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Cross-level effects of buyer-supplier collaboration and competition on individual gains and individual skill utilization

Julia Backmann[a,*], Martin Hoegl[a], K. Praveen Parboteeah[b]

[a] Ludwig-Maximilians-Univ. Munich, Munich School of Management/Institute for Leadership and Organization, Geschwister-Scholl-Platz 1, 80539 Munich, Germany
[b] University of Wisconsin—Whitewater, College of Business and Economics, 800 West Main Street, Whitewater, WI, USA

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ABSTRACT

Organizations increasingly engage in interorganizational projects. Individuals working on such projects are likely to be influenced by this context. This study investigates the effects of the team processes of collaboration and competition on individuals' gains and skill utilization. Drawing on social identity theory, we proposed that collaboration would positively affect individual-level outcomes, while competition would result in negative individual-level outcomes. Using hierarchical linear modeling, the cross-level hypotheses were tested on multiple informants' data pertaining to 55 projects. Surprisingly, positive effects were found for both contextual variables, indicating that collaboration and competition result in greater skill utilization and individual gains.

1. Introduction

Collaborating with external companies such as suppliers, customers, or technology partners offers opportunities to exploit external resources, knowledge, and organizational learning (Becker and Dietz, 2004). Engaging in such interorganizational endeavors exposes organizations, teams, and individuals involved in particular projects to complex task coordination challenges, uncertainty in terms of their partners' contributions, and potential conflicts of interest stemming from divergent expectations and goals (Das and Rahman, 2010; Sampson, 2007). Therefore, current research has started to identify the drivers of successful interorganizational projects. Research on team-level success factors for interorganizational new product development projects has identified processes such as trust, collaboration, and communication as beneficial drivers (e.g., Bstieler, 2006; Fang, 2008; Hoegl and Wagner, 2005; Sivadas and Dwyer, 2000). Conversely, team effectiveness and efficiency is known to be impaired by partners' competitive and opportunistic behaviors (Bstieler, 2006; Yan and Kull, 2015).

While current research has focused on team-level processes and outcomes of interorganizational projects, it has largely ignored how the interorganizational team environment affects the individuals involved in such projects. This is surprising, given the importance of individual-level outcome variables such as skill utilization and professional growth for team performance (Hackman, 1987; Nerkar et al., 1996), future team performance (Spector, 1997), and organizational learning (Friedman, 2001). Individuals involved in interorganizational projects are likely to gain both personally and professionally from the experience and knowledge of team members from both their own and partner organizations. This is especially true

* Corresponding author.
E-mail addresses: backmann@bwl.lmu.de (J. Backmann), hoegl@lmu.de (M. Hoegl), parbotek@uww.edu (K. Praveen Parboteeah).

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in the case of new product development projects involving, for instance, a supplier company, as these projects usually involve individuals from diverse backgrounds (Dahlin et al., 2005). Additionally, team members from both organizations must often exchange information and knowledge in order to achieve their project goals (Faraj and Lee, 2000). Such teams also rely upon individuals to perform their tasks effectively and to contribute to the team (Stewart and Barrick, 2000; Tjosvold et al., 2009).

Given the above, there is a needto better understand the relationship between team processes (such as buyer-supplier collaboration and competition) and individual team members' gains (acquired knowledge, contacts, and personal benefits) and skill utilization (the degree to which team members can contribute to the project and apply their knowledge and skills). The present study examines how buyer-supplier collaboration and competition relate to these individual outcomes. Specifically, the aim is to contribute to the existing literature by addressing the following research questions. (1) Is buyer-supplier collaboration related to individual gains and skill utilization? (2) Does competitive behavior between buyer and supplier team members affect individual gains and skill utilization? To address these questions, the study uses a cross-level approach to investigate effects of team-level variables (collaboration, competition) on individual-level outcomes (individual gains and individual skill utilization).

The paper makes two main contributions. First, emphasizing the importance of team-level variables for individual-level outcomes acknowledges that individuals are influenced by surrounding systems (Hoegl et al., 2003; McGrath, 1986)—in this case, their team and intergroup relationships with a partner company. The literature on team-level implications for behaviors, actions, and outcomes of its members remains underdeveloped (Shaw et al., 2000). Although several studies (e.g. Friedman, 2001; Hackman, 1987; Nerkar et al., 1996) have underscored the importance of individual-level outcomes such as satisfaction and learning for organizational and team performance, few (e.g., Shaw et al., 2000) have investigated how team context influences individual outcomes such as individual gains and skill utilization. In a review of team research, only a small fraction of group-related studies took account of individual-level variables (Cohen and Bailey, 1997). In helping to bridge this research gap, the present study strengthens the increasing interest in cross-level influences (Hirst et al., 2009).

Second, this study augments the interorganizational product development literature and, in particular, addresses the issue of how external partnering influences performance outcomes. Earlier studies (e.g., Hoegl and Wagner, 2005; Kotabe et al., 2003; Lawson et al., 2009; Ragatz et al., 1997; Sampson, 2007; Takeishi, 2001; Wynstra and Weggemann, 2001) have focused on organizational-, project-, and team-level performance outcomes without giving due consideration to the effects of interorganizational product development projects on individual-level outcome variables among team members. The present study clarifies this issue by examining how buyer-supplier collaboration relates to individual gains and skill utilization. We further consider competition between team members from both organizations and its effects on individual-level outcomes, which to our knowledge has never previously been examined in this context.

In the following sections, we first describe the derivation of cross-level hypotheses related to the variables in question and how these hypotheses were tested on a sample of 159 team leaders and members in 55 new product development projects in the automotive industry. We conclude by discussing the theoretical and practical implications, along with the study's limitations and required future work.

2. Theory and hypotheses

In building the hypotheses, we adopted a cross-level approach thereby considering different units of analysis. Although most existing research on the factors examined has favored a single-level approach, some reviews (e.g., Hitt et al., 2007: 1385) have suggested that cross-level research directs "our attention to the context in which behaviors occur and illuminates the multiple consequences of behaviors traversing levels of social organization." By examining how team-level variables (buyer-supplier collaboration and competition) relate to individual-level outcomes (here, individual gains and individual skill utilization), we contribute a much-needed "downward" perspective, considering the impact of higher-level variables (here, team properties) on lower level variables (Mathieu and Chen, 2011). While acknowledging that individuals can also have an upward influence on teams, the cross-level influences considered here seem more plausible (Hitt et al., 2007) and consistent with reality. Below, we discuss how team-level collectives can affect individual level outcomes.

Drawing on social identity theory, intergroup relations research assumes that teams comprise individuals whose thoughts, actions, and behaviors are influenced by the individuals themselves and by others (both within and outside their teams), and that teams interact with other groups (Alderfer, 1987). Social identity is defined as "that part of an individuals' self-concept which derives from their knowledge of their membership of a social group (or groups) together with the value and emotional significance of that membership" (Tajfel, 1981: 255). Classifying themselves in several categories (Turner, 1982) such as organizational or team member, individuals usually belong to multiple groups and tend to act as representatives of those group(s) (Guzzo and Shea, 1992; Labianca et al., 1998).

In an interorganizational context, project participants are part of the project development team, but they also belong to either the supplier or buyer organization and are expected to represent their own organization's interests. In the context of interorganizational new product development, an intergroup relations perspective is useful in explaining the relationship between team members from buyer and supplier organizations, acknowledging that intergroup relationships are shaped by cooperation, competition, and conflict between groups (Alderfer, 1987; Alderfer and Smith, 1982; Elmes and Wilemon, 1991; Guzzo and Shea, 1992; Richter et al., 2006). There is recent evidence that cooperative and competitive behavior between groups (often referred to as "coopetition") may exist simultaneously (Morrison et al., 2005; Tsai, 2002; Walley, 2007), with