VILNIUS TECH
Vilnius Gediminas Technical University

Business: Theory and Practice
ISSN 1648-0627 / eISSN 1822-4202
2023 Volume 24 Issue 1: 258–270
https://doi.org/10.3846/btp.2023.17774

TIME LOST ON TASK-, RELATIONSHIP AND PROCESS CONFLICT

Phyllis DIRRLER[1*], Szilárd PODRUZSIK[2]

[1]*Faculty of Economic Sciences, Hungarian University of Agriculture and Life Sciences, Kaposvár, Hungary*
[2]*Centre for Economic and Regional Studies, Budapest, Hungary*

Received 9 October 2022; accepted 21 November 2022

Abstract. There are various ways to measure conflict costs, however no study has considered the distinction of conflict types in the approaches yet. The purpose of this study is to measure internal indirect conflict costs in terms of lost time and to evaluate the association to task-, relationship-, and process conflict. An online survey with 507 respondents was conducted to gather data on individual conflict situations. The measurement of internal indirect conflict costs and different conflict types was based on former research. Multiple Regression and Kruskal-Wallis testing was used to test our hypotheses. We found support that relationship conflict influences the amount of lost time on internal indirect conflict costs. Task conflict did not indicate any significant association. Process conflict demonstrated mixed results. The overall variable did not have a significant effect, however in case of international conflict set-ups process conflict was significantly linked to conflict costs. The multiple regression has an explanatory power of approximately 25%. Future research should consider other variables to be included affecting internal indirect conflict costs. Process conflict should also be researched thoroughly again. The distinction of logistical and contribution conflict was not possible.

Keywords: internal indirect conflict costs, lost time, task conflict, relationship conflict, process conflict, conflict costs.

JEL Classification: D23, M12, M54.

Introduction

Within the last decades organizations have increasingly shifted to team-oriented workgroups (Boyett & Conn, 1991), emphasizing decentralized structures and decision-making, as well as flatter hierarchies and higher independences of individuals (Nohria & Garcia-Point, 1991). This shift away from bureaucratic organizations can on the one hand side promote flexibility, efficiency, creativity, motivation or the acceptance of ideas (Levine & Moreland, 1990; McGrath & McGrath, 1984). On the other side it can foster new or more conflict (Janssen et al., 1999), encourage free rider trends or keep back ideas (Jehn & Mannix, 2001). In today's organizations groups have become the center of work and despite the advantages it provides, conflict becomes inevitably due to increased interdependence and complexity (DeChurch & Marks, 2001; Jehn, 1995). Not surprisingly, many management studies have investigated the field of conflict (McMillan et al., 2012), but up to now presenting divergent research findings whether conflict can be beneficial or not (Jehn & Bendersky, 2003; Jehn, 1995). In line with the outcome divergence presented by scientists, academics also lack a jointly accepted definition of conflict. However, many researchers include common characteristics in their definitions, which are amongst others incompatible goals (Lewicki et al., 1997), divergent interests (Pruitt et al., 1994) or perceived differences (De Dreu et al., 1999), as well as an interdependence and interaction among the group members (Brockman, 2013). For this research study conflict is described as "perceived incompatibilities or discrepant views among the parties involved" (Jehn & Bendersky, 2003, p. 189). Most scholars don't consider conflict as a whole and instead analyze different conflict types that are task conflict, relationship and process conflict (Jehn, 1995; Jehn & Bendersky, 2003; De Dreu et al., 1999; Jehn & Mannix, 2001). Disregarding the debate whether conflict can be constructive or not, most research articles focus on similar variables in respect to conflict outcomes, which are amongst others satisfaction levels (Jehn & Bendersky, 2003; Wit et al., 2012; Jehn, 1997), group performances (De Dreu & Weingart, 2003; Jehn, 1997; Wit et al., 2012; Vodosek, 2005; Greer et al., 2011), trust amongst the members (Wit et al., 2012), intentions to quit (Jehn, 1997; Ismail et al., 2012) and group commitment (Wit et al., 2012; Jehn & Bendersky, 2003). A distinct approach to capture conflict outcomes, is the

*Corresponding author. E-mail: *phyllis.dirrler@yahoo.com*

measurement of conflict costs (Dirrler & Podruzsik, 2022). Conflict costs are claimed to be the highest reducible costs of today's organizations (Buss, 2011). Other researchers emphasize that companies might not be able to overcome increased competitiveness by focusing on economic and academic factors only (Canen & Canen, 2008), which can also stress the importance of conflict costs. Due to a high variety of different cost variables, measuring conflict costs has been a challenge so far (Dirrler & Podruzsik, 2022). There are studies that state costs such as lawyer expenses (Murtha, 2005; Chartered Institute of Personal and Development [CIPD], 2011), turnover costs (Conbere, 2000; Kreisman, 2002) or productivity declines (Harris, 2008). In addition, scholars researched the element of lost time and indicate the amount of time spent on conflicts, instead of conducting clearly value-adding activities (Canada Pension Plan [CPP], 2008; Dirrler & Podruzsik, 2022). A limitation for all of these studies is the neglection of the conflict types task-, relationship- and process conflict. In our study we address this research gap and investigate internal indirect conflict costs in terms of lost time, but associated with the three conflict types. By doing so, we detach from the classical views about conflict consequences and replace it with the element of lost time, but respect the division of conflict. We want to work out whether there is a link between time wasted on conflicts and all conflict types. There is always time spent on a conflict, regardless of the conflict type. This however does not automatically imply to be negative, since in case of task conflict the time can for example be used to discuss different viewpoints and perspectives (Jehn, 1997). In the end, this can contribute to a positive result and might not be perceived as negative or a waste of time. However, the focus of this study is clearly on the aspect of lost time, which is reflected in internal indirect conflict costs. Meaning that the internal indirect conflict cost variables only reflect situations in which the involved conflict parties actually consider time to be wasted or lost due to a conflict. The research aim is to provide a new perspective on the continuous debate whether conflicts are beneficial or harmful. Taking task conflict as an example, conflicting results exist on the impact of performance. On the one hand, there are arguments that task conflict is good because it generates new ideas and enables cautious evaluation (Jehn, 1997). On the other hand, it is said to be detrimental because it decreases productivity and increases frustration (Greer et al., 2011). Both approaches have received statistical confirmation and justify the difficulty of evaluating conflict consequences. The variable of lost time can contribute to better decision making, when conflicts yield benefits or are detrimental as the negative consequences and costs outweigh. It also provides new insights into how conflict parties themselves evaluate conflicts and to what extent they consider conflicts to be actually disruptive or aggravating. Especially for task and process conflict, where different viewpoints exist, these findings are beneficial.

1. Theoretical foundation

1.1. Task conflict

Researchers have studied various aspects of conflict, with task conflict being a leading area of research (Parayitam & Dooley, 2007; Amason, 1996; Greer & Jehn, 2005), which was firstly introduced by Jehn (1995). Task conflict refers to disagreements or different perspectives about the content of a task, which can entail divergent ideas, opinions or viewpoints. Arguments in these conflictual situations are always task-oriented, involving non-relationship aspects (Jehn, 1997, 1995). Examples for task conflict are discussions about strategic choices, the correct calculation method for capacity utilization or which information to include in a project report (De Dreu & Weingart, 2003; Jehn & Bendersky, 2003). This conflict type can also be summarized as "work conflict" or a "task problem" (Jehn & Bendersky, 2003). A high number of studies exist on the effects of task conflict, however academics present mixed results, stimulating an on-going debate (De Dreu & Weingart, 2003). Research studies emphasizing the negative impacts of task conflict point out lower satisfaction levels, wellbeing and performances, as well as difficulties reaching a consensus and increased anxiety on an individual, group and organizational level (Jehn & Bendersky, 2003; De Dreu & Weingart, 2003; Dijkstra et al., 2005; Medina et al., 2005; Jia et al., 2021). According to information processing theory, a widely used concept in conflict management, little conflict can benefit information processing, but as soon as it strengthens information processing is hindered, the cognitive system stops functioning, consequently negatively affecting team performance (De Dreu & Weingart, 2003). Considering this baseline, De Dreu and Weingart (2003) strengthened these assumptions with their meta-analysis indicating a negative relation between team performance and task conflict, thus finding support for information processing theory and task conflict. Other researchers investigated that despite the actual outcomes, the perceived performance was always negatively rated in work teams (Bang & Park, 2015) and that people preferred to work on a task with low task conflict (Schuch & Dignath, 2021). This is in line with former research that people generally react negatively to disagreements or in case someone is questioning their viewpoints and that these situations lead to negative reactions, dissatisfaction and frustration of individuals, despite the outcomes (Jehn, 1995; Jehn et al., 2008b; Baron, 1990; Ross, 1989). In addition, academia adds that task conflict lowers consensus building, causes tension, unhappiness (Jehn & Bendersky, 2003), anxiety (Hoffman, 1978; Jehn & Bendersky, 2003), lower trust (Wit et al., 2012), leads to poor decision making and increases the intention to quit (DeChurch & Marks, 2001; Simons & Peterson, 2000), as well as counter-productive work behaviors (Wit et al., 2012). Generally stating that team members with higher consensus about a task were more satisfied and indicated a stronger desire to stay in the group (Schweiger et al., 1986; Jehn et al., 2014). The positive aspects of task

conflict are based on the absence of group-think, the availability of divergent viewpoints and the consideration of alternatives. This leads to improved decision making and understanding of a task, higher creativity and innovation, and some researchers even stating improved performances and increased commitment within groups (Parayitam & Dooley, 2007; Tjosvold & Hui, 2003; Jehn, 1995; Pelled et al., 1999; Yousaf et al., 2020). In case of the absence of task conflict, the risk arises that alternatives are overlooked and that new perspectives are left out, because of an inability of the group to view problems from different angles (Nemeth, 1995; Peterson et al., 1998; Tjosvold et al., 1992). Some researchers, point out that it is essential to consider the whole situation, when evaluating the effects of task conflict, because studies indicated that moderate levels of task conflict were beneficial (Jehn, 1995; Jehn & Mannix, 2001). Additional findings present that positive consequences appeared when the work involved non-routine jobs and an open and trusting environment was present (De Dreu & Weingart, 2003; Jehn et al., 2008b). More generally speaking, De Dreu et al. (2004) stated that the outcomes of task conflict could be beneficial when relationship conflict was absent.

1.2. Relationship conflict

Relationship Conflict is a second widely studied discipline of conflict research (Parayitam & Dooley, 2007; Greer & Jehn, 2005; Amason, 1996). It describes conflictual situations involving incompatibilities about personal issues, such as languages, personal traits, fashion, political beliefs or cultural practices (Jehn, 1997; Jehn, 1995; De Dreu & Weingart, 2003; Ayub & Jehn, 2014; Jehn & Bendersky, 2003). In contrast to task conflict, relationship conflict addresses non-work related issues and these conflicts are triggered by and involve feelings such as tension, annoyance, animosity, frustration or irritation (Jehn & Mannix, 2001; McMillan et al., 2012; Jehn, 1995). Research findings on the effects of relationship conflict are more consistent than on task conflict, primarily strengthening negative results on individuals, groups and organizations (Huang, 2010). Researchers found negative effects on performance and productivity (De Dreu & Weingart, 2003; Greer & Jehn, 2005; Li & Hambrick, 2005; Rau, 2005; Evan, 1965; Wit et al., 2012; Vodosek, 2005) that can be explained by different triggers. Firstly, people spend time on the conflict by discussing, resolving or ignoring it, thus waste their energy on it, instead of focusing on the task, which can already influence performance negatively (Pelled, 1996; Jehn & Bendersky, 2003; Jehn et al., 2008b; Evan, 1965). Secondly, performance can be lowered due to members inability to assess new information and ideas of others (Pelled, 1996). Thirdly, creativity is claimed to decrease, too (Jehn & Bendersky, 2003), based on similar assumptions that conflicts distract members and reduce their energy, which is needed for a creative process (Cummings & Jehn, 1999; Cohen, 1984). Besides the outcome related effects, such as performance (Jehn & Bendersky, 2003; Pelled, 1996), creativity (Jehn & Bendersky, 2003; Cohen, 1984), innovation (Matsuo, 2006) or group processes (Amason, 1996; Jehn, 1995), relationship conflict is further stated to be harmful for group functioning and well-being in forms of dissatisfaction, lower consensus-building, less advice-seeking and mutual understanding or goodwill (Evan, 1965; Wall, Jr. & Nolan, 1986; Deutsch, 1969; Jehn, 1997; Jehn, 1995; Jehn & Bendersky, 2003; Marineau et al., 2018). As a consequence, relationship conflicts can lead to irrational behaviors and damaged individual's moral, such as misinterpreting constructive discussions, disagreeing despite of a lack of rational reasons or fostering more aggressive attitudes (Jehn & Bendersky, 2003; Amason & Schweiger, 1994; Gabriel, 1998). Lastly, relationship conflict is claimed to lower trust, increase the intentions to quit (Ismail et al., 2012; Wit et al., 2012), emotional exhaustion (Benitez et al., 2018) and that group members were more willing to work on a task in the same group setting again, if relationship conflict was low and satisfaction and performance high (Jehn et al., 2014). A minority of research pointed out situations, in which relationship conflict can benefit performance, such as when relationship conflict is well managed (Greer & Jehn, 2005), in case of very close relationships among the team members and high interdependencies (Rispens et al., 2006) and in case of the necessity to set boundaries and to clear the air (Bernstein et al., 1997).

1.3. Process conflict

Among the three conflict types defined by Jehn (1995, 1997) process conflict has received least attention (Jehn et al., 2008b; Jehn & Mannix, 2001). Academics often solely researched task and relationship conflict (Behfar et al., 2011), which is however criticized as an oversimplification of the topic (Jehn, 1997; Jehn et al., 2008a; Mooney et al., 2007). Process conflict refers to conflictual situations about logistical aspects of a task accomplishment, which can be disagreements about the distribution of resources or task responsibilities and about the delegation of tasks (Jehn, 1997). For example teams can argument about the composition of their project team, about the tasks each one has to accomplish or how to best schedule the tasks (Jehn & Bendersky, 2003). As well as task conflict, process conflict involves task-related aspects, but they vary widely, as process conflict is more concerned about planning or delegating a task, whereas task conflict mainly focuses on the content itself (Jehn et al., 2008b). More precisely it can be exemplified as follows; in case of researchers arguing about the interpretation or meaning of data and results, task conflict is present, if they discuss who is presenting the final results or who is writing a report, they are clearly involved in process conflict (Jehn & Bendersky, 2003). The conflict outcomes are claimed to be two-folded, as researchers do not yet commonly agree on the effects of process conflict. On the one hand, academia points out positive impacts on performance, due to reevaluations of processes and standards, which can lead

to general upgrades and improvements (Tjosvold, 1991; Jehn & Bendersky, 2003). This can also enable teams to plan deadlines and timelines accurately, to use resources most efficiently and to ensure clear roles and responsibilities (Jehn & Bendersky, 2003; Jehn & Mannix, 2001; Karn, 2008). It is strengthened that when starting or ending a task or project, it is often essential to discuss task assignments or resource delegations to ensure perfect fits of individual abilities and task requirements (Jehn et al., 1999). On the other hand, researchers claim process conflict to have negative outcomes on performance (Vodosek, 2005; Jehn & Mannix, 2001; Jehn, 1997), creativity and innovation (Matsuo, 2006; Jehn & Bendersky, 2003; Kurtzberg & Mueller, 2005), as people use their energy on the conflict, instead of focusing their cognitive capabilities on the task itself (Jehn & Bendersky, 2003). Process conflict often deals with the evaluation of personal abilities, skills and values and can therefore be negatively related to the overall satisfaction, intention to remain and commitment within a group (Jehn et al., 1999; Jehn & Mannix, 2001). It can also evoke emotions (Behfar et al., 2008; Jehn et al., 2008a; Greer et al., 2008) that can be expressed in form of anger and animosity (Jordan et al., 2006; Passos & Caetano, 2005). These feelings can be triggered by elements of process conflict such as wasted time, free riding or absenteeism of individuals (Behfar et al., 2008). The consequences of process conflict can result in disliking of group members or perceived unfairness or irritation (Behfar et al., 2008; Behfar et al., 2011), as well as decreased well-being (Kuriakose et al., 2019). This may also explain the close correlation of relationship and process conflict, as it can easily and fast turn into a more emotional conflict and individuals involved in the conflict behave similar like in relationship conflict situations (Jehn & Bendersky, 2003; Behfar et al., 2011). Due to difficulties related to the differentiation of process conflict towards task and relationship conflict, scholars have established further sub-categories of process conflict. Greer and Jehn (2007) distinguished between emotional and non-emotional process conflict, whereas Behfar et al. (2002) used a task and people-centered distinction. Behfar and colleagues (2011) separated process conflict into logistical and contribution conflict. Logistical process conflict describes situations around the organization and utilization of resources, responsibilities and timing, whereas contribution process conflict deals with situations focusing on the people, either caused by free rider problems or disruptions (Behfar et al., 2011).

1.4. Conflict costs

Conflict costs can be defined as "the financial costs caused by conflicts that negatively affect an organization's overall financial performance. A company can either achieve its desired outcomes, but with reduced revenue due to the additional financial costs of conflict, or achieve lower outcomes due to the extra costs" (Dirrler & Podruzsik, 2022, p. 291). One categorization of conflict costs differentiates between costs to employees, customers and the organization (Buss, 2011). Freres (2013) introduced eight themes, which contain amongst others dimensions such as wasted time, legal and dispute costs or counter-productive work. In these studies, no cost measurement approaches were introduced, however, some quantitative data from other studies (CPP, 2008; Harris, 2008; Kreisman 2002; OPP & Cartered Institute of Personnel and Development [CIPD], 2008; Conbere, 2000) was presented. None considered task-, relationship or process conflict (CIPD, 2011; CPP, 2008; OPP & CIPD, 2008; Kreisman, 2002; Conbere, 2000; Harris, 2008). Dirrler and Podruzsik (2022) introduced four clusters that are internal direct and indirect conflict costs, as well as external direct and indirect conflict costs. Internal costs can be directly related to internal stakeholders in contrast to external costs correlated with external parties. Direct costs define directly visible effects on financial results or desired outcomes and indirect costs describe a more invisible, indirect effect on an organizations' outputs. As an example, internal direct costs can be costs associated with lawyer fees, legal disputes, sabotage, decreased quality, lower productivity or the inability to meet deadlines. In contrast, internal indirect costs involve more individual results, such as wasted time, sick leaves, psychological or other health-related problems or counter-productive work. External costs contain costs related to customers, such as customer complaint handling or a damaged brand image (Dirrler & Podruzsik, 2022). Dirrler and Podruzsik (2022) present a measurement approach for all internal indirect conflict costs that can be captured in form of lost time. They found that employees on average spent 6 hours for short conflicts and 40 to 45 hours for long conflicts but did not consider a more precise conflict distinction.

In our research, we phase the known problem, that it is very difficult to measure all cost variables with one approach. Therefore, we decided to use the categorization approach of Dirrler and Podruzsik (2022) and narrow down our research scope to internal indirect costs also measured in terms of lost time. Their precise definition is that "internal indirect costs indirectly affect companies' business revenues or desired outcomes and internal stakeholders. These costs are generally less visible and more difficult to measure, because they require analysis, in-depth observations, or interviews. Fewer companies are expected to possess a profound understanding of the actual costs they pay. Many of these costs are correlated with time, such as lost time, because people deal with or worry about conflict" (Dirrler & Podruzsik, 2022, p. 292). The researched cost variables are: Wasted time worrying about a conflict, dealing with it, or resolving it, the pretension to work, counterproductive work behavior, additional time for information gathering, lost time due to avoiding behavior, not listening purposely, personal attacks or pointing out mistakes, as well as less time at work, sick leaves to avoid conflicts, presenteeism and psychological and physical diseases.

2. Hypotheses

Internal indirect conflict costs are claimed to be present on an individual level and represent more emotional and behavior driven conflict consequences, such as counterproductive work behavior, absenteeism or attacking behavior (Dirrler & Podruzsik, 2022). All cost variables come into play, because an individual is personally affected by a conflict situation and reacts in form of internal indirect conflict costs to it. In contrast, task conflict is described as a task-oriented conflict, detached from relational aspects that is about different viewpoints or opinions and about the content of a task (Jehn, 1995; Jehn, 1997). We therefore assume the weakest relation between internal indirect conflict costs and task conflict, compared to the other conflict types. However, we hypothesize a positive association of the variables. This is mainly driven by research findings that state negative effects of task conflict on the individual, such as decreased satisfaction and wellbeing (Jehn & Bendersky, 2003; De Dreu & Weingart, 2003), increased tensions, unhappiness, anxiety or lower trust (Jehn & Bendersky, 2003; Wit et al., 2012; Hoffman, 1978). We expect these consequences to occupy a person and to be reflected in form of internal indirect conflict costs, such as worrying about a conflict or extra-time gathering information. In addition, we expect respondents to negatively rate the time involved in task conflict, which is reflected in wasted time dealing with a conflict or resolving it. This assumption is based on findings that present group members to negatively rate their work performance, despite the actual outcomes (Bang & Park, 2015), that people generally dislike disagreements or being questioned by someone else (Jehn, 1995; Jehn et al., 2008b; Baron, 1990; Ross, 1989) and that people prefer to work on tasks with low task conflict (Schuch & Dignath, 2021).

H1: The more task conflict is present, the more time is spent on internal indirect conflict cost variables.

Relationship conflicts take place because of disagreements about personal issues (Ayub & Jehn, 2014; De Dreu & Weingart, 2003; Jehn, 1995) and are claimed to cause feelings such as tension, frustration, emotional exhaustion or annoyance (Jehn & Mannix, 2001; McMillan et al., 2012; Jehn, 1995; Benitez et al., 2018). This conflict type is judged to distract members, as they spend time on the conflict or its management and waste their energy instead of working on the value-adding task (Pelled, 1996; Jehn & Bendersky, 2003; Jehn et al., 2008b; Evan, 1965; Cohen, 1984). In addition, people are more likely to demonstrate irrational or more aggressive behavior, misinterpret, disagree or reject arguments without rational reasons (Jehn & Bendersky, 2003; Amason & Schweiger, 1994; Gabriel, 1998). Relationship conflict is also presented to foster dissatisfaction, lower trust and increase turnovers (Ismail et al., 2012; Wit et al., 2012; Jehn & Bendersky, 2003). We hypothesize the strongest association between internal indirect conflict costs and relationship conflict, compared to process or task conflict. The cost variables, measured in this study mostly describe the individual's reaction to a conflict, which are triggered by emotions and feelings. Many of the researched relationship conflict effects are directly represented in the internal indirect cost variables, such as wasted time (Pelled, 1996; Jehn & Bendersky, 2003; Evan, 1965) or irrational behavior (Jehn & Bendersky, 2003; Amason & Schweiger, 1994), as for example attacking behaviors or counterproductive work. Less advice seeking (Marineau et al., 2018) can for example also result in extra-time gathering information. We also expect relationship conflict to foster most of the absences, measured in terms of absenteeism and sick leaves, resulting in the highest amount of lost time.

H2: The more relationship conflict is present, the more time is lost on internal indirect conflict cost variables.

In order to clearly distinguish process conflict from relationship and task conflict, we break it down into logistical process conflict and contribution conflict, as described earlier. Logistical process conflict is less associated with the personal component of process conflict, but refers to organizational elements like resource allocation or responsibilities (Behfar et al., 2011). Due to the low personal component of logistical conflict, we assume parallels to task conflict, resulting in an overall weaker association to internal indirect conflict costs. However, since people react negatively to conflict despite the actual results (Bang & Park, 2015) and generally do not like to be challenged (Jehn, 1995; Jehn et al., 2008b; Baron, 1990), we still expect a certain relation with the amount of lost time. In addition, we question the possibility of resource or responsibility allocation without individuals being affected on a more personal level. Former findings presented that the evaluation of personal abilities evoked emotions and was negatively related to satisfaction or group consensus (Jehn et al., 1999; Jehn & Mannix, 2001; Behfar et al., 2008). We therefore anticipate logistical conflict to be associated with lost time, for example in form of worrying about a conflict or counterproductive work.

H3a: The more logistical process conflict is present, the more time is lost on internal indirect conflict cost variables.

Contribution process conflict entails psychosocial aspects and can be linked to the more emotional part of conflict. In return, it is suggested that it lowers satisfaction and commitment within teams, as well as their enthusiasm (Greer & Jehn, 2007; Behfar et al., 2011, 2008; Desivilya & Yagil, 2005). Contribution conflict can be easily interpreted as a form of disrespect or unfairness towards group members (Greer & Jehn, 2007; Behfar et al., 2011, 2008; Desivilya & Yagil, 2005). It is assumed that similar to relationship conflict, it affects individuals on a very personal level, and that some of the emotions are expressed in internal indirect conflict costs. We expect conflict consequences like dissatisfaction and interpretations of disrespect or unfairness to lead to wasted time worrying about

a conflict, but also irrational behaviors like counter-productive work. Overall, we assume most internal indirect cost variables to be present in case of contribution process, fostering a high amount of lost time, only marginally lower than relationship conflict.

H3b: The more contribution process conflict is present, the more time is lost on internal indirect conflict cost variables.

3. Method

3.1. Data collection

The data to test our hypotheses was gathered via an online survey, distributed to 1302 people. In order to reach a large number of participants, a German panel provider was used. For surveys in German, the panel consists of a pool of just under 40,000 participants, who are, however, only contacted once or twice a month for possible surveys. The goal is to keep the quality of the survey results high. In addition, our survey included a control question that tested the attention of the participants. In case the question was answered incorrectly, the survey ended. The panel consists of slightly more female participants, but this is not reflected in our survey results. Anyone who currently has a job and is involved in a conflict or has been involved in a conflict in the past could participate in our survey. Due to these requirements, our data set ended up consisting of 507 participants. With 45.3 people employed in Germany, a confidence level of 95 percent and a margin of error of 5 percent, N = 385. Consequently, the survey is considered as representative. 49.1% of the participants were female and 50.9% were male. The majority of participants reported working in a company with up to 10.000 employees. 349 people entered operational employee as their profession, compared to 121 managers at various levels. A very small number of participants were self-employed. The age distribution was balanced reaching from respondents younger than 30 years to people older than 60 years. Following the general part, all participants were asked to think of a concrete conflict situation in which they are or were personally involved. All subsequent questions then had to be answered in relation to this concrete conflict situation. Our approach is based on the study of Dirrler and Podruzsik (2022). We tested this procedure in a preliminary study with 20 participants. The subjects were asked to answer question by question in a telephone interview and, in case of ambiguity, to discuss the open points with the scientific team. The main issues were that some participants had not read the description properly and therefore it was unclear that all answers should be given for a specific situation. This was emphasized in the final questionnaire in a larger, bold font. The second difficulty was translating the questions on the types of conflict. Particularly in the case of relationship and task conflicts, it was sometimes difficult to distinguish the issues. Therefore, an information field has been included in the final questionnaire to describe in more detail which aspects of the question are covered.

3.2. Measures & pre-tests

Task and Relationship conflict can be measured in form of a Likert-Scaling introduced by Jehn (1995). Questions such as "how much conflict of ideas is there in your work group?", "How often do people in your work group have conflicting opinions about the project you are working on?" were used for task conflict. Relationship conflicts were identified by the following questions "How much emotional conflict is there in your work group?" or "How often do people get angry while working in your group?" (Jehn, 1995; Greer et al., 2011; Jehn & Mannix, 2001). Process conflict was introduced later (Jehn, 1997) and measured by questions such as "How often are there disagreements about who should do what in your work group?" or "How often do you disagree about resource allocation in your work group?" (Jehn, 1997; Greer et al., 2011; Jehn & Mannix, 2001). Using these questions the results often indicated close correlations between the three conflict types (Jehn, 1997; Jehn & Mannix, 2001), which encouraged criticism that the distinction was not sufficiently precisely formulated (Behfar et al., 2011). Using these questions as a starting point, Behfar et al. (2011) derived more precise items by introducing revised questions on task and relationship conflict and new items on process conflict, taking into account the distinction of logistical and contribution process conflict. Among others the questions for task conflict are "how often do members of your team discuss evidence for alternative viewpoints?" and "how frequently do members of your team engage in debates about different opinions or ideas?". Elements that illustrate relationship conflict are "how much are personality conflict evident in your team?" and "how much friction is there among members of your team?". As an example, logistical process conflict was detected by "how often do members of your team disagree about who should do what?" or "how frequently do your team members disagree about the optimal amount of time to spend on different parts of teamwork?". Contribution conflict was measured by "To what extent is there tension in your team caused by member(s) not completing their assignment(s) on time?" and "how often is there tension in your team caused by member(s) not performing as well as expected?" (Behfar et al., 2011). Revised questions from Behfar et al. (2011) were used to develop the hypotheses introduced, which have been preserved in their original form and were only translated into German. To fit the questions to our survey type, involving a concrete conflict situation, we replaced "work unit" or "team members" by conflict parties. We provided a description that the term "conflict parties" comprises the survey respondent, as well as the people involved in the conflict. The results of the confirmatory factor analysis indicated mixed results, not fully consistent with the research of Behfar and colleagues (2011). Relationship and

Table 1. Confirmatory factor analysis

Item	Relationship Conflict	Process Conflict	Task Conflict
How much friction is there among the conflict parties?	0.750	0.303	0.211
How much are personality conflicts evident between the conflict parties?	0.778	0.253	0.155
How much tension is there among the conflict parties?	0.844	0.264	0.173
How much emotional conflict is there among the conflict parties?	0.821	0.170	0.211
To what extent do the conflict parties argue the pros and cons of different options?	0.266	0.207	0.630
How often do the conflict parties discuss evidence for alternative viewpoints?	0.166	0.211	0.847
How frequently do the conflict parties engage in debates about different opinions or ideas?	0.164	0.218	0.875
How frequently do the conflict parties disagree about the optimal amount of time to spend on different parts of teamwork?	0.384	0.588	0.310
How frequently do the conflict parties disagree about the optimal amount of time to spend in meetings?	0.271	0.696	0.243
How often do the conflict parties disagree about who should do what?	0.497	0.561	0.245
How often is there tension between the conflict parties caused by member(s) not performing as expected?	0.443	0.654	0.233
To what extent is there tension between the conflict parties caused by member(s) no completing their assignment on time?	0.241	0.808	0.250
How much tension is there between the conflict parties caused by member(s) arriving late to meetings?	0.211	0.750	0.213

task conflict were clearly identified with loadings above 0.7 for relationship and 0.6 for task conflict. The differentiation between contribution and logistical was more difficult, whereas logistical conflict could not clearly be identified. The respective questions only showed loading of 0.1 and 0.2, as well as one loading with 0.7. Following the vague result, we checked the Kaiser Criterion, which only resulted in three factors with Eigenvalues above 1.0. The corresponding Eigenvalues were 7.206, 1.528 and 1.183. We conducted the confirmatory factor analysis a second time with three factors only, assuming that contribution and logistical conflict could be summarized in process conflict. Relationship and Task conflict stayed unchanged and their loadings remained. Process conflict was now also clearly represented in Factor two and loadings between 0.5 and 0.8 (Table 1). The Cronbach alpha values were 0.93 for relationship conflict, 0.88 for task conflict and 0.91 for Process Conflict. Based on the results, we decided to proceed with process conflict and summarize the hypotheses 3a and 3b to one hypothesis referring to process conflict.

Internal indirect conflict costs were measured in terms of lost time. This approach is based on Dirrler and Podruzsik (2022) and the identical drop-down menu was used. Respondents were asked to state the amount of time they spend on the individual conflict costs, such as "how much time was wasted due to a conflict", "how much time they were absent due to the conflict, despite of not being sick" or "how much time was spent on the pretention to work". The time values reached from 0 to 50 hours/ days. The Cronbach alpha indicated a high reliability with a value of 0.92.

4. Results

Table 2 summarizes the conflict type variables, with none of the variables demonstrating any anomalies. The three variables indicated correlations of 0.46 between task and relationship conflict, 0.57 between task and process conflict, followed by 0.67 for relationship and process conflict.

Table 2. Descriptive statistics conflict types

	Mean	Median	SD	Min	Max	Kurtosis
Relationship Conflict	3.96	3.75	1.99	1	9	–0.84
Task Conflict	4.10	4.00	1.87	1	9	–0.51
Process Conflict	3.76	3.50	1.91	1	9	–0.73

To analyze our hypotheses, we used the mean values of the internal indirect conflict costs, which we logarithmized to achieve a more symmetric distribution. The factors were used for the conflict types, as independent variables. Our hypotheses only differ in terms of the conflict type, so that the same tests could be applied. Multiple linear regression was used to test if relationship, task and process conflict significantly predicted internal indirect conflict costs. All regression assumptions were pretested. The overall regression was statistically significant (R^2 = 0.2331, F-statistic = 50.96 and $p < 0.001$). The explanatory power of the model is given by significantly explaining 23% of the variance of internal indirect conflict costs, especially as it is one of the first studies analyzing conflict costs. It was found that relationship conflict significantly

(H2) predicted conflict costs (B = 2.1718, p < 0.001). Task (H1) and Process (H3) conflict however do not affect conflict costs. Task conflict indicated non- significant results of B = 0.00183 and p = 0.9458 and process conflict of B = 0.05314, p = 0.0942. In a subsequent step, we included three control variables in the regression model, which were gender, age and whether the conflict took place in a national or international work environment. National referred to conflicts where all people had the same nationality. International work environments described a conflict with at least one person having another nationality. On top, we built interaction terms for each conflict type and the international set-up, that we also included in the second regression analysis (Table 3). The variables did however not influence the model to a large extent. The overall model remained statistically significant with R^2 = 0.2417, F-statistic = 17.6 and p < 0.001. The explanatory power of the model slightly increased to 24%. Relationship conflict remained significant with B = 0.239910, p < 0.001 and task conflict non-significant with B = 0.008375 and p = 0.7962. The interaction terms of relationship and task conflict did not indicate significant results. Process conflict indicated mixed results. Process conflict in a national set-up did not influence the dependent variable of conflict costs (B = 0.018136, p = 0.6461). The interaction term, meaning process conflict with conflict parties of more than one nationality however demonstrated an almost significant prediction of conflict costs with B = 0.132324, p = 0.0562. Gender, age and the set-up itself did not have any effect on the model (Table 3). As the interaction effect in case of process conflict was almost significant, we calculated the confidence intervals of the process conflict effect of the two groups and can conclude that there is an overall effect of process conflict in international conflict situations on internal indirect conflict costs (Figure 1).

Table 3. Multiple Regression Model incl. control variables

	B	Std. Error	T- value	P-value
Intercept	0.036458	0.251658	0.145	0.8849
Relationship Conflict	0.239910	0.033018	7.266	1.44e-12
Relationship Conflict International	–0.105475	0.064508	–1.635	0.1027
Task Conflict	0.008375	0.032405	0.258	0.7962
Task Conflict International	0.001670	0.058928	0.028	0.09774
Process Conflict	0.018136	0.039475	0.459	0.6461
Process Conflict International	0.132324	0.069133	1.914	0.0562
Gender - Female	0.090993	0.084883	1.072	0.2842
International Set-up	–0.151800	0.243568	–0.623	0.5334
Age	–0.008169	0.032717	–0.250	0.8029

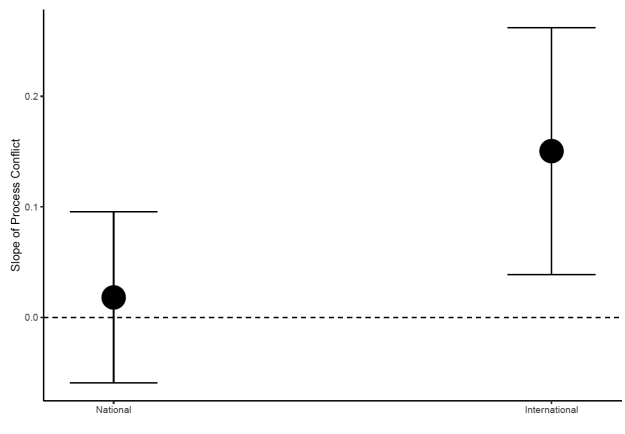

Figure 1. Interaction term Process Conflict – test for significance

In a second step, we differentiated relationship, task and process conflict based on the highest mean values and compared the three conflict types in terms of their internal indirect conflict costs, using Kruskall-Wallis analysis. The test results indicated significant differences between the groups H(2) = 15.506, p = 0.0004. We applied Bonferroni correction with a new level of significance of 0.0167 and a Wilcox rank sum test to determine significant differences between process and task conflict (W = 11582, p = 0.0017) as well as Task and Relationship conflicts (W = 12578, p = 0.0006). Process and Relationship Conflict did not differ significantly (W = 8129, p = 0.9418) (Table 4).

Table 4. Differences between conflict types

	diff	W	p
Relationship – Process Conflict	0.08	8129	0.0006*
Task – Process Conflict	–0.36	11582	0.0017*
Task – Relationship Conflict	–0.44	8129	0.9418

Note: *p < 0.0167.

Hypothesis 1 needs to be fully rejected, as task conflict did not indicate any effect on internal indirect conflict costs. Hypothesis 2 can be approved, as Relationship Conflict indicated a prediction of internal indirect conflict costs in both models. It can be stated that an increase of relationship conflict results in an increase of international indirect conflict costs. Hypothesis 3 can partially be approved, as process conflict in general did not predict conflict costs, however in case of an international conflict set-up there was an effect on the dependent variable. Meaning that people of different nationalities having a process conflict predicted internal indirect conflict costs.

5. Discussion

The research goal was to test whether time is lost for all conflict types, referring to task-, relationship-, and process conflict and how the conflict types vary. This is a pioneering study that takes these variables together, with

the aim of presenting a new perspective in the ongoing debate on the impact of conflict. The hypotheses were partially approved, demonstrating a link between relationship conflict and conflict costs, as well as for process conflict in certain situations.

The strongest relation was between relationship conflict and time spent on internal indirect conflict costs. This supports existing research findings that relationship conflict is rather unambiguously detrimental (Jehn & Bendersky, 2003; Jehn, 1995; Wit et al., 2012; Vodosek, 2005). Our results indicate that relationship conflict also contributes significantly to employees wasting their time on conflicts, instead of value adding activities. Relationship conflict refers to a more personal and emotional level (Jehn, 1995; Jehn, 1997; Ayub & Jehn, 2014), which also applies to internal indirect cost variables such as worrying about a conflict, attacking behaviors or absenteeism (Dirrler & Podruzsik, 2022). For both items a conflict goes beyond ordinary work-related topics and worries the individual beyond the time actively involved in the conflict. The relationship conflict variable also provides the highest explanatory power to the model of internal indirect conflict costs.

Process Conflict is only linked to time spend on internal indirect conflict costs, in case of more nationalities being involved. Otherwise, there was no significant effect. The multiple regression analysis did not demonstrate that process conflict often has an interrelation to relationship conflict and is experienced similarly (Jehn & Bendersky, 2003; Behfar et al., 2011). Internal indirect conflict costs measure conflict effects on an individual level, where people are emotionally and personally involved and affected. Our study does not show a general link to process conflict. This can be due to the ability of individuals separating the conflict content of process conflict from an individual and emotional level. This is in line with the general definition of process conflict (Jehn, 1997) but contradicting to findings that process conflict has a rather personal component and is mostly considered as detrimental (Jehn & Bendersky, 2003; Behfar et al., 2011). The Kruskal-Wallis test on the other hand did not indicate any significant differences between relationship and process conflict and time lost on conflicts. In addition, process conflict was partially significant, when including the nationalities of the conflict parties. Cultural diversity is considered as a possible amplifier of conflict (Vodosek, 2005, 2007; Wickramasinghe & Nandula, 2015; Akhtar et al., 2016; Opute, 2012), due to individuals distinguishing themselves to others, preferring similar others and forming in-groups (Ko & VanderPal, 2014; Worchel, 2005; Mannix & Neale, 2005; Tajfel & Turner, 1979; Tajfel & Turner, 1986; Byrne, 1971). This can explain the significant association to process conflict, as it can get more difficult for people involved in a conflict to focus on the process conflict content only, instead of getting more involved on a personal level. Our study results demonstrate that process conflict remains a conflict type that needs to be carefully evaluated and analyzed. Firstly, its characteristics were less obvious, and it was more difficult to unambiguously identify process conflict. Secondly, we found mixed results on time spent on conflict cost variables.

Per definition task conflict refers to task-oriented arguments and is detached from relationship-elements (Jehn, 1995; Jehn, 1997). Our study supports that argument, as we did not find any significant association between task conflict and the cost variables. Task conflict also differed significantly from process and relationship conflict. Most of the cost variables, measured in our study describe conflict consequences that might go beyond a task-oriented discussion. Examples are counterproductive work, absences due to illness or presenteeism. Therefore, we did not expect a strong link between these items and task conflict, which is also reflected in our results. Against our initial assumption based on Bang and Park (2015), the survey participants did not have negative feelings about the task conflict that were reflecting in time lost due to a conflict.

5.1. Research and managerial implications

Given the ongoing debate on the consequences of conflict, the results of this research support existing studies (Jehn, 1995; Jehn, 1997; Jehn & Bendersky, 2003), and also provide new insights. Relationship conflict is claimed to be detrimental (Jehn & Bendersky, 2003; Jehn, 1995), which is also supported by our study. Our results present a significant amount of time spent on relationship conflict, that is considered as harmful or wasted. This at least causes opportunity costs (Dirrler & Podruzsik, 2022). According to our study people do not lose time on conflicts, in case of task conflict and in case of process conflict only in very specific set-ups. Especially in companies where working groups and teamwork is essential, this is a new and important finding. Even though people are involved in these conflict types, they do not evaluate it as negative or perceive it as a loss of time. This is controversial to research findings that stated more severe consequences of task conflict, such as dissatisfaction or frustration despite the results (Jehn, 1995; Jehn et al., 2008b; Baron, 1990; Ross, 1989). For companies this is a positive finding and indicates that people can distinguish task-oriented discussions well and don't feel personally attacked by it. Therefore, our research results suggest that the positive aspects of the conflict types predominate and within our study the negative consequences such as frustration or dissatisfaction could not be confirmed. Although these variables were not measured directly, it can be concluded that feelings such as the ones mentioned before would lead to internal indirect conflict costs and would be reflected in our variables. This supports research findings, stating that task and process conflict have positive elements to group-functioning and work results (Tjosvold, 1991; Jehn & Bendersky, 2003; Jehn & Mannix, 2001; Karn, 2008; Parayitam & Dooley, 2007; Tjosvold & Hui, 2003; Jehn, 1995; Pelled et al., 1999; Yousaf et al., 2020). However, the findings must be viewed critically, as conflicts often have

different phases, and the conflict types cannot be completely separated from each other in practice. Within a conflict, conflict parties can experience different conflict types and a task conflict can quickly become a relationship conflict, for example (Curseu et al., 2012; Krajcsák, 2021; Dahlan et al., 2021). It is therefore particularly important for companies to take a close look at conflicts and to intervene at the latest when they turn into relationship conflicts or show the first signs of it. Because as soon as this point is reached within the conflict, costs can arise for companies in the form of wasted time and the positive aspects of the conflicts recede into the background. In order to exploit the full potential of teamwork, efforts must be made to take advantage of the positive types of conflicts, while avoiding relationship conflict. Many factors can play an important role in achieving that, such as training, development, commitment, or transformational leadership (Dahlan et al., 2021; Krajcsák, 2021).

5.2. Limitations and future research suggestions

Behfar et al. (2011) highlighted the difficulty of process conflict and its distinction from relationship and task conflict. They separated it into logistical and contribution conflict and introduced a new set of questions for each conflict type to overcome the problem. Our results were still weakened by equivocal questions, forcing us to summarize logistical and contribution conflict to process conflict as one variable. Future research should consider the difficulty and potentially use different categorizations for task-, relationship and process conflict. The explanatory power of the overall model can be improved further. Future research needs to come up with more variables to be included in the model, explaining internal indirect conflict costs, measured in form of lost time. A starting point can be known conflict amplifiers, such as diversity (Vodosek, 2005) or the point of time the conflict takes place (Jehn et al., 1999). In addition, the cultural effect on internal indirect conflict costs also needs to be researched thoroughly, as our work only gives a first indication of its effect. This paper only measured some internal indirect conflict costs in terms of lost time. Future studies could conduct a more comprehensive study with more than one measurement approach to capture more conflict costs and provide actual quantitative data for each conflict type. The sample size of the study is large, however it comprises people from different workplaces, industries and even nationalities. So the way the respondents experienced their conflict can vary significantly in terms of the conflict itself, its length or frequency. Future research should conduct a similar study with a more homogenous sample group, for example within one company or profession.

Conclusions

There are various ways to measure conflict outcomes. Our study is a new approach to analyze the effects more quantitatively in terms of lost time. Conflicts always demand time and energy of the parties involved. Our study enables scholars, but also managers to carefully evaluate when to stop conflicts immediately, but also situations where conflict can bring advantages. Overall, it can be stated that according to previous findings, relationship conflict is harmful and makes individuals spend time on non-value adding activities, instead of performing their work. Task and Process conflict did not indicate clear losses in time. Respondents of our survey did not have the impression of having lost time due to task or process conflict. This can be promising to managers, as task and process conflict yield positive consequences that can be captured in the right set-ups, when relationship conflict is kept low.

Funding

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

Author contributions

All authors contributed to the study conception and design. Material preparation, data collection and analysis were performed by Phyllis Dirrler and Szilárd Podruzsik. The first draft of the manuscript was written by Phyllis Dirrler and all authors commented on previous versions of the manuscript. All authors read and approved the final manuscript.

Disclosure statement

The authors have no conflicts of interest to declare that are relevant to the content of this article.

References

Akhtar, F., Lodhi, S. A., & Khan, S. Sh. (2016). Assessing the influence of the cultural perspective on cross cultural conflict: An analysis of cultural environment. *Pakistan Journal of Commerce and Social Sciences, 10*(1), 84–103.

Amason, A. C. (1996). Distinguishing the effects of functional and dysfunctional conflict on strategic decision making: Resolving a paradox for top management teams. *Academy of Management Journal, 39*(1), 123–148. https://doi.org/10.2307/256633

Amason, A. C., & Schweiger, D. M. (1994). Resolving the paradox of conflict, strategic decision making, and organizational performance. *International Journal of Conflict Management, 5*(3), 239–253. https://doi.org/10.1108/eb022745

Ayub, N., & Jehn, K. (2014). When diversity helps performance: Effects of diversity on conflict and performance in workgroups. *International Journal of Conflict Management, 25*(2), 189–212. https://doi.org/10.1108/IJCMA-04-2013-0023

Bang, H., & Park, J. G. (2015). The double-edged sword of task conflict: Its impact on team performance. *Social Behavior and Personality 43*(5), 715–728. https://doi.org/10.2224/sbp.2015.43.5.715

Baron, R. A. (1990). Countering the effects of destructive criticism: The relative efficacy of four interventions. *Journal of Applied Psychology, 75*(3), 235–245. https://doi.org/10.1037/0021-9010.75.3.235

Behfar, K., Mannix, E., Peterson, R., & Trochim, W. M. (2002). A multi-faceted approach to intragroup conflict issues of theory and measurement. In *The 15th Annual Conference of the International Association for Conflict Management*. Salt Lake City, Utah.

Behfar, K., Peterson, R., Mannix, E., & Trochim, W. M. (2008). The critical role of conflict resolution in teams: A close look at the links between conflict type, conflict management strategies, and team outcomes. *Journal of Applied Psychology, 93*(1), 170–188. https://doi.org/10.1037/0021-9010.93.1.170

Behfar, K. J., Mannix, E. A., Peterson, R. S., & Trochim, W. M. (2011). Conflict in small groups: The meaning and consequences of process conflict. *Small Group Research, 42*(2), 127–176. https://doi.org/10.1177/1046496410389194

Benitez, M., Medina, F. J., & Munduate, L. (2018). Buffering relationship conflict consequences in teams working in real organizations. *International Journal of Conflict Management, 29*(2), 279–297. https://doi.org/10.1108/IJCMA-11-2017-0131

Bernstein, D. A., Clarke-Stewart, A., Roy, E. J., & Wickens, C. D. (1997). *Psychology* (4th ed.). Houghton Mifflin.

Boyett, J. H., & Conn, H. P. (1991). *Workplace 2000: The revolution reshaping American business*. Dutton.

Brockman, J. L. (2013). Interpersonal conflict in construction: Cost, cause and consequence. *Journal of Construction Engineering and Management, 140*(2). https://doi.org/10.1061/(ASCE)CO.1943-7862.0000805

Buss, H. (2011). Controlling conflict costs: The business case of conflict management. *Journal of the International Ombudsman Association, 4*(1), 54–62.

Byrne, D. (1971). *The attraction paradigm*. Academic Press.

Canen, A. G., & Canen, A. (2008). Multicultural leadership. The costs of its absence in organizational conflict management. *International Journal of Conflict Management, 19*(1), 4–19. https://doi.org/10.1108/10444060810849155

Chartered Institute of Personal and Development. (2011). *Conflict management*. https://www.iidmglobal.com/downloads/blog/Conflict_Management_Survey.pdf

Cohen, M. D. (1984). Conflict and complexity: Goal diversity and organizational search effectiveness. *American Political Science Review, 78*(2), 435–451. https://doi.org/10.2307/1963374

Conbere, J. (2000). Designing conflict management systems to resolve workplace conflicts. *Journal of Alternative Dispute Resolution in Employment, 2*(3), 30–36.

Canada Pension Plan. (2008). *CPP global human capital report: Workplace conflict and how business can harness it thrive*. https://img.en25.com/Web/CPP/Conflict_report.pdf

Cummings, A., & Jehn, K. A. (1999). The role of team leadership in the constructive use of conflict for creativity and change. In *Leadership conference*. The Wharton School, University of Pennsylvania.

Curseu, P. L., Boros, S., & Oerlemans, L. (2012). Task and relationship conflict in short-term and long-term groups: The critical role of emotion regulation. *International Journal of Conflict Management, 23*(1), 97–107. https://doi.org/10.1108/10444061211199331

Dahlan, M., Al-Atwi, A. A., Alshaibani, E., Bakir, A., & Maher, K. (2021). Diverse group functioning, co-occurence of task and relationship conflict and transformational leadership. *International Journal of Productivity and Performance Management 72*(4). https://doi.org/10.1108/IJPPM-01-2021-0025

De Dreu, C. K. W., Harinck, F., & Van Vianen, A. E. M. (1999). Conflict and performance in groups and organizations. In C. L. Cooper & I. T. Robertson (Eds.), *International review of industrial and organizational psychology, 14*, 369–414.

De Dreu, C. K. W., van Dierendonck, D., & Dijkstra, M. T. M. (2004). Conflict at work and individual well-being. *International Journal of Conflict Management, 15*(1), 6–26. https://doi.org/10.1108/eb022905

De Dreu, C. K. W., & Weingart, L. R. (2003). Task versus relationship conflict, team performance, and team member satisfaction: A meta-analysis. *Journal of Applied Psychology, 88*(4), 741–749. https://doi.org/10.1037/0021-9010.88.4.741

DeChurch, L., & Marks, M. A. (2001). Maximizing the benefits of task conflict: The role of conflict management. *International Journal of Conflict Management, 12*(1), 4–22. https://doi.org/10.1108/eb022847

Desivilya, H. S., & Yagil, D. (2005). The role of emotions in conflict management: The case of work teams. *International Journal of Conflict Management, 16*(1), 55–69. https://doi.org/10.1108/eb022923

Deutsch, M. (1969). Conflicts: Productive and destructive. *Journal of Social Issues, 25*(1), 7–42. https://doi.org/10.1111/j.1540-4560.1969.tb02576.x

Dijkstra, M. T. M., van Dierendonck, D., Evers, A., & De Dreu, C. K. W. (2005). Conflict and well-being at work: The moderating role of personality. *Journal of Managerial Psychology, 20*(2), 87–104. https://doi.org/10.1108/02683940510579740

Dirrler, Ph., & Podruzsik, Sz. (2022). Companies can lose time over conflicts: An analysis of internal indirect conflict costs. *Business: Theory and Practice, 23*(2), 288–301. https://doi.org/10.3846/btp.2022.16449

Evan, W. M. (1965). Conflict and performance in R&D Organizations: Some preliminary findings. *Industrial Management Review, 7*, 37–46.

Freres, M. (2013). Financial costs of workplace conflict. *Journal of International Ombudsman Association, 6*(2), 83–94.

Gabriel, Y. (1998). An introduction to the social psychology of insults in organizations. *Human Relations, 51*(11), 1329–1354. https://doi.org/10.1177/001872679805101101

Greer, L. L., Caruso, H. M., & Jehn, K. A. (2011). The bigger they are, the harder they fall: Linking team power, team conflict, and performance. *Organizational Behavior and Human Decision Processes, 116*(1), 116–128. https://doi.org/10.1016/j.obhdp.2011.03.005

Greer, L. L., Jehn, K., & Mannix, E. (2008). Conflict transformation: A longitudinal investigation of the relationships between different types of intragroup conflict and the moderating role of conflict resolution. *Small Group Research, 39*(3), 278–302. https://doi.org/10.1177/1046496408317793

Greer, L. L., & Jehn, K. A. (2005). Relationship and task conflict in e-mail: Performance effects moderated by verbal style and influence tactic usage. In *The International Association of Conflict Management Conference*. Seville, Spain.

Greer, L. L., & Jehn, K. A. (2007). The pivotal role of emotion in intragroup process conflict. In E. A. Mannix, M. A. Neale, & C. P. Anderson (Eds.), *Research on managing groups and teams* (Vol. 10, 21–43). Elsevier.

Harris, G. (2008). "If your only tool is a hammer, any issue will look like a nail": Building conflict resolution and mediation capacity in South African universities. *Higher Education, 55*(1), 93–101. https://doi.org/10.1007/s10734-007-9075-3

Hoffman, L. R. (1978). Group problem solving. In L. Berkowitz (Ed.), *Group processes*. Academic Press.

Huang, J.-Ch. (2010). Unbundling task conflict and relationship conflict: The moderating role of team goal orientation and conflict management. *International Journal of Conflict Management, 21*(3), 334–355. https://doi.org/10.1108/10444061011063207

Ismail, K. M., Richard, O. C., Taylor, E. C. (2012). Relationship conflict in supervisor-subordinate dyads: A subordinate perspective. *International Journal of Conflict Management, 23*(2), 192–218. https://doi.org/10.1108/10444061211218302

Janssen, O., Van De Vliert, E., & Veenstra, Ch. (1999). How task and person conflict shape the role of positive interdependence in management teams. *Journal of Management, 25*(2), 117–141. https://doi.org/10.1177/014920639902500201

Jehn, K. A. (1997). A qualitative analysis of conflict types and dimensions in organizational groups. *Administrative Science Quarterly, 42*(3), 530–557. https://doi.org/10.2307/2393737

Jehn, K., & Bendersky, C. (2003). Intragroup conflict in organizations: A contingency perspective on the conflict-outcome relationship. *Research in Organizational Behavior, 25*, 187–242. https://doi.org/10.1016/S0191-3085(03)25005-X

Jehn, K., Greer, L. L., Levine, Sh. S., & Szulanski, G. (2008a). The effects of conflict types, dimensions, and emergent states on group outcomes. *Group Decision and Negotiation, 17*(6), 465–495. https://doi.org/10.1007/s10726-008-9107-0

Jehn, K. A., & Greer, L. L., & Rupert, J. (2008b). *Diversity, conflict, and their consequences* (pp. 127–174). Cambridge University Press. https://doi.org/10.1017/CBO9780511753725.007

Jehn, K., Northcraft, G. B., & Neale, M. A. (1999). Why differences make a difference: A field study of diversity, conflict and performance in workgroups. *Administrative Science Quarterly, 44*(4), 741–763. https://doi.org/10.2307/2667054

Jehn, K. A. (1995). A multimethod examination of the benefits and detriments of intragroup conflict. *Administrative Science Quarterly, 40*(2), 256–282. https://doi.org/10.2307/2393638

Jehn, K. A., Jonsen, K., & Rispens, S. (2014). Relationships at work: Intragroup conflict and the continuation of task and social relationships in workgroups. *Current Topics in Management, 17*, 1–22.

Jehn, K. A., & Mannix, E. A. (2001). The dynamic nature of conflict: A longitudinal study of intragroup conflict and group performance. *The Academy of Management Journal, 44*(2), 238–251. https://doi.org/10.2307/3069453

Jia, J., Ma, G., Wu, Zh., & Wu, M. (2021). Unveiling the impact of task conflict on construction project performance: Mediating role of knowledge integration. *Journal of Management in Engineering, 37*(6). https://doi.org/10.1061/(ASCE)ME.1943-5479.0000963

Jordan, P. J., Lawrence, S. A., Troth, A. C. (2006). The impact of negative mood on team performance. *Journal of Management & Organization, 12*(2), 131–145. https://doi.org/10.1017/S1833367200004077

Karn, J. (2008). An ethnographic study of conflict in software engineering teams. *Journal of Information, Information Technology, and Organizations, 3*, 105–133. https://doi.org/10.28945/133

Ko, V., & VanderPal, G. A. (2014). An overview of global leadership: Ethics, values, cultural diversity and conflicts. *Journal of Leadership, Accountability and Ethics, 11*(3), 166–175.

Krajcsák, Z. (2021). Modelling organizational conflict processes: The organizational value of employee commitment and the moderating role of transformational leadership. *Journal of Modelling in Management, 17*(2), 746–763. https://doi.org/10.1108/JM2-08-2020-0221

Kreisman, B. (2002). Insights into employee motivation, commitment and retention. In *Business training experts*. http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.582.5654&rep=rep1&type=pdf

Kuriakose, V., Sreejesh, S., Heerah, J., Anusree, M. R., & Shelly, J. (2019). Process conflict and employee well-being. *International Journal of Conflict Management, 30*(4), 462–489. https://doi.org/10.1108/IJCMA-12-2018-0142

Kurtzberg, T. R., & Mueller, J. (2005). The influence of daily conflict on perceptions of creativity: A longitudinal study. *International Journal of Conflict Management, 16*(4), 335–353.

Levine, J. M., & Moreland, R. L. (1990). Progress in small group research. *Annual Review of Psychology, 41*, 585–634. https://doi.org/10.1146/annurev.ps.41.020190.003101

Lewicki, J. R. J., Saunders, D. M., & Minton, J. M. (1997). *Essentials of negotiation*. Richard D Irwin.

Li, J., & Hambrick, D. C. (2005). Factional groups: A new vantage on demographic faultlines, conflict, and disintegration in work teams. *Academy of Management Journal, 48*(5), 794–813. https://doi.org/10.5465/amj.2005.18803923

Mannix, E., & Neale, M. A. (2005). What differences make a difference?: The promise and reality of diverse teams in organizations. *Psychological Science in the Public Interest, 6*(2), 31–55. https://doi.org/10.1111/j.1529-1006.2005.00022.x

Marineau, J. E., Hood, A. C., & Labianca, G. (2018). Multiplex conflict: Examining the effects of overlapping task and relationship conflict on advice seeking in organizations. *Journal of Business and Psychology, 33*, 595–610. https://doi.org/10.1007/s10869-017-9511-z

Matsuo, M. (2006). Customer orientation, conflict, and innovativeness in Japanese sales departments. *Journal of Business Research, 59*(2), 242–250. https://doi.org/10.1016/j.jbusres.2005.06.002

McGrath, J. E. (1984). *Groups: Interaction and performance*. Prentice-Hall.

McMillan, A., Chen, H., Richard, O. C., & Bhuian, Sh. (2012). A mediation model of task conflict in vertical dyads. Linking organizational culture, subordinate values, and subordinate outcomes. *International Journal of Conflict Management, 23*(3), 307–332. https://doi.org/10.1108/10444061211248994

Medina, F. J., Munduate, L., Dorado, M. A., & Martínez-Corts, I. (2005). Types of intragroup conflict and affective reactions. *Journal of Managerial Psychology, 20*(3/4), 219–230. https://doi.org/10.1108/02683940510589019

Mooney, A. C., Holahan, P. J., & Amason, A. C. (2007). Don't take it personally: Exploring cognitive conflict as a mediator of affective conflict. *Journal of Management Studies, 44*(5), 733–758. https://doi.org/10.1111/j.1467-6486.2006.00674.x

Murtha, R. (2005). Workplace conflicts challenge businesses. *Fairfield County Business Journal*, *44*(20), 42.

Nemeth, Ch. J. (1995). Dissent as driving cognition, attitudes, and judgments. *Social Cognition, 13*(3), 273–291. https://doi.org/10.1521/soco.1995.13.3.273

Nohria, N., & Garcia-Point, C. (1991). Global strategic linkages and industry structure. *Strategic Management Journal, 12*, 105–124. https://doi.org/10.1002/smj.4250120909

OPP & Cartered Institute of Personnel and Development. (2008). *Fight, fight or face it? Celebrating the effective management of conflict at work*. https://eu.themyersbriggs.com/-/media/10e61ce66e29407080ef0caf9f3dc846.ashx

Opute, A. P. (2012). Maximizing effectiveness in team sports: The personal audit tool. *Team Performance Management, 18*(1/2), 78–101. https://doi.org/10.1108/13527591211207725

Parayitam, S., & Dooley, R. S. (2007). The relationship between conflict and decision outcomes: Moderating effects of cognitive- and affect-based trust in strategic decision-making teams. *International Journal of Conflict Management, 18*(1), 42–73. https://doi.org/10.1108/10444060710759318

Passos, M. A., & Caetano, A. (2005). Exploring the effects of intragroup conflict and past performance feedback on team

effectiveness. *Journal of Managerial Psychology, 20*(3–4), 231–244. https://doi.org/10.1108/02683940510589028

Pelled, L. H. (1996). Demographic diversity, conflict, and work group outcomes: An intervening process theory. *Organization Science 7*(6), 593–682. https://doi.org/10.1287/orsc.7.6.615

Pelled, L. H., Eisenhardt, K. M., & Xin, K. R. (1999). Exploring the black box: An analysis of work group diversity, conflict and performance. *Administrative Science Quarterly, 44*(1), 1–28. https://doi.org/10.2307/2667029

Peterson, R. S., Owens, P. D., Tetlock, Ph. E., Fan, E. T., & Martorana, P. (1998). Group dynamics in top management teams: Groupthink, vigilance, and alternative models of organizational failure and success. *Organizational Behavior and Human Decision Processes, 73*(2–3), 272–305. https://doi.org/10.1006/obhd.1998.2763

Pruitt, D., Rubin, J. Z., & Kim, S. H. (1994). *Social conflict: escalation, stalemate, and settlement*. McGraw-Hill.

Rau, D. (2005). The influence of relationship conflict and trust on the transactive memory: Performance relation in top management teams. *Small Group Research, 36*(6), 746–771. https://doi.org/10.1177/1046496405281776

Rispens, S., Greer, L. L., & Jehn, K. A. (2006). Can relationship conflict be positive? Exploring the moderating role of interdependence on the link between relationship conflict and workgroup performance. In *The International Association of Conflict Management Conference*. Montreal, Canada.

Ross, R. (1989). Conflict. In R. Ross & J. Ross (Eds), *Small groups in organizational settings* (pp. 139–178). Precentice-Hall.

Schuch, S., & Dignath, D. (2021). Task conflict biases decision making. *Journal of Experimental Psychology, 150*(5), 864–872. https://doi.org/10.1037/xge0000908

Schweiger, D. M., Sandberg, W. R., & Rechner, P. L. (1986). Experiential effects of dialectical inquiry, devil's advocacy and consensus approaches to strategic decision making. *Academy of Management Journal, 32*(4), 51–71. https://doi.org/10.2307/255859

Simons, T. L., & Peterson, R. S. (2000). Task conflict and relationship conflict in top management teams: The pivotal role of intragroup trust. *Journal of Applied Psychology, 85*(1), 102–111. https://doi.org/10.1037/0021-9010.85.1.102

Tajfel, H., & Turner, J. (1979). An integrative theory of intergroup conflict. In W. Austin & S. Worchel (Eds.), In *The social psychology of intergroup relations* (pp. 33–47). Brooks/Cole Publishing Company.

Tajfel, H., & Turner, J. C. (1986). The social identity theory of intergroup behavior. In S. Worchel & W. Austin (Eds), *Psychology of intergroup relation* (pp. 7–24). Hall Publishers.

Tjosvold, D. (1991). Rights and responsibilities of dissent: Cooperative conflict. *Employee Responsibilities and Rights Journal, 4*(1), 13–23. https://doi.org/10.1007/BF01390435

Tjosvold, D., Dann, V., & Wong, Ch. (1992). Managing conflict between departments to serve customers. *Human Relations, 45*(10), 1035–1054. https://doi.org/10.1177/001872679204501002

Tjosvold, D., & Hui, Ch. (2003). Conflict management and task reflexivity for team in-role and extra-role performance in China. *International Journal of Conflict Management, 14*(2), 141–163. https://doi.org/10.1108/eb022895

Vodosek, M. (2005). Cultural diversity, intragroup conflict, and group outcomes: Evidence for a mediated relationship. In *Academy of Management Annual Meeting Proceedings, 2005*(1), D1–D6. https://doi.org/10.5465/ambpp.2005.18778533

Vodosek, M. (2007). Intragroup conflict as a mediator between cultural diversity and work group outcomes. *International Journal of Conflict Management, 18*(4), 345–375. https://doi.org/10.1108/10444060710833469

Wall, V. D., Jr., & Nolan, L. L. (1986). Perceptions of inequity, satisfaction, and conflict in task-oriented groups. *Human Relations, 39*(11), 1033–1052. https://doi.org/10.1177/001872678603901106

Wickramasinghe, V., & Nandula, S. (2015). Diversity in team composition, relationship conflict and team leader support on globally distributed virtual software development team performance. *Strategic Outsourcing: An International Journal 8*(2/3), 138–155. https://doi.org/10.1108/SO-02-2015-0007

Wit, F. de, Greer, L. L., & Jehn, K. (2012). The paradox of intragroup conflict: A meta-analysis. *Journal of Applied Psychology, 97*(2), 360–390. https://doi.org/10.1037/a0024844

Worchel, S. (2005). Culture's role in conflict and conflict management: Some suggestions, many questions. *International Journal of Intercultural Relations, 29*(6), 739–757. https://doi.org/10.1016/j.ijintrel.2005.08.011

Yousaf, A., Shaukat, R., & Umrani, W. A. (2020). Linkages between group level task conflict and individual level outcomes in non-routine technical jobs. *International Journal of Conflict Management, 32*(1), 158–176. https://doi.org/10.1108/IJCMA-08-2019-0128