the cognitive and affective aspects of team psychological ownership, teams with proactive and responsive creativity could be expected to have different levels of team psychological ownership. While both teams might have spent energy, time, efforts, and attention on complex and non-routine work, those with proactive creativity might feel more affective attachment toward an idea because they initiated the endeavor voluntarily, perhaps with a desperate need to solve the problems at hand. Team members know the ideas the best, which will lead them to have more control over the idea. By contrast, teams with responsive creativity initiate creating ideas because of external requests or pressure, thereby preventing them from having a robust affective attachment toward the idea. Moreover, given that the origins of the idea started from external parties, they will not feel that they have full control over the idea they generated. Hence, teams with proactive creativity will have higher team psychological ownership than teams with responsive creativity.

Previous research on the positive influence of team psychological ownership on various organizational attitudes and performances has explained how teams with team psychological ownership would behave, particularly on team resourcing behavior. Many studies have revealed that team members with a sense of team psychological ownership over their jobs or organizations experience more positive work-related attitudes, such as satisfaction and commitment (Pierce et al., 2001). Given that resource utilization requires significant cognitive efforts to recombine and generate things from limited sources (Feldman & Worline, 2012), having positive work-related attitudes and commitment can contribute to resource utilization. Team psychological ownership also enables team members to protect, care, make sacrifices, and contribute more in executing extra-role performance (Parker, Wall, & Jackson, 1997; Vandewalle, Van Dyne, & Kostova, 1995; Van Dyne & Pierce, 2004; Wagner, Parker, & Christiansen, 2003). Thus, team members might have a positive attitude toward executing their extra-roles in implementing ideas and make sacrifices and commitment toward it with heightened positive, functioning psychological ownership from proactively generated ideas.

Teams that generated ideas proactively will have higher team psychological ownership of their ideas. When positive group functioning from team psychological ownership is activated, it will lead teams to have more productive resource utilization. On the contrary, teams that generated ideas responsively will have lower team psychological ownership of their ideas, resulting in less effective resource utilization within the team. Therefore, the relationship between work teams with proactive versus responsive creativity and resource utilization is mediated by positive group functioning of team psychological ownership. Motivational states from the initiation of creative ideas transcend the difference in affective and cognitive status characterized by team psychological ownership, thereby resulting in distinct team behaviors. This outcome

strengthens the notion that a team's motivation, cognition, and affection influence one another and interact with social contextual factors to affect the team's innovation performance (Paulus & Dzindolet, 2008).

Hypothesis 7a: Team psychological ownership mediates the positive relationship between work teams with proactive creativity and internal resource utilization.

Hypothesis 7b: Team psychological ownership mediates the negative relationship between work teams with responsive creativity and internal resource utilization.

Constituent endorsement for social elaboration. When teams elaborate ideas to prepare for the implementation, obtaining approval to push the idea forward is critical (Perry-Smith & Mannucci, 2017; Staw, 1990). In modern organizations, work teams are intertwined with external parties, such as other teams in the organization, customers, or other companies in the value chain, making it inevitable to work closely to realize innovation implementation. Teams often put the idea in front of constituents outside the team boundary, articulating a compelling argument and underlining the positive effects that an idea could have on the organization (Howell & Higgins, 1990). Once constituents have accepted these efforts, the idea receives the green light to be further developed and, ultimately, implemented (Frost & Egri, 1991; Rothwell et al., 1974). When constituents do not accept the idea or are not endorsed much to provide support, then the ideas could be abandoned. Thus, receiving constituents' endorsement during the elaboration phase is critical, particularly in securing resource stock, and eventually implementing the innovation successfully.

When teams generated ideas proactively rather than responsively following the request of constituents, teams will be faced with inherent drawbacks on gaining sufficient constituent endorsement. Initially, teams with proactive ideas will start by contacting constituents with an aggressive attitude to achieve support. However,

because constituents challenge the legitimacy of their ideas and/or try to modify the ideas to serve the needs of constituents best, fear of infringement into the team's ideas could occur among team members, which in turn would have a negative effect of motivating teams to exert efforts in acquiring constituent endorsement.

On the contrary, when teams generated ideas responsively, they will seek resource stock from constituents without any fear or threats. Work teams with responsive creativity will be less sensitive to the request to modify their ideas, given that the ideas are born from a request by external constituents. This factor will help work teams with responsive creativity to engage in more social elaboration by achieving constituent endorsement, which in turn will place them at an advantageous position in securing external stock.

Hypothesis 8a: Constituent endorsement mediates the negative relationship between work teams with proactive creativity and external resource acquisition.

Hypothesis 8b: Constituent endorsement mediates the positive relationship between work teams with responsive creativity and external resource acquisition.

Idea reflexivity for team elaboration. During the idea elaboration phase, teams reflect on their initial concept of ideas, on the environment where the ideas will be implemented, and the plan to adopt these aspects and make changes accordingly (West, 2000). Previous research called this *reflexivity* has shown that as a core group process, reflexivity is highly associated with team effectiveness (West, 2000; Schippers et al., 2007). Team reflexivity is defined originally as the extent to which group members overtly reflect upon and communicate on the group's objectives, strategies (e.g., decision-making), and processes (e.g., communication), and adapt them to current or anticipated circumstances (West, 2000). It includes "behaviors such as questioning,

planning, exploratory learning, analysis, diverse exploration, making use of knowledge explicitly, planfulness, learning at a meta-level, reviewing past events with self-awareness, and coming to terms over time with a new awareness.” (West, 2000, p.4). When adopting team reflexivity construct to idea implementation context, having reflexivity over innovative ideas could be critical in successful innovation implementation. After a core idea has been generated, work teams need to refine the idea by checking for inconsistencies and making improvements. Creative ideas are often unique and potentially entails uncertainty and work teams must refine these ideas into a more implementable way while keeping its novel aspects. Thus, the ability for teams to reflect on their ideas becomes critical during the idea elaboration phase.

When work teams generated ideas proactively, they might be in a better position in terms of idea reflexivity. Teams that come up with ideas proactively indicate the existence of more individuals in the team who are likely to “speak out” their ideas going forward (Schippers et al., 2007). Moreover, a team might be situated with more a psychologically safe environment in generating innovative ideas (Edmondson, 1999), which helps teams become more proactive in reflecting on their ideas. Thus, work teams with proactive creativity will highly likely to be associated with idea reflexivity. Once ideas are more reflected upon during the idea elaboration phase, teams will be able to plan and coordinate more readily the potential complexity in implementing ideas (Schippers et al., 2015; West, 2000), thereby resulting in higher resource utilization during innovation implementation. In fact, much of the previous research showed a strong positive relationship between reflexivity and innovation implementation. However, when teams generated ideas responsively from the beginning, then teams will lack the strong desire to push forward the refining of the idea, resulting in a low level on idea reflexivity and ultimately in lower levels of internal resource utilization.

Hypothesis 9a: Idea reflexivity mediates the positive relationship between work teams with proactive creativity and internal resource utilization.

Hypothesis 9b: Idea reflexivity mediates the negative relationship between work teams with responsive creativity and internal resource utilization.

Social reflexivity for social elaboration. Given that innovation implementation is intertwined with various constituents, it is also vital for work teams to reflect on the social relationships in elaborating their ideas. Social reflexivity refers to the extent to which team members overtly reflect upon the relationships with constituents, such as the degree of accepting feedback from constituents, avoiding conflicts with constituents, and communicating within the team regarding constituent management, including being supportive to team members when facing challenges with managing constituents and helping in resolving arguments with constituents (Carter & West, 1998; Schippers et al., 2007).

When teams generated ideas responsively rather than proactively, they will be more likely to achieve social reflexivity because they will be more willing to accept feedback from constituents and avoid conflicts by following their requests from the beginning. This positive attitude toward constituents will help teams with responsive creativity obtain external resources required for implementing ideas. When teams generated ideas proactively, then they to exert more efforts on social reflexivity to obtain constituent endorsement. However, push-back from constituents is inevitable because innovative ideas are inherently risky and challenge the status quo of constituents. When work teams with proactive creativity face constant push-back from constituents with feedback requesting changes on their ideas, avoiding conflicts with constituents becomes complicated, resulting in a lower level of social reflexivity. This low social reflexivity could be the core source for work teams with proactive creativity to achieve a low level of external resource stock for innovation implementation.

Hypothesis 10a: Social reflexivity mediates the negative relationship between work teams with proactive creativity and external resource acquisition.

Hypothesis 10b: Social reflexivity mediates the positive relationship between work teams with responsive creativity and external resource acquisition.

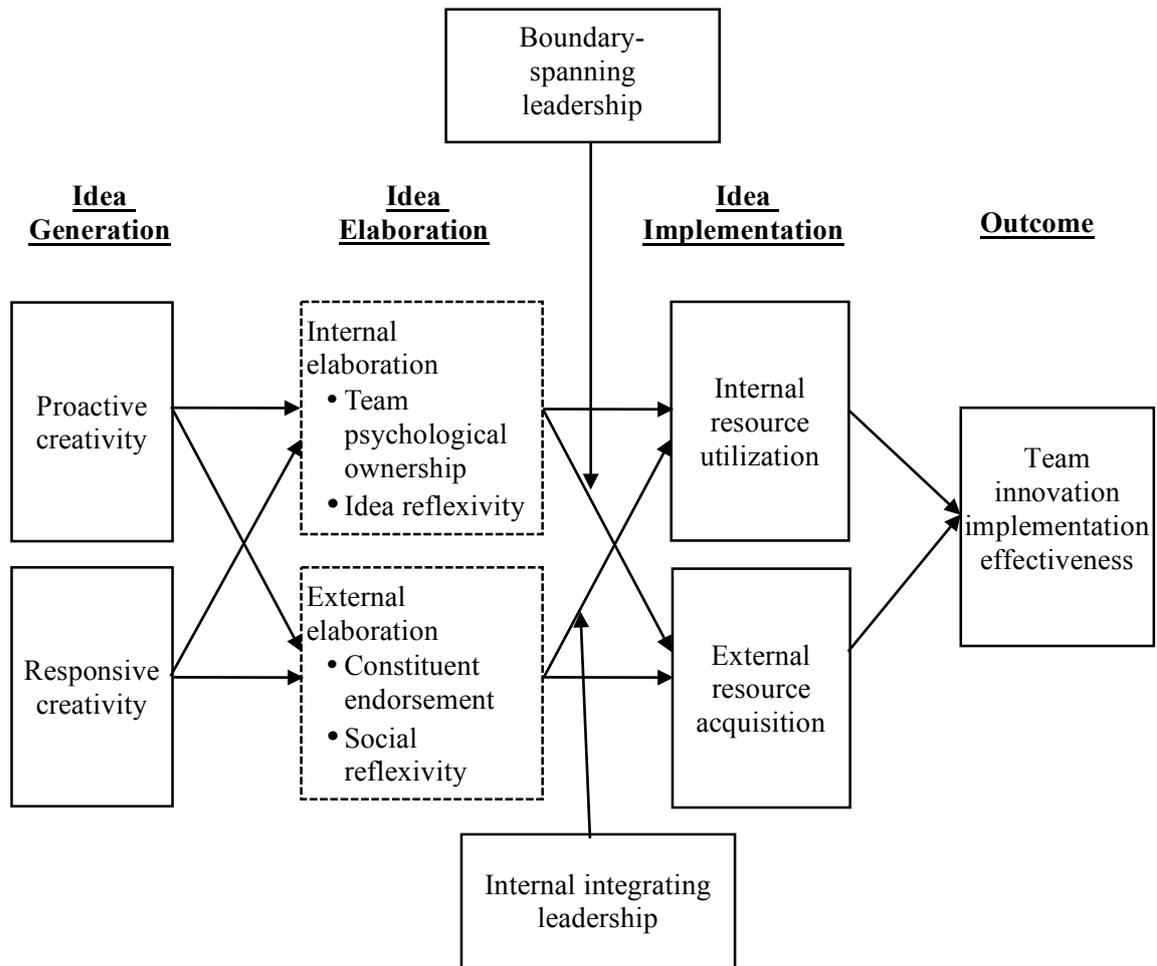


Figure 2. Conceptual Framework for Study 2

Method

Sample

The hypotheses were tested empirically by first collecting data from work teams in organizations in South Korea. The target companies were medium-to-large companies covering various sectors, including telecommunication, financial services, manufacturing, consumer goods, and Internet-based sectors. I intentionally included medium-to-large companies and excluded start-up companies because work teams in medium-to-large companies generate innovative ideas with diverse motivational backgrounds, while start-up companies could be driven mostly by proactive motivations by nature. In addition, work teams in medium-to-large companies work interdependently with external parties within the organization, while start-up companies could be dependent mostly on the external parties outside of the organizations, which could create different dynamics. Thus, to control for potential variations occurring due to company size, I focused on medium-to-large companies for the empirical test.

Initially, I distributed surveys to a total of 112 work teams from 17 different companies. Among the 112 teams contacted, 99 team leaders and 356 team members (on average 3.6 team members per team) returned completed surveys (response rate=88%). After excluding teams with dishonest answers (2 teams), missing responses (3 teams), and a small sample of team members (4 teams), the final analysis sample included 91 work teams (91 team leaders and 315 team members). This sample was composed of teams from various industries, such as telecommunication (14.3%), financial services (37.3%), manufacturing (24.2%), consumer goods (8.8%), and internet-based (15.4%). The sample includes various functions of work teams, such as strategy (24.7%), sales (20.2%), management/planning (15.7%), operation (12.4%), R&D (10.1%), HR (9.0%), and marketing (7.9%). On average, 3.46 team members per team participated in the survey. The actual team size was 6.2 team members (SD =2.57)

on average. Hence, our sample covers on average 61% of total team members per team (SD=17.4%). All the demographic characteristics of the sample are shown in Table 5.

Table 5

Demographic distribution of survey samples (Study 2)

Classification	%	Classification	
Industry		Team leader characteristics	
Telecommunication	14.3	Team tenure	3.60 years (SD= 3.71)
Financial service	37.3	Age	46.93 years (SD=3.80)
Manufacturing	24.2	Gender (Male%)	89.01 %
Consumer goods	8.8	Education	
Internet-based	15.4	≥graduate school (%)	47.25 %
Team function		≥college school(%)	52.75%
Strategy	24.7	Team member characteristics	
Sales	20.2	Team tenure	3.38 years (SD=4.65)
Management/planning	15.7	Age	35.65 years (SD=7.25)
Operation	12.4	Gender (Male %)	81.85%
R&D	10.1	Education	
HR	9.0	≥graduate school (%)	22.93%
Marketing	7.9	≥college school(%)	66.56%
Team size		≥high school (%)	10.51%
Below 4	15.4		
5	38.4		
6	16.5		
7	13.2		
Above 8	16.5		

Data Collection Procedure

Given that the current model is at the team level, data were collected on a team basis. One team includes a team leader and at least two to three team members. Each work team was contacted in various ways. The 13 teams in telecommunication, 14 teams in financial services, 8 teams in consumer goods, 7 teams in Internet-based, and 1

team in manufacturing were first contacted through representative middle managers or team members who distributed surveys to the work teams in their organizations. The 20 teams in financial services, 21 teams in manufacturing, and 7 teams in internet-based companies were first contacted through top executives who distributed surveys to work teams in their organizations. In particular, online surveys were distributed to 21 teams in manufacturing because they were located in different cities across South Korea. This difference in survey collection method was considered in the data analysis.

The survey was administered in the following way. First, team leaders were asked to identify a recent, particular innovation that was implemented or attempted to be implemented in the past six months before the time of the data collection. Thereafter, they will be asked to provide the following information on the innovation: (a) initiating factors (Sung, Cho, & Choi, 2011): external parties (top management initiated adoption, environmental-initiated adoption) and team members (team members initiated adoption); (b) a brief explanation of the innovation; (c) innovation type (i.e., work process, product/service, and IT/system, etc.), and (d) duration of the innovation implementation. The sample of innovations selected by team leaders is listed in Table 6.

Once the innovation is defined, team leaders distributed surveys to at least three to seven team members to ensure the aggregating procedures from the individual responses to the team level. Specifically, team leaders were requested to write the specific innovation (s)he had in mind on the envelope of the surveys distributed to team members. Subsequently, team members were asked to answer questions on the survey while thinking of the innovation that the team leaders identified. We asked team members to write down the name of innovation team leaders identified in the envelope twice throughout the survey to ensure that all team members completed the survey on the same innovation that the team leaders identified. Team members answered the degree of proactive versus responsive motivation in generating ideas, how they evaluate

Table 6

Examples of innovation types surveyed (Study 2)

Industry	Innovation type	Innovation name
Telecom	Product/Service	Life style products planning per segment, BM innovation for security business, etc.
	Work process	New business development process bottom-up building system, etc.
	Others	Alliance with a global big player, JV establishment, etc.
Consumer goods	Product/Service	Piloting cosmetics based on customer skin diagnosis, new product brand naming, etc.
	Work process	Retail marketing solution system based on data analysis, External alliance system for performance marketing, Budget control process upgrade, etc.
	IT/System	Building dining reservations system, etc.
	Others	Establishing flat communication culture, etc.
Financial service	Product/Service	New product development, channel innovation, sales system innovation, etc.
	Work process	Strategic alliance process development, budget spending process upgrade, establishing guideline for new products, etc.
	IT/system Others	IFRS9 accounting system, document sharing system, etc. 15 minute morning talk for increasing team communication
Manufacturing	Product/Service	New market entry strategy, non-efficient system upgrade, decreasing the cost by diversifying materials, targeting Chinese market for xx product, etc.
	Work process	Efficient process for warehouse management, process upgrade for 52 hour working time, etc.
	Others	Adopting government supported work
Internet-based	Product/Service	Customer segment establishment based on big data analysis, increasing DB marketing efficiency, diversifying ad channels, etc.
	Work process	Co-working process with alliancing companies, consulting for data analysis, etc.
	Others	Agile culture, increasing corporate value, etc.

their team and social elaboration on their ideas, their team resourcing behaviors, and the assessment of their team leader's leadership. Each team member's survey was sealed immediately after the completion of the survey to obtain sincere responses on the team leader's leadership. Team leaders responded to the degree of innovation implementation and its effectiveness, while team members responded to the degree of proactive and responsive creativity, team resourcing behavior, team/social endorsement, and leadership to overcome the common method bias (Podsakoff et al., 2003).

Measures

All variables were assessed using multi-item measures rated on a five-point Likert scale (1 = "strongly disagree" and 5 = "strongly agree"). Study variables measured by team members were aggregated with acceptable levels of internal consistency, within-group agreement (r_{wg}), and intra-class correlations that reflect between-group variations in individual ratings (G. Chen, Bliese, & Mathieu, 2005).

Proactive creativity and responsive creativity. I used the proactive and responsive creativity scaled developed by Sung et al. (2017) to assess whether participating teams generated the specific creative ideas proactively or responsively. The original scale was used in the context of team leaders assessing individual team members' two forms of creativity (Sung et al., 2017). In this study, I shifted the referent of scale items from "this person" to "my team members" and customized the context of idea generation by specifying the innovation. Team members reported their team's proactive creativity by responding to a five-item scale ($\alpha = .91$, $r_{wg(5)} = .92$, $ICC(1) = .55$, $ICC(2) = .83$, $F = 6.05$, $p < .001$, e.g., "My team members suggested new ways of performing this innovation in a proactive manner."). Team's responsive creativity was also reported by team members by responding to a five-item scale ($\alpha = .83$, $r_{wg(5)} = .91$, $ICC(1) = .91$, $ICC(2) = .97$, $F = 4.40$, $p < .001$, e.g., "My team members come up with creative solutions for this innovation only with specific instruction.")

Internal resource utilization. I adapted from the informational utilization ability measure of Akgun, Dayan, and di Benedetto (2008) to measure internal resource utilization in implementing innovation. Knowledge was changed into other resources, specifically, financial support, human capital, knowledge, and legitimacy, to measure overall resource utilization behaviors in an innovation implementation context. Items include (a) “Team members’ task-related **resources** are utilized fully in translating ideas into implementation,” (b) “**Various resources** acquired by our team members promote learning in our team,” and (c) “Team members’ **resources** are utilized effectively in solving problems we encounter.” Team members reported by responding to a three-item scale ($\alpha = .89$, $r_{wg(3)} = .91$, $ICC(1) = .37$, $ICC(2) = .71$, $F = 3.47$, $p < .001$).

External resource acquisition. This study adopted Spreitzer’s (1996) three-item *access to resources* measures and customized it to external resource acquisition specific for translating ideas into implementation. The customized version of three items from Spreitzer (1996) are as follows: (a) “My team was able to acquire sufficient resources required to implement innovative ideas from external parties”, (b) “My team was able to acquire external resources on timely manner”, and (c) “My team had an access to external resources needed for implementing this idea.” Resources were specified as “financial support, human resources, knowledge, and legitimacy.” Team members reported building external resource stock by responding to a three-item scale ($\alpha = .95$, $r_{wg(3)} = .86$, $ICC(1) = .32$, $ICC(2) = .66$, $F = 2.72$, $p < .001$).

Boundary spanning leadership. Items from Faraj & Yan's (2009) boundary spanning measures were adopted and customized to measure boundary spanning leadership. Unfortunately, most of the empirical papers regarding boundary spanning leadership were based on a qualitative study and lack validated measures for the survey analysis (Allen & O’Neill, 2015; Ancona & Caldwell, 1992; Katz & Tushman, 1981). Faraj and Yan’s (2009) measures on boundary spanning consisted of to what extent the

team encourages team members to span the boundary, rather than measuring directly the team's boundary-spanning behaviors. Thus, I adopted Faraj and Yan's (2009) measures by shifting the referent from "the team" to "team leader" and specified the context of "when implementing this idea". Sample items are "Our team leader (a) solicits information and resources from external parties to implement our ideas, (b) tries to influence important external actors to implement this idea, (c) makes use of his/her relationships with external parties on behalf of the team for implementing this idea, and (d) brings external information and resources critical for implementing this idea beyond what comes through official channels." Team members reported boundary spanning leadership using a four-item scale ($\alpha = .91$, $r_{wg(4)} = .90$, $ICC(1) = .40$, $ICC(2) = .74$, $F = 3.78$, $p < .001$).

Internal integrating leadership. Three items of sensitivity to members needs from Conger-Kanungo Scale (CKS) of Charismatic Leadership (Conger et al., 2010) were adopted to measure internal integrating leadership. The original CKS scale consists of 20 items in five areas, and three items that focus on caring for internal team members were selected to measure internal integrating leadership. Sample items include "In implementing this innovative idea, my team leader (a) shows sensitivity to the needs and feelings of the other members in the organization", (b) "influences others by developing mutual liking and respect", (c) "often expresses personal concern for the needs and feelings of other members in the organization." Team members reported internal integrating leadership by responding to a three-item scale ($\alpha = .85$, $r_{wg(3)} = .89$, $ICC(1) = .21$, $ICC(2) = .52$, $F = 2.10$, $p < .001$).

Team psychological ownership. I constructed team psychological ownership by adopting an existing measure (Avey, Avolio, Crossley, & Luthans, 2009) p. The original measures that Avey et al. (2009) developed have 20 items in total, including 16 items of functional psychological ownership (self-efficacy, accountability, sense of

belongingness, and self-identity; three items each) and 4 items for territorial psychological ownership (feelings of territoriality). Given that the original 16 items of functional psychological ownership showed high correlations within the four sub-dimensions, I chose one representative item (by choosing the items with the highest factor loadings) for each of the four sub-areas (self-efficacy, accountability, sense of belongingness, and self-identity) of functional psychological ownership. Given that all the original items were at the individual level and the target of ownership was generic, the referent of scale items was shifted from “I” to “my team members”, the target of ownership to “my team’s creative idea” was specified, and the context was customized to “idea elaboration stage”. Sample items for team psychological ownership include “When elaborating this idea internally with my team members, my team members... (a) are confident that we can make a positive difference in this team with our creative idea, (b) feel a sense of ownership toward this idea, (c) feel the success of this idea being implemented is our success, and (d) would not hesitate to tell others if we saw something that is done wrong with our idea.” Team members reported team psychological ownership by responding to a four-item scale ($\alpha = .87$, $r_{wg(3)} = .93$, $ICC(1) = .44$, $ICC(2) = .77$, $F = 4.25$, $p < .001$).

Constituent endorsement. I adopted four items from Spreitzer’s (1996) social structural characteristics of empowerment measures to evaluate the endorsement of external constituents on implementing innovative ideas. The original items consisted of 18-items on five different sub-areas of empowerment, including sociopolitical support, work climate, role ambiguity, access to resources, and access to information (Spreitzer, 1996). I used four items of sociopolitical support from Spreitzer’s (1996) and customized them into the idea elaboration context to capture the endorsement of external parties on implementing ideas. Sample items include “When elaborating this idea with external relevant parties, my team members ... (a) had the external support we

need to elaborate our ideas, (b) had a collaborative external social network for elaborating our ideas, (c) acquired additional resources from external parties, and (d) had emotional support from external parties to pursue the idea in uncertainty.” The constituent endorsement was reported by team members on a four-item scale ($\alpha = .83, r_{wg(3)} = .90, ICC(1) = .34, ICC(2) = .69, F = 3.20, p < .001$).

Idea reflexivity and social reflexivity. I adopted reflexivity measures developed by Carter & West (1998) to measure internal idea reflexivity and external social reflexivity. They developed team reflexivity measures with four sub-areas, namely, evaluation/learning, discussing processes, adaptation, and feedback-seeking behavior. Among these four sub-areas, evaluation/learning focused on reflexivity on the team’s internal work itself, which could be customized into reflexivity on the team’s internal elaboration of their ideas. Feedback-seeking behavior was focused mostly on obtaining support and feedback on external parties, which could be customized into reflexivity on external support by constituents. Thus, the top four items with highest factor-loading for evaluation/learning reflexivity were used and customized into internal idea elaboration context and the feedback-seeking behavior measures were used and customized into external social elaboration context. Internal idea reflexivity measures are “When elaborating ideas within the team, my team members... (a) often modify our ideas in the light of changing circumstances, (b) regularly discuss whether the team is working effectively together in elaborating ideas, (c) often review our approach to elaborating ideas, and (d) change the concept of ideas if necessary.” Team members reported on internal idea reflexivity and were appropriate to be aggregated to the team level ($\alpha = .90, r_{wg(3)} = .93, ICC(1) = .52, ICC(2) = .82, F = 5.47, p < .001$). External social reflexivity measures include “When elaborating ideas with external relevant parties, my team members... (a) pull together as a team to accept external feedback, (b) do not engage in conflicts with external parties in this team, (c) are supportive when

managing external parties are stressful, and (d) are fast to resolve arguments with external parties in this team”. Team members reported on external social reflexivity and was also appropriate to be aggregated to the team level ($\alpha = .87$, $r_{wg(3)} = .91$, $ICC(1) = .42$, $ICC(2) = .75$, $F = 3.66$, $p < .001$).

Team innovation implementation effectiveness. I evaluate team innovation implementation effectiveness by asking team leaders to assess their own team’s effectiveness in implementing the creative idea they identified. I used Klein et al.’s (2001) innovation implementation effectiveness measure and changed the referent from “this employee” to “my team.” Team leaders measured their team’s success in implementing their ideas by responding to a four-item scale. The items include “By implementing our own ideas... (a) my team’s quality of product, service, or work process is improved, (b) my team’s morale is enhanced, (c) my team’s performance is improved, and (d) my team’s productivity is enhanced.” Team leaders reported team innovation implementation effectiveness using a four-item measure ($\alpha = .78$).

Control variables. Various control variables that might affect any of the differences in our variables of interest will be included. First, given that the sample of study includes various types of teams across different industries and functions, controlling for any potential causes coming from differences in team characteristics is important. Thus, industry and team size were controlled as representative team characteristics. The team’s main function identified by team leaders (e.g., planning, marketing, sales, operations, etc.) exhibited high correlations with industry and thus, was excluded. Industry was included in the analysis as a nominal variable and manufacturing was set as a baseline.

Second, the characteristics of the creative idea itself could affect a team’s resourcing behavior and innovation implementation effectiveness. Depending on whether the creative idea pertained to a product/service innovation, work process,

IT/system, or others (e.g., building alliances or M&A), the way a team approaches the acquisition and utilization of resources could vary. Thus, the innovation type as a nominal variable was included in the analysis. The innovation type of “others”, such as building alliances, M&A, etc., was set as a baseline in conducting the analysis.

Third, team climate for innovation is known to affect team innovation implementation effectiveness significantly (Hülshager et al., 2009). I first considered many variables that could signal the degree of team’s innovativeness, such as team innovation frequency, innovative organizational climate, and innovation incentive, but team entrepreneurial orientation was correlated more strongly with both of dependent (innovation implementation effectiveness) and independent variables (proactive creativity) compared to others. Thus, I chose team entrepreneurial orientation as a control variable representing the team climate on innovation implementation. Team entrepreneurial orientation was measured using four items adapted from Renko et al.’s (2015) entrepreneurial leadership measures and made a referent shift from “my team leader” to “my team.” Sample items are “My team ... (a) often comes up with radical improvement ideas, (b) pursues projects that could produce high performance even with high risk, (c) takes aggressive actions for searching opportunities even with uncertainty, and (d) believes that aggressive task performance helps in achieving a team’s goals.” Team members reported on a four-item scale of team entrepreneurial orientation, which was aggregated effectively to the team level ($\alpha = .88$, $r_{wg(3)} = .89$, $ICC(1) = .33$, $ICC(2) = .67$, $F = 3.06$, $p < .001$).

Fourth, a team’s status and work characteristics within the organization could affect our variables of interest, such as securing external resource stock. Thus, a team’s task interdependence across the boundary was added to control variables. The team’s status within the organization was also measured (Flynn, 2003). However, because of its high correlations with external task interdependence, I excluded team status for a

control variable. The team's external task interdependence was measured by five items adopted by Pearce and Gregersen (1991) and a referent shift was made from "I" to "my team". Sample items are "(a) my team works closely with other teams in doing our work, (b) my team must y coordinate our efforts frequently with other teams, (c) my team's own performance is dependent on receiving accurate information and resources from other teams, (d) the way my team performs our job has a significant effect on other teams, and (e) my team's work requires us to consult with others fairly frequently." Team members reported on a four-item scale of team entrepreneurial orientation, which was aggregated effectively to the team level ($\alpha = .88$, $r_{wg(3)} = .90$, $ICC(1) = .34$, $ICC(2) = .68$, $F = 3.16$, $p < .001$).

Lastly, 21 teams were surveyed through an online survey method, while the rest were surveyed offline. The online versus offline survey method should be considered as a control variable to control for any potential differences occurring the differences in the survey method. However, because the online survey method was conducted only with one company in manufacturing, it exhibited a high correlation with industry measures. Thus, whether the survey was operationalized online versus offline was excluded for a control variable. All the survey items used for the main and control variables in this study are listed in Appendix A.

Result

Empirical Distinctiveness of the Study Variables

Given that the main study variables show acceptable levels of internal consistency, within-group agreement, and intra-class correlations that reflect between-group variations in individual ratings, I analyzed the empirical distinctiveness of the study variables. The predictors were all gathered at the same time and collected on psychometric scales rated by team members, thus, I verified the empirical distinctiveness of the main study variables reported by team members and team leaders

by conducting exploratory factor analysis (EFA) and confirmatory factor analysis (CFA). The EFA was executed using oblique CF-varimax rotation with maximum likelihood extraction method, which is known to show a reasonable factor structure in the social science field (Browne, 2001). I conducted series of five sets of EFA analyses reported by team members: proactive and responsive creativity, building resource stock and facilitating resource utilization, boundary-spanning leadership and internal integrating leadership, team psychological ownership, and constituent endorsement, and idea reflexivity and social reflexivity. As shown in Tables 7–11, the results of the rotated factor matrix of EFA produced two factors in accordance with the expected two-factor structure for all EFA analyses. Thus, all measures will be used to capture each construct as the survey was designed.

Second, multi-level CFA was conducted with 10 main study variables reported by team members. Given that the number of items measured for each construct exceeds the total sample size of $N=91$, conducting CFA analysis at the team-level is not appropriate. Thus, after item parceling by picking two items randomly for each construct, I ran multi-level CFA analysis using MPlus 16.3. The 10-factor hypothesized model certified a good fit to the data ($\chi^2 (125)= 233.88, p<.001, CFI=.96, TLI=.93, RMSEA=.05$). Alternative CFA on the plausible five-factor model was conducted by combining two team creativity measures, two team resourcing behaviors, two endorsement measures, two reflexivity measures, and two leadership measures. However, this model did not exhibit a better fit than the hypothesized ten-factor model ($\chi^2 (160)= 1,032.64, p<.00, CFI=.64, TLI=.57, RMSEA=.13$). Alternative CFA on plausible three-factor model by combining proactive and responsive creativity, resource stock and resource utilization, and all the other mediating variables also exhibited a worse fit than prior models ($\chi^2 (167)= 1,271.50, p<.00, CFI=.54, TLI=.48, RMSEA=.15$). Lastly, CFA on plausible one-factor model by combining all manifested the worst fit among all the

Table 7

Exploratory Factor Analysis on Proactive and Responsive Creativity (Study 2)

	Factor 1	Factor 2
Proactive creativity 1	.75	-.19
Proactive creativity 2	.87	-.18
Proactive creativity 3	.87	-.20
Proactive creativity 4	.87	-.31
Proactive creativity 5	.78	-.41
Responsive creativity 1	-.31	.87
Responsive creativity 2	-.69	.25
Responsive creativity 3	-.56	.76
Responsive creativity 4	-.75	.63
Responsive creativity 5	-.13	.79
Eigenvalue	5.17	1.60
Variance explained(%)	51.69	16.03
Cumulative variance explained (%)	51.69	67.72

Note: N=91

Table 8

Exploratory Factor Analysis on External Resource Acquisition and Internal Resource Utilization (Study 2)

	Factor 1	Factor 2
External resource acquisition 1	.96	.34
External resource acquisition 2	.95	.32
External resource acquisition 3	.94	.29
Internal resource utilization 1	.37	.93
Internal resource utilization 2	.16	.89
Internal resource utilization 3	.43	.94
Eigenvalue	3.57	1.70
Variance explained(%)	59.55	28.38
Cumulative variance explained (%)	59.55	87.93

Note: N=91

Table 9

Exploratory Factor Analysis on Boundary-Spanning Leadership and Internal Integrating Leadership (Study 2)

	Factor 1	Factor 2
Boundary-spanning leadership 1	.89	.65
Boundary-spanning leadership 2	.91	.61
Boundary-spanning leadership 3	.95	.58
Boundary-spanning leadership 1	.92	.54
Internal integrating leadership 1	.65	.95
Internal integrating leadership 2	.64	.93
Internal integrating leadership 3	.52	.91
Eigenvalue	4.99	1.01
Variance explained(%)	71.26	14.36
Cumulative variance explained (%)	71.26	85.62

Note: N=91

Table 10

Exploratory Factor Analysis on Team Psychological Ownership and Constituent Endorsement (Study 2)

	Factor 1	Factor 2
Team psychological ownership 1	.91	.02
Team psychological ownership 2	.90	.12
Team psychological ownership 3	.90	-.15
Team psychological ownership 4	.82	-.10
Constituent endorsement 1	-.93	.86
Constituent endorsement 2	.08	.87
Constituent endorsement 3	-.13	.87
Constituent endorsement 4	-.02	.86
Eigenvalue	3.33	3.00
Variance explained(%)	41.66	37.47
Cumulative variance explained (%)	41.66	79.13

Note: N=91

Table 11

Exploratory Factor Analysis on Idea Reflexivity and Social Reflexivity (Study 2)

	Factor 1	Factor 2
Idea reflexivity 1	.93	.17
Idea reflexivity 2	.93	.10
Idea reflexivity 3	.90	.22
Idea reflexivity 4	.89	.12
Social reflexivity 1	.26	.89
Social reflexivity 2	.07	.89
Social reflexivity 3	.18	.87
Social reflexivity 4	.10	.92
Eigenvalue	3.83	2.69
Variance explained(%)	47.83	33.66
Cumulative variance explained (%)	47.83	81.48

Note: N=91

models (χ^2 (175)= 1,873.70, $p < .00$, CFI=.29, TLI=.23, RMSEA=.18). Given the empirical confirmations from EFA and CFA, I proceed to test the hypothesized relationships with 10 main study variables. Table 12 provides the results of the CFA analysis.

Table 12

Multi-level Confirmatory Factor Analysis for The Main Study Variables Collected by Team Members (Study 2)

Models	$\chi^2(df)$	χ^2 /df	CFI	TLI	RMSEA
10-factor Hypothesized Model	233.88*** (125)	1.87	.96	.93	.05
Alternative1: 9-factor Model	298.26*** (134)	2.23	.93	.90	.06
Alternative2: 8-factor Model	586.71*** (142)	4.13	.82	.75	.09
Alternative3: 5-factor Model	1,032.64*** (160)	6.45	.64	.57	.13
Alternative4: 1-factor Model	1,873.70*** (175)	10.71	.29	.23	.18

Note: N=315. CFI=comparative fit index, TLI= tucker-lewis index, RMSEA=root mean square error of approximation

- 10-factor Hypothesized Model: proactive creativity, responsive creativity, team psychological ownership, constituent endorsement, idea reflexivity, social reflexivity, internal resource utilization, external resource acquisition, boundary-spanning leadership, internal integrating leadership
- 9-factor Model: proactive creativity + responsive creativity, and others same
- 8-factor Model: proactive creativity + responsive creativity, internal resource utilization, external resource acquisition, and others same
- 5-factor Model: proactive creativity + responsive creativity, team psychological ownership + constituent endorsement, idea reflexivity +social reflexivity, internal resource utilization + external resource acquisition, boundary-spanning leadership + internal integrating leadership
- 1-factor Model: proactive creativity + responsive creativity + team psychological ownership + constituent endorsement + idea reflexivity +social reflexivity+ boundary-spanning leadership + internal integrating leadership + internal resource utilization + external resource acquisition

* $p < .05$, ** $p < .01$, *** $p < .001$

Descriptive Statistics

Table 13 provides descriptive statistics and correlations among the variables examined. The control variables, industry, innovation type, team size, team entrepreneurship, and external task interdependence all exhibit significant correlations with our variables of interest. In particular, telecom, manufacturing, and internet-based industries and innovation types, such as work processes or product/services, exhibited significant correlations with proactive creativity, external resource

acquisition, internal resource utilization, and team innovation implementation effectiveness. In addition, team entrepreneurship and external task interdependence also showed significant correlations with many of our variables, including internal resource utilization, boundary-spanning leadership, and internal integrating leadership. Given that some variables displayed high correlations with one another when running all the analyses, I conducted the variance inflation factor (VIF) test to examine the potential multicollinearity problems.

Hypothesis Testing Analytic Procedure

All variables were appropriate for aggregation to the team level, and thus, I converted all the variables reported by team members to the team-level. First, hierarchical regression analyses were conducted to examine the relationship between proactive/responsive creativity and team resourcing behaviors. I used STATA v.22 to test the hypotheses by incorporating the variables for regression analysis through three hierarchical steps in predicting team resourcing behavior: (1) control variables, (2) proactive and responsive creativity, and (3) boundary-spanning leadership or internal integrating leadership as moderators.

Second, hierarchical regression analyses were conducted to examine the relationship between proactive/responsive creativity and team innovation implementation effectiveness via team resourcing behavior. I used STATA v.22 to test the hypotheses through three hierarchical steps: (1) the control variables, (2) proactive and responsive creativity, and (3) internal resource utilization or external resource acquisition. In addition, to examine the mediation effects of team resourcing behavior on the link between two types of creativity and team innovation implementation effectiveness, I used Hayes' (2013) macro PROCESS in SPSS 2.16.3 to estimate a confidence interval (CI) around the indirect effects based on a parametric bootstrap procedure that ran 5,000 Monte Carlo replications (Preacher & Selig, 2010).

Table 13
Descriptive Statistics and Correlations of Variables (Study 2)

Variables	Mean	St.Dev.	Correlations													
			1 (PS)	2 (RS)	3 (TPO)	4 (CE)	5 (IR)	6 (SR)	7 (RU)	8 (RS)	9 (BS)	10 (II)	11 (Inno)	12 (Tel)		
1 Proactive creativity	3.69	.77	1.00													
2 Responsive creativity	2.89	.69	-.54***	1.00												
3 Team psychological ownership	3.77	.60	.44***	-.12	1.00											
4 Constituent endorsement	3.42	.62	.11	.22	.34**	1.00										
5 Idea reflexivity	3.85	.66	.54***	-.30**	.67***	.31**	1.00									
6 Social reflexivity	3.62	.65	.13	.07	.55***	.61***	.63***	1.00								
7 Internal resource utilization	3.73	.60	.40***	-.28*	.49***	.23*	.51***	.24*	1.00							
8 External resource acquisition	3.10	.65	.01	.15	.04	.45***	.22	.31**	.24*	1.00						
9 Boundary spanning leadership	3.82	.65	.33**	-.25*	.47***	.27*	.65***	.38***	.51***	.12	1.00					
10 Internal integrating leadership	3.89	.54	.45***	-.39***	.43***	-.02	.63***	.22	.56***	-.04	.67***	1.00				
11 Team Innovation implementation	3.89	.54	.32**	-.27*	.09	-.06	.16	.04	.29*	.04	.05	.07	1.00			
12 Telecom	.14	.35	-.10	-.00	.14	.20	-.04	.13	-.05	-.07	-.02	-.08	-.30**	1.00		
13 Financial services	.37	.49	-.22	.11	-.25*	-.13	-.18	-.16	-.26*	-.04	-.20	-.06	-.07	-.43***	1.00	
14 Consumer goods	.09	.28	.15	-.14	-.10	-.19	.04	-.15	.14	-.24*	.20	.16	.10	-.16	-.16	1.00
15 Internet-based	.15	.36	-.06	.05	-.34**	-.16	-.29*	-.36***	-.10	-.27*	-.20	.01	-.31**	-.17	-.17	-.17
16 Manufacturing	.25	.43	.24*	-.02	.24*	.10	.21	.18	.24*	.27*	.11	.02	.27*	-.27*	-.27*	-.27*
17 Work process innovation	.36	.48	-.26*	.04	-.34**	-.26*	-.31**	-.27	-.25*	-.09	-.17	-.14	.00	-.14	-.14	-.14
18 Product/service innovation	.47	.50	.28*	-.03	.27*	.13	.32**	.23	.34**	.11	.28*	.18	.12	-.12	-.12	-.12
19 System innovation	.04	.21	.18	-.01	-.00	-.08	.00	.01	-.26*	-.12	-.20	-.12	.09	-.11	-.11	-.11
20 Others innovation	.11	.31	-.18	-.01	.07	.23*	-.08	.08	-.03	-.05	-.06	-.01	-.26*	.52***	.52***	.52***
21 Team size	6.19	2.57	.17	-.16	.19	.13	.09	.25	.07	-.09	.05	.08	.19	.11	.11	.11
22 Team entrepreneurship	3.44	.66	.23*	-.00	.48***	.28*	.44***	.42***	.32**	.29	.39***	.33**	-.12	.26	.26	.26
23 External task interdependence	3.94	.61	.14	.00	.32**	.22	.38***	.26	.41***	.02	.36**	.29	.20	.07	.07	.07

Table 13 (Continued)

Descriptive Statistics and Correlations of Variables (Study 2)

Variables	Mean	St.Dev.	Correlations											
			13 (FS)	14 (CG)	15 (Int)	16 (Mfg)	17 (WP)	18 (Prod)	19 (Sys)	20 (Others)	21 (Size)	22 (Ent)	23 (Dep)	
13 Financial services	.37	.49	1.00											
14 Consumer goods	.09	.28	-.32**	1.00										
15 Internet-based	.15	.36	-.33**	-.13	1.00									
16 Manufacturing	.25	.43	-.54***	-.20	-.24	1.00								
17 Work process innovation	.36	.48	.45** *	-.09	-.00	-.33**	1.00							
18 Product/service innovation	.47	.50	-.50***	.21	.08	.53** *	-.70***	1.00						
19 System innovation	.04	.21	.26*	-.08	-.09	-.14	-.19	-.21	1.00					
20 Others innovation	.11	.31	-.15	-.12	-.05	-.20	-.27*	-.31**	-.08	1.00				
21 Team size	6.19	2.57	.02	.11	-.22	-.20	-.13	-.05	.18	.19	1.00			
22 Team entrepreneurship	3.44	.66	-.40***	-.03	.13	.25*	-.42***	.38***	-.20	.16	.06	1.00		
23 External task interdependence	3.94	.61	-.15	.17	-.14	-.01	-.10	.06	-.06	.06	.13	.23*	1.00	

Third, I analyzed the moderated mediation effect of (1) how boundary-spanning leadership moderates the mediated relationship between proactive creativity and team innovation implementation effectiveness via external resource acquisition and (2) how internal integrating leadership moderates the mediated relationship between responsive creativity and team innovation implementation effectiveness via internal resource utilization. I used Hayes' (2013) macro PROCESS in SPSS 2.16.3 to test these moderated mediation effects. A parametric bootstrap procedure that ran 5,000 Monte Carlo replications was used to estimate confidence interval (CI) around the indirect effects and determine the significance of the hypothesized moderated mediation effects (Preacher & Selig, 2010).

Lastly, to examine further the link between different types of creativity and team resourcing behavior, I ran a mediation analysis using Hayes' (2013) macro PROCESS to test the indirect effects of team and social elaborations on the link between proactive/responsive creativity and team resourcing behavior.

Relationship Between Creativity and Team Resourcing Behavior

In Hypotheses 1a and 1b, I proposed that teams with proactive creativity are related positively to internal resource utilization, and teams with responsive creativity are associated negatively with internal resource utilization. To test these hypotheses, I ran hierarchical linear regression analyses of the relationship between proactive/responsive creativity and team resourcing behaviors. As shown in Model 2 of Table 14, proactive creativity indicated a positive significant relationship with internal resource utilization ($\beta = .22, p < .05$), while responsive creativity showed negative significant relationship with internal resource utilization ($\beta = -1.59, p < .001$). Thus Hypotheses 1a and 1b are supported. In addition, Model 2 shows a significant increase in adjusted R^2 compared to the control variables-only model of Model 1. The

specifically adjusted R^2 of Model 2 is .39 ($F=5.84, p<.05$), which is a .17 increase from the adjusted R^2 of Model 1 (control variables-only models) of .22 ($F=3.54, p<.05$).

In Hypotheses 2a and 2b, I proposed that teams with proactive creativity are related negatively to external resource acquisition and teams with responsive creativity are associated positively with external resource acquisition. Model 5 of Table 14 indicates that proactive creativity showed a negative relationship with external resource acquisition, but this relationship was not significant ($\beta = -.14, p>.05$). Meanwhile, responsive creativity showed significant positive relationship with external resource acquisition ($\beta = .29, p < .05$). Thus, Hypothesis 2a was not supported, but Hypothesis 2b was supported. In addition, Model 5 of Table 14 shows a significant increase in adjusted R^2 compared to the control variables-only model of Model 4. The adjusted R^2 of Model 5 is .31 ($F=3.35 p<.05$), which is a .19 increase from adjusted R^2 of Model 4 (control variables-only models) of .12 ($F=2.18, p<.05$).

Relationship Between Team Resourcing Behavior and Team Innovation Implementation Effectiveness

In Hypotheses 4a and 4b, I proposed that internal resource utilization and external resource acquisition is related positively to team innovation implementation effectiveness. To test these hypotheses, I ran hierarchical linear regression on the relationship between team resourcing behavior and team innovation implementation effectiveness. In Model 3 of Table 15, after controlling for the effect of proactive and responsive creativity on team innovation implementation effectiveness, external resource acquisition indicated a positive significant relationship with innovation implementation effectiveness ($\beta = .19, p < .05$). In addition, in Model 4 of Table 15, internal resource utilization also showed a significant positive relationship with team

Table 14

Hierarchical Linear Regressions of the Relationship between Proactive/Responsive Creativity and Team Resourcing Behavior (Study 2)

Variables	Model 1 Outcome: Internal Resource utilization	Model 2 Outcome: Internal Resource utilization	Model 3 Outcome: Internal resource utilization	Model 4 Outcome: External resource acquisition	Model 5 Outcome: External resource acquisition	Model 6 Outcome: External resource acquisition
Constant	1.47(.51)**	1.10(.77)	4.96(1.43)** *	2.37(.62)**	1.87(.97)*	5.27(1.48)** *
<u>Step 1: Controls</u>						
Team size	.02(.02)	.01(.02)	.01(.02)	.01(.02)	-.00(.03)	-.01(.02)
Industry						
-Telecommunication	-.29(.20)	-.13(.17)	-.03(.15)	-.53(.20)*	-.37(.23)	-.36(.17)*
-Financial service	-.08(.17)	.03(.15)	-.03(.15)	-.31(.18)†	-.20(.20)	-.16(.14)
-Consumer goods	.00(.22)	-.02(.19)	-.08(.16)	-.59(.22)**	-.63(.25)*	-.53(.18)**
-Internet-based	-.27(.18)	-.15(.16)	-.25(.14)†	-.87(.18)***	-.76(.20)***	-.39(.15)**
Innovation type						
-Work process	.11(.21)	.11(.18)	.07(.16)	.12(.21)	.15(.24)	-.24(.17)
-Product/services	.09(.20)	.13(.18)	.06(.15)	.00(.21)	.10(.23)	-.35(.17)*
-IT/system	-.24(.33)	-.41(.30)	-.45(.26)†	-.02(.35)	-.09(.38)	-.22(.28)
Team entrepreneurship	.35(.10)***	.23(.09)**	.13(.08)†	.33(.10)***	.22(.11)*	.12(.09)
External task interdependence	.24(.09)**	.26(.08)***	.20(.07)**	.01(.10)	.05(.11)	-.09(.08)
<u>Step 2: Main effects</u>						
Proactive creativity		.26(.12)*	.22(.10)*		-.14(.14)	-.70(.34)*
Responsive creativity		-.11(.03)*	-1.59 (.43)***		.29(.14)*	.13(.12)
Boundary spanning leadership (BS)						.68(.36)*
Internal integrating leadership(II)			.75(.32)*			
BS x Proactive creativity						.23(.09)**
II x Responsive creativity			.37(.10)***			
ΔR^2		.17	.15		.19	.12
Adjusted R^2 for total equation	.22	.39	.54	.12	.31	.43
$F(df)$	3.54	5.84	8.52	2.18	3.35	4.10

Note: N = 91. † $p < .10$ * $p < .05$, ** $p < .01$, *** $p < .001$

innovation implementation effectiveness ($\beta = .48, p < .001$) after controlling for both proactive and responsive creativity. Thus, Hypotheses 4a and 4b are supported. Models 3 and 4 showed a decent amount of increase in adjusted R^2 compared to both control variables-only model (Model 1) and proactive/responsive creativity-controlled model (Model 2). Specifically, Model 3 showed .24 adjusted R^2 or a .02 increase from Models 1 and 2, and Model 4 showed .37 adjusted R^2 or a .13 increase from Models 1 and 2.

Interestingly, Model 2 in Table 15 shows how proactive creativity and responsive creativity are associated with team innovation implementation effectiveness. Neither proactive nor responsive creativity exhibited a significant relationship with team innovation implementation effectiveness ($\beta = .04, p = \text{n.s.}$ for proactive creativity; $\beta = -.02, p = \text{n.s.}$ for responsive creativity). I will discuss this finding further in the discussion section.

Mediation Effect of Team Resourcing Behavior on The Link Between Creativity and Innovation

In Hypotheses 5a and 5b, I predicted that internal resource utilization and external resource acquisition will mediate the relationship between proactive/responsive creativity and team innovation implementation effectiveness, respectively. I employed mediation analysis based on Hayes' (2013) macro PROCESS in SPSS 2.16.3 and a parametric bootstrapping procedure that ran 5,000 Monte Carlo replications to estimate a confidence interval (CI) around the indirect effects on testing the hypothesized indirect effects (Preacher & Selig, 2010). Table 16 shows the significant positive indirect effect of proactive team creativity (estimate = .19, 95% CI = .05, .34) and a significant positive indirect effect of responsive team creativity (estimate = .08, 95% CI = .01, .17) on team innovation implementation via internal resource utilization and external resource acquisition, respectively. Thus, Hypotheses 5a and 5b are supported.

Table 15

Hierarchical Linear Regressions of the Relationship between Proactive/Responsive Creativity and Team Innovation Implementation Effectiveness via Team Resourcing Behavior (Study 2)

Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
	Outcome: Team Innovation implementation					
Constant	3.01(.49)***	2.96 (.80)***	2.60(.87)**	2.44(.78)**	2.32(.73)***	.63(1.82)
<u>Step 1: Controls</u>						
Team size	.06(02)**	.06 (.02)**	.05(.02)*	.05(.02)**	.05(.02)**	.05(.02)*
Industry						
- Telecommunication	-.54(19)**	-.51(.18)**	-.41(.20)*	-.41(.17)*	-.41(.17)*	-.42(.16)*
- Financial service	-.42(.17)*	-.40(.16)**	-.35(.17)*	-.39(.14)**	-.39(.14)**	-.40(.14)**
- Consumer goods	-.24(.21)	-.24(.19)	-.13(.22)	-.18(.18)	-.18(.18)	-.20(.18)
- Internet-based	-.64(.17)***	-.62(.16)***	-.45(.19)*	-.49(.16)**	-.49(.16)**	-.50(.16)**
Innovation type						
- Work process	.45(.20)*	.45(.19)*	.42(.20)*	.38(.17)*	.38(.17)*	.39(.17)*
- Product/services	.19(.19)	.20(.18)	.20(.20)	.14(.16)	.14(.16)	.15(.16)
- IT/system	.48(.32)	.46(.31)	.46(.33)	.64(.28)*	.64(.28)*	.66(.28)*
Team entrepreneurship	.03(.09)	.01(.09)	-.05(.10)	-.12(.09)	-.12(.09)	-.11(.08)
External task interdependence	.13(.09)	.13(.08)	.13(.09)	.01(.08)	.01(.08)	.02(.08)
<u>Step 2: Main effects</u>						
Proactive creativity		.04(.13)	.06(.13)	-.07(.11)	-.07(.12)	-.06(.11)
Responsive creativity		-.02(.14)	-.07(.14)	.01(.12)	.01(.12)	.00(.12)
External resource acquisition			.19(.10)*		.08(.09)	.65(.56)
Internal Resource utilization				.48(.10)***	.45(.10)***	.87(.43)*
External resource acquisition × internal resource utilization						-.14(.14)
ΔR^2		.00	.02	.13	.00	-.01
Adjusted R^2 for total equation	.22	.22	.24	.37	.37	.36
$F(df)$		2.94	3.10	5.02	4.70	4.43

Table 16

Bootstrapped Mediation Analysis of the Relationship between Proactive/Responsive Creativity and Team Innovation Implementation Effectiveness (Study 2)

Independent variables	Mediator	Dependent variables	Indirect effect	Product of coefficients			Bootstrapping bias-corrected 95% CI	
				SE	Z	P	Lower	Upper
Proactive creativity	Internal resource utilization	Team innovation implementation effectiveness	.19	.07	4.30	<.001	.05	.34
Responsive creativity	External resource acquisition	Team innovation implementation effectiveness	.08	.04	2.11	<.05	.01	.17

Note: N=91

Boundary Spanning Leadership as a Boundary Condition

In Hypothesis 5a, I theorized that boundary-spanning leadership would moderate the relationship between proactive creativity and external resource acquisition, while in Hypothesis 5b, I predicted that boundary-spanning leadership would moderate the mediated relationship between work teams with proactive creativity and team innovation implementation effectiveness via external resource acquisition.

The results reported in Models 3 and 6 in Table 14 confirm a significant moderation effect. Specifically, in Model 6 of Table 14, the interaction term between boundary-spanning leadership and proactive creativity was related significantly with external resource acquisition ($\beta = .23, p < .01$), thereby supporting Hypothesis 5a. I investigate this significant interaction further by conducting a simple slope analysis that included the variance of covariates and multilevel unique effects (Aiken, West, & Reno, 1991; Bauer & Curran, 2005). A simple slope analysis depicted in Figure 3 indicates the slope between proactive creativity and external resource acquisition has a negative relationship, where the slope becomes less steep when boundary-spanning leadership is high ($b = -.54, p = n.s.$) compared to when boundary-spanning leadership is low ($b = -.84, p < .001$).

Next, I tested the conditional indirect effect of proactive creativity on team innovation implementation effectiveness through external resource acquisition for work teams with varying boundary-spanning leadership. Statistically, this effect represents a first-stage moderated mediation in which boundary-spanning leadership moderates the effect of work teams with proactive creativity on external resource acquisition, which in turn affects team innovation implementation effectiveness. I tested this model using Hayes' (2013) PROCESS macro (Model 7). In Table 17, based on a bootstrap sample of 5,000, zero fell within the 95% confidence interval when boundary-spanning leadership is low (95% CI = $-.198, .001$) or high (95% CI = $-.226, .004$), indicating that external

resource acquisition did not mediate the relationship between proactive creativity and team innovation implementation effectiveness when the level of boundary spanning leadership varies. The index of moderated mediation was $\beta=.00$ ($SE=.04$), 95% confidence interval $[-.09, .08]$, and thus, I cannot offer conclusive evidence of moderated mediation in this case. Thus, Hypothesis 5b is not supported.

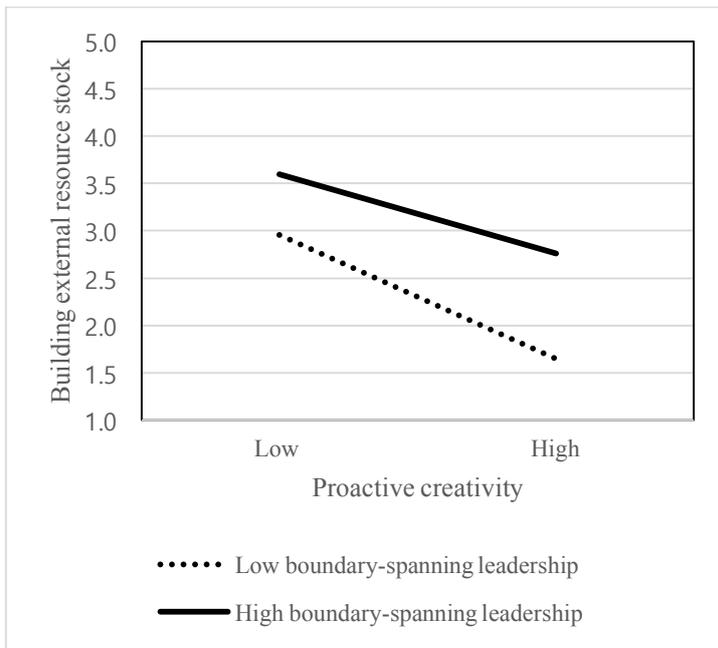


Figure 3. Interaction between proactive creativity and team boundary-spanning leadership in predicting building external resource stock (Study 2)

Internal Integrating Leadership as a Boundary Condition

In Hypothesis 6a, I theorized that internal integrating leadership would moderate the relationship between responsive creativity and internal resource utilization, while in Hypothesis 6b, I predicted that internal integrating leadership would moderate the mediated relationship between work teams with responsive creativity and team innovation implementation effectiveness via internal resource utilization.

First, I tested the moderation effect of internal integrating leadership \times responsive creativity on internal resource utilization. In Model 3 of Table 14, the interaction term between internal integrating leadership and responsive creativity was related

significantly with internal resource utilization ($\beta = .37, p < .001$). Thus, Hypothesis 6a is supported. According to a simple slope analysis depicted in Figure 4, the slope between responsive creativity and internal resource utilization has a negative relationship, where the slope becomes less steep when internal integrating leadership is high ($b = -1.39, p < .05$) compared to when internal integrating leadership is low ($b = -1.79, p < .001$).

Next, I argued that the mediated effect of responsive creativity on team innovation implementation effectiveness via internal resource utilization would be moderated by internal integrating leadership, such that the negative effect of responsive creativity will be weaker for those high in internal integrating leadership than for those low in internal integrating leadership. I again ran Hayes' (2013) macro PROCESS (Model 7) to test this first stage moderated mediation model. In Table 18, based on a bootstrap sample of 5,000, the 95% confidence interval for the index of moderated mediation excludes zero (95% CI = .02, .31), thereby providing definite evidence that the mediating relationship of responsive creativity on team innovation implementation effectiveness through internal resource utilization depends on internal integrating leadership. Specifically, based on a bootstrap sample of 5,000, the negative relationship between responsive creativity and innovation effectiveness via internal resource utilization became weaker as internal integrating leadership increases. For instance, as depicted in Table 18, when internal integrating leadership is low, the negative mediating effect is $\beta = -.26$ (SE=.10); however, this negative mediating effect decreases to $\beta = -.06$ (SE=.04) when internal integrating leadership is high. Thus, Hypothesis 6b is supported.

Table 17

Regression Coefficients and Conditional Indirect Effect Estimates of Moderated Mediation Analysis (Study 2)

IV	Mediator	DV	Moderator	Indirect effect	Product of coefficients		Bootstrapping bias-corrected 95% CI	
					SE	Z	Lower	Upper
Proactive creativity	Building external resource stock	Team innovation implementation effectiveness	Boundary spanning leadership (Low)	-.10	.05	-1.92	-.20	.00
			Boundary spanning leadership (Medium)	-.09	.05	-2.04	-.20	-.01
			Boundary spanning leadership (High)	-.09	.06	-1.55	-.23	.00
Index of Moderated Mediation				.00	.04	.00	-.09	.08

Table 18

Regression Coefficients and Conditional Indirect Effect Estimates of Moderated Mediation Analysis (Study 2)

IV	Mediator	DV	Moderator	Indirect effect	Product of coefficients		Bootstrapping bias-corrected 95% CI	
					SE	Z	Lower	Upper
Responsive creativity	External resource acquisition	Team innovation implementation effectiveness	Internal integrating leadership (Low)	-.26	.10	-2.51	-.44	-.02
			Internal integrating leadership (Medium)	-.17	.06	-2.70	-.29	-.03
			Internal integrating leadership (High)	-.06	.04	-1.52	-.15	.01
Index of Moderated Mediation				.16	.08	2.00	.02	.31

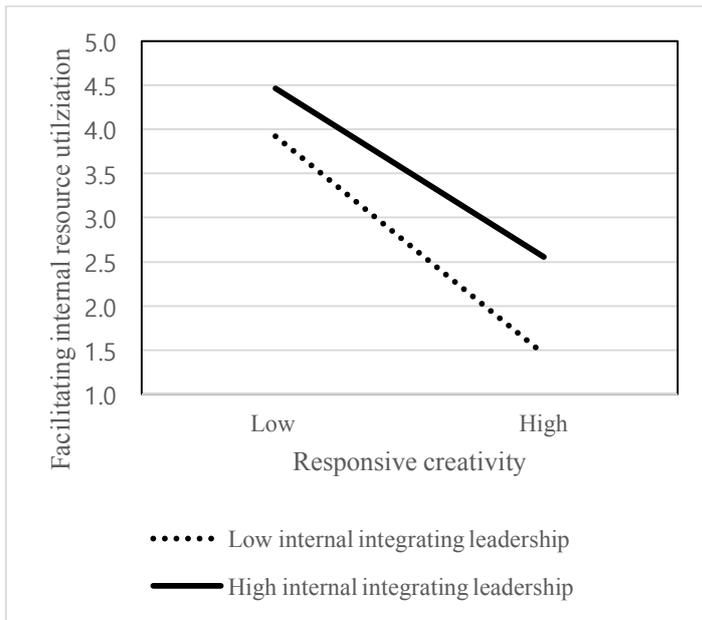


Figure 4. Interaction between responsive creativity and internal integrating leadership in predicting building external resource stock (Study 2)

Mediation Effect of Internal and External Endorsement on the Link Between Creativity and Team Resourcing Behavior

In Hypotheses 7–10, I theorize on the mediating mechanism that links the two types of creativity and team resourcing behavior. I used Hayes’ (2013) macro PROCESS in SPSS 2.16.3 to test whether team psychological ownership, constituent endorsement, idea reflexivity, and social reflexivity mediate the relationship between the two types of creativity and team resourcing behavior. Specifically, Hypotheses 7a and 7b predicted that team psychological ownership mediates the *positive* relationship between work teams with proactive creativity and internal resource utilization and the *negative* relationship between work teams with responsive creativity and internal resource utilization. Table 19 shows the significant positive indirect effect of proactive team creativity (estimate = .21, 95% CI=.07, .37) and responsive team creativity (estimate = -.22, 95% CI=–.37, –.07) on internal resource utilization via team psychological ownership. Thus, Hypotheses 7a and 7b are supported.

Hypotheses 8a and 8b suggested that constituent endorsement mediates the negative relationship between work teams with proactive creativity and external resource acquisition as well as the positive relationship between work teams with responsive creativity and external resource acquisition. As reported in Table 19, a significant negative indirect effect exists for proactive creativity (estimate=-.15, 95% CI=-.40, -.13), whereas a significant positive indirect effect can be observed for responsive creativity (estimate=.28, 95% CI=.15, .43), thereby supporting both Hypotheses 8a and 8b.

Hypotheses 9a and 9b theorized that idea reflexivity mediates the positive relationship between work teams with proactive creativity and internal resource utilization as well as the negative relationship between work teams with responsive creativity and internal resource utilization. According to Table 19, proactive team creativity (estimate=.25, 95% CI=.05, .51) has a significant positive indirect effect on internal resource utilization via idea reflexivity, but responsive team creativity did not significantly mediate (estimate=-.04, 95% CI=-.17, .07). Hence, Hypothesis 9a is supported but not Hypothesis 9b.

In Hypotheses 10a and 10b, I predicted that social reflexivity would mediate the negative relationship between work teams with proactive creativity and external resource acquisition as well as the positive relationship between work teams with responsive creativity and external resource acquisition. Table 19 shows that a significant positive indirect effect can be observed for responsive creativity (estimate=.17, 95% CI=.05, .32), but the indirect effect of proactive creativity was not significant (estimate=-.02, 95% CI=-.10, .10). Thus, Hypothesis 10b is supported, but not Hypothesis 10a.

Table 19

Bootstrapped Mediation Analysis of the Relationship between Proactive/Responsive Creativity and Team Resourcing Behavior (Study 2)

Independent variables	Mediators	Dependent variables	Indirect effect	Product of coefficients			Bootstrapping bias-corrected 95% CI	
				SE	Z	P	Lower	Upper
Proactive creativity	Team psychological ownership	Internal resource utilization	.21	.08	2.85	<.01	.07	.37
Responsive creativity	Team psychological ownership	Internal resource utilization	-.22	.08	-2.89	<.01	-.37	-.07
Proactive creativity	Idea reflexivity	Internal resource utilization	.25	.12	2.14	<.01	.05	.51
Responsive creativity	Idea reflexivity	Internal resource utilization	-.04	.06	-.76	>.05	-.17	.07
Proactive creativity	Constituent endorsement	External resource acquisition	-.15	.06	-3.79	<.001	-.40	-.13
Responsive creativity	Constituent endorsement	External resource acquisition	.28	.07	3.87	<.001	.15	.43
Proactive creativity	Social reflexivity	External resource acquisition	-.02	.05	-.34	>.05	-.10	.10
Responsive creativity	Social reflexivity	External resource acquisition	.17	.07	2.57	<.01	.05	.32

Note. N=91. Responsive(Proactive) creativity was not included as control variables when analyzing mediation effects between proactive (responsive) creativity and team resourcing behaviors.

Post Hoc Analysis: Testing Alternative Models

I validate the current model by conducting structural equation modeling (SEM), which allows simultaneous tests of multiple predictive relationships (Bentler, 2006). Incorporating all the hypothesized structural paths, I fitted the present framework to the data, as depicted in Figure 5. The hypothesized model showed an acceptable fit to the data: scaled χ^2 (30) = 151.79, $p < .01$; comparative fit index (CFI) = .90; Tucker-Lewis index (TLI) = .82, root mean square error of approximation (RMSEA) = .09.

Although the present theoretical model investigated the relationship between proactive/ responsive creativity and team innovation implementation effectiveness via team resourcing behaviors and leadership as boundary conditions, the reverse causal effects could be argued because of the limitations of the cross-sectional data, and team resourcing behaviors could interact with proactive/responsive creativity on predicting team innovation implementation effectiveness but not mediate the link between creativity and innovation. Thus, I explored five alternative theoretical possibilities: (a) two types of creativity affect external resource acquisition first, then affect internal resource utilization, which, in turn, results in team implementation effectiveness, (b) team resourcing behavior predicts team implementation effectiveness via two types of creativity, (c) the two types of creativity interact with team resourcing behavior in predicting team implementation effectiveness, (d) two types of leadership predict two types of creativity, thereby resulting in differences in resourcing behaviors and team implementation effectiveness in turn, and (e) two types of creativity predict team implementation effectiveness via internal and external elaboration (without the mediating effect of team resourcing behaviors).

The first alternative model of external resource acquisition affecting internal resource utilization exhibited a worse model fit, scaled χ^2 (36) = 199.65, $p < .01$, CFI = .74, TLI = .55, and RMSEA = .15. The second alternative model of reverse causality,

which predicts team resourcing behavior, is related to team implementation effectiveness via proactive/responsive creativity and exhibited a worse model fit, scaled $\chi^2 (30) = 220.26, p < .01, CFI = .50, TLI = .11, RMSEA = .25$. The third alternative model of proactive and responsive creativity interacting with resource utilization and resource stock, respectively, in predicting team implementation effectiveness also exhibited a worse model fit, scaled $\chi^2 (10) = 147.73, p < .01, CFI = .62, TLI = .14, RMSEA = .38$, showing worse goodness fit in comparison to the current theoretical model. The fourth alternative model of leadership being antecedents of creativity-resourcing-innovation links exhibited a worse model fit, scaled $\chi^2 (14) = 150.80, p < .01, CFI = .34, RMSEA = .25, RMR = .08$. Finally, the fifth alternative model of internal/external elaboration mediating the relationship between creativity-innovation exhibited a worse model fit, scaled $\chi^2 (12) = 545.353, p < .01, CFI = .35, TLI = .09, RMSEA = .38$. Thus, these alternative models do not show a better goodness fit compared to the current theoretical model.

Table 20

Post-hoc Analysis: Path Analysis for Alternative Models (Study 2)

Models	$\chi^2(df)$	χ^2 /df	CFI	TLI	RMSEA
7-factor Hypothesized Model	151.79***(30)	5.06	.90	.82	.09
Alternative 1: Creativity (x Leadership) → External resource acquisition → Internal resource utilization → Innovation	199.65***(36)	5.55	.74	.55	.15
Alternative 2: Resourcing x Leadership → Creativity → Innovation	220.26***(30)	7.34	.50	.11	.25
Alternative 3: Creativity x Resourcing → Innovation	147.73***(10)	14.77	.62	.14	.38
Alternative 4: Leadership → Creativity → Resourcing → Innovation	150.80***(14)	10.77	.34	.06	.33
Alternative 5: Creativity → Elaboration → Innovation	545.35***(12)	45.44	.38	.09	.38

Note: N=91. CFI=comparative fit index, TLI= Tucker-Lewis index, RMSEA=root mean square error of approximation
p<.05, **p<.01, *p<.001*

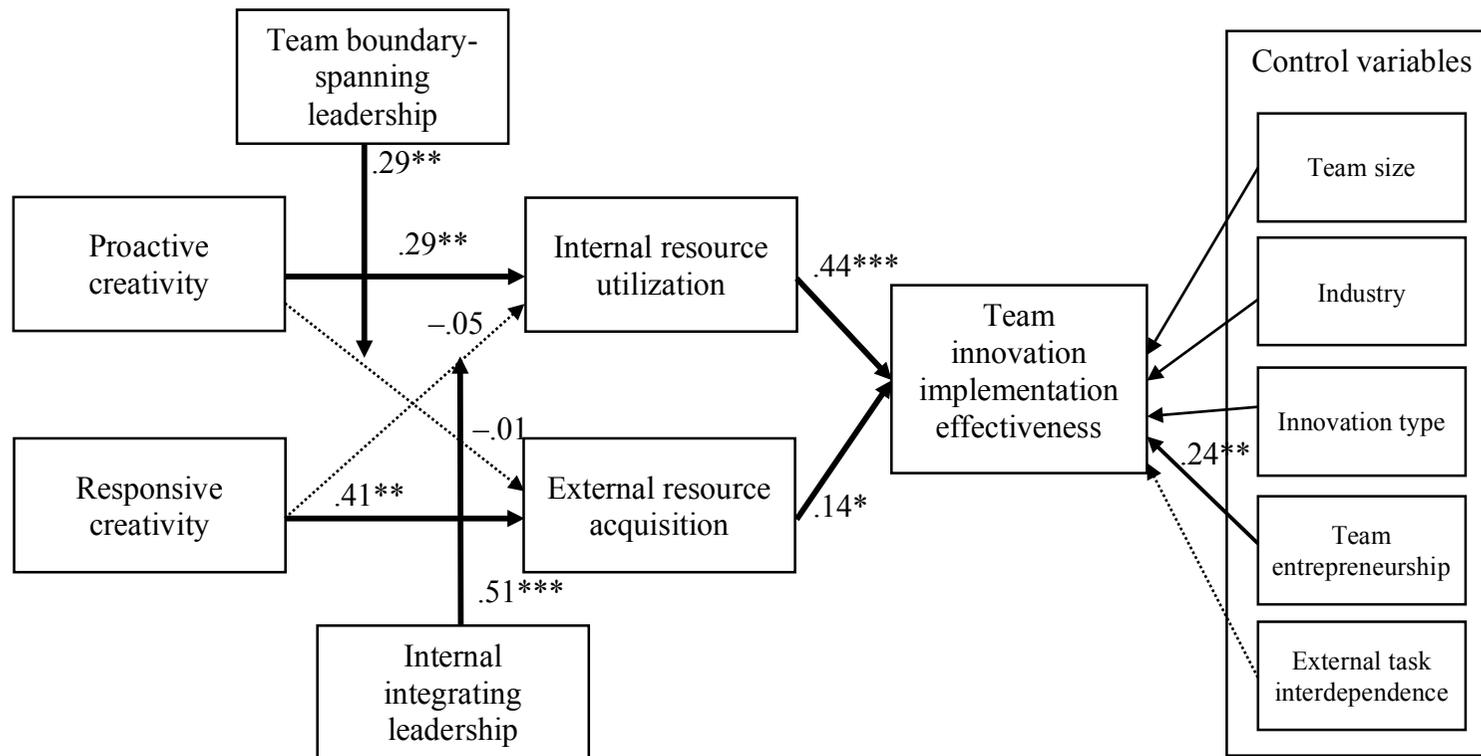


Figure 5. Final structural model predicting innovation implementation effectiveness (Study 2)

Note. Thicker line represents statistically more significant results. Insignificant paths are depicted as dotted lines in the diagram. Coefficients of insignificant or marginal paths from control variables are not presented in the diagram for the sake of simplicity.

N = 91. † $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$

Discussion

Similar to Study 1 depicted in Chapter 2 of this dissertation, this study shows the largely disconnected chasm between team creativity and team innovation implementation by showing how work teams with proactive versus responsive creativity engage in distinct team resourcing behaviors to translate innovative ideas into implementation. Study 1 focused on contrasting internal versus external resource acquisition, while Study 2 specified team resourcing behavior with external resource acquisition and internal resource utilization in translating ideas into implementation. Study 2 also extended further and discussed how work teams with proactive and responsive creativity could overcome their limitations on team resourcing behaviors by considering boundary-spanning leadership and internal integrating leadership as boundary conditions. Finally, Study 2 explores further why work teams with proactive versus responsive creativity exhibit specific team resourcing behaviors by considering how teams elaborate ideas within and outside the team.

Theoretical Contribution

The core contribution of this study is that it connects neglected but crucial organizational phenomena involving the relationship between creativity and implementation at the team level (van Knippenberg, 2017). Previous literature on creativity and innovation has flourished in recent years, but most of the research has focused on each phenomenon separately or has not distinguished each phenomenon from one another (Perry-Smith & Mannucci, 2017). In effect, previous investigations have failed to consider the subsequent processes of creativity and neglected the fact that ideas are useless unless implemented (Anderson et al., 2014; van Knippenberg, 2017). Accordingly, no explanation has been given as to how idea generation translates into idea implementation. Several studies have focused on the link between idea

generation and implementation, but these studies have focused mostly on identifying boundary conditions that strengthen the link between idea generation and implementation (Baer, 2010; Somech & Drach-Zahavy, 2013; Škerlavaj et al., 2014). The present study advances team creativity and team innovation literature by revealing the mechanisms that connect team idea generation to implementation.

This study focuses on how teams mobilize resources internally and externally during team innovation implementation processes and reveals the mechanisms that connect team creativity with implementation. A team's internal and external activities could be in competing relationships given that a team has limited resources, forcing teams to make a trade-off in allocating resources to their internal and external activities (Choi, 2002). A team's internal and external activities could also create a synergistic relationship because the two activities could promote each other (Choi, 2002). Thus, understanding how work teams balance internal and external activities to create synergy is critical particularly in terms of how it could increase a team's performance. Balancing internal and external activities is more critical in team innovation implementation where acquiring external support to conduct non-routine task is essential.

Even with the importance of understanding a team's balancing its internal and external team activities, few studies have focused on a team's internal and external activities directly at the same time, and most studies have focused either on internal team dynamics or boundary-spanning activities separately (Drach-Zahavy, Somech, 2010; Richter et al., 2006). Hence, the real challenges teams are facing regarding balancing internal and external team activities (Choi, 2002) are neglected. By adopting Perry-Smith & Mannucci's (2017) concepts of the four phases of creativity to innovation, this study examines how teams are engaged in internal versus external activities throughout these phases. Specifically, this study examined how work teams

balance internal psychological ownership and external constituent endorsement, internal idea reflexivity, and external social reflexivity during the idea elaboration phase. Meanwhile, how internal integrating leadership and external boundary-spanning leadership affects work teams managing internal and external activities during the idea championing phase. This study contrasted and compared how work teams conduct facilitating internal resource utilization and building external resource stock during the idea implementation phase.

The idea generation based on the work team's distinct motivational processes is set as the starting point to understand how a work team struggles to balance internal and external activities throughout the team innovation implementation phase. This study theorized and empirically tested how work teams with distinct motivational drivers (i.e. proactive or responsive) affect the way a team reacts and behaves cognitively in their internal and external activities in the subsequent team innovation implementation processes. Intrinsic or proactive motivation has been studied extensively and has been highlighted as the core predictor of creativity and innovation (e.g., Amabile, 1996). However, with the view of making trade-offs and balancing team's internal and external activities throughout the innovation implementation phases, this study showed how both proactive and responsive motivational underpinnings could affect the subsequent processes positively and negatively. This study theorized and empirically showed how proactive motivation in idea generation sustains throughout the subsequent process, making internal activities easier and external activities more difficult. Meanwhile, when teams generated ideas responsively from the request of external parties, then the responsive motivation makes external activities easier, whereas internal activities become more difficult in the subsequent process. Thus, this study showed how the different motivational underpinnings of idea generation last throughout the innovation process, thereby affecting the balancing between internal and external activities. By

doing this, this study manifests how teams make trade-offs between internal and external activities in implementing innovations based on motivational underpinnings.

With the pros and cons due to the motivational underpinnings of idea generation, which results in trade-offs between internal and external activities in the subsequent team innovation implementation process, this study highlights team leadership as a way to balance and create synergy between internal and external activities. By theorizing and testing empirically how external-focused, boundary-spanning leadership helps teams with proactive creativity in achieving external resource stock and how internal-focused, internal integrating leadership helps teams with responsive creativity in facilitating internal resource utilization, this study suggests the importance of team leadership being active in balancing internal and external team activities by playing complementary roles.

This study also explores the idea elaboration phase to understand why work teams display certain resourcing behaviors depending on the motivational driver of innovative idea generation. By exploring how a work team's internal and external affective states are affected by distinct motivations in idea generation, this study shows the strong effect of motivation at the beginning of the innovation implementation stage toward affective states during the implementation stage. Specifically, work teams with proactive idea generation formed strong positive affective states internally (i.e., high psychological ownership) but secured weak affective support externally (i.e., low constituent endorsement) while elaborating ideas, and vice versa for work teams with responsive idea generation. This study also showed how work teams with distinct motivational drivers exhibited different cognitive states internally and externally, but the patterns were not as explicit as shown in the affective states. In particular, work teams with proactive idea generation exhibited highly activated reflexivity on refining their ideas

and work teams with responsive idea generation exhibited highly activated reflexivity on refining their social relationships in implementing ideas. These internal and external idea reflexivity mediated the relationship between teams with proactive and responsive creativity and team innovation implementation effectiveness. However, work teams that generated ideas proactively did not exhibit weaker reflexivity on external social relationships. Moreover, work teams that generated ideas responsively did not show weaker reflexivity on ideas internally, which means teams with proactive creativity pursue reflexivity on their external social relationship to some degree and teams with responsive creativity pursue reflexivity on their ideas internally to some degree. This weak relationship between idea generation and internal/external idea elaboration via cognitive states of reflexivity suggests that a more complex phenomenon on team's cognitive states occurs during the idea elaboration phase, which was difficult to capture with cross-sectional survey-based data in this paper.

Practical Implications

The findings from this study suggest that managers, team leaders, and team members need to understand the underlying initial motivation work team forms to enable work teams to implement their innovative ideas successfully. The reason is that the initial motivation could last throughout the implementation process and affect the work team's cognitive states, affective states, and most importantly, their resourcing behaviors. Managers or top executives should consider the underlying motivation of what drives a certain work team to engage in innovation implementation and try to support their inherent weakness in resourcing behaviors. Team leaders should actively diagnose their team's motivational drivers in adopting the innovation and predict their strengths and weaknesses throughout the innovation implementation process. Team leaders should play an active role to supplement a team's expected weak resourcing behaviors, either by spanning boundaries for external resource acquisition or by

charismatically integrating internal team members. Lastly, team members should be always aware of their potential weaknesses and strengths throughout the process and strive to overcome their weaknesses.

Study Limitations and Future Research Directions

Despite the significant implications, the current findings should be interpreted with some limitations in mind. First, the causal relationships among the study variables cannot be ascertained because they were collected concurrently. Longitudinal panel data or field laboratory experiments could be helpful in establishing the causal effect of work teams with proactive or responsive creativity on team behaviors and cognitions during the subsequent implementation phases. In addition, employing qualitative methods, such as interviews or ethnographical studies, could help capture the underlying processes that teams go through during the implementation phases. Second, data were collected through a mix of online and offline surveys. Most of the samples (70 teams out of 91 total samples) were collected offline, but data on 21 teams in the manufacturing industry were collected online due to their office locations dispersed across South Korea. Although I controlled this effect by controlling the manufacturing industry and setting the manufacturing industry as the baseline industry, there might be some unknown effect from conducting an internet-based survey. Third, although I aimed to recruit survey respondents who have at least one year of team tenure so that they could diagnose their team contexts accurately, given that the period of survey conducted was during the early part of the fiscal year, ~40% of team leaders and ~28% of team members had team tenure of .50 to 1 year. Respondents with less than half a year were excluded and the survey conducted referred to a particular innovation that team leaders selected, hence, I believe all participants have sufficient knowledge and experience around their team contexts and behaviors regarding the specific innovation.

However, if more samples can be collected, then those with less than one year of team tenure could be excluded. Lastly, depending on the expected dependence on internal and external resources of each innovation, the behaviors of the team's internal and external resourcing behaviors could vary. Thus, I measured the importance of internal and external resources to implement each innovation as a potential control variable, but I excluded it as a control variable because the importance of internal and external resources indicated a strong correlation with industry and innovation type variables ($r=.26$). In future studies, surveys could be designed to capture the degree of resource utilization and resource stock compared to its necessities to capture accurately the dynamics of resourcing behaviors.

Despite these potential shortcomings, this study contributes to the exploration of “the black box” regarding the relationship between idea generation and implementation. Many potential areas could be developed further in future research. First, although this study aimed to untangle why teams with proactive or responsive creativity engage in specific team resourcing behaviors by examining internally and externally the degree of endorsement and reflexivity to the team, the underlying mechanism between creativity and team resourcing behaviors can be explored. For instance, based on the interview conducted with a team leader at the fashion company on her efforts to implement her creative ideas, teams with proactive creativity exhibit an aggressive approach to external resources; however, at a certain point, teams with proactive creativity exhibit diminishing returns on securing external resources.

“When my team created a 5-year milestone for the new product using wearable technology, which highlighted the importance of co-working with Company A on the development of technology, my supervisor told my team to redesign the plan to avoid highlighting the the dependence on external party, Company A..... So, I

had to personally reach out to Company A to get support on the technology, but after 6 months of fighting alone for the resources, I'm finally giving up and will just stick to what we have internally within my company." (41, Team Leader of the New Business Development team in Fashion company)

Examining this precise point when teams with proactive creativity exhibit diminishing returns on their endeavors for securing external resources and why teams act in this way could contribute to the comprehension of the underlying mechanism between creative idea generation and team resourcing behaviors.

Second, in this study, team leadership was posited as a boundary condition for work teams to balance internal and external resourcing activities, and the natural extension will be to study what other factors other than team leadership could play this role in balancing internal and external resourcing activities. For instance, the HR system or performance evaluation system could foster team members to behave in individual resourcing acts regardless of their initial motivation. Team and organizational contexts that support team innovation implementation could play a complementary role for teams to overcome their resourcing behaviors because of the initial motivations.

Finally, in this study, initial motivational underpinnings in generating ideas lasted throughout the innovation process. This study could be extended to consider other initiating factors that can influence the subsequent team innovation implementation process. For example, team cognitive diversity or flexibility and team context of supporting innovation environment during the idea generation phase could also affect the subsequent processes. Team attributions on the innovation adaptation could also affect the subsequent processes.

Conclusion

Teams who create innovative ideas need to go through idea elaboration, idea championing, and idea implementation phases to bring ideas into effective implementation. In this journey, teams face the challenge of balancing its internal and external activities throughout the process to create synergy between two activities in securing relevant resources for implementation. The initial motivational underpinnings will influence this balancing act between a team's internal and external activities during the idea generation phase. When teams generated ideas proactively, they were more engaged in team endorsement and idea reflexivity within the team, resulting in better facilitation of internal resource utilization. However, this engagement is disadvantageous to the achievement of constituent endorsement and social reflexivity outside of the team, resulting in the lesser acquisition of external resource stock. Meanwhile, when teams generated ideas responsively, they will be in an advantageous position in achieving constituent endorsement and social reflexivity with external parties, resulting in the better acquisition of external resource stock. However, they would be in worse condition for facilitating internal resource utilization because of the low level of psychological endorsement and reflexivity on their ideas. Team leadership that complements the shortcomings of both paths could help teams balance internal and external activities throughout the innovation implementation processes.

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APPENDIX

Appendix A. Survey items for the main variables in the study (Study 2)

Variables	Reliability
1. Proactive creativity (내부 주도형 창의성): Sung et al.(2017)	
우리 팀은 이 혁신 아이디어를 처음 개발 하기 시작할 때...	
... 팀 외부*의 요구와는 별개로 우리 팀이 독자적으로 창의적인 아이디어를 개발하였다.	<ul style="list-style-type: none"> • Cronbach's Alpha=.91 • ICC(1): .55 • ICC(2): .83 • rWG: .92
... 업무의 효과적 수행을 위해 우리 스스로 새로운 방식의 아이디어를 제안하였다.	
... 기존 업무를 개선하기 위해 자발적으로 혁신 아이디어를 제시하였다.	
... 팀 외부로부터 미리 정해진 방향이 없었지만 적극적으로 창의적인 아이디어를 제시하였다.	
... 팀 외부로부터 해결해야할 구체적 문제가 주어지지 않았지만 자체적으로 혁신 아이디어를 도출하였다.	
2. Responsive creativity (외부 주도형 창의성): Sung et al.(2017)	
우리 팀은 이 혁신 아이디어를 처음 개발 하기 시작할 때...	
... 팀 외부*로부터 해결해야할 구체적인 문제점들이 제시되어 이 아이디어를 개발하였다.	<ul style="list-style-type: none"> • Cronbach's Alpha=.83 • ICC(1): .91 • ICC(2):.97 • rWG: .91
... 팀 외부에서 기대하는 적정 수준으로만 아이디어를 제시하고, 그 이상의 노력은 하지 않았다.	
... 팀 외부로부터 제시된 가이드라인에 맞추어 이 아이디어를 개발하였다.	
... 팀 외부로부터 지시 받은 범위 내에서 이 아이디어를 개발하였다.	
... 팀 외부로부터 제시받은 요건에 잘 부합하는 창의적인 아이디어를 개발하였다.	
3. Team psychological ownership (아이디어에 대한 심리적 주인의식):Avey et al. (2009)	
우리 팀은 이 혁신 아이디어를 <u>팀 내부적으로</u> 정교하게 만들어 가는 과정에서...	
... 혁신 아이디어를 실행시키기 위한 강한 책임의식을 느꼈다.	<ul style="list-style-type: none"> • Cronbach's Alpha=.87 • ICC(1): .44 • ICC(2):.77 • rWG: .93
... 혁신 아이디어가 "우리의 것"이라고 말하는데 주저함이 없었다.	
... 외부의 개입으로 원치 않는 방향으로 전개될 때, 조직 내 누구에게든 우리의 의견을 개진했다.	
... 외부의 지나친 개입이 있을 때, 조직 내 누구에게든 아이디어 관련 우리의 입장을 피력하였다.	
... 혁신 아이디어를 <u>팀 외부적으로</u> 정교하게 만들어 가는 과정에서...	
... 팀 외부로부터 필요한 피드백을 충분히 받았다.	<ul style="list-style-type: none"> • Cronbach's Alpha=.83 • ICC(1): .34 • ICC(2): .69 • rWG: .90
... 혁신 아이디어 실행과 관련있는 팀 외부 관계자들과 협력적인 관계를 맺었다.	
... 아이디어 정교화에 필요한 추가적인 자원 (인적자원, 정보, 재정적 자원 등)을 팀 외부로부터 제공 받았다.	
... 불확실성이 큰 혁신 아이디어를 지속적으로 추진할 수 있도록 팀 외부로부터 정서적 지원 (emotional support)을 받았다.	
... 불확실성이 큰 혁신 아이디어를 지속적으로 추진할 수 있도록 팀 외부로부터 정서적 지원 (emotional support)을 받았다.	
4. Idea endorsement (혁신 아이디어에 대한 외부의 지지): Spreitzer (1996); Seibert et al. (2001)	
우리 팀은 이 혁신 아이디어를 <u>팀 외부적으로</u> 정교하게 만들어 가는 과정에서...	
... 팀 외부로부터 필요한 피드백을 충분히 받았다.	<ul style="list-style-type: none"> • Cronbach's Alpha=.90 • ICC(1): .52 • ICC(2):.82 • rWG: .93
... 혁신 아이디어 실행과 관련있는 팀 외부 관계자들과 협력적인 관계를 맺었다.	
... 아이디어 정교화에 필요한 추가적인 자원 (인적자원, 정보, 재정적 자원 등)을 팀 외부로부터 제공 받았다.	
... 불확실성이 큰 혁신 아이디어를 지속적으로 추진할 수 있도록 팀 외부로부터 정서적 지원 (emotional support)을 받았다.	
... 불확실성이 큰 혁신 아이디어를 지속적으로 추진할 수 있도록 팀 외부로부터 정서적 지원 (emotional support)을 받았다.	
5. 혁신 아이디어에 대한 팀 자체적 성찰 (Idea reflexivity): Carter & West (1998); Schippers et al. (2007)	
우리 팀은 이 혁신 아이디어를 <u>팀 내부적으로</u> 정교하게 만들어 가는 과정에서...	
... 변화하는 환경에 맞추어 아이디어를 지속적으로 개선하였다.	<ul style="list-style-type: none"> • Cronbach's Alpha=.90 • ICC(1): .52 • ICC(2):.82 • rWG: .93
... 팀원들이 협력하여 다함께 아이디어를 수정해나갔다.	
... 혁신 아이디어의 실행 가능성을 고려하며 개선하였다.	
... 필요하다면 혁신 아이디어의 핵심 개념도 재검토했다.	
... 필요하다면 혁신 아이디어의 핵심 개념도 재검토했다.	

<p>6. 혁신 아이디어에 대한 사회적 성찰 (Social reflexivity): Carter & West (1998); Schippers et al. (2007)</p>	
<p>우리 팀은 이 혁신 아이디어를 <u>팀 외부</u>와 함께 정교하게 만들어 가는 과정에서...</p> <p>... 팀 외부의 다양한 피드백을 검토하여 반영하려고 했다.</p> <p>... 팀 외부 관계자들이 기피하는 부분도 반영하여 아이디어를 수정했다.</p> <p>... 외부 관계자 관리의 어려움이 있을 때 서로의 피드백을 충분히 수용하였다.</p> <p>... 외부 관계자들의 의견을 충분히 반영하여 가급적 빨리 문제를 해결하려고 했다.</p>	<ul style="list-style-type: none"> • Cronbach's Alpha=.87 • ICC(1):.42 • ICC(2):.75 • rWG: .91
<p>7. 팀장의 외부 관리 (Boundary spanning leadership): Faraj and Yan (2009)</p>	
<p>우리 팀장은, <u>팀 외부</u>의 강한 지지를 통해 이 혁신 아이디어가 잘 실행될 수 있도록,</p> <p>... 팀 외부에서 필요한 정보와 자원을 구해왔다.</p> <p>... 중요한 외부 관계자들을 설득하였다.</p> <p>... 외부 관계자들과의 기존 관계를 충분히 활용하여 협조를 구했다.</p> <p>... 공식적으로 지원되는 것 외의 외부 지원이나 정보를 확보했다.</p>	<ul style="list-style-type: none"> • Cronbach's Alpha=.91 • ICC(1):.40 • ICC(2):.74 • rWG: .90
<p>8. 팀 내부의 협력을 이끌어내는 카리스마적 리더십 (Internal integrating leadership): Conger et al., 2010</p>	
<p>우리 팀장은, <u>팀 내부</u>의 강한 지지를 통해 이 혁신 아이디어가 잘 실행될 수 있도록,</p> <p>... 팀원들이 서로 좋아하고 존중할 수 있게 영향을 끼쳤다.</p> <p>... 혁신 실행으로 팀원들에게 생길 감정과 니즈를 잘 고려하여 팀을 이끌어주었다.</p> <p>... 종종 팀원들의 감정과 니즈를 고려하여 지치지 않게 개인적으로 먼저 다가와줬다.</p>	<ul style="list-style-type: none"> • Cronbach's Alpha= .85 • ICC(1):.21 • ICC(2):.52 • rWG:.89
<p>9. 외부 자원 확보 (External resource acquisition): Spreitzer (1996)</p>	
<p>우리 팀은 이 혁신 아이디어를 실행에 옮길 때 필요한 자원을...</p> <p>... 팀 외부에서 충분히 확보할 수 있었다.</p> <p>... 팀 외부에서 적시에 확보할 수 있었다.</p> <p>... 팀 외부에서 필요한 만큼 끌어올 수 있었다.</p>	<ul style="list-style-type: none"> • Cronbach's Alpha=.95 • ICC(1):.32 • ICC(2):.66 • rWG:.86
<p>10. 내부 자원 활용 (Internal resource utilization): Sung & Choi(2012), Akgun et al., (2008)</p>	
<p>우리 팀은 이 혁신 아이디어를 실행에 옮길 때...</p> <p>... 필요한 업무관련 자원을 완전히 활용하였다.</p> <p>... 팀원들이 확보한 다양한 자원이 낭비되지 않았다.</p> <p>... 도전에 직면할 때마다 자원을 효과적으로 잘 활용하였다.</p>	<ul style="list-style-type: none"> • Cronbach's Alpha=.89 • ICC(1):.37 • ICC(2):.71 • rWG:.91
<p>11. 팀의 혁신 실행 효과성 (Team innovation implementation effectiveness): Klein et al. (2001)</p>	
<p>이 혁신으로 인해 ...</p> <p>...우리 팀의 제품, 서비스, 혹은 업무 프로세스 등의 품질이 향상되었다.</p> <p>...우리 팀의 성과가 향상되었다.</p> <p>...우리 팀의 사기가 증진되었다.</p> <p>...우리 팀의 생산성이 향상되었다.</p>	<ul style="list-style-type: none"> • Cronbach's Alpha=.78 • ICC(1): N/A • ICC(2): N/A • rWG: N/A
<p>12. 팀의 기업가적 지향성(Entrepreneurial orientation)</p>	
<p>우리 팀은 새로운 업무 방식들(예: 새로운 기법, 신기술)을 조직 내에서 가장 먼저 제안하거나 도입하는 경우가 자주 있다.</p> <p>우리 팀은 리스크가 높더라도 높은 성과를 올릴 수 있는 프로젝트를 추진하려는 성향을 갖고 있다.</p> <p>우리 팀은 과감하고 공격적인 업무 추진이 팀의 목표 달성에 도움이 된다고 믿는다.</p> <p>우리 팀은 불확실성이 있는 상황에서 기회 탐색을 위한 과감한 액션을 취한다.</p>	<ul style="list-style-type: none"> • Cronbach's Alpha=.88 • ICC(1): .33 • ICC(2): .67 • rWG: .89

13. 팀 외부와의 업무 연관성 (Task interdependence with external parties)

우리 팀의 업무는 조직 내 다른 팀의 업무와 서로 밀접하게 연관되어 있다.
우리 팀은 조직 내 다른 팀들과 서로의 업무 활동을 함께 조율해야 하는 경우가 많다.

우리 팀이 수행하는 업무는 조직내 다른 팀들의 업무에 상당한 영향을 준다.
우리 팀은 업무를 수행하기 위해서 외부와 서로 자주 소통해야 한다.

- Cronbach's Alpha=.88
- ICC(1): .34
- ICC(2): .68
- rWG: .90

(*팀 외부: 조직 내 다른 팀, 최고경영진/임원, 시장, 고객 등)

적극적, 수동적 팀 창의성의 혁신실행으로 전환:
혁신실행을 위한 팀의 내외부 자원 활용 행위
대조를 중심으로

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혁신은 역동적인 비즈니스 환경에서 운영되는 현대 조직의 성장과 경쟁력에 중요하며, 팀은 조직 혁신의 가장 필수적인 원천이 되고 있다 (Anderson et al., 2014; Lopez Cabrales et al., 2009). 실현되지 않은 창의적 아이디어는 무용지물이라는 점을 감안할 때, 본 논문은 혁신적 아이디어 창출과 팀에서의 구현을 연결하는 중간 메커니즘에 초점을 맞추고 있다. 팀은 특히 혁신과 같은 비일상적인 작업을 수행 할 때 조직적이고 광범위한 산업 맥락에서 독립적으로 작동하지 않는다 (Ancona & Caldwell, 1992; Gist, Locke, 1987; Yan & Louis, 1999). 따라서 팀들은 혁신적 아이디어를 성공적으로 구현하기 위해 내부 및 외부 활동을 효과적으로 관리해야 한다. 이 논문은 혁신 구현 프로세스 전반에 걸쳐 팀들이 다양한 내부 및 외부 활동을 어떻게 관리하고 있으며, 특히 이러한 내부 및 외부 활동이 혁신적 아이디어 창출의 초기에 근본적인 동기 유발 요인에 의해 어떻게 영향을 받는지를 보여준다. 이 논문은 두 개의 연구로 구성되어 있다. 첫 번째 연구는 능동적이고 수동적인 동기를 가지고 아이디어를 창출한 팀이 혁신을 이루기 위해 내부 자원(즉, 팀 구현 효율성 및 팀 협력)과 외부 자원(즉, 외부 자원 획득 및 외부 합법성)을 어떻게 활용하는지를 검토한다. 두 번째 연구는 능동적이고 수동적인 동기를 가지고 아이디어를 창출한 팀이 팀의 혁신을 달성하기 위해 내부 자원 활용 및 외부 자원 획득에 어떻게 관여하는지를 검토한다. 두 연구 모두 능동적인 동기를 가지고 아이디어를 창출한 팀들이 내부 자원을 활용하는 데 유리하지만, 외부 자원을 확보하는 데는 한계가 있는지, 반면에 수동적인 동기를 가지고 아이디어를 창출한 팀은 외부 자원을

확보하는데는 유리해도, 내부 자원을 활용하는데 불리한지를 보여준다. 특히, 두 번째 연구에서는 외부 경계 스패닝(boundary spanning) 리더십과 내부 통합(internal integrating) 리더십이 팀의 내부 및 외부 자원 조달 행위에 어떻게 관여하여 팀 혁신 실행 효과성을 이끌어 내는지를 보여준다. 두 연구는 각각 미국(온라인)과 한국(오프라인)에서 실시한 고객설문조사 자료를 통해 실증적으로 검증했다. 이 논문은 그동안 많이 간과되었던 팀에서 아이디어가 도출되고 나서 어떻게 실행에 이르는지의 과정을 탐구하고, 그 전환 메커니즘을 규명하였다라는 점에서 의의가 있다.

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주요어: 창의성, 혁신, 자원활용, 동기부여, 작업팀, 리더십

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