The effect of task conflict and cooperation on performance of teams: Are the results similar for different task types?

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A B S T R A C T

There is ample agreement in the literature that task conflict is an important predictor of team performance. Nevertheless, the question of "how and why" specifically task conflict affects performance still remains open and existing studies found positive, negative, as well as insignificant results when testing the relationship. Researchers argue that intra-team cooperation is a crucial process through which a team can improve its performance. Using team-conflict theory we argue that the effect of task conflict on performance is mediated by team member cooperation. In this paper, we thus intend to test this relationship using a sample of 92 team-task observations. We further split the sample into decision-choice and creative-generating tasks in order to see if the outcome of this mediating chain is the same for different task types. The results contribute to the understanding of the "black box" of team processes and are of relevance for practitioners as they provide evidence of a potential trigger to improve team performance

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Introduction

In order to improve effectiveness many companies have changed their structures from hierarchical organizational units to decentralized work teams (Mannix & Neale, 2005). Hence, teams have become a common feature of present-day's workforce (Gibson, Zellmer-Bruhn, & Schwab, 2003; Jehn, Northcraft, & Neale, 1999) as well as a popular research topic (Antoni & Hertel, 2009). Team function, in case of both research and practice, is often described by input–process–output (I-P-O) frameworks (Hackman, 1987; McGrath, 1984). I-P-O models are frequently used in order to answer why some teams perform better or are more efficient than others (Marks, Mathieu, & Zaccaro, 2001; Stewart & Barrick, 2000). Nevertheless, the majority of studies on the topic relies on input–process (I-P), process–output (P-O), or input–output (I-O) relationships. Such studies, however, can only add limitedly to our knowledge in the field and can only partially provide guidance for practitioners as they only present a very fragmented perspective on team functioning.

This is specifically the case in team conflict research when direct effects of conflict on team outcomes are investigated, and only few scholars address what particularly happens between input and output (Cooper & Watson, 2011; De Dreu & Weingart, 2003; De Wit, Greer, & Jehn, 2012; Guerra, Martínez, Munduate, & Medina, 2005; Jehn & Bendersky, 2003). Conflict can be broadly defined as a "process resulting from the tension between team members because of real

or perceived differences" (De Dreu & Weingart, 2003, p. 741) and is an inevitable part of teamwork. Conflict is also one of the most immediate challenges to effective teamwork (Jehn, 1995; Medina, Munduate, Dorado, Inés, & José, 2005) as it can be an impediment for cooperation and, subsequently, performance (Jehn, Greer, Levine, & Szulanski, 2008; Swann, Polzer, Seyle, & Ko, 2004). There has been a large amount of research on intra-team conflict, developing a typology of conflict (Jehn, 1995, 1997) and addressing antecedents (Ayub & Jehn, 2006; Jehn & Mannix, 2001; Puck, Neyer, & Dennerlein, 2010), as well as consequences (Jehn et al., 2008; Medina et al., 2005; Rispens, Greer, & Jehn, 2007). Whether conflict is good or bad for team performance seems to depend on the type of conflict (Amason, 1996; De Dreu, 2006; De Wit et al., 2012; Jehn, 1997; Jehn & Bendersky, 2003; Rispens et al., 2007), yet, results remain inconsistent (De Wit et al., 2012; Jehn & Bendersky, 2003).

In particular the effects of task conflict, which refers to "disagreements among group members about the tasks being performed" (Jehn & Bendersky, 2003, p. 200), do not seem to be clear. Some researchers found a beneficial effect of task conflict (Amason, 1996; Behfar, Mannix, Peterson, & Trochim, 2011; De Dreu, 2006; Janssen, Van De Vliert, & Veenstra, 1999; Jehn, 1995, 1997), others found a negative one (De Dreu, 2006; Langfred, 2007; Vodosek, 2005), some even found no significant effect (De Wit et al., 2012). Scholars arguing for a positive effect base their line of reasoning on the assumption that such disagreement forces team members to deal with issues in more detail and express their own opinion about the task at hand which leads to better understanding and a higher level of cooperation and, ultimately, higher performance. Scholars arguing for a negative effect (De Dreu & Weingart, 2003; Langfred, 2007;

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Vodosek, 2005) either implicitly or explicitly assume that task conflict is disruptive and, in turn, team members cooperate less, as arguing for one's viewpoints leads to stress and frustration, which again leads to worse performance. This negative view of conflict is based on information-processing theory, which claims that team performance suffers because conflict impairs the processing of information (e.g., Carnevale & Probst, 1998). Also according to self-verification theory (Swann et al., 2004) task conflict has a negative impact on cooperation because team members constantly challenge each other. In turn, if team members cooperate less, performance might decrease. Yet, if cooperation is increased, performance can increase as well. Arguably, the effect of task conflict on performance runs via cooperation.

Cooperation can be defined as "teammates' behavioral decisions about whether to act in promoting the objectives of the team" (Sinclair, 2003, p. 75) and is an essential process through which team effectiveness can be actualized and improved (Campion, Medsker, & Higgs, 1993; Fleishman & Zaccaro, 1992). Indeed, it was found that if members of a group cooperate, they perform better (Evans & Charles, 2005). Some researchers have either implicitly or explicitly suggested cooperation to be the opposite of conflict (Kozlowski & Bell, 2003), yet we follow the argumentation of King et al. (2009) that cooperation is a related, but separable process that can evolve in teams. We borrow from cooperation theory to stress our reasoning which views cooperation to be a mechanism to manage conflict or a response to conflict (Alper, Tjosvold, & Law, 2000; Deutsch, 1990) and thus a subsequent behavioral process. The general mediating effect of cooperation has been analyzed in several studies (Chatman & Flynn, 2001; Pinto, Pinto, & Prescott, 1993; Sinclair (2003), yet it has never been conceptualized as a mediating variable between task conflict and performance. Further, we argue that the relevance of this mediation most probably depends on task type as "characteristics of team tasks are key factors for the development [. . .] of team processes" (Antoni & Hertel, 2009, p. 258). De Wit et al. (2012) suggest that in case of task conflict the type of task could account for a negative effect on performance, but only little is known about differing effects of various task types (Antoni & Hertel, 2009). Consequently, we intend to venture deeper into these relationships and shed light on the "black box" of team processes.

Overall, the objective of this paper is to test the mediating role of cooperation between task conflict and performance and whether the relevance of the mediating effect depends on task type. In general scant research analyzed mechanisms that explain the negative effects of task conflict on group outcome (Rispens et al., 2007). Scholars argue that mediating variables have mostly been neglected in conflict-performance research (Jehn & Bendersky, 2003; Jehn et al., 2008) and it is essential to learn more "about the psychological mechanisms of group work in order to explain and predict why certain groups are working successfully while others don't" (Antoni & Hertel, 2009, p. 254). Moreover, typical process variables like cooperation have frequently been considered as predictor variables (Antoni & Hertel, 2009; Hyatt & Ruddy, 1997). The above reasoning might explain why research on task conflict is still "open to doubt" (Medina et al., 2005, p. 221) and contribute to increase the understanding of how and under which conditions task conflict affects performance.

The mixed results regarding task conflict also create difficulties in providing clear managerial implications, which is why Greer, Caruso, and Jehn (2011) suggested further investigating the effect of task conflict on performance. We contribute to practice as we show that cooperation is a potential trigger for firms to influence performance.

This paper is structured as follows: in a first step we develop our theoretical framework and derive hypotheses regarding the above mentioned relations. We will then present the sample and measures and describe the operationalization of the variables used. In a next step we will test the hypotheses by regression analysis and discuss the results as well as the limitations of the study and implications for further research and practice.

Theoretical framework and hypotheses

Whether conflict is good or bad has caused an intensive debate that is still ongoing (Ayub & Jehn, 2006; De Dreu, 2006; De Wit et al., 2012; Jehn & Bendersky, 2003; Jehn et al., 2008). Initial research suggested conflict to be mainly detrimental (Blake & Mouton, 1964; Wall & Nolan, 1986) and to reduce effectiveness as it distracts team members from performing the task, makes communication more difficult and leads to breaks in personal as well as professional relationships (De Dreu & Weingart, 2003; Medina et al., 2005). Given these findings, conflict is still mainly seen as something that either needs to be avoided in general, or something to be immediately resolved (Jehn et al., 1999; Losey, 1994; Stone, 1995).

On the other hand, task-related conflicts, which involve disagreements "about the content and outcomes of the task being performed" (De Wit et al., 2012, p. 360) were often found to be beneficial. Scholars argue that they motivate critical thinking which allows for better decision making (Jehn, 1997). However, this assumption does not seem to hold up continuously as several studies found evidence for a negative effect of task conflict on performance (De Dreu, 2008; De Dreu & Weingart, 2003; Jehn et al., 2008; Langfred, 2007). These studies base their argumentation on an information-processing perspective, suggesting task conflict is decreasing the quality of decision-making as team members are distracted (Carnevale & Probst, 1998; Jehn et al., 2008). Also self-verification theory is used to explain the negative effects of task conflict (Swann et al., 2004). However, while task conflict is obviously an important factor influencing performance, it is not clear, how exactly. Given the important role of cooperation in group work we therefore expect that the effect of task conflict on performance can be understood more clearly via the mediating mechanism of cooperation. Hence, in line with the input–process–output (I-P-O) framework (McGrath, 1964, 1984), the definition of team processes by Marks et al. (2001), and previous studies which analyzed conflict as input variable (Jehn et al., 2008); (Rispens et al., 2007) we conceptualize task conflict as input factor that can influence the process of cooperation which, again, will influence a team's performance. Specifically, we argue that task conflict (input) has a negative effect on the process of cooperation (mediator) which, in turn, has a negative effect on performance (output). In order to address issues related to task type we split the sample into decision-choice and creative-generating tasks based on the typology developed by (McGrath, 1984). Both task types are considered rather complex tasks, which means more cognitive resources or activities are required and the negative effect of task conflict is likely to be particularly prominent (De Dreu & Weingart, 2003). We compare the I-P-O models for these two task types. Some scholars criticize the simplicity of the I-P-O model approaches (e.g., Cohen & Bailey, 1997). However, we argue that applying a two-step approach (conflict to cooperation to performance) instead of the frequently applied single-step analyses (e.g., conflict to performance (Cooper & Watson, 2011; De Wit et al., 2012; Jehn & Bendersky, 2003) or cooperation to performance (Kratzer, Leenders, & Van Engelen, 2004)) needs to be the first step before adding further complexity to the model: before testing potential contingencies of a model, the basic relationship in the "black box" need to be established. Thus, while we agree that our I-P-O approach will not explain all variance in the relationships, we believe that opening the "black box" of processes is an important first step toward more complex models.[1]

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[1] Given that some scholars would argue that conflict is a process we may rather talk about a P-P-O model in our case. However, as we model conflict as input for cooperation we believe the label I-P-O is still warranted.