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Leader's sensegiving and promotion of team sensemaking: Implications for team effectiveness in face of temporal team conflict

Agnieszka Broda

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Supervisor:

PhD Ana Margarida Passos, Associate Professor,
Department of Human Resources and Organizational Behaviour, ISCTE-IUL

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Summary

Abstract

In the modern organizations where work is to a far extent based on teamwork, identifying the conditions supporting team effectiveness is crucial. In the present research the leader's sensegiving and leader's promotion of team sensemaking are analysed as potential moderators of the relationship between temporal team conflict and team effectiveness. The intragroup conflict has been studied in the literature in many context, however, not much attention has been given to leader's sensegiving in a conflict situation. The present research aims to fill this gap by analysing relationship between the leader's sensegiving and leader's promotion of team sensemaking with team effectiveness, through their moderation of negative effects of conflict. As the result of the analysis, the hypothesis of the moderating effect of leader's sensegiving and leader's promotion of sensemaking was not supported while investigating temporal conflict, however, in the further analysis of other types of intragroup conflict leader's promotion of sensemaking showed to have a significant moderating effect on the negative relationship between task conflict and team effectiveness, through reduction of the detrimental effect. Further research is suggested to extend the results of this relevant area of investigation.

Keywords: leader's sensegiving, team sensemaking, temporal conflict, shared temporal cognitions, team effectiveness

JEL Classification System: D23 Organizational Behavior; O15 Human Resources, Human Development.

Resumo

Abstrato

Em organizações modernas, onde maior parte do trabalho é baseado em equipas, a identificação de condições que apoiem a eficácia de equipa é de grande importância. No presente trabalho o *sensemaking* do líder e promoção de *sensemaking* pelo líder são analisados como potenciais moderadores de relação entre o conflito temporal e a eficácia de equipa. O conflito temporal foi estudado em vários contextos, no entanto pouca atenção foi dada ao papel de *sensemaking* do líder em situações de conflito. O presente trabalho tem o objetivo de responder a esta lacuna, oferecendo a análise de relação de *sensegiving* do líder e de promoção de *sensemaking* pelo líder, com a eficácia de equipa, através das suas moderações de efeitos negativos de conflito. Como o resultado da análise, as hipóteses sobre o efeito de moderação de *sensegiving* do líder, e de promoção de *sensemaking* pelo líder, não foi suportada em relação ao conflito temporal. Porém, a promoção de *sensemaking* pelo líder teve um efeito de moderação significativo para a relação negativa entre o conflito de tarefa e a eficácia de equipa, através de redução do efeito negativo. Continuação de investigação nesta área relevante é recomendada com o objetivo de extensão de resultados.

Palavras-chave: *sensegiving* do líder, *sensemaking* de equipa, conflito temporal, cognições temporais partilhadas, eficácia de equipa

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Introduction

Teamwork is almost a default way of organizing work within majority of modern organizations, which is especially true for the consulting services sector. Consequently the team effectiveness has been a popular and widely discussed topic in the literature in the past years. Various predictors of team effectiveness have been studied to better understand favourable conditions for successful teamwork, pointing to individual, group and environmental factors (Hackman, 1983).

Over the last years the leader's figure and behaviours have been investigated as inputs and moderators of team processes in numerous contexts, showing e.g. positive association of leader's briefings with development of mental models and consequently with team performance (Marks, Zaccaro, & Mathieu, 2000); transformational leadership enhancing individual creativity in teams (Bai, Lin, & Li, 2016); leader's strong direction moderating team affects, or leader's motivational communication and feedback influencing team member engagement (Zaccaro, Rittman, & Marks, 2001).

The present research investigates leader's sensegiving behaviours as potential predictor of team effectiveness. Although leader's sensegiving perspective has been present in the literature (Bartunek, Krim, Necochea, & Humphries, 1999; Gioia & Chittipeddi, 1991), there has been little research dedicated to team context and possible impact of leader's sensegiving on team effectiveness. In the team environment, which is inherently characterized by diversity of team members (e.g. personality, values, demographics), there is a risk of emerging conflicts that can affect work flow and group functioning (Lau & Murnighan, 1998; Mathieu, Maynard, Rapp, & Gilson, 2008) leading to a decrease in team effectiveness. The identification of the processes that encompass leader's behaviours and team response, and which possibly have a moderating effect on the relationship between team conflict and team effectiveness, is a promise of being able to design appropriate training programmes and develop conditions within organizations in which those processes would be facilitated and promoted.

In the present research the theoretical framework of I-P-O (input-process-outcome) model has been adopted (Marks, Mathieu, & Zaccaro, 2001), where the team characteristics, such as diversity of mental models (*input*) results in various team processes, including team conflict,

which followed by leader's sensegiving and subsequent team sensemaking (*process*) from which both are expected to have an impact on team effectiveness (*outcome*). The constructs of sensegiving and sensemaking are being both rooted in the paradigm of organizations as interpretative systems proposed by Daft and Weick (1984). Leader's sensegiving behaviours towards the team focus on giving sense to the team context, environment and the events, and communicating that interpretation to the team, which is expected to be reflected in the subsequent team sensemaking: the ways the team members, and team as a collective, interpret it and make sense of it for themselves.

The temporal cognitions have been identified as those individual characteristics that can influence the teamwork on a significant level. Incoherence in that aspect can be disruptive to team performance (Gevers, Rutte, & van Eerde, 2006; Standifer et al., 2015) and consequently to team-based organizations, considering their dynamic and constantly changing environment, where efficiency and fast-delivered solutions are of high importance and define organization's position on the market. Therefore, a better understanding of possible moderators of these dynamics is highly relevant. The main question aimed to be answered is whether leader's engagement in sensegiving behaviours towards the team can possibly have a moderating effect on the relationship between team conflict and team effectiveness.

Literature Review

Teamwork and team effectiveness

Teamwork means individuals working together towards a goal that is otherwise unachievable for them working alone (Marks, Mathieu, & Zaccaro, 2001). After Mathieu et al. (2008: 411), who adapted the definition of Kozlowski and Bell (2003), the team is considered a collective that exists to perform specific organizational tasks, thus whose members have a common goal, work and interact towards achievement of that goal, and at the same time are interdependent and restricted by the organizational context they function in. Team members need to share information, manage resources, monitor their own and each other's actions and adjust them if needed (Zaccaro et al., 2001).

The most popular perspective of team effectiveness in the literature is based on the I-P-O (input-process-outcome) model in which team effectiveness is seen as a group outcome. Different constructs related to team effectiveness have been investigated, taking into account both performance-related indicators, as well as affective outcomes. One of the concepts that significantly enriched literature was Hackman's (1983) normative model of team effectiveness, in which three criteria are identified: 1) the output of the work group needs to meet or exceed the performance standards of the receivers and/or reviewers of the final product (*performance*); 2) the social processes occurring during the teamwork should maintain or improve the capability of team members to work together in the future (*viability*); 3) the teamwork experience should bring satisfaction rather than frustration to team members (*satisfaction*).

In the Hackman's model the teamwork process depends upon organizational context and group design, both identified as its predictors, as well as on group synergy (understood as minimization of coordination and motivation losses, and creation of shared commitment) that will have a moderating effect on the relationship between them. The team effectiveness is then seen as the function of three core process criteria: 1) level of effort dedicated collectively by the team to the given work; 2) knowledge and skills of the team members; 3) appropriateness of performance strategies to the task at hand (Hackman, 1983: 23).

De Wit et al. (2012) summarize team effectiveness in categories of distal and proximal outcomes, where they identify 1) group performance as a distal outcome with such its indicators

as decision quality, effectiveness, financial performance, innovativeness and overall performance; and 2) emergent states and group viability as proximal outcomes. Emergent states include group cohesion and intragroup trust, while viability reflects group member's affect towards the group, measured by individual satisfaction and commitment, and intention to stay in the group.

The emergent states were initially defined by Marks et al. (2001) whose objective was to distinguish the team processes from team characteristics of dynamic, processual nature. Emergent states, although being team properties, might vary in time as they are function of team context, inputs, processes, and outcomes. They encompass cognitive, motivational and affective states of the team, and can be both team inputs and proximal outcomes. In the context of the present work they are represented by shared mental models (SMM), defined further below.

According to Marks et al. (2001), both emergent states and processes contribute to team effectiveness. The authors see team performance as a series of related I-P-O (input-process-outcome) cycles, in which outcomes from initial episode might become inputs for the next one. Marks et al. (2001: 357) define team process as "members' interdependent acts that convert inputs to outcomes through cognitive, verbal, and behavioural activities directed toward organizing taskwork to achieve collective goals", and identify its three categories: 1) transition phase processes, 2) action phase processes, and 3) interpersonal processes, from which all determine team effectiveness. While transition phase processes relate to preparation of teamwork (goal specification; strategy development and planning), the action phase processes are directly linked to goal accomplishment (monitoring progress towards goals; systems monitoring; team monitoring and backup responses; coordination activities). The interpersonal processes (conflict management; motivating and confidence building; affect management) occur both in transitional and action phases and as the authors argue are fundamental for effectiveness of all the other processes.

Within the same methodological I-P-O framework Zaccaro et al. (2001: 457) point to four central processes that define effective teams: cognitive, motivational, affective, and coordination, claiming that "truly collective teams are those that are able to maintain high levels of collective performance, even as team and environmental circumstances become decidedly adverse", and

this is achieved through norms and procedures that support “individual and collective flexibility and adaptability”.

Similarly, De Dreu and Weingart (2003) in their meta-analysis dedicated to relationship between conflict and team effectiveness, identify both team performance and affective states of team members reflected in member satisfaction, as dimensions that need to be considered when talking about team effectiveness. Ilgen, Hollenbeck, Johnson, and Jundt (2005) mention team potency, which is a collective belief of the team that they can be effective (Guzzo et al., 1993 cited in Ilgen et al., 2005: 521), as a reciprocal predictor of group performance, making it inherent to the construct of team performance itself.

As the literature shows, the construct of team effectiveness is complex due to multiple dimensions that should be considered in its analysis. At the same time, the terms of team performance and team effectiveness are very often used almost interchangeably (Marks, Sabella, Burke, & Zaccaro, 2002), which might bring confusion in the attempt of literature review. The effort has been made to separate those two constructs in the present work, in which the I-P-O model presented by Marks et al. (2001) has been adopted. The input of team mental models (emergent state), implied as a predictor of team conflict has not been thoroughly investigated. The core analysis is focused on the relationship between team conflict and team effectiveness moderated by cognitive and affective processes performed by the leader and the team: sensegiving and sensemaking. As measurements of team effectiveness, Hackman's (1983) criteria have been applied: performance, viability, and satisfaction.

Shared mental models and team effectiveness

There is an evidence that in the team environment disagreements can be managed through development of team mental models (TMMs) which are, according to Mohammed, Hamilton, Tesler, Mancuso, and McNeese (2015) an organised understanding and mental representation of relevant knowledge about the team environment, shared by team members. TMM reflects then the extent to which individual mental models of team members are consistent one with another. The mental models mirror perceptions of all different kinds of work-related aspects linked to taskwork, such as goals, performance standards, and to process itself, including different dimensions of teamwork (Mohammed et al., 2015). Team mental models are expected to be positively related to team performance as they enable to interpret the information in a consistent

manner, anticipate each other's actions and adapt to current needs accordingly, thus help coordinate work more efficiently (Zaccaro et al., 2001).

There is a strong evidence in the literature of the positive relationship between shared mental models and team performance (Mathieu, Heffner, Goodwin, Salas, & Cannon-Bowers, 2000; Mohammed et al., 2015; Santos & Passos, 2013). Well established team mental models enable team members to predict each other's behaviours, thus reduce time dedicated to processing and communication in order to be "on the same page" (Zaccaro et al., 2001), which will be of a great importance in a changing environment, through increase of adaptive capacity of a team which at the same time is able to maintain high level of collaboration. The more similar the individual perceptions are, the more the work process is facilitated and the better is team performance. However, as some studies evidence, this positive effect will depend on other conditions such as the stage at which the teamwork process is at the moment or mental model's accuracy.

Mohammed et al. (2015) argue that in the early stages of the team lifecycle the similarity in temporal mental models does not have such a strong effect on team performance as it happens in the later stages of the teamwork process, however, it still predicts team performance positively. Moreover, the authors state that taskwork and teamwork mental models that the team holds, as opposed to temporal mental models, are not positively associated with team performance, as the team can miss out on the beneficial effect of having diverse opinions and ideas. Other studies, however, are not consistent in that matter.

Another concern is the accuracy of the shared mental models, understood as alignment of the discussed cognitions with the demands of the task (Gevers et al., 2006). If the mental model shared by the team members does not correspond with external demands, the whole team is simply wrong and will most likely not succeed. It has been evidenced that shared task and temporal models will moderate the positive influence of learning behaviour on team performance (Santos, Uitdewilligen, & Passos, 2015), however, what is even more important, teams with high similar, but low accurate, mental model will have low ability to engage in learning behaviours (Santos, Passos, & Uitdewilligen, 2016), which means they will choose to continue to believe in the incorrect ideas they share, excluding the possibility to learn from their mistakes, which eventually can inhibit performance.

In the context of team affective outcomes, the shared mental models positively predict team satisfaction, as Gevers et al. (2006) evidence in the case of shared temporal mental models. The more similar mental models, the less relationship conflict the team experiences and the higher is team effectiveness (Santos & Passos, 2013). Santos, Uitdewilligen and Passos (2015) find shared mental models as facilitators of group learning as they enable to redirect the available resources (e.g. time, attention) from the effort to develop common understanding to learning activities, resulting in enhanced affective outcomes of member satisfaction and viability. Ayoko and Chua (2014) prove likewise exhibiting the positive relationship between shared mental models and team efficacy as well as reduction of intra-group conflict.

Considering the above, the following hypotheses are proposed:

H1: Shared temporal cognitions predict team effectiveness*.

*Team effectiveness is conceptualized on two levels 1) team effectiveness perceived by team; 2) team effectiveness perceived by leader, tested separately. Three dimensions of team effectiveness are verified: performance, satisfaction, viability.

Team conflict

Conflict is an inherent part of social life and the presence of intragroup conflict in the organizational environment has been widely recognized as it is generated by naturally existing individual differences among team members (e.g. Cronin & Weingart, 2007; Jehn, 1995). Nevertheless, it has been acknowledged among managers that diversity is a good thing and that in today's business reality, where innovative solutions determine the survival on the market, the teams should be indeed diverse to ensure high levels of team creativity, and contributing this way to organization's competitive advantage (e.g. Lau & Murnighan, 1998). Those beliefs emerge from the idea that diversity in social and cultural background as well as in demographics brings cognitive diversity, resulting in exchange of different ideas and alternative solutions, which can have positive effect on the final team performance (De Wit, Greer, & Jehn, 2012; Jehn, 1995; Kilduff, Angelmar, & Mehra, 2000). In this context it has been a challenge for managers to ensure such levels of intra-team collaboration to both diminish negative effects of conflict and take advantage of team diversity.

In the literature of organizational behaviour three types of conflicts have been distinguished: task conflict, relationship conflict and process conflict (De Wit et al., 2012; Jehn & Bendersky,

2003). For a long time the only distinction that existed in the literature was the differentiation of task conflict from relationship conflict (De Dreu & Weingart, 2003), where the aspects of later defined process conflict, such as procedures and distribution of resources, were located within the construct of task conflict, which might have brought some contaminated results regarding their effects on teams.

According to the three-type classification, the relationship conflict refers to interpersonal incompatibilities, such as differences in personality or norms and values, and task conflict involves disagreements about the content and outcomes of the group work being executed (de Wit et al., 2012). The process conflict, which is of the most interest in the present research, is defined as “disagreements among group members about the logistics of task accomplishment, such as delegations of tasks and responsibilities” (de Wit et al., 2012: 360). It encompasses all kind of disagreements related to logistics, organizational aspects, and the ways the responsibilities should be distributed, thus to the means and resources, available to complete the task, including time and its management.

The differentiation of the process conflict from the task conflict proposed by de Wit and the colleagues (2012) is considered as highly beneficial in the present study, as both of them concern aspects of teamwork quite distinctive from each other, which can have significant consequences for the further analysis of the conflict itself as well as the environment. This reflects the switch of focus in the literature from previously existent relationship-oriented approach to teamwork process to rather organizational aspects of the work itself and the way it is managed.

Temporal conflict

Temporal conflict (TC) is a process conflict that concerns intragroup disagreements about time, duration of the task, and the amount of time the team should dedicate to specific activities (Standifer et al., 2015). Those disagreements are rooted in the inconsistency between team members' individual temporal mental models, so their perceptions about deadlines and time needed for task accomplishment, but also pacing of activities, linked to individual pacing styles, and their sequence (Santos, Passos, & Uitdewilligen, 2016). The disagreements can lead to tensions and eventually to temporal conflict (Santos, Passos, Uitdewilligen & Nübold, 2016; Standifer et al., 2015).

According to Gevers et al. (2006: 54) shared temporal cognition, which is a predictor of temporal conflict, is “the extent to which group members have congruent mental representations of the temporal aspects of a specific group task, such as the importance of meeting the deadline, (sub)task completion times, and the appropriate timing and pacing of task activities”. The internalization of the meanings of specific temporal aspects of task execution is considered as a necessary process to enable a smooth workflow in order to meet the established schedules and deadlines.

Gevers et al. (2016) suggest that shared temporal cognition within the group facilitates anticipation of each other's actions, thus potential adjustments to time management, according to the current needs. The pacing styles as well as exchange of temporal reminders have been identified by the authors as the antecedents of shared temporal cognition, although similarity in pacing styles was proven to be irrelevant in a situation when the team was more acquainted with the task (Gevers et al., 2006).

Team conflict and team effectiveness

For many years the literature was highly consistent in perceiving conflict as detrimental to effectiveness in the organizational setting, independently of its type, as shows the meta-analysis by de Dreu and Weingart (2003), with the relationship conflict having the strongest and consequently proven negative effect (Amason, 1996; Santos & Passos, 2013). The relationship conflict is disruptive to team effectiveness as it is a source of wasted resources of time and energy over personal disputes and hostilities, instead invested in task accomplishment (Santos & Passos, 2013; Simons & Peterson, 2000). It is also considered to have a negative effect on all the other team processes (Marks et al., 2001), such as communication, exchange of information, collaboration, as well as on affective outcomes, decreasing satisfaction of team members (e.g. Amason, 1996). The tension and anxiety can also lead to a decrease in member cognitive capacity, and in result in team effectiveness (de Wit et al., 2012; Santos & Passos, 2013).

The stable perspective of negative impact of conflict on team effectiveness was disturbed by Jehn (1995), who identified task conflict as the one potentially beneficial to team performance, however in regard to only non-routine tasks. This trend in the literature was followed by works of Amason (1996) showing positive effect of cognitive conflict on quality decision-making, and

Simon and Peterson (2000), who proved alike. The later meta-analysis by de Wit et al. (2012) shows, however, that all kind of conflicts have a negative impact on team outcomes, proximal outcomes in particular, with stronger effect of relationship and process conflict, than the task conflict. As the authors indicate, certain conditions might moderate that effect, as for instance, the co-occurrence of two types of conflict, bringing more positive results to team performance if the task conflict and relationship conflict are weakly correlated.

However, as Cronin and Weingart (2007) point out, team diversity that leads to conflict, although results in *exploration* and *resolution*, understood as information sharing with the objective of increasing understanding, creates resistance to others' perspectives, which results in non-taking advantage of potential benefits of task conflict. The authors emphasize the need of building some level of shared understanding to both benefit from diversity and enable collaboration through expanding individual cognitions so that they fit other perspectives (*bridging of representational gaps*).

The need for further research in that matter has been one of the drivers of the present work which aims to test leader's sensegiving as possible moderator of the negative relationship between specific process conflict, namely temporal conflict (based on diverse temporal cognitions), and team outcomes.

As evidenced the shared mental models have appositive effect on team performance, however team performance can be negatively affected by team conflict, thus the hypothesis identifying the temporal conflict as a mediator is proposed:

H2a: Temporal conflict mediates the relationship between shared temporal cognitions and team effectiveness*.

*Team effectiveness is conceptualized on two levels 1) team effectiveness perceived by team; 2) team effectiveness perceived by leader, tested separately. Three dimensions of team effectiveness are verified: performance, satisfaction, viability.

Leadership and sensemaking

Although there are currently different forms of organizational leadership (e.g. collective leadership, self-managing teams), most teams still have a defined person who is responsible for defining goals and developing and coordinating the team to accomplish them (Zaccaro et al., 2001). Leadership is a crucial aspect of team functioning and, as the literature shows, can have a

significant impact on team performance through the actions the leader undertakes towards the team, such as setting goals, promoting team learning and adaptation, coaching, managing events that occur in the team environment and developing a shared understanding within the team (Morgeson, DeRue, & Karam, 2010). The leader has also a linking role between the team and the external environment serving as a diagnosis point of potential problems (Zaccaro et al., 2001).

Team leadership is then understood as “the process of team need satisfaction in the service of enhancing team effectiveness” (Morgeson et al., 2010: 8). New theory of leadership defines it in terms of a process rather than a set of characteristics (Pye, 2005), showing how leaders influence followers' values and understanding and inspire them in the quest for objectives through empowerment and presentation of a meaningful vision (Foldy, Goldman, & Ospina, 2008). Zaccaro et al. (2001) claim that effective leadership process is likely to be the most critical factor in team's success, as it influences all four types of team processes: cognitive, motivational, affective, and coordination. In their functional approach to leadership the authors distinguish its four dimensions: 1) information search; 2) information use in problem solving; 3) managing personnel resources; 4) managing material resources (Zaccaro et al., 2001). According to the authors, leader processes have effect on the collective processing of information, including metacognition, and their quality and efficacy.

Sensemaking has been identified in the literature as one of the leadership functions which enables promotion of common understanding in the context of changing environment (changes within the team, events that impact team functioning and other aspects), which is of special importance when the conditions the team needs to make sense of, might be disruptive to team functioning and team performance (Morgeson et al., 2010). The leader's influence on followers' perceptions and attitudes has also been proven to have impact on their commitment to organizational goals (Foldy et al., 2008). Zaccaro et al. (2001) claim that leader's behaviour contributes to team effectiveness through its influence on cognitive team processes, including emergence of shared mental models. They indicate that team mental models (and their quality) are a direct result of the leader's own understanding passed on to the team that has an impact on team coordination and subsequently team effectiveness. Similarly, Ayoko and Chua (2014) evidence that transformational leadership, encompassing such behaviours as intellectual

stimulation, mentoring and sensegiving behaviours has a significant impact on development of similar team mental models.

What is sensemaking?

The term “sensemaking” was introduced to the organizational studies by Weick (1979; 2005), who states that sensemaking occurs when “the current state of the world is perceived to be different from the expected state of the world, or when there is no obvious way to engage the world” (Weick et al., 2005: 131). In practice, sensemaking should be seen as a cognitive strategy used towards the dissociation of what we want to be happening and what actually “is”. The psychological work that an individual performs aims at such an interpretation of the situation which would help to solve a specific problem or reduce the fear and insecurity caused by incapacity to change the reality. Daft and Weick (1984) place the interpretation process as a mediator of the relationship between *scanning* (data collection) and *learning*, understood as action taking. Sensemaking is in that sense a strategy that enables the individual to process the available information and act accordingly to that interpretation.

Bartunek, Krim, Necochea, and Humphries (1999) argue that the collecting and interpretation of information will depend on already existing mental models, facilitating the incorporation of the information that is different enough to be perceived and considered as relevant, yet still similar enough to fit the existing cognitions. Thus, as a result of the interpretation process (*making-sense*) the created meanings will always not only be subjective, but also, as Gioia and Chittipeddi (1991) notice, will be constrained by the goals the involved individuals intend to achieve.

The core idea of sensemaking is that the meanings the individuals construct through reasoning are brought into being by verbalization, becoming this way something that is socially constructed in an interaction with others (Smerek, 2011). This leaves us with the conclusion that already sensemaking (and not yet sensegiving, defined below) is a social process since its content derives from a relation to others (Weick, 2005). According to Weick (1995), sensemaking is: 1) grounded in identity construction, 2) retrospective (as it is based on experience-based knowledge), 3) enactive of sensible environments, 4) social (performed in a response to others, physically present or imagined), 5) ongoing, 6) focused on and rooted in cues, and 7) plausible rather than accurate. Although the sensemaking is primarily a cognitive process it has been

recognized that it concerns both cognitions and affections that come subsequently, being directly linked to the discourse and the established identifications (Guiette & Vandembempe, 2013).

Sensemaking in the organization

In the literature dedicated to organizational management sensemaking is thoroughly discussed, however, mostly on the organizational and individual levels, and there is relatively little research regarding the team level. Many of the available studies, have only exploratory character, not giving much insight into the outcomes of the sensegiving-sensemaking behaviours (e.g. Havermans Keegan, & Hartog, 2015; Smerek, 2011). Since sensemaking and sensegiving are aimed at reduction of ambiguity it is mostly an unstable environment linked to organizational change that is addressed in the research (e.g. Bartunek et al., 1999; Drori & Ellis, 2011; Goia & Chittipeddi, 1991; Smerek, 2011).

Smerek (2011: 80) says that in organizational setting sensemaking is about “the reduction of uncertainty and equivocality through the deliberate effort to understand the organization”. In the team environment the data collection, which is one of the initial steps of sensemaking process, will be occurring both on the individual and team levels and will be conditioned by already existing knowledge of team members. Considering the expected diversity in members' background, the interpretations of the available information will vary. On the organizational level, beside the individuals involved, the organizational culture, procedures and processes also need to be considered as they will determine the way the internal and external environment will be interpreted by its members. Daft and Weick (1984) consider organization as a system with its own cognition and memory, resulting from accumulated information-interpretation.

Weick (2005) points out that sensemaking aims principally at continuity of action, thus it does not need to be accurate to help solve the problem, but it does need to happen and in a way it brings the social actors closer to the solution. Employees will use various sensemaking strategies (eg. metaphors, humor) to define identities of themselves, stakeholders' and the given context in situations that require their adaptation (Fairhurst & Connaughton, 2014). Liu, Inlow, and Feng (2014) show, for instance, positive relationship between the use of positive metaphors by

employees, which support control and desired interpretation of meaning, and conflict management institutionalization within an organization.

Klein, Wiggins, and Dominguez (2010: 304) see sensemaking at a team level “as the process by which a team manages and coordinates its efforts to explain the current situation and to anticipate future situations, typically under uncertain or ambiguous conditions”. The result of this process is development of shared understanding of the situation, which is expected to facilitate the cooperation of team members. As the authors point out team sensemaking is even more critical to the functioning of the organization than individual sensemaking as its impact has further-going implications; it is also more difficult to coordinate and to accomplish. According to Klein et al. (2010) team sensemaking depends on level of common understanding of external events (related knowledge and assumptions) which allows efficient communication.

As mentioned previously, sensemaking is strictly dependent on our existing mental models, which results in a selective attention to received information (Weick et al., 2005). In such a pre-conditioned setting, the leader's guidance of what and how needs to be objectified is expected to have an important role in shaping the team's shared cognition. This will especially be valid in a changing environment where some of the meanings need to be constructed, updated and re-constructed within project's extended timeframe and/or its dynamic conditions. The team sensemaking is then a negotiation of the meanings the team members exchange (Klein et al., 2010).

Klein et al. (2010) distinguish three forms of team sensemaking: hierarchical, collaborative and opportunistic. The hierarchical one is based on top-down communication, where information is gathered by a leader, blended and passed on to the team; collaborative form is the result of discussion and comparison of individual impressions; opportunistic is based on suggestions given from the higher level, however processed independently by individuals who take responsibility for their own identifications and subsequent decisions. Klein et al. (2010: 309-310) see team sensemaking as a multi-stage process consisting of: 1) identification of the frame; 2) questioning the frame; 3) re-framing (comparing to alternative views); 4) creation of a new frame. The last stage can be then followed by elaboration of the frame. The dynamics of those processes will depend on the structure, norms and procedures within the team, defining e.g. decisiveness of team members, participation level, and conflict resolution mechanisms.

As noted by Havermans et al. (2015), the language and narrative types the leader uses will have an important role in coordination of emerging meanings that shape the common interpretation of the team through the process of collective sensemaking. This can have importance both in the interpretation of the problems and consequently in their resolution, hence the team performance. The authors also point out that the way the leader talks about external environment will be crucial for shaping the team members' understanding and their relationship with external stakeholders, which can have positive, or negative, effect on the team response towards them, team functioning, and ultimately performance, depending on the leader's messaging and pre-set goals (Havermans et al., 2015). Foldy et al. (2008) evidence the importance of distinction between followers' sensemaking focused on a problem and sensemaking around a solution, and emphasize the leader's role in sensegiving as the one that can bring a linkage by influencing one through another.

Leader's sensegiving and followers' sensemaking

Sensemaking is a cognitive process performed by individuals, while sensegiving is a behavioural process of someone communicating the interpretation to others as suggested meanings to be internalized. The term "sensegiving" was introduced to the literature by Goia and Chittipeddi (1991) who defined it as "the process of attempting to influence the sensemaking and meaning construction of others toward a preferred redefinition of organizational reality" (1991: 442). Smerek (2011) states shortly that sensegiving is about persuasion, influence and action.

A lot of attention has been given in the research to leader's sensegiving, sometimes being confusingly labelled under sensemaking (Morgeson et al., 2010), however, very often not giving much consideration to receptiveness and interpretation by the recipients. The concept of sensegiving has been also present in the literature under the term of framing (Brummans, Putnam, Gray, Hanke, Lewicki, & Wiethoff, 2008; Hamilton, 2016; Havermans et al., 2015), having its roots in social psychology. Hamilton (2016), for instance, investigates three types of frames that can be engaged by leader's to encourage stakeholders' support for organizational change: initiative visionary framing (communication of future outcomes), step-by-step framing (communication of short-term goals and ways to achieve them) and frame bridging, based on discursive strategies to present given context in categories of recipient's goals and interests.

As Maitlis and Lawrence (2007) point out, the behaviours attempted to influence others' way of understanding is the very reality of organizational life and is performed by various stakeholders through usage of persuasive language. The assumption behind that concept is that the person expressing the message has an intended meaning that is targeted at their audience (Smerek, 2011), however, the communicator's sensemaking and recipient's sensemaking might be not fully aligned as intended, especially instantly, as achieving a consensus is a complex process (Bartunek et al., 1999), and is always based on interpretations, rather than on objective facts. Additionally, the communicated sense (sensegiving) might be different from the actual interpretation (sensemaking) of the communicator (leader) him-/herself (Bartunek et al., 1999), however, since it is not a subject of this research, the concept of sensegiving is being analysed on the level of communication, independently of potential discord between the internally held opinions/interpretations of the leader and the ones actually expressed.

Gioia and Chittipeddi's work (1991) was one of the first extensive studies dedicated to stakeholders' sensemaking in a response to leader's sensegiving, which examined those mutual dynamics in the process of strategic organizational change. According to the interpretive approach, within which Gioia and Chittipeddi (1991: 435) operate, and which derives from social constructionism, "understanding and action are based on the interpretation of information and events by people experiencing them". In the model developed by the authors, the sensegiving-sensemaking process has a continuous character, where the leader's sensegiving (in that case the CEO's) will shape stakeholders' sensemaking which will then have a return impact on leader's messaging, and in consequence will take part in further sensegiving process. The authors refer then to four stages in this "sequential and reciprocal" process: 1) leader's sensemaking (*envisioning*); 2) leader's sensegiving; 3) stakeholders' sensemaking (*revisioning*); 4) stakeholders' sensegiving. As a consequence of the last stage, the process transforms into a feedback loop and shapes the first stage which occurs again and leads to a repetitive cycle to all the other following phases. This model, however, stays in the contradiction with a later study of Klein et al. (2010) who claim that sensemaking has a final point, which is identification of suitable frame. Smerek (2011), on the other hand, focuses on the sequence of sensemaking and sensegiving processes which in his study occur in parallel, as the leaders in the unfamiliar conditions make sense for themselves and give sense to others on a continuous basis.

Maitlis and Lawrence (2007) in their analysis of sensegiving triggers and enablers, point out that leaders tend to give-sense in the occurrence of “sensemaking gaps”, i.e. perceived or anticipated complex situations that require sensemaking, such as ambiguous, unstable environment and conflicting interests of numerous stakeholders. However, the authors point out, as it has been evidenced in various studies, that sensegiving is a key leadership action, both in the conditions of change and stability, when the perceived complexity of the situation requires it. The willingness to create new interpretation is generated by a need to build some kind of common ground to bridge the divergent stakeholders' positions (Maitlis & Lawrence, 2007). On the other hand, the engagement in the sensegiving behaviours will depend upon a discursive ability of the leader to communicate persuasive interpretations of what is happening.

What is worth noting, the stakeholders might involve in sensegiving behaviour themselves if they perceive the leader as incompetent regarding the subject (Maitlis & Lawrence, 2007) and at the same time feel responsible to take over as they consider the given issue important. As Gioia and Chittipeddi (1991) claim, the position the members hold will influence the level of dominance they have over the negotiated vision, as they believe that “sense” is not entirely given, but rather negotiated. Although their analysis reflects on the sensegiving-sensemaking processes at the macro level of the organization, it is expected that some of those core dynamics are observable on the team level.

In her analysis of leadership processes, Pye (2005) sees leadership itself as “sensemaking in action”. She bases her vision in social constructionism that sees the interpretations of everyday reality as built socially, in ongoing interactions, and remaining this way; thus since leadership is a guidance in action or opinion it should rather seen as *leading* (Pye, 2005). Sensemaking, as the author states, embodies the leader's role more accurately than the concept of leadership does, as it reflects the leader's action in practice succeeded by followers' response. Pye states that the leader's role in sensemaking is both a help to extract appropriate clues, by pointing to references, and providing the key cue (being the reference themselves). Smircich and Morgan (1982, cited in Pye, 2005: 45) say that “leadership lies in large part in generating a point of reference, against which a feeling of organizing and direction can emerge”.

As to summarize, the core that defines the sensegiving is “to provide viable interpretation of a new reality and to influence stakeholders and constituents to adopt it as their own” (Gioia &

Chittipeddi, 1991). Morgeson et al. (2010) consider leader's sensemaking as one of the key leadership functions, merging the sensemaking construct with sensegiving and defining sensemaking not only as an interpretive process, but also the communication of the meanings to the team. Leader's sensemaking encompasses then such behaviours as: 1) assisting the team in interpreting things that happen inside the team; 2) assisting the team in interpreting things that happen outside the team; 3) facilitating the team's understanding of events or situations; 4) helping the team interpret internal or external events; 5) helping the team make sense of ambiguous situations (Morgeson et al., 2010: 32). Also, Foldy et al. (2008) state that sensegiving, seen as shaping others understanding of the work at hand, of themselves and others in the work context, is crucial aspect of organizational leadership. Marks et al. (2000) show that leader's communication of information about the environment has a positive effect on development of more similar and more accurate mental models of team members. Subsequently, the leader's initiative to interpret and "give sense" to the situations, outside and inside the team or organization, and guide the team in interpreting them in a desired way, is expected to have a significant impact on the ways the team members will perceive them, and in result effectively deal with them.

Sensegiving - sensemaking and team conflict

Leader's sensegiving in the situation of team conflict has not been much researched. The studies point out that clear and strong direction given by the leader can help regulate emergence of negative emotions (Zaccaro et al., 2001), thus reduce the negative effect of conflict. Similar assumption is rooted in the study of Santos, Passos, and Uitdewilligen (2016) who base the positive relationship between temporal leadership (leader's definition of schedules and deadlines, allocation of temporal resources etc.) and reduction of temporal conflict in teams in their testing of shared mental models as substitute for this type of leadership (which is confirmed positively in the study). Sensegiving is, however, a concept distant from temporal leadership as it is based on persuasive and not directive communication and uses different kind of strategies.

Morgeson et al. (2010) claim the leader's relevance in managing intra-group conflicts and point out that although in certain circumstances, e.g. self-managing teams with an external leader, the leader's sensemaking-sensegiving might be seen as intrusive by the team, it still does facilitate the team functioning. Other studies show that leader's sensegiving supports development of team

mental models and subsequently enhances team functioning (Mathieu et al., 2000). Foldy et al. (2008) point to leader's sensegiving as a way to conceive collective identity which strengthens sense of solidarity, by focusing on the communalities and not differences.

In their exploratory study, Havermans et al. (2015) emphasize the relevance of leader's framing of conflicting views as something negative that can hinder team performance. According to the authors, the leader should stress the importance of aligning individual points of view as a way to facilitate project development and implementation, and at the same time prevent emergence of relationship conflict. Another discussed type of leader's narratives (Havermans et al., 2015) is the emphasis on the value of conflict and encouragement of tensions as a way to adaptation and improvement, which aligns with the research on positive outcomes of moderate task conflict on creativity and related performance (Jehn, 1995). The authors summarize with a possibility of introducing another leader's narrative that would enable both diversity and alignment. Taking into account an exploratory character of the referred study, further research would be required to better understand the outcomes of all of the mentioned strategies.

Drori and Ellis (2011) show in their research how sensegiving might be used by leaders in the process of organizational change, however, with the aim to preserve the existing meanings and maintain the status quo. According to their study the sensegiving rooted in conflicting points of view and actions, can support the disagreements. Brummans et al. (2008) show that the sense developed by a party in a conflict situation (framing of the conflict, of risks and possible outcomes) is based on their emotional investment in the conflict.

With the aim of enriching the existing literature on the subject, in the following part of the study the impacts of leader's sensegiving and leader's promotion of team sensemaking are being explored and tested as possible moderators of anticipated negative effect of temporal conflict on team effectiveness.

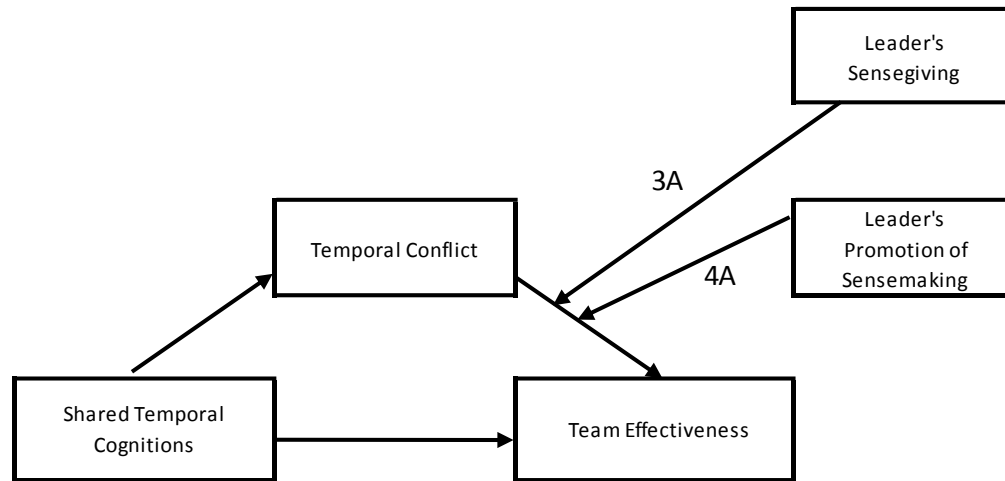


Fig. 1. Research Model A: 3A and 4A

*Team effectiveness is conceptualized on two levels 1) team effectiveness perceived by team; 2) team effectiveness perceived by leader, tested separately. Three dimensions of team effectiveness are verified: performance, satisfaction, viability.

As a result, following hypotheses are proposed:

H3A: Leader's sensegiving moderates the relationship between temporal conflict and team effectiveness.

H4A: Leader's promotion of sensemaking moderates the relationship between temporal conflict and team effectiveness.

Methodology

Sample characterization

The study was run on a sample of 42 teams, consisting of total of 154 individuals. The teams worked in consulting services in companies registered and located in Portugal. The number of team members varied between two and twenty, with a majority of teams consisting of three to six members (71.2%). The average age of members was 29 years and majority was female (71.4%).

Procedure

The study was conducted through a written paper questionnaire of a declarative character. The team members and team leaders answered to the questionnaire individually and independently. All the data was collected within a period of three months, between February and April of 2017, as part of a wider research project dedicated to team dynamics, aiming at identifying some of the critical conditions and determinants of team effectiveness.

Measures

Shared temporal cognitions

In the operationalization of shared temporal cognitions the four-item construct by Gevers et al. (2006) has been adapted and measured by the level of agreement on 7-point scale (1 = *totally disagree*; 7 = *totally agree*). The items being assessed where: 1) “We have the same opinions about meeting deadlines”; 2) “We have similar thoughts about the best way to use our time”; 3) “We agree on how to allocate the time available”; 4) “We have similar ideas about the time it takes to perform certain tasks.”

Temporal conflict

Temporal conflict was measured by three item scale by Yang (2009) modified by its application to items by Shah and Jehn (1993), reflecting the frequency of conflict instead of its magnitude. With this aim, a 7-item scale has been applied with 1 corresponding to *never* and 7 corresponding to *always*. The respondents assessed frequency with which certain temporal disagreements were happening in the team: 1) “There are disagreements in the team about time allocation to tasks”; 2) “There are disagreements about how much time should be spent on

specific tasks”; 3) “The team members disagree about the pace with which tasks should be done”.

Task conflict

Task conflict was measured through an adaptation of modified scale by Jehn (1995). Three items have been included: 1) “There is a conflict of ideas among team members”; 2) “There is a confrontation of opinions about work”; 3) “There is disagreement in the team about opinions expressed by some members”. The 7-item scale has been used to measure the frequency of the conflict situations (1 = *never*; 7 = *always*).

Relationship conflict

With an aim of operationalizing relationship conflict, the scale by Shah and Jehn (1993) has been applied with the frequencies of conflict measured on the same 7-item scale (1 = *never*; 7 = *always*). The participants were asked to assess how often the following situations took place in their teams: 1) “There are personal conflicts among team members”; 2) “There is friction among team members”; 3) “Personal conflicts are evident”.

Leader's sensegiving

The scale used to measure leader's sensegiving behaviours has been created for the purpose of this study on the basis of leader's sensemaking scale proposed by Morgeson, DeRue and Karam (2010). The participants evaluated behaviours of their team leaders by agreeing to a certain extent, measured on a 7-item scale (1 = *totally disagree*; 7 = *totally agree*) to the six statements describing the leader's influence on team members' interpretations (e.g. “The leader tells the team how events or situations the team is faced with should be interpreted”; see Appendix C).

Leader's promotion of sensemaking

Promotion of sensemaking by the leader has been measured by a newly-created 6-item scale, being an extension of the leader's sensemaking scale proposed by Morgeson, DeRue and Karam (2010). The existence of those leader's behaviours has been evaluated by the respondents on a 7-item scale (1 = *totally disagree*; 7 = *totally agree*). The items included such statements as e.g. “The leader encourages the team to collectively interpret things that happen to the team”; “The

leader promotes the development of a shared understanding of events or situations among the team members” (see Appendix C).

Team effectiveness

In the operationalization of the team effectiveness variable, three constructs have been included: performance, viability and satisfaction. The measurement was done on a 7-item scale (1 = *totally disagree*; 7 = *totally agree*). In order to measure performance two items by González-Romá, Fortes-Ferreira, and Peiró (2009) have been adapted 1) “My team has a good performance”; 2) “My team is effective”. Team satisfaction was operationalized by one item, adapted from Standifer et al. (2015): “We are satisfied with working in this team”. Viability has been represented by two items based on the work by Costa, Passos, and Barata (2015) expressed by such statements as:

1) “I would not hesitate to work with this team on other projects” 2) “This team could work well in the future projects”. The team effectiveness by leader has been operationalized on the basis of the same items, with a slight change of the expression “my team” to “the team”, when applicable, and the change of the item of satisfaction to “The members are satisfied with working in this team”. The items were assessed by using the same 7-item scale of levels of agreement.

Results

Aggregation

In the initial phase of analysis individual answers obtained in the questionnaires have been aggregated to allow a team level analysis. In order to allow a correct aggregation, $r_{wg(j)}$ has been computed for multiple-item scales to identify the level of agreement within the groups and thus confirming validity of the group-level constructs. A mean value of $r_{wg(j)}$ equal or higher than .70 has been applied (James, Demaree, & Wolf, 1993) and the measure of agreement levels as follows: “lack of agreement”= .00 to .30; “weak agreement”= .31 to .50; “moderate agreement”= .51 to .70; “strong agreement”= .71 to .90; “very strong agreement”= .91 to 1.00 (Biemann, Cole, & Voelpel, 2012: 73).

As a result, shared temporal cognitions have the $r_{wg(j)}$ mean value of .74 and 85.7% of the values evidence lack of agreement or weak agreement and 14.3% of the values evidence moderate,

strong or very strong agreement. The $r_{wg(j)}$ mean value of temporal conflict is .80, and 9.5% of the values evidence weak agreement, while 90.5% evidence moderate, strong or very strong agreement. For relationship conflict the $r_{wg(j)}$ mean value is .84, and 7.1% of the values correspond to lack of agreement or weak agreement and 92.9% to moderate, strong or very strong agreement (47.6% for very strong agreement). The $r_{wg(j)}$ mean value of task conflict is .82 with weak agreement evidenced by 2.4% of the value and moderate, strong or very strong agreement regarding the rest of 97.6% of the values. The $r_{wg(j)}$ mean value of leader's sensegiving is .78, and lack of agreement or weak agreement is evidenced by 11.9% of the values (with a total disagreement of 2.4%; -.47) and moderate, strong or very strong agreement by 88.1% (45.2% for very strong agreement). For leader's promotion of sensemaking the $r_{wg(j)}$ mean value is .76, and lack of agreement or weak agreement evidence by 14.3% of the values (with a total disagreement of 2.4%; -.01) and moderate, strong or very strong agreement evidenced by 85.7% of the values. For team performance the $r_{wg(j)}$ mean value is .86, and 7.1% of the values indicate weak agreement, and 92.9% moderate, strong or very strong agreement (57.1% for very strong agreement). The the $r_{wg(j)}$ mean value for team viability is .73, with 21.4% of data indicating lack of agreement or weak agreement and 78.6% indicating moderate, strong or very strong agreement. For team satisfaction the $r_{wg(j)}$ mean value is .77, and lack of agreement or weak agreement is evidenced by 19% of values (with a total disagreement of 7.1%; < 0) and moderate, strong or very strong agreement by 81% (42.9% for very strong agreement).

Hypotheses testing

In the preparation for hypothesis testing the correlations of all variables have been tested. The results are displayed in the Table 1, together with mean values and standard deviations. Positive significant correlations were found between shared temporal cognitions and: leader's sensegiving, leader's promotion of sensemaking, team performance, team satisfaction and team viability; between relationship conflict, task conflict and temporal conflict; between leader's sensegiving and: leader's promotion of sensemaking, team performance, team satisfaction, team viability, and team performance, satisfaction and viability perceived by leader. Leader's promotion of sensemaking, except of aforementioned variables, was positively correlated with team performance, team satisfaction and team viability, as well as team performance and team viability perceived by leader. Additionally, as expected, all variables of team effectiveness:

Table 1. Means, standard deviations and correlations of all analysed variables.

	M	SD	1	2	3	4	5	6	7	8	9	10	11
1. Shared temporal cognitions	5.05	.70											
2. Relationship conflict	2.00	.71	-.43**										
3. Task conflict	2.98	.82	-.48**	.70***									
4. Temporal conflict	2.71	.74	-.72***	.48***	.63***								
5. Leader's sensegiving	5.17	.87	-.33*	-.61***	-.54***	-.33*							
6. Leader's promotion of sensemaking	5.13	.99	.41**	-.49***	-.45**	-.39*	.88***						
7. Team performance	5.83	.55	.51***	-.60***	-.56***	-.38*	.63***	.58***					
8. Team satisfaction	5.63	.81	.47**	-.58***	-.55***	-.45**	.65***	.60***	.78***				
9. Team viability	5.78	.94	.52***	-.58***	-.57***	-.43**	.54***	.50**	.72***	.86***			
10. Team performance by leader	5.67	.74	.12	-.35*	-.23	-.08	.55***	.37*	.39*	.38*	.54***		
11. Team satisfaction by leader	5.71	.87	.10	-.31	-.10	-.13	.36*	.28	.41**	.34*	.40**	.47**	
12. Team viability by leader	6.17	.83	.13	-.39*	-.24	-.11	.43**	.31*	.39*	.49**	.59***	.71***	.48**

Note: n = 42 teams

* p < .05

** p < .01

*** p < .001

performance, satisfaction and viability, perceived by team and leader were all positively correlated with each other. Negative significant correlations were found between shared temporal cognitions and all types of conflict (relationship, task and temporal); between all types of conflict and team performance, team satisfaction and team viability, between relationship conflict and team performance, satisfaction and viability perceived by leader, between all types of conflict and leader's sensegiving and leader's promotion of sensemaking.

The conceptual Model A (Appendix D, Fig. 3) being tested in the present work consists of two sequential processes: 1) mediation of the relationship between shared temporal cognitions and team effectiveness by temporal conflict (shared temporal cognitions identified as a predictor of temporal conflict); 2a) moderation of the relationship between temporal conflict and team effectiveness by leader's sensegiving; 2b) moderation of the relationship between temporal conflict and team effectiveness by leader's promotion of sensemaking. Thus, the mediation hypotheses were tested first and afterwards moderation analyses to determine if there will be a case of moderated mediation (Cole, Walter, & Bruch, 2008).

First the viability of the mediation model was tested, where the work by Baron and Kenny (1986) has been applied as a basis for the tests. In the mediation model, if confirmed in tests, the regression weight of total effect c should be a sum of direct (c') and indirect effects (ab), i.e. $c = c' + ab$ (Hayes, Preacher, & Myers, 2011).

Direct Effects

As part of the tests of mediation models, the regression tests of independent variable of shared temporal cognitions have been run, testing it as a predictor of team effectiveness (Hypothesis 1). In separate tests their prediction of: 1) team performance; 2) team satisfaction; and 3) team viability was investigated. Separate testing were run with the dependent variable of 1) team perceptions of their own effectiveness; 2) and team effectiveness perceived by leader.

Hypothesis 1a₁ proposing shared temporal cognitions as predictor of team performance was supported, showing their strong positive effect ($B = .51, p = .001$). The model explains 24% of the variance ($F = 13.76, p = .001$). Hypothesis H1a₂ in which shared temporal cognitions predict team satisfaction was also confirmed showing their positive effect at level $B = .47 (p = .002)$ and showing a good fit of the model accounting for 20% of the variance ($F = 11.51, p = .002$).

Hypothesis H1a₃ proposing shared temporal cognitions as predictor of team viability was also supported, where a strong positive effect was evidenced ($B = .52, p < .001$). The model explains 26% of the variance ($F = 15.06, p < .001$). As a result shared temporal cognitions were confirmed as a predictor with a strong positive effect on team effectiveness.

Hypothesis 1b₁ proposing shared temporal cognitions as predictor of team performance perceived by leader was not supported. The regression effect was not significant $B = .12, p > .05$ leading to rejection of the hypothesis. In the testing of Hypothesis 1b₂ proposing shared temporal cognitions as predictors of team satisfaction perceived by leader, the regression was also evidenced as not significant ($B = .10, p > .05$). Hypothesis 1b₃ proposing shared temporal cognitions as predictor of team viability perceived by leader was also rejected ($B = .13, p > .05$).

Indirect Effects

In the further analysis indirect effects were tested in order to verify mediation by temporal conflict of the relationship between shared temporal cognitions and team effectiveness perceived by the team and by the leader, with the separation of its three levels: performance, satisfaction, and viability (Model 2a, Appendix H, Fig. 6).

The mediation model suggested in the Hypothesis 2a₁ proposes that temporal conflict mediates the relationship between shared temporal cognitions and team performance. The model did not show a good fit ($R^2_{adj} = .22, p > .05; F = 6.73, p = .003$), with no significant regression effect of temporal conflict ($B = -.03, p > .05$). As a result Hypothesis 2a₁ was rejected.

Hypothesis 2a₂ proposes a mediation effect of temporal conflict on the relationship between shared temporal cognitions and team satisfaction. In this model none of the tested variables predicted team satisfaction: shared temporal cognitions ($B = .31, p > .05$) and temporal conflict ($B = -.23, p > .05$), thus the Hypothesis 2a₂ was rejected.

In the Hypothesis 2a₃ it is suggested that temporal conflict has a mediating effect on the relationship between shared temporal cognitions and team viability. The model of mediation has not been confirmed evidencing no significant regression effect of temporal conflict on team viability ($B = -.12, p > .05$) and not significant goodness of fit ($R^2_{adj} = .24, p > .05; F = 7.61, p = .002$).

In order to fully explore possible mediation of temporal conflict on the relationship between shared temporal models and team effectiveness, the variables reflecting the leader's perception of team effectiveness have been included in the analysis, namely: team performance perceived by leader, team satisfaction perceived by leader, and team viability perceived by leader.

The mediation model suggested in the Hypothesis 2a₄ proposes that temporal conflict mediates the relationship between shared temporal cognitions and team performance perceived by leader. The model fit was reported at non-significant level ($R^2_{adj} = -.01, p > .05; F = .54, p > .05$), as well as regression analysis showed shared temporal cognitions as non-significant for predicting team performance by leader ($B = .13, p > .05$) and the same was evidenced for temporal conflict ($B = .02, p > .05$). As a result Hypothesis 2a₄ was rejected.

Hypothesis 2a₅ proposes a mediation effect of temporal conflict on the relationship between shared temporal cognitions and team satisfaction by leader. The separate regression tests of both identified potential predictors showed no significance, for shared temporal cognitions, $B = .10, p > .05$ and for temporal conflict, $B = -.12, p > .05$, which led us to rejection of the mediation Hypothesis 2a₅.

In the Hypothesis 2a₆ it is suggested that temporal conflict has a mediating effect on the relationship between shared temporal cognitions and team viability by leader. Also this hypothesis was rejected, since regression on viability by leader was not evidenced for shared temporal cognitions ($B = .13, p > .05$), nor for temporal conflict ($B = -.03, p > .05$).

Following the regression tests run in SPSS, the PROCESS macro for SPSS by Andrew F. Hayes was used to verify and explore the results. The Model 4 of simple mediation was applied, and the bootstrapping method with 5000 bootstrap samples, was applied to allow resampling and extension of the tested assumptions (Hayes, Preacher, & Myers, 2011) without assuming the shape of the sampling distribution. The confidence intervals of 95% were used.

In the testing of mediation effect of temporal conflict on the relationship between shared temporal cognitions and team performance perceived by team, no significant effect was reported. Shared temporal cognitions predicted negatively temporal conflict ($B = -.75, t_{(40)} = -6.47, p < .001$), however, temporal conflict did not have a significant effect on team performance ($B = -.03, t_{(39)} = -.17, p > .05$). The results showed also no significant effect of temporal conflict on team

satisfaction ($B = -.25, t_{(40)} = -1.13, p > .05$), nor on team viability ($B = -.16, t_{(39)} = -.63, p > .05$), which confirmed the rejection of the Model 2a.

Table 2. Regression results for conditional indirect effect on team effectiveness

Predictor	<i>B</i>	<i>SE</i>	<i>t</i>	<i>p</i>
Temporal conflict				
Constant	6.50	.59	11.01	.000
Shared temporal cognitions	-.75	.12	-6.47	.000
Team performance				
Constant	3.98	1.11	3.57	.001
Temporal conflict	-.03	.15	-.17	.863
Shared temporal cognitions	.38	.16	2.44	.020
Team satisfaction				
Constant	4.48	1.64	2.74	.009
Temporal conflict	-.25	.22	-1.13	.265
Shared temporal cognitions	.36	.23	1.57	.124
Team viability				
Constant	3.26	1.86	1.75	.087
Temporal conflict	-.16	.25	-.63	.533
Shared temporal cognitions	.58	.26	2.24	.031

Note: Sample size $n = 42$ teams. Unstandardized coefficients are reported. Bootstrap sample size = 5000. Level of confidence for all confidence intervals in output 95%.

Table 3. Regression results for conditional indirect effect on team effectiveness perceived by leader

Predictor	<i>B</i>	<i>SE</i>	<i>t</i>	<i>p</i>
Temporal conflict				
Constant	6.46	.59	11.01	.000
Shared temporal cognitions	-.74	.12	-6.41	.000
Team performance by leader				
Constant	4.96	1.73	2.86	.007
Temporal conflict	.02	.23	.07	.947
Shared temporal cognitions	.13	.24	.56	.582
Team satisfaction by leader				
Constant	6.00	2.04	2.94	.006
Temporal conflict	-.14	.28	-.51	.616
Shared temporal cognitions	.02	.28	.06	.952
Team viability by leader				
Constant	5.58	1.95	2.86	.007
Temporal conflict	-.03	.26	-.11	.910
Shared temporal cognitions	.13	.27	.49	.626

Note: Sample size $n = 41$ leaders, one case was deleted due to missing data. Unstandardized coefficients are reported. Bootstrap sample size = 5000. Level of confidence for all confidence intervals in output 95%.

Since the temporal conflict has not been evidenced as a mediator of the relationship between shared temporal cognitions and team effectiveness, tests for other types of conflicts have been performed: relationship conflict and task conflict.

Model 2b (Appendix H, Fig. 7) was tested in its three variations. In Hypothesis 2b₁ the mediation by relationship conflict of the relationship between shared temporal cognitions and team performance was proposed. The model showed a good fit ($R^2_{adj} = .40$, $p = .001$; $F = 14.92$, $p < .001$) and the regression effects were confirmed for shared temporal cognitions ($B = .31$, $p < .05$), which weakened the effect from single prediction model ($B = .51$, $p = .001$), and for relationship conflict ($B = -.47$, $p = .001$), thus the hypothesis was supported.

In the testing of Hypothesis 2b₂ the proposed mediation effect of the relationship conflict on the relationship between shared temporal cognitions and team satisfaction was verified. The goodness of fit was confirmed ($R^2_{adj} = .37$, $p = .002$; $F = 12.87$, $p < .001$) and the regression results showed the effect of both shared temporal cognitions ($B = .28$, $p = .05$) and relationship conflict ($B = -.46$, $p = .002$) on team satisfaction, which supported the hypothesis.

Hypothesis 2b₃ proposing the mediation effect of relationship conflict on the relationship between shared temporal cognitions and team viability was also supported. The model was confirmed offering the level of goodness of fit at $R^2_{adj} = .40$ ($p = .002$; $F = 14.76$, $p < .001$). The regression results were reported for shared temporal cognitions at $B = .34$ ($p < .05$) and for relationship conflict at $B = -.44$ ($p = .002$).

Similarly, the tests to verify mediation of relationship conflict on the relationship between shared temporal cognitions and team effectiveness perceived by leader were performed: 1) team performance by leader (Hypothesis 2b₄); 2) team satisfaction by leader (Hypothesis 2b₅); 3) team viability by leader (Hypothesis 2b₆).

Hypothesis 2b₄ proposing relationship conflict as a mediator of relationship between shared temporal cognitions and team performance by leader showed a weak fit ($R^2_{adj} = .08$, $p < .05$; $F = 2.67$, $p = .08$). The regression analysis showed regression effect of shared temporal cognitions as not significant ($B = -.04$, $p > .05$), however, confirming regression effect of relationship conflict ($B = -.37$, $p < .05$). These results were not sufficient to support the hypothesis.

Hypothesis 2b₅ proposing mediation effect of relationship conflict on the relationship between shared temporal cognitions and team satisfaction by leader was not supported as the model fit was weak and marginally significant ($R^2_{adj} = .05$, $p = .07$; $F = 1.97$, $p > .05$) and regression effects were reported for shared temporal cognitions at $B = -.04$ ($p > .05$) and for relationship conflict at $B = -.32$ ($p = .07$).

The mediation effect of relationship conflict on the relationship between shared temporal cognitions and team viability perceived by leader was supported by a good result of model fit ($R^2_{adj} = .11$, $p < .05$; $F = 3.52$, $p < .05$), however the regression analysis did not confirm the effect of shared temporal cognitions on team viability by leader, neither in the single regression test ($B = .13$, $p > .05$), nor in the mediation model ($B = -.04$, $p > .05$). As a result Hypothesis 2b₆ was rejected.

Model 2c (Appendix H, Fig. 8) proposed task conflict as a mediator of the relationship between shared temporal cognitions and: team performance (Hypothesis 2c₁); team satisfaction (Hypothesis 2c₂); team viability (Hypothesis 2c₃). The testing of Hypothesis 2c₁ showed a good fit of the model ($R^2_{adj} = .36$; $p = .006$; $F = 12.30$, $p < .001$) and confirmed the regression of both shared temporal cognitions ($B = .31$, $p < .05$) and task conflict ($B = -.41$, $p = .006$) on team performance. As a result the Hypothesis 2c₁ was not rejected. The fit of the model proposed in Hypothesis 2c₂ with team satisfaction as dependent variable was also confirmed ($R^2_{adj} = .36$, $p = .006$; $F = 10.97$, $p < .001$) showing the regression effect of shared temporal cognitions ($B = .27$) on team satisfaction mediated by task conflict as marginally significant ($p = .07$) and regression effect of task conflict at $B = -.42$ ($p = .006$), which means the task conflict was responsible for weakening positive effect of shared temporal models on team satisfaction (from $B = .47$, $p = .002$ in a single regression model). Although the marginally significance of the effect might be arguable, the hypothesis was not rejected. As a marginally significant effect shows potential for identification of correct effect direction, the support of the hypothesis is proposed and further research in order to verify the results. Hypothesis 2c₃ proposing task conflict as a mediator of the relationship between shared temporal cognitions and team viability showed a good fit ($R^2_{adj} = .37$, $p = .006$; $F = 13.16$, $p < .001$). The regression of both variables was confirmed, showing the effect of shared temporal cognitions at $B = .33$ ($p < .05$) and of task conflict at $B = -.41$ ($p = .006$), which allowed supporting the hypothesis.

Consequently tests were run to measure the effect of task conflict as a mediator of relationship between shared temporal cognitions and team effectiveness perceived by leader: team performance by leader (Hypothesis 2c₄); team satisfaction by leader (Hypothesis 2c₅); team viability by leader (Hypothesis 2c₆).

Table 4. Regression analysis of shared temporal cognitions and team conflict on team effectiveness

		Performance		Satisfaction		Viability	
By:		Team	Leader	Team	Leader	Team	Leader
Model 1							
Predictor: STC	<i>B</i>	0.51**	0.12	.47**	0.10	.52***	0.13
	<i>R</i> ² _{adj}	0.24**	-0.01	0.20**	-0.02	.26***	-0.01
	<i>F</i>	13.76**	0.54	11.51**	0.38	15.06***	0.69
Model 2a							
Predictor: STC	<i>B</i>	.48*	0.13	0.31	0.01	.44*	0.11
Mediator: Temporal Conflict	<i>B</i>	-0.03	0.02	-0.23	-0.12	-0.12	-0.03
	<i>R</i> ² _{adj}	0.22	-0.04	0.21	-0.04	0.24	-0.03
	<i>F</i>	6.73**	0.27	6.43**	0.31	7.61**	0.34
Model 2b							
Predictor: STC	<i>B</i>	.31*	-0.04	.28"	-0.04	.34*	-0.04
Mediator: Relationship Conflict	<i>B</i>	-.47**	-0.37*	-.46**	-.32"	-.44**	-.41*
	<i>R</i> ² _{adj}	0.4**	.08*	0.37**	0.05"	.40**	.11*
	<i>F</i>	14.92***	2.67	12.87***	1.97	14.76***	3.52*
Model 2c							
Predictor: STC	<i>B</i>	.31*	0.01	.27"	0.07	0.33*	0.02
Mediator: Task Conflict	<i>B</i>	-.41**	-0.23	-.42**	-0.07	-.41**	-0.23
	<i>R</i> ² _{adj}	.36**	0.00	.33**	-0.04	.37**	0.01
	<i>F</i>	12.30***	1.07	10.97***	0.26	13.16***	1.18

Note: n = 42 teams

- * p < .05
- ** p < .01
- *** p < .001
- " p = .07
- " p = .05

The Hypothesis 2c₄ proposing effects on team performance perceived by leader was rejected as the model did not show a good fit (*R*²_{adj} = .00, *p* > .05; *F* = 1.07, *p* > .05), and the regression of any of the variables was evidenced, neither for shared temporal cognitions (*B* = .01, *p* > .05), nor for task conflict (*B* = -.23, *p* > .05). The Hypothesis 2c₅ proposing task conflict as a mediator

between shared temporal cognitions and team satisfaction by leader was also rejected, showing not a good fit of the model ($R^2_{adj} = -.04, p > .05; F = .26, p > .05$) and not significant regression effect of shared temporal cognitions ($B = .07, p > .05$) and task conflict ($B = -.07, p > .05$) on team satisfaction perceived by leader. Finally, the hypothesis 2c₆ proposing task conflict as having mediating effect on the relationship between shared temporal cognitions and team viability perceived by leader was rejected as well, as it did not present a good fit of the model ($R^2_{adj} = .01, p > .05$) and the regression was not significant, for shared temporal cognitions at $B = .02 (p > .05)$ and for task conflict at $B = -.23 (p > .05)$. Such results might be strongly linked to possible misperception of team effectiveness by the leader, especially regarding team satisfaction and team viability.

Moderation

The moderation effects were tested with the use of PROCESS macro for SPSS by Andrew F. Hayes with the adaption of the template Model 1. The bootstrapping method was used with 5000 bootstrap samples and 95% confidence intervals.

The effect of two possible moderators: 1) leader's sensegiving; 2) leader's promotion of sensemaking was tested on the relationship between temporal conflict and team effectiveness: 1) perceived by team; 2) perceived by leader, with the consideration of three levels of team effectiveness: team performance, team satisfaction, and team viability.

First the effects of leader's sensegiving were verified, proposed in Model 3A (Appendix H, Fig. 9). Leader's sensegiving moderated the effect of temporal conflict on team performance perceived by leader. The model showed a good fit: $F_{(3, 37)} = 7.17, p < .001$., covering 37% of variation and leader's sensegiving showed to be a significant predictor of team performance perceived by leader ($b = 1.16, t_{(37)} = 2.77, p = .009$). However, temporal conflict was not evidence as a predictor of team performance by leader and in the interaction test of temporal conflict with leader's sensegiving no significant effect was evidenced ($b = -.20, t_{(37)} = -.149, p > .05$), thus the moderating effect of leader's sensegiving was not supported.

The model proposing leader's sensegiving as a moderator of the effect of temporal conflict on team satisfaction perceived by leader, was also not supported as the model did not show a good fit ($R^2 = .14, F_{(3,37)} = 1.98, p > .05$.) and none of the effects were significant. In the moderation model where leader's sensegiving has a moderation effect on relationship between temporal

conflict and team viability perceived by leader was also rejected, showing no significant levels of prediction of temporal conflict and leader sensegiving and of the interaction of both ($b = -.14$, $t_{(37)} = -.84$, $p > .05$).

Leader's sensegiving also showed no moderation effect on the relationship between temporal conflict and team performance perceived by team, as the interaction of both leader's sensegiving and temporal conflict had no significant effect ($b = .07$, $t_{(38)} = .79$, $p > .05$).

Leader's sensegiving had also no moderation effect on relationship between temporal conflict and team satisfaction, showing no significant effect of the interaction effect of leader's sensegiving and temporal conflict ($b = .07$, $t_{(38)} = .55$, $p > .05$). The interaction effect of leader's sensegiving and temporal conflict on team viability was also not significant ($b = .02$, $t_{(38)} = .12$, $p > .05$).

As a result it can be concluded that leader's sensegiving did not moderate the relationship between temporal conflict and team effectiveness (Table 6), taking into consideration that this relationship showed as not significant in the first place, which can be due to not sufficient sample size.

Leader's promotion of team sensemaking was tested as the second possible moderator (Appendix H, Fig. 10). In the testing of its moderation effect on the relationship between temporal conflict and team effectiveness perceived by leader, the results also did not support the assumption, showing not significant effect of the interaction of leader's promotion of sensemaking and temporal conflict on team performance by leader ($b = -.18$, $t_{(37)} = -1.22$, $p > .05$), on team satisfaction by leader ($b = -.21$, $t_{(37)} = -.54$, $p > .05$) and team viability by leader ($b = -.16$, $t_{(37)} = -.94$, $p > .05$). Regarding the effects on team effectiveness perceived by team, the moderation effect was also not significant, reporting the interaction effect of leader's promotion of sensemaking and temporal conflict on: team performance at $b = .10$, $t_{(38)} = 1.27$ ($p > .05$); on team satisfaction at $b = .12$, $t_{(38)} = 1.10$ ($p > .05$); and on team viability at $b = .12$, $t_{(38)} = .87$ ($p > .05$).

Moderation for other types of conflict

Since the results on the moderation effect of leader's sensemaking and leader's promotion of team sensemaking were not satisfying, we decided to run moderation tests for other types of

conflicts, as in the previous mediation analysis. Relationship conflict and task conflict were investigated as independent variables in the model of possible moderation.

Regarding relationship conflict (Model 3B, Appendix H, Fig. 11) leader's sensegiving was not evidenced as a significant moderator of the relationship between the relationship conflict and team effectiveness perceived by leader showing not a significant interaction effect on: team performance by leader ($b = -.04$, $t_{(37)} = -.25$, $p > .05$); team satisfaction by leader ($b = .14$, $t_{(37)} = .70$, $p > .05$); and team viability by leader ($b = .06$, $t_{(37)} = .31$, $p > .05$). The interaction effect of relationship conflict and leader's sensegiving was also not significant on the team effectiveness perceived by team: team performance ($b = .15$, $t_{(38)} = 1.67$, $p > .05$); team satisfaction ($b = .22$, $t_{(38)} = 1.67$, $p > .05$); and team viability ($b = .27$, $t_{(38)} = 1.63$, $p > .05$). However, some effect direction can be observed, showing e.g. that for minimum or mean level of leader's sensegiving, the negative effect of relationship conflict on team performance diminishes with the increase of leader's sensegiving. The negative effects of relationship conflict on team performance was reported as significant for minimum registered level of leader's sensegiving ($b = -.34$, $t_{(38)} = -2.82$, $p = .008$) or marginally significant effect ($b = -.21$, $t_{(38)} = -1.80$, $p = .08$) for mean value level.

The moderating effect of leader's promotion of sensemaking on the relationship between relationship conflict and team effectiveness perceived by leader also showed as non-significant reporting the interaction effect at not significant levels for: team performance by leader ($b = -.17$, $t_{(37)} = -1.21$, $p > .05$); team satisfaction by leader ($b = .08$, $t_{(37)} = .43$, $p > .05$); and for team viability by leader ($b = -.06$, $t_{(37)} = -.37$, $p > .05$). In the next round of tests the same effect was verified on team effectiveness perceived by team. The results showed not significant interaction effect of leader's promotion of sensemaking and relationship conflict on team performance ($b = .09$, $t_{(38)} = 1.13$, $p > .05$), team satisfaction ($b = .10$, $t_{(38)} = .84$, $p > .05$), and team viability ($b = .04$, $t_{(38)} = .26$, $p > .05$), leading to the rejection of the assumption of moderating effect of leader's promotion of sensemaking. However, again it is worth noting that for mean value and minimum value levels registered of leader's promotion of sensemaking there was a significant, although not strong, effect on the relationship between the relationship conflict and team viability, showing that with higher level of leader's promotion of sensemaking, the negative effect of relationship conflict on team viability was getting lower, from $b = -.60$, $t_{(38)} = -2.98$ ($p = .005$) to b

= $-.56$, $t_{(38)} = -2.72$ ($p = .01$). This effect direction was followed in the maximum reported level of leader's promotion of sensemaking, however, already at a arguable level of significance ($b = -.53$, $t_{(38)} = -1.76$, $p = .09$).

Concluding, neither leader's sensegiving, nor leader's promotion of sensemaking had a significant moderating effect on the relationship between relationship conflict and team effectiveness, making both Model 3B and Model 4B (Appendix H, Fig. 12) invalid.

In the following tests task conflict was identified as independent variable and the moderation effect of 1) leader's sensegiving (Model 3C, Appendix H, Fig. 13); and 2) leader's promotion of sensemaking (Model 4C, Appendix H, Fig. 14) on the relationship between task conflict and team effectiveness was verified. As a result of tests, the moderating effect of leader's sensegiving on team effectiveness perceived by leader was not confirmed, showing interaction effect of the task conflict and leader's sensegiving as not significant for team performance by leader ($b = -.12$, $t_{(37)} = -.69$, $p > .05$), for team satisfaction by leader ($b = -.02$, $t_{(37)} = -.08$, $p > .05$), nor for team viability by leader ($b = -.01$, $t_{(37)} = -.06$, $p > .05$). The moderating effect on team effectiveness perceived by team was not confirmed either, evidencing not significant interaction effect of task conflict and leader's sensegiving on team performance ($b = .01$, $t_{(38)} = .13$, $p > .05$), team satisfaction ($b = .16$, $t_{(38)} = 1.23$, $p > .05$) and team viability ($b = .12$, $t_{(38)} = .75$, $p > .05$). However, the tests showed that at low and medium levels of leader's sensegiving the negative effect of task conflict on team performance was reduced i.e. the negative effect was stronger when there was minimum registered level of leader's sensegiving ($b = -.21$, $t_{(38)} = -1.92$, $p = .06$) than when it was at a mean value level ($b = -.20$, $t_{(38)} = -2.10$, $p < .05$), which shows some indication of the direction of the possible effect, which might be a focus of future research. Similarly, lower negative effect of the task conflict on team viability was showed when the level of leader's sensegiving increased from minimum registered level ($b = -.52$, $t_{(38)} = -2.59$, $p = .01$) to the mean value ($b = -.41$, $t_{(38)} = -2.36$, $p < .05$).

In the final part the moderation effect of leader's promotion of sensemaking was tested as a possible mediator of the relationship between task conflict and team effectiveness, perceived by team and by leader. There was no significant moderation effect on the relationship between the task conflict and team effectiveness assessed by leader, with no significant interaction effect on team performance by leader ($b = -.14$, $t_{(37)} = -.78$, $p > .05$), team satisfaction by leader ($b = .01$,

$t_{(37)} = .05, p > .05$), team viability by leader ($b = .05, t_{(37)} = .27, p > .05$). In the analysis of the interaction effects on team effectiveness perceived by team, the only significant effect was registered on team satisfaction, confirming the moderating effect of leader's promotion of sensemaking on the relationship between task conflict and team satisfaction. The interaction effect of task conflict and leader's promotion of sensemaking reports at $b = .23, t_{(38)} (p = .05)$ and there is significant moderating effect evidenced in the comparison of the levels of negative effect of task conflict on team satisfaction with minimum level of leader's promotion of sensemaking registered ($b = -.48, t_{(38)} = -3.40, p = .002$) and the mean level reported with marginal significance ($b = -.25, t_{(38)} = -1.91, p = .06$). The results are presented in the Table 5.

Table 5. Interaction effect analysis – leader's promotion of sensemaking as a moderator of the relationship between task conflict and team satisfaction

Predictor	<i>b</i>	<i>SE</i>	<i>t</i>	<i>p</i>
	Team satisfaction (TS)			
Constant	7.99	1.75	4.57	.000
Leader's promotion of sensemaking (LPSM)	-.30	.34	-.88	.384
Task conflict (TaC)	-1.43	.54	-2.64	.012
Interaction LPSM x TaC	.23	.11	2.06	.046
Leader's promotion of sensemaking	Conditional indirect effect at TS	Boot SE	Boot z	Boot p
-1 SD (-.99)	-.48	.14	3.40	.002
M	-.25	.13	-1.91	.064
+1 SD (.99)	-.03	.20	-.13	.895

Note: Sample size = 42 teams. Unstandardized coefficients are reported. Bootstrap sample size = 5000. Values for quantitative moderators are the mean and plus/minus one SD from mean. Values for dichotomous moderators are the two values of the moderator. Level of confidence for all confidence intervals in output 95,00

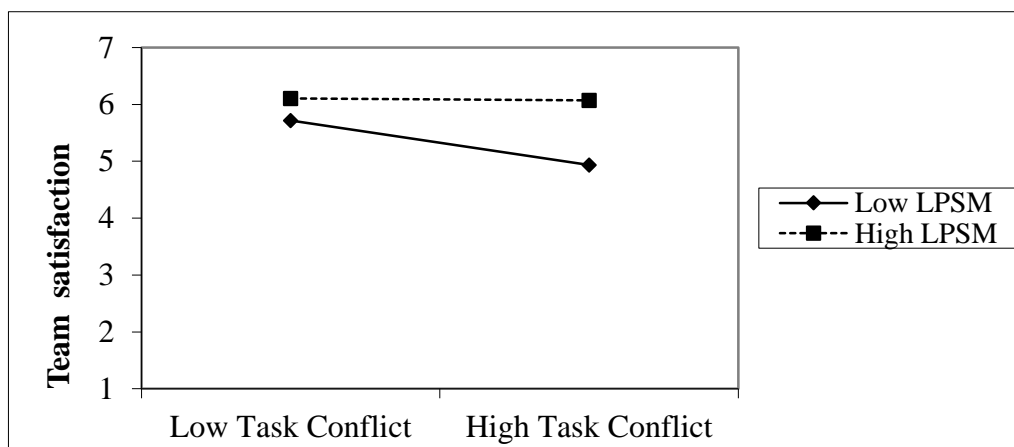


Fig. 2. Moderation effect of leader's promotion of sensemaking between task conflict and team satisfaction.

Table 6. Interaction effect analysis for 1) team conflict and leader's sensegiving and 2) team conflict and leader's promotion of sensemaking, on team effectiveness

	By:	Performance		Satisfaction		Viability	
		Team	Leader	Team	Leader	Team	Leader
Model 3A							
LSG	<i>b</i>	.18	1.16**	.34	.68	.44	.90
Temporal Conflict	<i>b</i>	-.48	1.22	-.62	.53	-.45	.84
Inter. LSG x TC	<i>b</i>	.07	-.20	.07	-.09	.02	-.14
	<i>R</i> ²	.44***	.37**	.48***	.14	.37**	.20*
	<i>F</i>	10.04***	7.17**	11.80***	1.98	7.39**	3.16*
Model 4A							
LPSM	<i>b</i>	.01	.95	.08	.95	.04	.85
Temporal Conflict	<i>b</i>	-.62	1.11	-.86	1.12	-.95	.94
Inter. LPSM x TC	<i>b</i>	.10	-.18	.12	-.21	.12	-.16
	<i>R</i> ²	.39***	.19*	.43***	.11	.33**	.12
	<i>F</i>	7.94***	2.90*	9.74***	1.55	6.20**	1.73
Model 3B							
LSG	<i>b</i>	-.05	.60	-.05	-.02	-.26	.17
Relationship Conflict	<i>b</i>	-.98*	.22	-1.39*	-.81	-1.81*	-.51
Inter. LSG x RC	<i>b</i>	.15	-.04	.22	.14	.27	.06
	<i>R</i> ²	.51***	.30**	.51***	.15	.44***	.20*
	<i>F</i>	13.10***	5.28**	13.08***	2.16	9.78***	3.17*
Model 4B							
LPSM	<i>b</i>	.01	.61	.13	-.02	.18	.26
Relationship Conflict	<i>b</i>	-.75	.62	-.89	-.62	-.77	-.08
Inter. LPSM x RC	<i>b</i>	.09	-.17	.10	.08	.04	-.06
	<i>R</i> ²	.48***	.19*	.48***	.11	.40***	.17
	<i>F</i>	11.58***	2.98*	11.57***	1.57	8.37***	2.48
Model 3C							
LSG	<i>b</i>	.26	1.05	-.04	.63	-.01	.53
Task Conflict	<i>b</i>	-.27	.85	-1.08	.37	-1.05	.14
Inter. LSG x TaC	<i>b</i>	.01	-.12	.16	-.02	.12	-.01
	<i>R</i> ²	.47***	.34**	.49***	.17	.41***	.18
	<i>F</i>	11.11***	6.28**	12.35***	2.47	8.75***	2.79
Model 4C							
LPSM	<i>b</i>	.06	.76	-.30	.32	-.28	.06
Task Conflict (TaC)	<i>b</i>	-.52	.70	-1.43*	.08	-1.43*	-.36
Inter. LPSM x TaC	<i>b</i>	.06	-.14	.23*	.01	.20	.05
	<i>R</i> ²	.45***	.15	.51***	.09	.42***	.10
	<i>F</i>	10.38***	2.17	13.41***	1.19	9.30***	1.40

LSG = Leader's sensegiving; LPSM = Leader's promotion of sensemaking; TC = Temporal conflict; RC = Relationship conflict

* *p* < .05; ** *p* < .01; *** *p* < .001

Regarding the interaction effects of task conflict and leader's promotion of sensemaking on team performance and team viability, neither of them was significant ($b = .06$, $t_{(38)} = .70$, $p > .05$; $b = .20$, $t_{(38)} = 1.41$, $p > .05$, respectively), however the comparison of the levels of negative effect of task conflict on team performance for minimum and mean levels of registered values of leader's promotion of sensemaking ($b = -.29$, $t_{(38)} = -2.79$, $p = .008$; $b = -.23$, $t_{(38)} = -2.39$, $p < .05$, respectively) might suggest some moderation power. Similar results were obtained regarding the effect on team viability (Table 6), showing weaker negative effect of task conflict when leader's promotion of sensemaking was at a higher (mean) level ($b = -.61$, $t_{(38)} = -3.40$, $p = .002$) than when it was reported at the minimum level ($b = -.41$, $t_{(38)} = -2.45$, $p < .05$).

As a final result, the initial conceptual Model A (Fig. 1) was not supported in the data analysis. Temporal conflict did not showed significant effect as a mediator of the relationship between shared temporal cognitions and team effectiveness, and no moderating effect of leader's sensegiving, nor leader's promotion of sensemaking was evidenced on the relationship between temporal conflict and team effectiveness, which led to lack of empirical support for the research model.

Due to no empirical evidence for Model A, models B, and C (Appendix D, Fig. 4 and Fig. 5, respectively) were tested. The mediation effect of relationship conflict on the relationship between shared temporal cognitions and team effectiveness perceived by team was confirmed. However, due to lack of support for the moderation effect of leader's sensemaking and leader's promotion of sensemaking on the relationship between relationship conflict and team effectiveness, the Model B was not supported either.

The mediation of the relationship between shared temporal cognitions and team effectiveness by task conflict, was supported with significant effects on team performance and team viability and marginally significant effect on team satisfaction ($p = .07$). The moderation effect on the relationship between task conflict and team effectiveness was only confirmed for leader's promotion of sensemaking, with statistically significant effect on team satisfaction. Thus, the support for Model C is proposed in which task conflict mediates the relationship between shared temporal cognitions and team satisfaction and the relationship between task conflict and team satisfaction is moderated by leader's promotion of sensemaking, The moderation effect is positive, which means the more leader's behaviours promoting sensemaking, the smaller negative effect of task conflict on team satisfaction.

Discussion

The objective of this study was to test and analyse the effects of leader's sensegiving and leader's promotion of sensemaking on the relationship between temporal team conflict and team effectiveness. The main purpose was to enable the identification of leader's behaviour that predict possible outcomes for team effectiveness in a situation of team conflict and to implement appropriate mechanisms, and possibly leadership training programmes, to facilitate promotion of those behaviours that have beneficial effects.

Regarding the mediation hypothesis, being the basis of the model, it was expected for the temporal conflict to mediate the relationship between shared temporal cognitions and team effectiveness. The study showed otherwise, not supporting the mediation hypothesis of temporal conflict.

The relationship conflict was confirmed as a mediator of the relationship between shared temporal cognitions, having a detrimental effect on team effectiveness. Similarly, task conflict was confirmed as a mediator of that relationship, having a significant negative effect on team performance and team viability, and marginally significant effect on team satisfaction.

In the relation to the existing literature, the study did not confirm negative effects of all types of intragroup conflict on team effectiveness, showing not a significant effect of temporal conflict on the relationship between shared temporal cognitions and team effectiveness. This can be a valuable input in the discussion about effects of conflict on team effectiveness, where some authors point out to its positive effect (Jehn, 1995), although specifically regarding task conflict related to non-routine tasks. The task conflict in most of the reported literature is, however, considered as detrimental to team effectiveness (de Dreu & Weingart, 2003), which was supported by the present analysis. The study also confirmed a negative effect of relationship conflict on the relationship between shared mental models and team effectiveness, as reported in the literature (e.g. Santos & Passos, 2013), especially regarding those team mental models linked to the team processes and not the task itself.

Temporal conflict, being the focus of the research model has been not confirmed as a mediator of the relationship between shared mental models and team effectiveness, which is unexpected, considering number of studies on the topic, evidencing e.g. mediation effect by temporal conflict

on the relationship between shared temporal cognitions and team performance (Santos, Passos, Uitdewilligen, & Nübold, 2016). It can be considered that not always a conflict emerges when shared temporal cognitions are not consistent within the team. Teams might have some kind of mechanisms that do not allow the conflicts based on temporal cognitions to emerge among team members. The results, however, should be verified in further studies of the subject, since such an outcome might be due to insufficient sample size.

In the moderation testing, the results showed no significant moderating effect of leader's sensegiving, nor of leader's promotion of sensemaking on the relationship between temporal conflict and team effectiveness. In the further analysis of other types of conflict, the results showed a significant moderating effect of leader's promotion of sensemaking on the relationship between task conflict and team satisfaction. There was no moderation effect reported in the analysis of the relationship between relationship conflict and team effectiveness.

Although leader's sensegiving was not confirmed in the study to have an effect on relationship between conflict (temporal, relationship, task) and team effectiveness, leader's promotion of sensemaking was. In the situation of task conflict leader's promotion of sensemaking has a positive effect on team satisfaction, which can be seen as extension of the literature dedicated to sensemaking as an important leadership function (Morgeson et al., 2010).

The obtained result is highly relevant for better understanding of team leadership and might be beneficial for preparation of appropriate strategies to allow leaders keep their teams motivated. Designers of leadership trainings should also have in mind the importance of leader's behaviours focused on promotion of team sensemaking and include related workshops and exercises in their programmes.

Limitations and future research

The results did not show other significant effects of leader's sensegiving and leader's promotion of sensemaking on team effectiveness in situations of group conflict, however, some of the marginally significant results might be encouraging for further exploration. Limitations of this study, such as limited sample size (42 teams) and varying number of members among teams, might be one of the determinants of so many results with low levels of significance.

The selection of teams only among consulting services where the work is regularly controlled and supervised might be considered another limitation. In the consulting services sector the existence of temporal conflict might be questioned, since there might be clear deadlines and a task schedule given upwards, or even temporal leadership that controls individual time management.

Future research should focus on exploring other fields where teamwork is applied as well as aim at increasing sample size. Due to not much literature regarding the topic of leader's sensegiving and promotion of sensemaking in conflict situations, further research is recommended. Team performance should be further studied to understand if there are certain conditions in which the abovementioned leader's behaviours could have a beneficial outcome on this specific effectiveness dimension in situations of team conflict.

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Appendices

Appendix A - Questionnaire for team members

QUESTIONÁRIO AOS COLABORADORES

1. Este questionário insere-se num projeto de investigação levado a cabo por um grupo de investigadores do ISCTE-Instituto Universitário de Lisboa, focado na eficácia do trabalho em equipa em contexto de empresas de consultoria. O principal objetivo deste projeto é identificar os fatores relacionados com trabalho em equipa que contribuem para a eficácia dos projetos realizados e para a satisfação quer dos clientes quer dos próprios consultores.
2. Os dados recolhidos serão exclusivamente analisados pela equipa de investigação, estando garantido o anonimato.
3. As perguntas estão construídas de modo a que apenas tenha de assinalar a resposta que lhe parecer mais adequada. Procure responder sem se deter demasiadamente em cada questão.
4. Não há respostas certas ou erradas. O que nos interessa é exclusivamente a sua opinião pessoal.
5. Para cada pergunta existe uma escala. Pode utilizar qualquer ponto da escala desde que o considere adequado.
6. Responda a todo o questionário de seguida, sem interrupções.

Para qualquer esclarecimento, ou para receber informação adicional sobre o estudo por favor contacte: Prof.^a Doutora Ana Margarida Passos (ana.passos@iscte.pt).

Obrigado pela sua colaboração!

Para responder a este questionário pense no projeto de consultoria em que está atualmente envolvido e na equipa em que está a trabalhar

1. As questões que a seguir se apresentam procuram descrever os comportamentos da equipa. Indique em que medida concorda com cada uma delas utilizando a escala de resposta:

Discordo Totalmente	Discordo muito	Discordo em parte	Não concordo nem discordo	Concordo em parte	Concordo muito	Concordo Totalmente
1	2	3	4	5	6	7

A nossa equipa é eficaz...

1.	A levar a cabo ações criativas para resolver problemas para os quais não há respostas fáceis ou diretas	1	2	3	4	5	6	7
2.	A encontrar formas inovadoras de lidar com situações inesperadas.	1	2	3	4	5	6	7
3.	Em ajustar-se e lidar com situações imprevistas, mudando rapidamente de foco e tomando medidas adequadas	1	2	3	4	5	6	7
4.	A desenvolver planos de ação alternativos, num curto espaço de tempo, para lidar com imprevistos	1	2	3	4	5	6	7
5.	Na procura e desenvolvimento de novas competências para dar resposta a situações/ problemas	1	2	3	4	5	6	7
6.	A ajustar o estilo pessoal de cada membro ao da equipa como um todo	1	2	3	4	5	6	7
7.	Na melhoria das relações interpessoais tendo em consideração as necessidades e aspirações de cada membro	1	2	3	4	5	6	7
8.	A manter o foco mesmo quando lida com várias situações e responsabilidade	1	2	3	4	5	6	7

2. As seguintes afirmações referem-se a **sentimentos** que algumas equipas têm **em relação ao seu trabalho**. Utilize, por favor, a mesma escala apresentada anteriormente.

1.	Quando estamos a trabalhar sentimo-nos cheios de energia	1	2	3	4	5	6	7
2.	Sentimo-nos com força e energia quando estamos a trabalhar	1	2	3	4	5	6	7
3.	Estamos entusiasmados com este trabalho	1	2	3	4	5	6	7
4.	Este trabalho inspira-nos	1	2	3	4	5	6	7
5.	Durante o trabalho, temos vontade de participar nas diversas atividades	1	2	3	4	5	6	7
6.	Somos felizes quando estamos envolvidos neste trabalho	1	2	3	4	5	6	7
7.	Estamos orgulhosos com o nosso trabalho nesta consultora	1	2	3	4	5	6	7
8.	Estamos imersos no trabalho desta consultora	1	2	3	4	5	6	7

9.	“Deixamo-nos levar” pelas atividades deste trabalho	1	2	3	4	5	6	7
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3. Indique a **rotatividade da sua equipa desde o início do projeto** em que estão atualmente envolvidos

	0 elementos	1 elemento	2 elementos	3 elementos	+ 3 elementos
Número de elementos que saíram da equipa	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Número de elementos que entraram na equipa	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. Indique, por favor, a **centralidade (importância)** dos elementos que saíram para a realização do projeto:

Nada central	1	2	3	4	5	6	7	Muito central
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5. As questões que se seguem dizem respeito à **forma como a sua equipa funciona enquanto grupo**. Indique, por favor, com que **frequência** cada uma destas situações se verifica na realização do vosso trabalho. Utilize, por favor, a seguinte escala:

Nunca	Raramente	Poucas vezes	Às vezes	Muitas vezes	Quase sempre	Sempre
1	2	3	4	5	6	7

1.	Existem conflitos pessoais entre os membros da equipa	1	2	3	4	5	6	7
2.	Existe atrito entre os membros da equipa	1	2	3	4	5	6	7
3.	Existe conflito de ideias entre os membros da equipa	1	2	3	4	5	6	7
4.	Existe desacordo entre os membros sobre a forma de distribuir o tempo disponível na realização de tarefas	1	2	3	4	5	6	7
5.	Existe confronto de opiniões sobre o trabalho	1	2	3	4	5	6	7
6.	Existe desacordo na equipa em relação às ideias expressas por alguns membros	1	2	3	4	5	6	7
7.	Existe desacordo entre os membros sobre o tempo que é necessário despendido para realizar as tarefas	1	2	3	4	5	6	7
8.	Os conflitos pessoais são evidentes	1	2	3	4	5	6	7
9.	Os membros da equipa estão em desacordo em relação à rapidez com que as tarefas devem ser realizadas	1	2	3	4	5	6	7

6. As questões que se seguem dizem respeito à forma **como a equipa gere o seu tempo**. Utilize, por favor, a seguinte escala:

Discordo Totalmente	Discordo muito	Discordo em parte	Não concordo nem discordo	Concordo em parte	Concordo muito	Concordo Totalmente
1	2	3	4	5	6	7

1.	Temos a mesma opinião sobre o cumprimento de prazos.	1	2	3	4	5	6	7
2.	Pensamos de forma semelhante sobre a forma de usarmos o tempo no trabalho	1	2	3	4	5	6	7
3.	Concordamos sobre a forma de distribuir o tempo disponível durante o trabalho	1	2	3	4	5	6	7
4.	Temos ideias semelhantes no que se refere ao tempo necessário para realizarmos as tarefas necessárias.	1	2	3	4	5	6	7

7. Tendo por base o conhecimento que tem da sua equipa, indique, em que medida concorda com cada uma das seguintes afirmações. Utilize, por favor, a mesma escala:

1.	A minha equipa preocupa-se em prevenir acontecimentos negativos	1	2	3	4	5	6	7
2.	Normalmente focamo-nos no sucesso que pretendemos atingir no futuro	1	2	3	4	5	6	7
3.	Preocupamo-nos com a possibilidade de ficar aquém dos nossos objetivos	1	2	3	4	5	6	7
4.	Estamos mais orientados para alcançar resultados do que para evitar fracassos	1	2	3	4	5	6	7
5.	Somos uma equipa que procura cumprir os seus deveres, responsabilidades e obrigações	1	2	3	4	5	6	7
6.	Somos uma equipa que procura atingir os seus desejos e aspirações	1	2	3	4	5	6	7

8. Indique, em que medida concorda com cada uma das seguintes afirmações. Continue, por favor, a utilizar a mesma a escala:

1.	Discutimos regularmente em que medida a equipa está a ser eficaz no seu	1	2	3	4	5	6	7
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	trabalho.							
2.	Alteramos os objetivos quando as circunstâncias assim o exigem.	1	2	3	4	5	6	7
3.	Os métodos de trabalho da equipa são discutidos frequentemente.	1	2	3	4	5	6	7
4.	Os objetivos são revistos com frequência.	1	2	3	4	5	6	7
5.	Revemos com frequência a forma de abordar os problemas.	1	2	3	4	5	6	7
6.	A minha equipa tem um bom desempenho	1	2	3	4	5	6	7
7.	Estamos satisfeitos em trabalhar nesta equipa	1	2	3	4	5	6	7
8.	A minha equipa é eficaz	1	2	3	4	5	6	7
9.	Não hesitaria em trabalhar com esta equipa em outros projetos	1	2	3	4	5	6	7
10.	Esta equipa poderia trabalhar bem em futuros projetos	1	2	3	4	5	6	7
11.	Nós, enquanto equipa, interpretamos em conjunto os eventos ou situações com que nos deparamos.	1	2	3	4	5	6	7
12.	Na nossa equipa nós discutimos e integramos pontos de vista distintos sobre eventos ou situações com que nos deparamos	1	2	3	4	5	6	7
13.	Nós, enquanto equipa, desenvolvemos um entendimento global sobre os eventos ou situações com que nos deparamos.	1	2	3	4	5	6	7
14.	Na nossa equipa procuramos atingir uma compreensão total e clara sobre os eventos ou situações com que nos deparamos.	1	2	3	4	5	6	7
15.	Nós, enquanto equipa e em conjunto, damos sentido a situações ambíguas.	1	2	3	4	5	6	7
16.	Nós, enquanto equipa, discutimos diferentes perspetivas sobre como compreender eventos ou situações com que nos deparamos	1	2	3	4	5	6	7
17.	Nós, enquanto equipa, procuramos assegurar que temos um entendimento semelhante dos eventos ou situações com que nos deparamos	1	2	3	4	5	6	7
18.	Nós, enquanto equipa, encorajamo-nos mutuamente a olhar para eventos ou situações com que nos deparamos de diferentes perspetivas	1	2	3	4	5	6	7

9. As questões que se seguem dizem respeito às condições do espaço de trabalho da sua equipa. Indique, por favor, **em que medida se encontra satisfeito** com cada um dos seguintes aspetos. Utilize, por favor, a seguinte escala:

Totalmente Insatisfeito	Insatisfeito	Em parte insatisfeito	Não insatisfeito nem satisfeito	Em parte satisfeito	Satisfeito	Totalmente Satisfeito
1	2	3	4	5	6	7

1.	Temperatura do local de trabalho	1	2	3	4	5	6	7
2.	Qualidade da iluminação	1	2	3	4	5	6	7
3.	Layout do espaço de trabalho e mobiliário	1	2	3	4	5	6	7
4.	Privacidade	1	2	3	4	5	6	7
5.	Qualidade do ar	1	2	3	4	5	6	7
6.	Conforto do espaço de trabalho	1	2	3	4	5	6	7
7.	Qualidade da acústica e níveis de ruído	1	2	3	4	5	6	7
8.	Quantidade de pessoas no mesmo espaço (<i>Crowding</i>)	1	2	3	4	5	6	7
9.	Limpeza e manutenção	1	2	3	4	5	6	7
10.	Visualização de espaços naturais	1	2	3	4	5	6	7
11.	Possibilidade de personalização do espaço de trabalho	1	2	3	4	5	6	7
12.	Considerando todos os aspetos, em que medida se encontra satisfeito com o espaço de trabalho da sua equipa	1	2	3	4	5	6	7

10. As questões que se apresentam de seguida referem-se à forma como a sua equipa planeia o trabalho. Utilize, por favor, a seguinte escala:

Discordo Totalmente	Discordo muito	Discordo em parte	Não concordo nem discordo	Concordo em parte	Concordo muito	Concordo Totalmente
1	2	3	4	5	6	7

A/ Na minha equipa:

1.	Desenvolve um plano claro antes de iniciar qualquer projeto	1	2	3	4	5	6	7
2.	Identifica as tarefas que devem ser realizadas e decide quem as realiza durante o projeto.	1	2	3	4	5	6	7
3.	Clarifica as expetativas dos membros sobre os seus papéis na equipa	1	2	3	4	5	6	7
4.	Utiliza a lógica "if-then" no desenvolvimento dos projetos onde estou inserido	1	2	3	4	5	6	7
5.	Especifica alternativas de ação a serem utilizadas caso o plano inicial não funcione	1	2	3	4	5	6	7
6.	Comunica planos de <i>backup</i> com antecedência	1	2	3	4	5	6	7
7.	Faz ajustes estratégicos ao seu plano inicial	1	2	3	4	5	6	7
8.	Redistribui tarefas entre os membros da equipa conforme as necessidades	1	2	3	4	5	6	7
9.	Existe coordenação entre os membros para a realização de ações conjuntas	1	2	3	4	5	6	7
10.	Os esforços individuais vão em direção aos objetivos da sua equipa	1	2	3	4	5	6	7
11.	Existe coordenação entre as ações levadas a cabo entre os membros	1	2	3	4	5	6	7

11. Gostávamos que pensasse nos objetivos de trabalho da sua equipa e no seu desempenho. Por favor, utilize a mesma escala de resposta.

1.	A minha equipa tem objetivos claros e específicos para atingir no trabalho	1	2	3	4	5	6	7
2.	Os objetivos da minha equipa são bastantes claros para mim	1	2	3	4	5	6	7
3.	Alguns dos objetivos da equipa são incompatíveis	1	2	3	4	5	6	7
4.	Participo ativamente na definição de objetivos para a minha equipa	1	2	3	4	5	6	7
5.	Os objetivos da equipa são revistos e adaptados, com regularidade	1	2	3	4	5	6	7
6.	Os objetivos da minha equipa são muito difíceis de alcançar	1	2	3	4	5	6	7
7.	A forma como os objetivos da equipa são formulados permite-me estimar em que medida estou perto de os alcançar	1	2	3	4	5	6	7
8.	É muito importante para mim que os outros me vejam como um bom consultor	1	2	3	4	5	6	7
9.	Passo muito tempo a comparar o meu desempenho com os meus colegas	1	2	3	4	5	6	7
10.	Eu sinto-me bem quando sei que tive um desempenho superior aos outros consultores	1	2	3	4	5	6	7

12. Pense no trabalho realizado pela equipa durante o projeto (por exemplo, análise dos resultados, contacto entre os membros, reuniões, etc.). Indique a percentagem (%) de tempo em que a sua equipa comunicou, na última semana, através dos seguintes métodos. A soma dos quatro métodos de comunicação deverá corresponder a 100%.

1.	Face-a-face	
2.	Comunicação áudio por telefone ou outros dispositivos através da Internet	
3.	Comunicação visual através de Skype ou outras plataformas <i>online</i>	
4.	E-mail (correio eletrónico)	
		100%

13. Pense agora no **comportamento da liderança** da sua chefia. Indique em que medida concorda com cada uma das afirmações. Por favor, utilize a escala seguinte:

Discordo Totalmente	Discordo muito	Discordo em parte	Não concordo nem discordo	Concordo em parte	Concordo muito	Concordo Totalmente
1	2	3	4	5	6	7

1.	Revê resultados de desempenho relevantes com a equipa	1	2	3	4	5	6	7
2.	Monitoriza a equipa e o desempenho dos colaboradores	1	2	3	4	5	6	7
3.	Diz à equipa como interpretar eventos ou situações com que a equipa se depara.	1	2	3	4	5	6	7
4.	Diz à equipa como compreender (dar sentido a) eventos ou situações	1	2	3	4	5	6	7
5.	Explica à equipa o significado de eventos ou situações ambíguas	1	2	3	4	5	6	7
6.	Fornecer feedback positivo quando a equipa tem um bom desempenho	1	2	3	4	5	6	7
7.	Contribui com ideias concretas para melhorar o desempenho da equipa.	1	2	3	4	5	6	7
8.	Repara em falhas nos procedimentos ou trabalho desenvolvido pela equipa.	1	2	3	4	5	6	7
9.	Comunica o que é esperado da equipa.	1	2	3	4	5	6	7
10.	Participa na resolução de problemas com a equipa	1	2	3	4	5	6	7

11.	Assegura que a equipa tem objetivos claros de desempenho.	1	2	3	4	5	6	7
12.	Encoraja a equipa a interpretar em conjunto o que acontece à equipa	1	2	3	4	5	6	7
13.	Promove a discussão, em equipa, de diferentes perspetivas sobre eventos /situações com que a equipa se depara	1	2	3	4	5	6	7
14.	Encoraja os membros da equipa a dar o seu ponto de vista sobre eventos/ situações.	1	2	3	4	5	6	7
15.	Promove o desenvolvimento de um entendimento partilhado entre os membros da equipa acerca de eventos e situações com que a equipa se depara.	1	2	3	4	5	6	7
16.	Encoraja a equipa a, coletivamente, dar sentido a situações ambíguas	1	2	3	4	5	6	7
17.	Encoraja os membros da equipa a olhar de diferentes perspetivas para eventos/ situações	1	2	3	4	5	6	7
18.	O que o líder diz, muda a forma como a equipa interpreta eventos ou situações com que se depara	1	2	3	4	5	6	7
19.	O que o líder diz, altera a forma como a equipa pensa sobre eventos ou situações com que se depara.	1	2	3	4	5	6	7
20.	O que o líder diz, modifica a forma como a equipa pensa sobre eventos ou situações com que se depara.	1	2	3	4	5	6	7

14. Pense agora na forma como vê a **sua equipa**. Utilizando a mesma escala indique em que medida concorda ou discorda com cada afirmação:

A/ Na minha equipa...

1.	Acredita que é muito produtiva	1	2	3	4	5	6	7
2.	É muito boa a conseguir resultados de alta qualidade	1	2	3	4	5	6	7
3.	Confia em si própria para conseguir bons resultados	1	2	3	4	5	6	7
4.	Interessa-se pelo que faz	1	2	3	4	5	6	7
5.	Acredita que o trabalho que realiza tem valor e significado	1	2	3	4	5	6	7
6.	Acredita que os seus projetos têm significado	1	2	3	4	5	6	7
7.	Tem autonomia para selecionar a forma como realiza o seu trabalho	1	2	3	4	5	6	7
8.	Sente liberdade no que faz e nas suas escolhas	1	2	3	4	5	6	7
9.	É relativamente independente da gestão nas suas escolhas	1	2	3	4	5	6	7

15. Pense agora na forma como os membros da sua equipa trabalham uns com os outros na realização dos projetos em que estão envolvidos. Por favor, continue a utilizar a mesma escala de resposta.

Alguns membros da minha equipa:

1.	Encaminham as responsabilidades que devem assumir para outros membros da equipa	1	2	3	4	5	6	7
2.	Exercem menos esforço do que seria esperado quando estão na presença de outros elementos da equipa	1	2	3	4	5	6	7
3.	Não fazem a sua parte do trabalho	1	2	3	4	5	6	7
4.	Esforçam-se menos do que os outros elementos na realização do trabalho	1	2	3	4	5	6	7
5.	Se tiverem oportunidade, deixam o trabalho para outro membro terminar	1	2	3	4	5	6	7
6.	Gostam mais parecer que fazem do que fazer.	1	2	3	4	5	6	7

Para terminar, gostaríamos de lhe solicitar alguns dados socio-demográficos, indispensáveis ao tratamento estatístico dos questionários:

1. Sexo: Masculino Feminino

2. Idade: _____ anos

3. Função que exerce na empresa: _____

4. Há quanto tempo trabalha nesta Empresa?

Menos de 1 anos 1 a 3 anos 3 a 5 anos 5 a 7 anos Mais de 7 anos

5. Número de pessoas que trabalham na sua equipa: _____

MUITO OBRIGADO PELA SUA PARTICIPAÇÃO!

Appendix B - Questionnaire for leaders

QUESTIONÁRIO AO LÍDER

1. Este questionário insere-se num projecto de investigação levado a cabo por um grupo de investigadores do ISCTE-Instituto Universitário de Lisboa, focado na eficácia do trabalho em equipa em contexto de empresas de consultoria. O principal objectivo deste projecto é identificar os factores relacionados com trabalho em equipa que contribuem para a eficácia dos projetos realizados e para a satisfação quer dos clientes quer dos próprios consultores.
2. Os dados recolhidos serão exclusivamente analisados pela equipa de investigação, estando garantido o anonimato.
3. As perguntas estão construídas de modo a que apenas tenha de assinalar a resposta que lhe parecer mais adequada. Procure responder sem se deter demasiadamente em cada questão.
4. Não há respostas certas ou erradas. O que nos interessa é exclusivamente a sua opinião pessoal.
5. Para cada pergunta existe uma escala. Pode utilizar qualquer ponto da escala desde que o considere adequado.
6. Responda a todo o questionário de seguida, sem interrupções.

Para qualquer esclarecimento, ou para receber informação adicional sobre o estudo por favor contacte: Prof.^a Doutora Ana Margarida Passos (ana.passos@iscte.pt).

Obrigado pela sua colaboração!

Para responder a este questionário pense na EQUIPA e no projeto de consultoria específico que está a liderar

1.As questões que a seguir se apresentam procuram descrever os comportamentos da equipa. Indique em que medida concorda com cada uma delas utilizando a escala de resposta:

Discordo Totalmente	Discordo muito	Discordo em parte	Não concordo nem discordo	Concordo em parte	Concordo muito	Concordo Totalmente
1	2	3	4	5	6	7

1.	A equipa tem um bom desempenho	1	2	3	4	5	6	7
2.	Os membros estão satisfeitos em trabalhar na equipa	1	2	3	4	5	6	7
3.	A equipa é eficaz	1	2	3	4	5	6	7
4.	Não hesitaria em trabalhar com esta equipa em outros projetos	1	2	3	4	5	6	7
5.	Esta equipa poderia trabalhar bem em futuros projetos	1	2	3	4	5	6	7

2. Pense agora **no seu comportamento enquanto líder da equipa**. Por favor, utilize a mesma escala:

1.	Revê resultados de desempenho relevantes com a equipa	1	2	3	4	5	6	7
2.	Monitoriza a equipa e o desempenho dos colaboradores	1	2	3	4	5	6	7
3.	Diz à equipa como interpretar eventos ou situações com que a equipa se depara.	1	2	3	4	5	6	7
4.	Diz à equipa como compreender (dar sentido a) eventos ou situações	1	2	3	4	5	6	7
5.	Explica à equipa o significado de eventos ou situações ambíguas	1	2	3	4	5	6	7
6.	Fornecer feedback positivo quando a equipa tem um bom desempenho	1	2	3	4	5	6	7
7.	Contribui com ideias concretas para melhorar o desempenho da equipa.	1	2	3	4	5	6	7
8.	Repara em falhas nos procedimentos ou trabalho desenvolvido pela equipa.	1	2	3	4	5	6	7
9.	Comunica o que é esperado da equipa.	1	2	3	4	5	6	7
10.	Participa na resolução de problemas com a equipa	1	2	3	4	5	6	7
11.	Assegura que a equipa tem objectivos claros de desempenho.	1	2	3	4	5	6	7
12.	Encoraja a equipa a interpretar em conjunto o que acontece à equipa.	1	2	3	4	5	6	7
13.	Promove a discussão, em equipa, de diferentes perspetivas sobre eventos /situações com que a equipa se depara	1	2	3	4	5	6	7
14.	Encoraja os membros da equipa a dar o seu ponto de vista sobre eventos/ situações.	1	2	3	4	5	6	7
15.	Promove o desenvolvimento de um entendimento partilhado entre os membros da equipa acerca de eventos e situações com que a equipa se depara.	1	2	3	4	5	6	7
16.	Encoraja a equipa a, coletivamente, dar sentido a situações ambíguas	1	2	3	4	5	6	7

17.	Encoraja os membros da equipa a olhar de diferentes perspetivas para eventos/ situações	1	2	3	4	5	6	7
18.	O que o líder diz, muda a forma como a equipa interpreta eventos ou situações com que se depara	1	2	3	4	5	6	7
19.	O que o líder diz, altera a forma como a equipa pensa sobre eventos ou situações com que se depara.	1	2	3	4	5	6	7
20.	O que o líder diz, modifica a forma como a equipa pensa sobre eventos ou situações com que se depara.	1	2	3	4	5	6	7

Para terminar, gostaríamos de lhe solicitar alguns dados socio-demográficos, indispensáveis ao tratamento estatístico dos questionários:

1. Sexo: Masculino Feminino

2. Idade: _____ anos

3. Função que exerce na empresa:

4. Há quanto tempo trabalha nesta Empresa?

Menos de 1 anos 1 a 3 anos 3 a 5 anos 5 a 7 anos Mais de 7 anos

MUITO OBRIGADO PELA SUA PARTICIPAÇÃO!

Appendix C – Constructs scales

Shared temporal cognitions (Gevers et al., 2006):

- 1) We have the same opinions about meeting deadlines.
- 2) We have similar thoughts about the best way to use our time.
- 3) We agree on how to allocate the time available.
- 4) We have similar ideas about the time it takes to perform certain tasks.

Temporal conflict (based on Shah & Jehn, 1993; Yang, 2009)

- 1) There are disagreements in the team about time allocation to tasks.
- 2) There are disagreements about how much time should be spent on specific tasks.
- 3) The team members disagree about the pace with which tasks should be done.

Task conflict (Jehn, 1995)

- 1) There is a conflict of ideas among team members.
- 2) There is a confrontation of opinions about work.
- 3) There is disagreement in the team about opinions expressed by some members.

Relationship conflict (Shah & Jehn, 1993)

- 1) There are personal conflicts among team members.
- 2) There is friction among team members.
- 3) Personal conflicts are evident.

Leader's sensegiving (based on Morgeson, DeRue, & Karam, 2010)

- 1) The leader tells the team how events or situations the team is faced with should be interpreted.
- 2) The leader tells the team how to understand events or situations.
- 3) The leader explains the meaning of ambiguous events or situations to the team.
- 4) The leader changes the way the team interprets events or situations the team is faced with.
- 5) The leader alters the way the team thinks about events or situations the team is faced with.
- 6) The leader modifies how the team thinks about events or situations the team is faced with.

Leader's promotion of sensemaking (based on Morgeson, DeRue, & Karam, 2010):

- 1) The leader encourages the team to collectively interpret things that happen to the team.
- 2) The leader promotes team discussions about different perspectives of events or situations.
- 3) The leader encourages team members to provide their individual viewpoint on events or situations
- 4) The leader promotes the development of a shared understanding of events or situations among the team member.
- 5) The leader encourages the team to collectively make sense of ambiguous situations.
- 6) The leader encourages the team members to look at events or situations the team is faced with from different perspectives.

Team effectiveness

Team performance (González-Romá, Fortes-Ferreira, & Peiró, 2009)

- 1) My team has a good performance.
- 2) My team is effective.

Team satisfaction (Standifer et al., 2015)

1) We are satisfied with working in this team.

Team viability (Costa, Passos, & Barata, 2015)

1) I would not hesitate to work with this team on other projects.

2) This team could work well in the future projects.

Team effectiveness by leader:

Team performance (González-Romá, Fortes-Ferreira, & Peiró, 2009)

1) The team has a good performance.

2) The team is effective.

Team satisfaction (Standifer et al., 2015)

1) The members are satisfied with working in this team.

Team viability (Costa, Passos, & Barata, 2015)

1) I would not hesitate to work with this team on other projects.

2) This team could work well in the future projects.

Appendix D - Research models

Model A

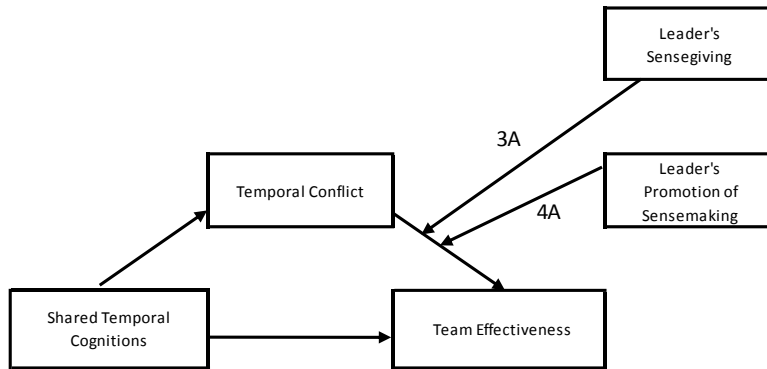


Fig. 3. Research Model A: 3A and 4A - temporal conflict as a mediator

Model B

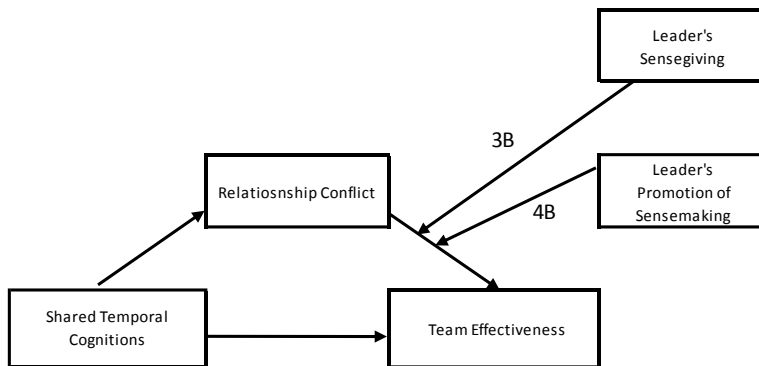


Fig. 4. Research Model B: 3B and 4B - relationship conflict as a mediator

Model C

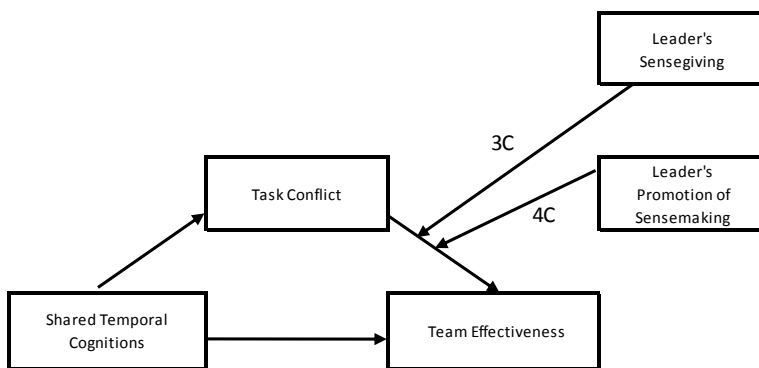


Fig. 5. Research Model C: 3C and 4C - task conflict as a mediator

Appendix E – Research hypotheses

Simple regression:

Model 1 – Hypothesis 1: Shared temporal cognitions predict team effectiveness.

Hypothesis 1a₁: Shared temporal cognitions predict team performance.

Hypothesis 1a₂: Shared temporal cognitions predict team satisfaction.

Hypothesis 1a₃: Shared temporal cognitions predict team viability.

Hypothesis 1b₁: Shared temporal cognitions predict team performance by leader.

Hypothesis 1b₂: Shared temporal cognitions predict team satisfaction by leader.

Hypothesis 1b₃: Shared temporal cognitions predict team viability by leader.

Indirect effects:

Model 2a – Hypothesis 2a: Temporal conflict mediates the relationship between shared temporal cognitions and team effectiveness.

Hypothesis 2a₁: Temporal conflict mediates the relationship between shared temporal cognitions and team performance.

Hypothesis 2a₂: Temporal conflict mediates the relationship between shared temporal cognitions and team satisfaction.

Hypothesis 2a₃: Temporal conflict mediates the relationship between shared temporal cognitions and team viability.

Hypothesis 2a₄: Temporal conflict mediates the relationship between shared temporal cognitions and team performance by leader.

Hypothesis 2a₅: Temporal conflict mediates the relationship between shared temporal cognitions and team satisfaction by leader.

Hypothesis 2a₆: Temporal conflict mediates the relationship between shared temporal cognitions and team viability by leader.

Model 2b – Hypothesis 2b: Relationship conflict mediates the relationship between shared temporal cognitions and team effectiveness.

Hypothesis 2b₁: Relationship conflict mediates the relationship between shared temporal cognitions and team performance.

Hypothesis 2b₂: Relationship conflict mediates the relationship between shared temporal cognitions and team satisfaction.

Hypothesis 2b₃: Relationship conflict mediates the relationship between shared temporal cognitions and team viability by leader.

Hypothesis 2b₄: Relationship conflict mediates the relationship between shared temporal cognitions and team performance by leader.

Hypothesis 2b₅: Relationship conflict mediates the relationship between shared temporal cognitions and team satisfaction by leader.

Hypothesis 2b₆: Relationship conflict mediates the relationship between shared temporal cognitions and team viability by leader.

Model 2c – Hypothesis 2c: Task conflict mediates the relationship between shared temporal cognitions and team effectiveness.

Hypothesis 2c₁: Task conflict mediates the relationship between shared temporal cognitions and team performance.

Hypothesis 2c₂: Task conflict mediates the relationship between shared temporal cognitions and team satisfaction.

Hypothesis 2c₃: Task conflict mediates the relationship between shared temporal cognitions and team viability.

Hypothesis 2c₄ Task conflict mediates the relationship between shared temporal cognitions and team performance by leader.

Hypothesis 2c₅: Task conflict mediates the relationship between shared temporal cognitions and team satisfaction by leader.

Hypothesis 2c₆: Task conflict mediates the relationship between shared temporal cognitions and team viability by leader.

Moderation:

Model 3A – Hypothesis 3A: Leader's sensegiving moderates the relationship between temporal conflict and team effectiveness.

Hypothesis 3A₁: Leader's sensegiving moderates the relationship between temporal conflict and team performance.

Hypothesis 3A₂: Leader's sensegiving moderates the relationship between temporal conflict and team satisfaction.

Hypothesis 3A₃: Leader's sensegiving moderates the relationship between temporal conflict and team viability.

Hypothesis 3A₄: Leader's sensegiving moderates the relationship between temporal conflict and team performance by leader.

Hypothesis 3A₅: Leader's sensegiving moderates the relationship between temporal conflict and team satisfaction by leader.

Hypothesis 3A₆ Leader's sensegiving moderates the relationship between temporal conflict and team viability by leader.

Model 3B – Hypothesis 3B: Leader's sensegiving moderates the relationship between relationship conflict and team effectiveness.

Hypothesis 3B₁: Leader's sensegiving moderates the relationship between relationship conflict and team performance.

Hypothesis 3B₂: Leader's sensegiving moderates the relationship between relationship conflict and team satisfaction.

Hypothesis 3B₃: Leader's sensegiving moderates the relationship between relationship conflict and team viability.

Hypothesis 3B₄: Leader's sensegiving moderates the relationship between relationship conflict and team performance by leader.

Hypothesis 3B₅: Leader's sensegiving moderates the relationship between relationship conflict and team satisfaction by leader.

Hypothesis 3B₆: Leader's sensegiving moderates the relationship between relationship conflict and team viability by leader.

Model 3C – Hypothesis 3C: Leader's sensegiving moderates the relationship between task conflict and team effectiveness.

Hypothesis 3C₁: Leader's sensegiving moderates the relationship between task conflict and team performance.

Hypothesis 3C₂: Leader's sensegiving moderates the relationship between task conflict and team satisfaction.

Hypothesis 3C₃: Leader's sensegiving moderates the relationship between task conflict and team viability.

Hypothesis 3C₄: Leader's sensegiving moderates the relationship between task conflict and team performance by leader.

Hypothesis 3C₅: Leader's sensegiving moderates the relationship between task conflict and team satisfaction by leader.

Hypothesis 3C₆ Leader's sensegiving moderates the relationship between task conflict and team viability by leader.

Model 4A – Hypothesis 4A: Leader's promotion of sensemaking moderates the relationship between temporal conflict and team effectiveness.

Hypothesis 4A₁: Leader's promotion of sensemaking moderates the relationship between temporal conflict and team performance.

Hypothesis 4A₂: Leader's promotion of sensemaking moderates the relationship between temporal conflict and team satisfaction.

Hypothesis 4A₃: Leader's promotion of sensemaking moderates the relationship between temporal conflict and team viability.

Hypothesis 4A₄: Leader's promotion of sensemaking moderates the relationship between temporal conflict and team performance by leader.

Hypothesis 4A₅: Leader's promotion of sensemaking moderates the relationship between temporal conflict and team satisfaction by leader.

Hypothesis 4A₆: Leader's promotion of sensemaking moderates the relationship between temporal conflict and team viability by leader.

Model 4B – Hypothesis 4B: Leader's promotion of sensemaking moderates the relationship between relationship conflict and team effectiveness.

Hypothesis 4B₁: Leader's promotion of sensemaking moderates the relationship between relationship conflict and team performance.

Hypothesis 4B₂: Leader's promotion of sensemaking moderates the relationship between relationship conflict and team satisfaction.

Hypothesis 4B₃: Leader's promotion of sensemaking moderates the relationship between relationship conflict and team viability.

Hypothesis 4B₄: Leader's promotion of sensemaking moderates the relationship between relationship conflict and team performance by leader.

Hypothesis 4B₅: Leader's promotion of sensemaking moderates the relationship between relationship conflict and team satisfaction by leader.

Hypothesis 4B₆: Leader's promotion of sensemaking moderates the relationship between relationship conflict and team viability by leader.

Model 4C – Hypothesis 4C: Leader's promotion of sensemaking moderates the relationship between task conflict and team effectiveness.

Hypothesis 4C₁: Leader's promotion of sensemaking moderates the relationship between task conflict and team performance.

Hypothesis 4C₂: Leader's promotion of sensemaking moderates the relationship between task conflict and team satisfaction.

Hypothesis 4C₃: Leader's promotion of sensemaking moderates the relationship between task conflict and team viability.

Hypothesis 4C₄: Leader's promotion of sensemaking moderates the relationship between task conflict and team performance by leader.

Hypothesis 4C₅: Leader's promotion of sensemaking moderates the relationship between task conflict and team satisfaction by leader.

Hypothesis 4C₆: Leader's promotion of sensemaking moderates the relationship between task conflict and team viability by leader.

Appendix F – Variables coding

Abbreviations

- STC – Shared temporal cognitions
- TC – Temporal conflict
- RC – Relationship conflict
- TaC – Task Conflict
- LSG – Leader's sensegiving
- LPSM – Leader's promotion of sensemaking
- TE – Team effectiveness
- TP – Team performance
- TS – Team satisfaction
- TV – Team viability

Operational names

- STC – Shared temporal cognitions
- conf_relac – Relationship conflict
- conf_tarefa – Task conflict
- conf_tempo – Temporal conflict
- lider_sensegiving – Leader's sensegiving
- lidera_prom_sensemaking – Leader's promotion of sensemaking
- eficacia – Team performance by team
- satisf – Team satisfaction by team
- viabilidade – Team viability by team
- L_eficacia – Team performance by leader
- L_satisf – Team satisfaction by leader
- L_viabilidade – Team viability by leader

Appendix G - Descriptive analysis

Table 7. Individual descriptive statistics

	Valid N	Minimum	Maximum	Mean	Std. Deviation
Gender	154	0	1	.71	.45
Age	150	20	60	29.35	7.54
Pax per Team	151	2	20	5.75	3.49

Table 8. Gender distribution

Gender	Valid N	%
Male	44	28.6
Female	110	71.4
Total	154	100%

Table 9. Age distribution

Age					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	20	1	,6	,7	,7
	21	3	1,9	2,0	2,7
	22	12	7,8	8,0	10,7
	23	17	11,0	11,3	22,0
	24	22	14,3	14,7	36,7
	25	7	4,5	4,7	41,3
	26	8	5,2	5,3	46,7
	27	10	6,5	6,7	53,3
	28	7	4,5	4,7	58,0
	29	8	5,2	5,3	63,3
	30	6	3,9	4,0	67,3
	31	4	2,6	2,7	70,0
	32	4	2,6	2,7	72,7
	33	7	4,5	4,7	77,3
	35	6	3,9	4,0	81,3
	36	4	2,6	2,7	84,0
	37	4	2,6	2,7	86,7
	38	2	1,3	1,3	88,0
	39	2	1,3	1,3	89,3
	40	1	,6	,7	90,0
	41	2	1,3	1,3	91,3
42	1	,6	,7	92,0	
43	1	,6	,7	92,7	
44	3	1,9	2,0	94,7	
46	2	1,3	1,3	96,0	
48	3	1,9	2,0	98,0	
50	1	,6	,7	98,7	
52	1	,6	,7	99,3	
60	1	,6	,7	100,0	
	Total	150	97,4	100,0	
Missing	System	4	2,6		
Total		154	100,0		

Table 10. Distribution of number of members per team

Pax per Team					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	9	5,8	6,0	6,0
	3	30	19,5	19,9	25,8
	4	28	18,2	18,5	44,4
	5	32	20,8	21,2	65,6
	6	18	11,7	11,9	77,5
	7	4	2,6	2,6	80,1
	8	2	1,3	1,3	81,5
	9	8	5,2	5,3	86,8
	10	6	3,9	4,0	90,7
	11	1	,6	,7	91,4
	12	2	1,3	1,3	92,7
	13	1	,6	,7	93,4
	14	1	,6	,7	94,0
	15	7	4,5	4,6	98,7
	17	1	,6	,7	99,3
20	1	,6	,7	100,0	
	Total	151	98,1	100,0	
Missing	System	3	1,9		
Total		154	100,0		

Table 11. Group variable variation – levels of intra-group agreement

Statistics	Rwg Shared temporal cognitions	Rwg Temporal conflict	Rwg Relationship conflict	Rwg Task conflict	Rwg Leader's sensegiving	Rwg Leader's promotion of sensemaking	Rwg Team performance	Rwg Team satisfaction	Rwg Team viability
N Valid	42	42	42	42	42	42	42	42	42
Mean	,74	,80	,84	,82	,78	,76	,86	,73	,77
Std. Deviation	,22	,17	,18	,15	,30	,26	,17	,32	,25
Minimum	,22	,42	,10	,50	-,47	-,01	,35	-,23	,10
Maximum	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00

Table 12. Group variable values distribution

Descriptive Statistics	N	Minimum	Maximum	Mean	Std. Deviation
Shared temporal cognitions	42	3,50	6,50	5,05	,70
Relationship conflict	42	1,00	4,04	2,00	,71
Task conflict	42	1,67	4,67	2,98	,82
Temporal conflict	42	1,17	4,59	2,71	,74
Leader's sensegiving	42	3,06	6,50	5,17	,87
Leader's promotion of sensemaking	42	2,25	6,67	5,13	,99
Team performance	42	4,17	7,00	5,83	,55
Team satisfaction	42	3,67	6,67	5,63	,81
Team viability	42	3,17	7,00	5,78	,94
Team performance by leader	41	3,00	7,00	5,67	,74
Team satisfaction by leader	41	3,00	7,00	5,71	,87
Team viability by leader	41	3,50	7,00	6,17	,83
Valid N	41				

Table 13. Correlations analysis among all analysed variables

		Correlations											
		STC_mean	conf_relac_mean	conf_tarefa_mean	conf_tempo_mean	lider_sensegiving_mean	lidera_prom_sensemaking_mean	eficacia_mean	satisf_mean	viabilidade_mean	L_eficacia	L_satisf	L_viabilidade
STC_mean	Pearson Correlation	1	-.426**	-.475**	-.715**	.326*	.406**	.506**	.473**	.523**	0.117	0.098	0.132
	Sig. (2-tailed)		0.005	0.001	0.000	0.035	0.008	0.001	0.002	0.000	0.466	0.544	0.411
	N	42	42	42	42	42	42	42	42	42	41	41	41
conf_relac_mean	Pearson Correlation	-.426**	1	.697**	.482**	-.605**	-.494**	-.597**	-.579**	-.582**	-.350*	-0.305	-.394*
	Sig. (2-tailed)	0.005		0.000	0.001	0.000	0.001	0.000	0.000	0.000	0.025	0.053	0.011
	N	42	42	42	42	42	42	42	42	42	41	41	41
conf_tarefa_mean	Pearson Correlation	-.475**	.697**	1	.629**	-.539**	-.451**	-.559**	-.550**	-.565**	-0.231	-0.100	-0.241
	Sig. (2-tailed)	0.001	0.000		0.000	0.000	0.003	0.000	0.000	0.000	0.146	0.535	0.129
	N	42	42	42	42	42	42	42	42	42	41	41	41
conf_tempo_mean	Pearson Correlation	-.715**	.482**	.629**	1	-.329*	-.389*	-.379*	-.448**	-.434**	-0.076	-0.127	-0.107
	Sig. (2-tailed)	0.000	0.001	0.000		0.033	0.011	0.013	0.003	0.004	0.635	0.430	0.505
	N	42	42	42	42	42	42	42	42	42	41	41	41
lider_sensegiving_mean	Pearson Correlation	.326*	-.605**	-.539**	-.329*	1	.884**	.633**	.645**	.543**	.546**	.362*	.426**
	Sig. (2-tailed)	0.035	0.000	0.000	0.033		0.000	0.000	0.000	0.000	0.000	0.020	0.006
	N	42	42	42	42	42	42	42	42	42	41	41	41
lidera_prom_sensemaking_mean	Pearson Correlation	.406**	-.494**	-.451**	-.389*	.884**	1	.575**	.603**	.497**	.368*	0.281	.310*
	Sig. (2-tailed)	0.008	0.001	0.003	0.011	0.000		0.000	0.000	0.001	0.018	0.075	0.048
	N	42	42	42	42	42	42	42	42	42	41	41	41
eficacia_mean	Pearson Correlation	.506**	-.597**	-.559**	-.379*	.633**	.575**	1	.778**	.724**	.394*	.413**	.392*
	Sig. (2-tailed)	0.001	0.000	0.000	0.013	0.000	0.000		0.000	0.000	0.011	0.007	0.011
	N	42	42	42	42	42	42	42	42	42	41	41	41
satisf_mean	Pearson Correlation	.473**	-.579**	-.550**	-.448**	.645**	.603**	.778**	1	.858**	.379*	.336*	.486**
	Sig. (2-tailed)	0.002	0.000	0.000	0.003	0.000	0.000	0.000		0.000	0.014	0.032	0.001
	N	42	42	42	42	42	42	42	42	42	41	41	41
viabilidade_mean	Pearson Correlation	.523**	-.582**	-.565**	-.434**	.543**	.497**	.724**	.858**	1	.535**	.403**	.588**
	Sig. (2-tailed)	0.000	0.000	0.000	0.004	0.000	0.001	0.000	0.000		0.000	0.009	0.000
	N	42	42	42	42	42	42	42	42	42	41	41	41
L_eficacia	Pearson Correlation	0.117	-.350*	-0.231	-0.076	.546**	.368*	.394*	.379*	.535**	1	.467**	.713**
	Sig. (2-tailed)	0.466	0.025	0.146	0.635	0.000	0.018	0.011	0.014	0.000		0.002	0.000
	N	41	41	41	41	41	41	41	41	41	41	41	41
L_satisf	Pearson Correlation	0.098	-0.305	-0.100	-0.127	.362*	0.281	.413**	.336*	.403**	.467**	1	.483**
	Sig. (2-tailed)	0.544	0.053	0.535	0.430	0.020	0.075	0.007	0.032	0.009	0.002		0.001
	N	41	41	41	41	41	41	41	41	41	41	41	41
L_viabilidade	Pearson Correlation	0.132	-.394*	-0.241	-0.107	.426**	.310*	.392*	.486**	.588**	.713**	.483**	1
	Sig. (2-tailed)	0.411	0.011	0.129	0.505	0.006	0.048	0.011	0.001	0.000	0.000	0.001	
	N	41	41	41	41	41	41	41	41	41	41	41	41

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Appendix H - Models of mediation and moderation

Mediation

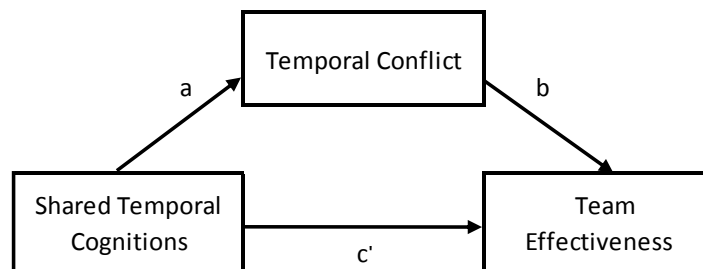


Fig. 6. Mediation **Model 2a**, in which temporal conflict mediates the relationship between shared temporal cognitions and team effectiveness.

*Team effectiveness is conceptualized on two levels 1) team effectiveness perceived by team; 2) team effectiveness by leader, tested separately. Three dimensions of team effectiveness were verified: performance, satisfaction, viability.

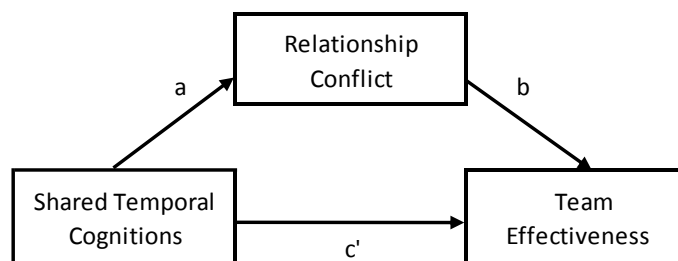


Fig. 7. Mediation **Model 2b**, in which relationship conflict mediates the relationship between shared temporal cognitions and team effectiveness.

*Team effectiveness is conceptualized on two levels 1) team effectiveness perceived by team; 2) team effectiveness by leader, tested separately. Three dimensions of team effectiveness were verified: performance, satisfaction, viability.

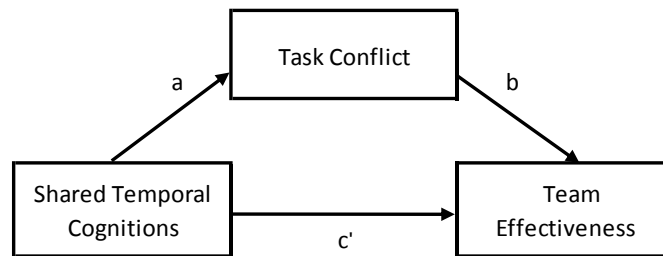


Fig. 8. Mediation **Model 2c**, in which task conflict mediates the relationship between shared temporal cognitions and team effectiveness.

*Team effectiveness is conceptualized on two levels 1) team effectiveness perceived by team; 2) team effectiveness by leader, tested separately. Three dimensions of team effectiveness were verified: performance, satisfaction, viability.

Moderation

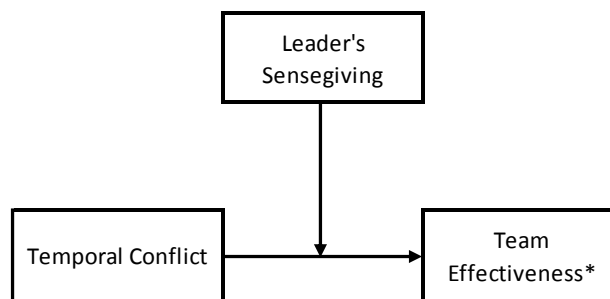


Fig. 9. Moderation **Model 3A**, in which leader's sensegiving moderates the relationship between temporal conflict and team effectiveness.

*Team effectiveness is conceptualized on two levels 1) team effectiveness perceived by team; 2) team effectiveness by leader, tested separately. Three dimensions of team effectiveness were verified: performance, satisfaction, viability.

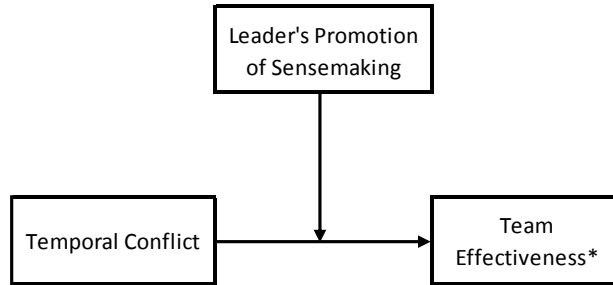


Fig. 10. Mediation **Model 4A**, in which leader's promotion of sensemaking moderates the relationship between temporal conflict and team effectiveness.

*Team effectiveness is conceptualized on two levels 1) team effectiveness perceived by team; 2) team effectiveness by leader, tested separately. Three dimensions of team effectiveness were verified: performance, satisfaction, viability.

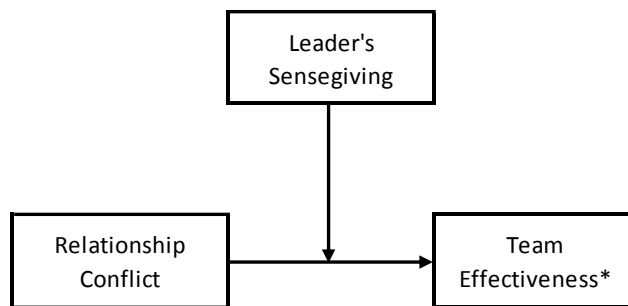


Fig. 11. Moderation **Model 3B**, in which leader's sensegiving moderates the relationship between relationship conflict and team effectiveness.

*Team effectiveness is conceptualized on two levels 1) team effectiveness perceived by team; 2) team effectiveness by leader, tested separately. Three dimensions of team effectiveness were verified: performance, satisfaction, viability.

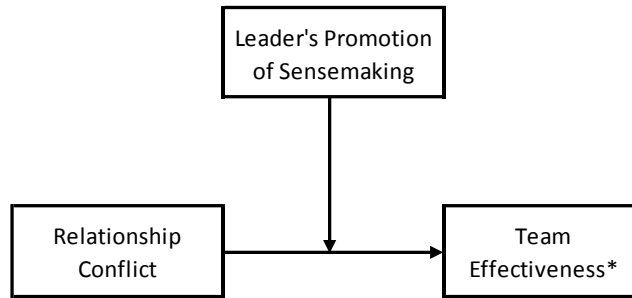


Fig. 12. Moderation **Model 4B**, in which leader's promotion of sensemaking moderates the relationship between relationship conflict and team effectiveness.

*Team effectiveness is conceptualized on two levels 1) team effectiveness perceived by team; 2) team effectiveness by leader, tested separately. Three dimensions of team effectiveness were verified: performance, satisfaction, viability.

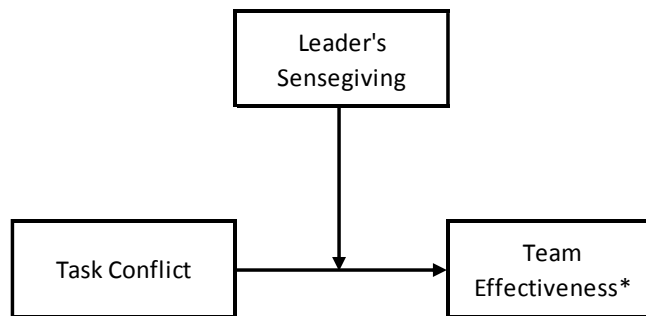


Fig. 13. Moderation **Model 3C**, in which leader's sensegiving moderates the relationship between task conflict and team effectiveness.

*Team effectiveness is conceptualized on two levels 1) team effectiveness perceived by team; 2) team effectiveness by leader, tested separately. Three dimensions of team effectiveness were verified: performance, satisfaction, viability.

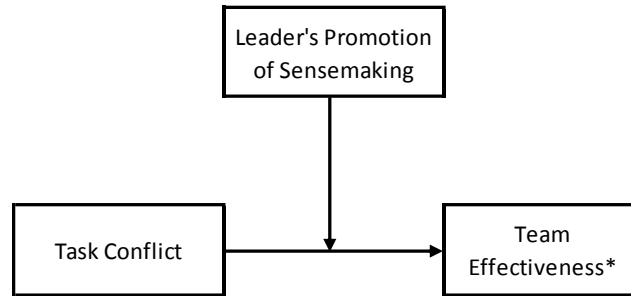


Fig. 14. Moderation **Model 4C**, in which leader's promotion of sensemaking moderates the relationship between task conflict and team effectiveness.

*Team effectiveness is conceptualized on two levels 1) team effectiveness perceived by team; 2) team effectiveness by leader, tested separately. Three dimensions of team effectiveness were verified: performance, satisfaction, viability.

Appendix I - Mediation analysis results

* Note: Sample size = 42 teams for the effects testing for team effectiveness by team; Sample size = 41 individuals for the effects testing for team effectiveness by leader.

TEMPORAL CONFLICT

Model statistics summary of mediation effect of temporal conflict on the relationship between shared temporal cognitions and **team performance perceived by team**:

Table 14. Analysis of model fit

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	,506 ^a	,256	,237	,48391	,256	13,761	1	40	,001
2	,507 ^b	,257	,218	,48988	,001	,030	1	39	,863

a. Predictors: (Constant), STC_mean

b. Predictors: (Constant), STC_mean, conf_tempo_mean

STC = Shared temporal cognitions

Table 15. Analysis of coefficients fit

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3,222	1	3,222	13,761	,001 ^b
	Residual	9,367	40	,234		
	Total	12,589	41			
2	Regression	3,230	2	1,615	6,729	,003 ^c
	Residual	9,359	39	,240		
	Total	12,589	41			

a. Dependent Variable: eficacia_mean

b. Predictors: (Constant), STC_mean

c. Predictors: (Constant), STC_mean, conf_tempo_mean

STC = Shared temporal cognitions

Table 16. Analysis of effect strength

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3,812	,549		6,948	,000
	STC_mean	,399	,108	,506	3,710	,001
2	(Constant)	3,980	1,115		3,570	,001
	STC_mean	,380	,156	,481	2,437	,019
	conf_tempo_mean	-,026	,149	-,034	-,174	,863

a. Dependent Variable: eficacia_mean

STC = Shared temporal cognitions

Model statistics summary of mediation effect of temporal conflict on the relationship between shared temporal cognitions and **team satisfaction perceived by team**:

Table 17. Analysis of model fit

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	,473 ^a	,223	,204	,72191	,223	11,506	1	40	,002
2	,498 ^b	,248	,209	,71942	,025	1,277	1	39	,265

a. Predictors: (Constant), STC_mean

b. Predictors: (Constant), STC_mean, conf_tempo_mean

STC = Shared temporal cognitions

Table 18. Analysis of coefficients fit

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5,996	1	5,996	11,506	,002 ^b
	Residual	20,846	40	,521		
	Total	26,842	41			
2	Regression	6,657	2	3,329	6,431	,004 ^c
	Residual	20,185	39	,518		
	Total	26,842	41			

a. Dependent Variable: satisf_mean

b. Predictors: (Constant), STC_mean

c. Predictors: (Constant), STC_mean, conf_tempo_mean

STC = Shared temporal cognitions

Table 19. Analysis of effect strength

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2,877	,818		3,515	,001
	STC_mean	,544	,160	,473	3,392	,002
2	(Constant)	4,481	1,637		2,737	,009
	STC_mean	,359	,229	,312	1,571	,124
	conf_tempo_mean	-,247	,219	-,225	-1,130	,265

a. Dependent Variable: satisf_mean

STC = Shared temporal cognitions

Model statistics summary of mediation effect of temporal conflict on the relationship between shared temporal cognitions and **team viability perceived by team**:

Table 20. Analysis of model fit

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				Sig. F Change
					R Square Change	F Change	df1	df2	
1	,523 ^a	,273	,255	,81124	,273	15,055	1	40	,000
2	,530 ^b	,281	,244	,81744	,007	,395	1	39	,533

a. Predictors: (Constant), STC_mean

b. Predictors: (Constant), STC_mean, conf_tempo_mean

STC = Shared temporal cognitions

Table 21. Analysis of coefficients fit

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9,908	1	9,908	15,055	,000 ^b
	Residual	26,324	40	,658		
	Total	36,232	41			
2	Regression	10,171	2	5,086	7,611	,002 ^c
	Residual	26,060	39	,668		
	Total	36,232	41			

a. Dependent Variable: viabilidade_mean

b. Predictors: (Constant), STC_mean

c. Predictors: (Constant), STC_mean, conf_tempo_mean

STC = Shared temporal cognitions

Table 22. Analysis of effect strength

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2,248	,920		2,444	,019
	STC_mean	,699	,180	,523	3,880	,000
2	(Constant)	3,261	1,860		1,753	,087
	STC_mean	,583	,260	,436	2,242	,031
	conf_tempo_mean	-,156	,248	-,122	-,628	,533

a. Dependent Variable: viabilidade_mean

STC = Shared temporal cognitions

Model statistics summary of mediation effect of temporal conflict on the relationship between shared temporal cognitions and **team performance perceived by leader**:

Table 23. Analysis of model fit

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				Sig. F Change
					R Square Change	F Change	df1	df2	
1	,117 ^a	,014	-,012	,74258	,014	,543	1	39	,466
2	,118 ^b	,014	-,038	,75224	,000	,004	1	38	,947

a. Predictors: (Constant), STC_mean

b. Predictors: (Constant), STC_mean, conf_tempo_mean

STC = Shared temporal cognitions

Table 24. Analysis of coefficients fit

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	,300	1	,300	,543	,466 ^b
	Residual	21,505	39	,551		
	Total	21,805	40			
2	Regression	,302	2	,151	,267	,767 ^c
	Residual	21,503	38	,566		
	Total	21,805	40			

a. Dependent Variable: L_eficacia

b. Predictors: (Constant), STC_mean

c. Predictors: (Constant), STC_mean, conf_tempo_mean

STC = Shared temporal cognitions

Table 25. Analysis of effect strength

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5,055	,843		5,998	,000
	STC_mean	,122	,165	,117	,737	,466
2	(Constant)	4,955	1,730		2,864	,007
	STC_mean	,133	,240	,128	,555	,582
	conf_tempo_mean	,015	,233	,015	,066	,947

a. Dependent Variable: L_eficacia

STC = Shared temporal cognitions

Model statistics summary of mediation effect of temporal conflict on the relationship between shared temporal cognitions and **team satisfaction perceived by leader**:

Table 26. Analysis of model fit

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	,098 ^a	,010	-,016	,87993	,010	,375	1	39	,544
2	,127 ^b	,016	-,036	,88845	,007	,256	1	38	,616

a. Predictors: (Constant), STC_mean

b. Predictors: (Constant), STC_mean, conf_tempo_mean

STC = Shared temporal cognitions

Table 27. Analysis of coefficients fit

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	,291	1	,291	,375	,544 ^b
	Residual	30,197	39	,774		
	Total	30,488	40			
2	Regression	,493	2	,246	,312	,734 ^c
	Residual	29,995	38	,789		
	Total	30,488	40			

a. Dependent Variable: L_satisf

b. Predictors: (Constant), STC_mean

c. Predictors: (Constant), STC_mean, conf_tempo_mean

STC = Shared temporal cognitions

Table 28. Analysis of effect strength

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5,101	,999		5,107	,000
	STC_mean	,120	,196	,098	,613	,544
2	(Constant)	6,001	2,044		2,936	,006
	STC_mean	,017	,284	,014	,061	,952
	conf_tempo_mean	-,139	,275	-,117	-,506	,616

a. Dependent Variable: L_satisf

STC = Shared temporal cognitions

Model statistics summary of mediation effect of temporal conflict on the relationship between shared temporal cognitions and **team viability perceived by leader**:

Table 29. Analysis of model fit

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				Sig. F Change
					R Square Change	F Change	df1	df2	
1	,132 ^a	,017	-,008	,83698	,017	,691	1	39	,411
2	,133 ^b	,018	-,034	,84778	,000	,013	1	38	,910

a. Predictors: (Constant), STC_mean

b. Predictors: (Constant), STC_mean, conf_tempo_mean

STC = Shared temporal cognitions

Table 30. Analysis of coefficients fit

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	,484	1	,484	,691	,411 ^b
	Residual	27,321	39	,701		
	Total	27,805	40			
2	Regression	,493	2	,247	,343	,712 ^c
	Residual	27,312	38	,719		
	Total	27,805	40			

a. Dependent Variable: L_viabilidade

b. Predictors: (Constant), STC_mean

c. Predictors: (Constant), STC_mean, conf_tempo_mean

STC = Shared temporal cognitions

Table 31. Analysis of effect strength

Coefficients ^a						
Model		Unstandardized Coefficients		Standardize d	t	Sig.
		B	Std. Error	Coefficients		
		B	Std. Error	Beta		
1	(Constant)	5,388	,950		5,672	,000
	STC_mean	,155	,186	,132	,831	,411
2	(Constant)	5,581	1,950		2,862	,007
	STC_mean	,133	,271	,113	,492	,626
	conf_tempo_mean	-,030	,263	-,026	-,113	,910

a. Dependent Variable: L_viabilidade

STC = Shared temporal cognitions

RELATIONSHIP CONFLICT

Model statistics summary of mediation effect of relationship conflict on the relationship between shared temporal cognitions and **team performance perceived by team**:

Table 32. Analysis of model fit

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				Sig. F Change
					R Square Change	F Change	df1	df2	
1	,506 ^a	,256	,237	,48391	,256	13,761	1	40	,001
2	,658 ^b	,433	,404	,42766	,177	12,214	1	39	,001

a. Predictors: (Constant), STC_mean

b. Predictors: (Constant), STC_mean, conf_relac_mean

STC = Shared temporal cognitions

Table 33. Analysis of coefficients fit

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3,222	1	3,222	13,761	,001 ^b
	Residual	9,367	40	,234		
	Total	12,589	41			
2	Regression	5,456	2	2,728	14,916	,000 ^c
	Residual	7,133	39	,183		
	Total	12,589	41			

a. Dependent Variable: eficacia_mean

b. Predictors: (Constant), STC_mean

c. Predictors: (Constant), STC_mean, conf_relac_mean

STC = Shared temporal cognitions

Table 34. Analysis of effect strength

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3,812	,549		6,948	,000
	STC_mean	,399	,108	,506	3,710	,001
2	(Constant)	5,325	,650		8,192	,000
	STC_mean	,243	,105	,308	2,310	,026
	conf_relac_mean	-,361	,103	-,466	-3,495	,001

a. Dependent Variable: eficacia_mean

STC = Shared temporal cognitions

Model statistics summary of mediation effect of relationship conflict on the relationship between shared temporal cognitions and **team satisfaction perceived by team**:

Table 35. Analysis of model fit

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	,473 ^a	,223	,204	,72191	,223	11,506	1	40	,002
2	,630 ^b	,398	,367	,64395	,174	11,271	1	39	,002

a. Predictors: (Constant), STC_mean

b. Predictors: (Constant), STC_mean, conf_relac_mean

STC = Shared temporal cognitions

Table 36. Analysis of coefficients fit

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5,996	1	5,996	11,506	,002 ^b
	Residual	20,846	40	,521		
	Total	26,842	41			
2	Regression	10,670	2	5,335	12,865	,000 ^c
	Residual	16,172	39	,415		
	Total	26,842	41			

a. Dependent Variable: satisf_mean

b. Predictors: (Constant), STC_mean

c. Predictors: (Constant), STC_mean, conf_relac_mean

STC = Shared temporal cognitions

Table 37. Analysis of effect strength

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2,877	,818		3,515	,001
	STC_mean	,544	,160	,473	3,392	,002
2	(Constant)	5,065	,979		5,175	,000
	STC_mean	,318	,158	,276	2,011	,051
	conf_relac_mean	-,523	,156	-,461	-3,357	,002

a. Dependent Variable: satisf_mean

STC = Shared temporal cognitions

Model statistics summary of mediation effect of relationship conflict on the relationship between shared temporal cognitions and **team viability perceived by team**:

Table 38. Analysis of model fit

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	,523 ^a	,273	,255	,81124	,273	15,055	1	40	,000
2	,656 ^b	,431	,402	,72714	,157	10,787	1	39	,002

a. Predictors: (Constant), STC_mean

b. Predictors: (Constant), STC_mean, conf_relac_mean

STC = Shared temporal cognitions

Table 39. Analysis of coefficients fit

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9,908	1	9,908	15,055	,000 ^b
	Residual	26,324	40	,658		
	Total	36,232	41			
2	Regression	15,611	2	7,806	14,763	,000 ^c
	Residual	20,621	39	,529		
	Total	36,232	41			

a. Dependent Variable: viabilidade_mean

b. Predictors: (Constant), STC_mean

c. Predictors: (Constant), STC_mean, conf_relac_mean

STC = Shared temporal cognitions

Table 40. Analysis of effect strength

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2,248	,920		2,444	,019
	STC_mean	,699	,180	,523	3,880	,000
2	(Constant)	4,665	1,105		4,221	,000
	STC_mean	,450	,179	,336	2,518	,016
	conf_relac_mean	-,577	,176	-,438	-3,284	,002

a. Dependent Variable: viabilidade_mean

STC = Shared temporal cognitions

Model statistics summary of mediation effect of relationship conflict on the relationship between shared temporal cognitions and **team performance perceived by leader**:

Table 41. Analysis of model fit

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				Sig. F Change
					R Square Change	F Change	df1	df2	
1	,117 ^a	,014	-,012	,74258	,014	,543	1	39	,466
2	,351 ^b	,123	,077	,70925	,110	4,751	1	38	,036

a. Predictors: (Constant), STC_mean

b. Predictors: (Constant), STC_mean, conf_relac_mean

STC = Shared temporal cognitions

Table 42. Analysis of coefficients fit

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	,300	1	,300	,543	,466 ^b
	Residual	21,505	39	,551		
	Total	21,805	40			
2	Regression	2,690	2	1,345	2,673	,082 ^c
	Residual	19,115	38	,503		
	Total	21,805	40			

a. Dependent Variable: L_eficacia

b. Predictors: (Constant), STC_mean

c. Predictors: (Constant), STC_mean, conf_relac_mean

STC = Shared temporal cognitions

Table 43. Analysis of effect strength

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5,055	,843		5,998	,000
	STC_mean	,122	,165	,117	,737	,466
2	(Constant)	6,619	1,078		6,139	,000
	STC_mean	-,039	,174	-,038	-,224	,824
	conf_relac_mean	-,374	,172	-,365	-2,180	,036

a. Dependent Variable: L_eficacia

STC = Shared temporal cognitions

Model statistics summary of mediation effect of relationship conflict on the relationship between shared temporal cognitions and **team satisfaction perceived by leader**:

Table 44. Analysis of model fit

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	,098 ^a	,010	-,016	,87993	,010	,375	1	39	,544
2	,307 ^b	,094	,046	,85260	,084	3,541	1	38	,068

a. Predictors: (Constant), STC_mean

b. Predictors: (Constant), STC_mean, conf_relac_mean

STC = Shared temporal cognitions

Table 45. Analysis of coefficients fit

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	,291	1	,291	,375	,544 ^b
	Residual	30,197	39	,774		
	Total	30,488	40			
2	Regression	2,865	2	1,432	1,970	,153 ^c
	Residual	27,623	38	,727		
	Total	30,488	40			

a. Dependent Variable: L_satisf

b. Predictors: (Constant), STC_mean

c. Predictors: (Constant), STC_mean, conf_relac_mean

STC = Shared temporal cognitions

Table 46. Analysis of effect strength

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5,101	,999		5,107	,000
	STC_mean	,120	,196	,098	,613	,544
2	(Constant)	6,723	1,296		5,187	,000
	STC_mean	-,047	,210	-,038	-,224	,824
	conf_relac_mean	-,388	,206	-,321	-1,882	,068

a. Dependent Variable: L_satisf

STC = Shared temporal cognitions

Model statistics summary of mediation effect of relationship conflict on the relationship between shared temporal cognitions and **team viability perceived by leader**:

Table 47. Analysis of model fit

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				Sig. F Change
					R Square Change	F Change	df1	df2	
1	,132 ^a	,017	-,008	,83698	,017	,691	1	39	,411
2	,395 ^b	,156	,112	,78567	,139	6,260	1	38	,017

a. Predictors: (Constant), STC_mean

b. Predictors: (Constant), STC_mean, conf_relac_mean

STC = Shared temporal cognitions

Table 48. Analysis of coefficients fit

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	,484	1	,484	,691	,411 ^b
	Residual	27,321	39	,701		
	Total	27,805	40			
2	Regression	4,348	2	2,174	3,522	,040 ^c
	Residual	23,457	38	,617		
	Total	27,805	40			

a. Dependent Variable: L_viabilidad

b. Predictors: (Constant), STC_mean

c. Predictors: (Constant), STC_mean, conf_relac_mean

STC = Shared temporal cognitions

Table 49. Analysis of effect strength

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5,388	,950		5,672	,000
	STC_mean	,155	,186	,132	,831	,411
2	(Constant)	7,376	1,194		6,176	,000
	STC_mean	-,050	,193	-,042	-,257	,798
	conf_relac_mean	-,475	,190	-,412	-2,502	,017

a. Dependent Variable: L_viabilidad

STC = Shared temporal cognitions

TASK CONFLICT

Model statistics summary of mediation effect of task conflict on the relationship between shared temporal cognitions and **team performance perceived by team**:

Table 50. Analysis of model fit

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	,506 ^a	,256	,237	,48391	,256	13,761	1	40	,001
2	,622 ^b	,387	,355	,44493	,131	8,315	1	39	,006

a. Predictors: (Constant), STC_mean

b. Predictors: (Constant), STC_mean, conf_tarefa_mean

STC = Shared temporal cognitions

Table 51. Analysis of coefficients fit

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3,222	1	3,222	13,761	,001 ^b
	Residual	9,367	40	,234		
	Total	12,589	41			
2	Regression	4,868	2	2,434	12,296	,000 ^c
	Residual	7,721	39	,198		
	Total	12,589	41			

a. Dependent Variable: eficacia_mean

b. Predictors: (Constant), STC_mean

c. Predictors: (Constant), STC_mean, conf_tarefa_mean

STC = Shared temporal cognitions

Table 52. Analysis of effect strength

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3,812	,549		6,948	,000
	STC_mean	,399	,108	,506	3,710	,001
2	(Constant)	5,417	,751		7,211	,000
	STC_mean	,245	,112	,311	2,179	,035
	conf_tarefa_mean	-,277	,096	-,411	-2,884	,006

a. Dependent Variable: eficacia_mean

STC = Shared temporal cognitions

Model statistics summary of mediation effect of task conflict on the relationship between shared temporal cognitions and **team satisfaction perceived by team**:

Table 53. Analysis of model fit

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	,473 ^a	,223	,204	,72191	,223	11,506	1	40	,002
2	,600 ^b	,360	,327	,66374	,137	8,318	1	39	,006

a. Predictors: (Constant), STC_mean

b. Predictors: (Constant), STC_mean, conf_tarefa_mean

STC = Shared temporal cognitions

Table 54. Analysis of coefficients fit

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5,996	1	5,996	11,506	,002 ^b
	Residual	20,846	40	,521		
	Total	26,842	41			
2	Regression	9,661	2	4,830	10,965	,000 ^c
	Residual	17,181	39	,441		
	Total	26,842	41			

a. Dependent Variable: satisf_mean

b. Predictors: (Constant), STC_mean

c. Predictors: (Constant), STC_mean, conf_tarefa_mean

STC = Shared temporal cognitions

Table 55. Analysis of effect strength

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2,877	,818		3,515	,001
	STC_mean	,544	,160	,473	3,392	,002
2	(Constant)	5,272	1,121		4,704	,000
	STC_mean	,314	,168	,273	1,875	,068
	conf_tarefa_mean	-,414	,143	-,420	-2,884	,006

a. Dependent Variable: satisf_mean

STC = Shared temporal cognitions

Model statistics summary of mediation effect of task conflict on the relationship between shared temporal cognitions and **team viability perceived by team**:

Table 56. Analysis of model fit

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	,523 ^a	,273	,255	,81124	,273	15,055	1	40	,000
2	,635 ^b	,403	,372	,74480	,129	8,454	1	39	,006

a. Predictors: (Constant), STC_mean

b. Predictors: (Constant), STC_mean, conf_tarefa_mean

STC = Shared temporal cognitions

Table 57. Analysis of coefficients fit

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9,908	1	9,908	15,055	,000 ^b
	Residual	26,324	40	,658		
	Total	36,232	41			
2	Regression	14,597	2	7,299	13,157	,000 ^c
	Residual	21,635	39	,555		
	Total	36,232	41			

a. Dependent Variable: viabilidade_mean

b. Predictors: (Constant), STC_mean

c. Predictors: (Constant), STC_mean, conf_tarefa_mean

STC = Shared temporal cognitions

Table 58. Analysis of effect strength

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2,248	,920		2,444	,019
	STC_mean	,699	,180	,523	3,880	,000
2	(Constant)	4,957	1,257		3,942	,000
	STC_mean	,439	,188	,329	2,336	,025
	conf_tarefa_mean	-,468	,161	-,409	-2,908	,006

a. Dependent Variable: viabilidade_mean

STC = Shared temporal cognitions

Model statistics summary of mediation effect of task conflict on the relationship between shared temporal cognitions and **team performance perceived by leader**:

Table 59. Analysis of model fit

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	,117 ^a	,014	-,012	,74258	,014	,543	1	39	,466
2	,231 ^b	,053	,004	,73698	,040	1,594	1	38	,214

a. Predictors: (Constant), STC_mean

b. Predictors: (Constant), STC_mean, conf_tarefa_mean

STC = Shared temporal cognitions

Table 60. Analysis of coefficients fit

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	,300	1	,300	,543	,466 ^b
	Residual	21,505	39	,551		
	Total	21,805	40			
2	Regression	1,165	2	,583	1,073	,352 ^c
	Residual	20,639	38	,543		
	Total	21,805	40			

a. Dependent Variable: L_eficacia

b. Predictors: (Constant), STC_mean

c. Predictors: (Constant), STC_mean, conf_tarefa_mean

STC = Shared temporal cognitions

Table 61. Analysis of effect strength

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5,055	,843		5,998	,000
	STC_mean	,122	,165	,117	,737	,466
2	(Constant)	6,228	1,250		4,982	,000
	STC_mean	,011	,186	,011	,060	,953
	conf_tarefa_mean	-,204	,162	-,226	-1,263	,214

a. Dependent Variable: L_eficacia

STC = Shared temporal cognitions

Model statistics summary of mediation effect of task conflict on the relationship between shared temporal cognitions and **team satisfaction perceived by leader**:

Table 62. Analysis of model fit

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	,098 ^a	,010	-,016	,87993	,010	,375	1	39	,544
2	,115 ^b	,013	-,039	,88977	,004	,143	1	38	,708

a. Predictors: (Constant), STC_mean

b. Predictors: (Constant), STC_mean, conf_tarefa_mean

STC = Shared temporal cognitions

Table 63. Analysis of coefficients fit

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	,291	1	,291	,375	,544 ^b
	Residual	30,197	39	,774		
	Total	30,488	40			
2	Regression	,404	2	,202	,255	,776 ^c
	Residual	30,084	38	,792		
	Total	30,488	40			

a. Dependent Variable: L_satisf

b. Predictors: (Constant), STC_mean

c. Predictors: (Constant), STC_mean, conf_tarefa_mean

STC = Shared temporal cognitions

Table 64. Analysis of effect strength

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5,101	,999		5,107	,000
	STC_mean	,120	,196	,098	,613	,544
2	(Constant)	5,525	1,509		3,661	,001
	STC_mean	,080	,225	,065	,356	,724
	conf_tarefa_mean	-,074	,195	-,069	-,378	,708

a. Dependent Variable: L_satisf

STC = Shared temporal cognitions

Model statistics summary of mediation effect of task conflict on the relationship between shared temporal cognitions and **team viability perceived by leader**:

Table 65. Analysis of model fit

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	,132 ^a	,017	-,008	,83698	,017	,691	1	39	,411
2	,242 ^b	,059	,009	,82994	,041	1,664	1	38	,205

a. Predictors: (Constant), STC_mean

b. Predictors: (Constant), STC_mean, conf_tarefa_mean

STC = Shared temporal cognitions

Table 66. Analysis of coefficients fit

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	,484	1	,484	,691	,411 ^b
	Residual	27,321	39	,701		
	Total	27,805	40			
2	Regression	1,630	2	,815	1,183	,317 ^c
	Residual	26,175	38	,689		
	Total	27,805	40			

a. Dependent Variable: L_viabilidade

b. Predictors: (Constant), STC_mean

c. Predictors: (Constant), STC_mean, conf_tarefa_mean

STC = Shared temporal cognitions

Table 67. Analysis of effect strength

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5,388	,950		5,672	,000
	STC_mean	,155	,186	,132	,831	,411
2	(Constant)	6,738	1,408		4,786	,000
	STC_mean	,028	,210	,023	,131	,896
	conf_tarefa_mean	-,235	,182	-,230	-1,290	,205

a. Dependent Variable: L_viabilidade

STC = Shared temporal cognitions

Appendix J - Moderation analysis results

* Note: Sample size = 42 teams for the effects testing for team effectiveness by team; Sample size = 41 individuals for the effects testing for team effectiveness by leader. Unstandardized coefficients are reported. Bootstrap sample size = 5000.

Values for quantitative moderators are the mean and plus/minus one SD from mean. Values for dichotomous moderators are the two values of the moderator. Level of confidence for all confidence intervals in output 95,00

Table 68. Interaction effect model analysis: Model 3A – leader's sensegiving as a moderator of the relationship between temporal conflict and team effectiveness by team

Model Summary – Team performance

<i>R</i>	<i>R</i> ²	<i>MSE</i>	<i>F</i>	<i>df1</i>	<i>df2</i>	<i>p</i>
,67	,44	,18	10,04	3,00	38,00	,000

Model Summary – Team satisfaction

<i>R</i>	<i>R</i> ²	<i>MSE</i>	<i>F</i>	<i>df1</i>	<i>df2</i>	<i>p</i>
,69	,48	,37	11,80	3,00	38,00	,000

Model Summary – Team viability

<i>R</i>	<i>R</i> ²	<i>MSE</i>	<i>F</i>	<i>df1</i>	<i>df2</i>	<i>p</i>
,61	,37	,60	7,39	3,00	38,00	,001

Table 69. Interaction effect coefficient analysis: Model 3A – leader's sensegiving as a moderator of the relationship between temporal conflict and team effectiveness by team

Predictor	<i>b</i>	<i>SE</i>	<i>t</i>	<i>p</i>
Team performance				
Constant	5,28	1,31	4,02	,000
Leader's sensegiving (LSG)	,18	,25	,71	,481
Temporal conflict (TC)	-,48	,43	-1,10	,277
Interaction LSG x TC	,07	,09	,79	,434
Team satisfaction				
Constant	4,65	1,84	2,52	,016
Leader's sensegiving (LSG)	,34	,35	,96	,341
Temporal conflict (TC)	-,62	,61	-1,01	,318
Interaction LSG x TC	,07	,12	,55	,586
Team viability				
Constant	4,51	2,37	1,91	,06
Leader's sensegiving (LSG)	,44	,45	,97	,34
Temporal conflict	-,45	,78	-,58	,57
Interaction LSG x TC	,02	,15	,12	,91

Table 70. Interaction effect model analysis: Model 3A – leader's sensegiving as a moderator of the relationship between temporal conflict and team effectiveness by leader

Model Summary – Team performance by leader

<i>R</i>	<i>R</i> ²	<i>MSE</i>	<i>F</i>	<i>df1</i>	<i>df2</i>	<i>p</i>
,61	,37	,37	7,17	3,00	37,00	,001

Model Summary – Team satisfaction by leader

<i>R</i>	<i>R</i> ²	<i>MSE</i>	<i>F</i>	<i>df1</i>	<i>df2</i>	<i>p</i>
,37	,14	,71	1,98	3,00	37,00	,134

Model Summary – Team viability by leader

<i>R</i>	<i>R</i> ²	<i>MSE</i>	<i>F</i>	<i>df1</i>	<i>df2</i>	<i>p</i>
,45	,20	,60	3,16	3,00	37,00	,036

Table 71. Interaction effect coefficient analysis: Model 3A – leader's sensegiving as a moderator of the relationship between temporal conflict and team effectiveness by leader

Predictor	<i>b</i>	<i>SE</i>	<i>t</i>	<i>p</i>
Team performance by leader				
Constant	-,93	2,27	-,41	,685
Leader's sensegiving (LSG)	1,16	,42	2,77	,009
Temporal conflict (TC)	1,22	,70	1,74	,090
Interaction LSG x TC	-,20	,13	-1,49	,145
Team satisfaction by leader				
Constant	2,03	3,14	,65	,522
Leader's sensegiving (LSG)	,68	,58	1,18	,246
Temporal conflict (TC)	,53	,97	,54	,590
Interaction LSG x TC	-,09	,19	-,51	,615
Team viability by leader				
Constant	1,18	2,88	,41	,686
Leader's sensegiving (LSG)	,90	,53	1,70	,098
Temporal conflict	,84	,89	,95	,349
Interaction LSG x TC	-,14	,17	-,84	,404

Table 72. Interaction effect model analysis: Model 4A – leader's promotion of sensemaking as a moderator of the relationship between temporal conflict and team effectiveness by team

Model Summary – Team performance

<i>R</i>	<i>R</i> ²	<i>MSE</i>	<i>F</i>	<i>df1</i>	<i>df2</i>	<i>p</i>
,62	,39	,20	7,94	3,00	38,00	,000

Model Summary – Team satisfaction

<i>R</i>	<i>R</i> ²	<i>MSE</i>	<i>F</i>	<i>df1</i>	<i>df2</i>	<i>p</i>
,66	,43	,40	9,74	3,00	38,00	,000

Model Summary – Team viability

<i>R</i>	<i>R</i> ²	<i>MSE</i>	<i>F</i>	<i>df1</i>	<i>df2</i>	<i>p</i>
,57	,33	,64	6,20	3,00	38,00	,002

Table 73. Interaction effect coefficient analysis: Model 4A – leader's promotion of sensemaking as a moderator of the relationship between temporal conflict and team effectiveness by team

Predictor	<i>b</i>	<i>SE</i>	<i>t</i>	<i>p</i>
Team performance				
Constant	6,08	1,20	5,07	,000
Leader's promotion of sensemaking (LPSM)	,01	,23	,04	,969
Temporal conflict (TC)	-,62	,39	-1,57	,124
Interaction LPSM x TC	,10	,08	1,27	,212
Team satisfaction				
Constant	5,87	1,68	3,49	,001
Leader's promotion of sensemaking (LPSM)	,08	,32	,25	,802
Temporal conflict (TC)	-,86	,55	-1,56	,126
Interaction LPSM x TC	,12	,11	1,10	,278
Team viability				
Constant	6,49	2,13	3,05	,004
Leader's promotion of sensemaking (LPSM)	,04	,41	,09	,931
Temporal conflict	-,95	,70	-1,36	,182
Interaction LPSM x TC	,12	,14	,87	,390

Table 74. Interaction effect model analysis: Model 4A – leader's promotion of sensemaking as a moderator of the relationship between temporal conflict and team effectiveness by leader

Model Summary – Team performance by leader

<i>R</i>	<i>R</i> ²	<i>MSE</i>	<i>F</i>	<i>df1</i>	<i>df2</i>	<i>p</i>
,44	,19	,48	2,90	3,00	37,00	,048

Model Summary – Team satisfaction by leader

<i>R</i>	<i>R</i> ²	<i>MSE</i>	<i>F</i>	<i>df1</i>	<i>df2</i>	<i>p</i>
,33	,11	,73	1,55	3,00	37,00	,218

Model Summary – Team viability by leader

<i>R</i>	<i>R</i> ²	<i>MSE</i>	<i>F</i>	<i>df1</i>	<i>df2</i>	<i>p</i>
,35	,12	,66	1,73	3,00	37,00	,178

Table 75. Interaction effect coefficient analysis: Model 4A – leader's promotion of sensemaking as a moderator of the relationship between temporal conflict and team effectiveness by leader

Predictor	<i>b</i>	<i>SE</i>	<i>t</i>	<i>p</i>
Team performance by leader				
Constant	,18	2,68	,07	,946
Leader's promotion of sensemaking (LPSM)	,95	,49	1,96	,057
Temporal conflict (TC)	1,11	,78	1,42	,164
Interaction LPSM x TC	-,18	,15	-1,22	,230
Team satisfaction by leader				
Constant	,58	3,32	,18	,861
Leader's promotion of sensemaking (LPSM)	,95	,60	1,58	,122
Temporal conflict (TC)	1,12	,97	1,16	,254
Interaction LPSM x TC	-,21	,18	-1,14	,261
Team viability by leader				
Constant	1,45	3,15	,46	,648
Leader's promotion of sensemaking (LPSM)	,85	,57	1,49	,146
Temporal conflict	,94	,92	1,02	,313
Interaction LPSM x TC	-,16	,17	-,94	,355

Table 76. Interaction effect model analysis: Model 3B – leader's sensegiving as a moderator of the relationship between relationship conflict and team effectiveness by team

Model Summary – Team performance

<i>R</i>	<i>R</i> ²	<i>MSE</i>	<i>F</i>	<i>df1</i>	<i>df2</i>	<i>p</i>
,71	,51	,16	13,10	3,00	38,00	,000

Model Summary – Team satisfaction

<i>R</i>	<i>R</i> ²	<i>MSE</i>	<i>F</i>	<i>df1</i>	<i>df2</i>	<i>p</i>
,71	,51	,35	13,08	3,00	38,00	,000

Model Summary – Team viability

<i>R</i>	<i>R</i> ²	<i>MSE</i>	<i>F</i>	<i>df1</i>	<i>df2</i>	<i>p</i>
,66	,44	,54	9,78	3,00	38,00	,000

Table 77. Interaction effect coefficient analysis: Model 3B – leader's sensegiving as a moderator of the relationship between relationship conflict and team effectiveness by team

Predictor	<i>b</i>	<i>SE</i>	<i>t</i>	<i>p</i>
Team performance				
Constant	6,58	1,17	5,62	,000
Leader's sensegiving (LSG)	-,05	,22	-,25	,804
Relationship conflict (RC)	-,98	,45	2,20	,034
Interaction LSG x RC	,15	,09	1,67	,104
Team satisfaction				
Constant	6,46	1,71	3,78	,001
Leader's sensegiving (LSG)	-,05	,32	-,15	,885
Relationship conflict (RC)	-1,39	,65	-2,13	,040
Interaction LSG x RC	,22	,13	1,67	,104
Team viability				
Constant	8,06	2,13	3,79	,001
Leader's sensegiving (LSG)	-,26	,39	-,65	,521
Relationship conflict (RC)	-1,81	,81	-2,22	,032
Interaction LSG x RC	,27	,16	1,63	,112

Table 78. Interaction effect model analysis: Model 3B - leader's sensegiving as a moderator of the relationship between relationship conflict and team effectiveness by leader

Model Summary – Team performance by leader

<i>R</i>	<i>R</i> ²	<i>MSE</i>	<i>F</i>	<i>df1</i>	<i>df2</i>	<i>p</i>
,55	,30	,41	5,28	3,00	37,00	,004

Model Summary – Team satisfaction by leader

<i>R</i>	<i>R</i> ²	<i>MSE</i>	<i>F</i>	<i>df1</i>	<i>df2</i>	<i>p</i>
,39	,15	,70	2,16	3,00	37,00	,109

Model Summary – Team viability by leader

<i>R</i>	<i>R</i> ²	<i>MSE</i>	<i>F</i>	<i>df1</i>	<i>df2</i>	<i>p</i>
,45	,20	,60	3,17	3,00	37,00	,036

Table 79. Interaction effect coefficient analysis: Model 3B – leader's sensegiving as a moderator of the relationship between relationship conflict and team effectiveness by leader

Predictor	<i>b</i>	<i>SE</i>	<i>t</i>	<i>p</i>
Team performance by leader				
Constant	2,49	2,17	1,15	,259
Leader's sensegiving (LSG)	,60	,39	1,53	,134
Relationship conflict (RC)	,22	,77	,29	,776
Interaction LSG x RC	-,04	,15	-,25	,802
Team satisfaction by leader				
Constant	6,05	2,82	2,14	,039
Leader's sensegiving (LSG)	-,02	,51	-,03	,973
Relationship conflict (RC)	-,81	1,00	-,81	,421
Interaction LSG x RC	,14	,20	,70	,489
Team viability by leader				
Constant	5,75	2,61	2,21	,034
Leader's sensegiving (LSG)	,17	,47	,35	,727
Relationship conflict (RC)	-,51	,92	-,55	,587
Interaction LSG x RC	,06	,18	,31	,757

Table 80. Interaction effect model analysis: Model 4B - leader's promotion of sensemaking as a moderator of the relationship between relationship conflict and team effectiveness by team

Model Summary – Team performance

<i>R</i>	<i>R</i> ²	<i>MSE</i>	<i>F</i>	<i>df1</i>	<i>df2</i>	<i>p</i>
,69	,48	,17	11,58	3,00	38,00	,000

Model Summary – Team satisfaction

<i>R</i>	<i>R</i> ²	<i>MSE</i>	<i>F</i>	<i>df1</i>	<i>df2</i>	<i>p</i>
,69	,48	,37	11,57	3,00	38,00	,000

Model Summary – Team viability

<i>R</i>	<i>R</i> ²	<i>MSE</i>	<i>F</i>	<i>df1</i>	<i>df2</i>	<i>p</i>
,63	,40	,57	8,37	3,00	38,00	,000

Table 81. Interaction effect coefficient analysis: Model 4B – leader's promotion of sensemaking as a moderator of the relationship between relationship conflict and team effectiveness by team

Predictor	<i>b</i>	<i>SE</i>	<i>t</i>	<i>p</i>
Team performance				
Constant	6,35	,99	6,40	,000
Leader's promotion of sensemaking (LPSM)	,01	,19	,05	,960
Relationship conflict (RC)	-,75	,39	-1,91	,064
Interaction LPSM x RC	,09	,08	1,13	,264
Team satisfaction				
Constant	5,73	1,45	3,96	,000
Leader's promotion of sensemaking (LPSM)	,13	,28	,46	,646
Relationship conflict (RC)	-,89	,58	-1,54	,132
Interaction LPSM x RC	,10	,12	,84	,408
Team viability				
Constant	5,99	1,81	3,32	,002
Leader's promotion of sensemaking (LPSM)	,18	,35	,52	,603
Relationship conflict (RC)	-,77	,72	-1,06	,295
Interaction LPSM x RC	,04	,15	,26	,797

Table 82. Interaction effect model analysis: Model 4B – leader's promotion of sensemaking as a moderator of the relationship between relationship conflict and team effectiveness by leader

Model Summary – Team performance by leader

<i>R</i>	<i>R</i> ²	<i>MSE</i>	<i>F</i>	<i>df1</i>	<i>df2</i>	<i>p</i>
,44	,19	,47	2,98	3,00	37,00	,044

Model Summary – Team satisfaction by leader

<i>R</i>	<i>R</i> ²	<i>MSE</i>	<i>F</i>	<i>df1</i>	<i>df2</i>	<i>p</i>
,34	,11	,73	1,57	3,00	37,00	,212

Model Summary – Team viability by leader

<i>R</i>	<i>R</i> ²	<i>MSE</i>	<i>F</i>	<i>df1</i>	<i>df2</i>	<i>p</i>
,41	,17	,63	2,48	3,00	37,00	,076

Table 83. Interaction effect coefficient analysis: Model 4B – leader's promotion of sensemaking as a moderator of the relationship between relationship conflict and team effectiveness by leader

Predictor	<i>b</i>	<i>SE</i>	<i>T</i>	<i>p</i>
Team performance by leader				
Constant	3,01	1,96	1,53	,133
Leader's promotion of sensemaking (LPSM)	,61	,37	1,66	,105
Relationship conflict (RC)	,62	,71	,87	,390
Interaction LPSM x RC	-,17	,14	-1,21	,235
Team satisfaction by leader				
Constant	6,30	2,44	2,59	,014
Leader's promotion of sensemaking (LPSM)	-,02	,45	-,05	,959
Relationship conflict (RC)	-,62	,88	-,71	,484
Interaction LPSM x RC	,08	,18	,43	,670
Team viability by leader				
Constant	5,62	2,26	2,49	,017
Leader's promotion of sensemaking (LPSM)	,26	,42	,61	,547
Relationship conflict (RC)	-,08	,81	-,10	,921
Interaction LPSM x RC	-,06	,17	-,37	,713

Table 84. Interaction effect model analysis: Model 3C – leader's sensegiving as a moderator of the relationship between task conflict and team effectiveness by team

Model Summary – Team performance

<i>R</i>	<i>R</i> ²	<i>MSE</i>	<i>F</i>	<i>df1</i>	<i>df2</i>	<i>p</i>
,68	,47	,18	11,11	3,00	38,00	,000

Model Summary – Team satisfaction

<i>R</i>	<i>R</i> ²	<i>MSE</i>	<i>F</i>	<i>df1</i>	<i>df2</i>	<i>p</i>
,70	,49	,36	12,35	3,00	38,00	,000

Model Summary – Team viability

<i>R</i>	<i>R</i> ²	<i>MSE</i>	<i>F</i>	<i>df1</i>	<i>df2</i>	<i>p</i>
,64	,41	,56	8,75	3,00	38,00	,000

Table 85. Interaction effect coefficient analysis: Model 3C – leader's sensegiving as a moderator of the relationship between task conflict and team effectiveness by team

Predictor	<i>b</i>	<i>SE</i>	<i>t</i>	<i>p</i>
Team performance				
Constant	5,09	1,57	3,24	,003
Leader's sensegiving (LSG)	,26	,30	,88	,383
Task conflict (TaC)	-,27	,47	-,57	,570
Interaction LSG x TaC	,01	,09	,13	,896
Team satisfaction				
Constant	6,61	2,24	2,95	,005
Leader's sensegiving (LSG)	-,04	,42	-,09	,929
Task conflict (TaC)	-1,08	,66	-1,63	,111
Interaction LSG x TaC	,16	,13	1,24	,224
Team viability				
Constant	7,12	2,81	2,53	,016
Leader's sensegiving (LSG)	-,01	,53	-,02	,981
Task conflict (TaC)	-1,05	,83	-1,26	,216
Interaction LSG x TaC	,12	,17	,75	,459

Table 86. Interaction effect model analysis: Model 3C – leader's sensegiving as a moderator of the relationship between task conflict and team effectiveness by leader

Model Summary – Team performance by leader

<i>R</i>	<i>R</i> ²	<i>MSE</i>	<i>F</i>	<i>df1</i>	<i>df2</i>	<i>p</i>
,58	,34	,39	6,28	3,00	37,00	,002

Model Summary – Team satisfaction by leader

<i>R</i>	<i>R</i> ²	<i>MSE</i>	<i>F</i>	<i>df1</i>	<i>df2</i>	<i>p</i>
,41	,17	,69	2,47	3,00	37,00	,077

Model Summary – Team viability by leader

<i>R</i>	<i>R</i> ²	<i>MSE</i>	<i>F</i>	<i>df1</i>	<i>df2</i>	<i>p</i>
,43	,18	,61	2,79	3,00	37,00	,054

Table 87. Interaction effect coefficient analysis: Model 3C – leader's sensegiving as a moderator of the relationship between task conflict and team effectiveness by leader

Predictor	<i>b</i>	<i>SE</i>	<i>t</i>	<i>p</i>
Team performance by leader				
Constant	-,51	3,47	-,15	,884
Leader's sensegiving (LSG)	1,05	,62	1,68	,101
Task conflict (TaC)	,85	,94	,91	,369
Interaction LSG x TaC	-,12	,17	-,69	,493
Team satisfaction by leader				
Constant	1,61	4,60	,35	,729
Leader's sensegiving (LSG)	,63	,82	,76	,451
Task conflict (TaC)	,37	1,24	,30	,768
Interaction LSG x TaC	-,02	,23	-,08	,935
Team viability by leader				
Constant	3,18	4,35	,73	,469
Leader's sensegiving (LSG)	,53	,78	,68	,503
Task conflict (TaC)	,14	1,17	,12	,902
Interaction LSG x TaC	-,01	,22	-,06	,953

Table 88. Interaction effect model analysis: Model 4C – leader's promotion of sensemaking as a moderator of the relationship between task conflict and team effectiveness by team

Model Summary – Team performance

<i>R</i>	<i>R</i> ²	<i>MSE</i>	<i>F</i>	<i>df1</i>	<i>df2</i>	<i>p</i>
,67	,45	,18	10,38	3,00	38,00	,000

Model Summary – Team satisfaction

<i>R</i>	<i>R</i> ²	<i>MSE</i>	<i>F</i>	<i>df1</i>	<i>df2</i>	<i>p</i>
,72	,51	,34	13,41	3,00	38,00	,000

Model Summary – Team viability

<i>R</i>	<i>R</i> ²	<i>MSE</i>	<i>F</i>	<i>df1</i>	<i>df2</i>	<i>p</i>
,65	,42	,55	9,30	3,00	38,00	,000

Table 89. Interaction effect coefficient analysis: Model 4C – leader's promotion of sensemaking as a moderator of the relationship between task conflict and team effectiveness by team

Predictor	<i>b</i>	<i>SE</i>	<i>t</i>	<i>p</i>
Team performance				
Constant	6,21	1,27	4,87	,000
Leader's promotion of sensemaking (LPSM)	,06	,25	,26	,796
Task conflict (TaC)	-,52	,40	-1,32	,195
Interaction LPSM x TaC	,06	,08	,70	,489
Team satisfaction				
Constant	7,99	1,75	4,57	,000
Leader's promotion of sensemaking (LPSM)	-,30	,34	-,88	,384
Task conflict (TaC)	-1,43	,54	-2,64	,012
Interaction LPSM x TaC	,23	,11	2,06	,046
Team viability				
Constant	8,54	2,21	3,86	,000
Leader's promotion of sensemaking (LPSM)	-,28	,43	-,66	,511
Task conflict (TaC)	-1,43	,69	-2,08	,044
Interaction LPSM x TaC	,20	,14	1,41	,167

Table 90. Interaction effect model analysis: Model 4C – leader's promotion of sensemaking as a moderator of the relationship between task conflict and team effectiveness by leader

Model Summary – Team performance by leader

<i>R</i>	<i>R</i> ²	<i>MSE</i>	<i>F</i>	<i>df1</i>	<i>df2</i>	<i>p</i>
,39	,15	,50	2,17	3,00	37,00	,108

Model Summary – Team satisfaction by leader

<i>R</i>	<i>R</i> ²	<i>MSE</i>	<i>F</i>	<i>df1</i>	<i>df2</i>	<i>p</i>
,30	,09	,75	1,19	3,00	37,00	,326

Model Summary – Team viability by leader

<i>R</i>	<i>R</i> ²	<i>MSE</i>	<i>F</i>	<i>df1</i>	<i>df2</i>	<i>p</i>
,32	,10	,67	1,40	3,00	37,00	,258

Table 91. Interaction effect coefficient analysis: Model 4C – leader's promotion of sensemaking as a moderator of the relationship between task conflict and team effectiveness by leader

Predictor	<i>b</i>	<i>SE</i>	<i>T</i>	<i>p</i>
Team performance by leader				
Constant	1,68	3,34	,50	,619
Leader's promotion of sensemaking (LPSM)	,76	,61	1,25	,218
Task conflict (TaC)	,70	,92	,76	,452
Interaction LPSM x TaC	-,14	,17	-,78	,440
Team satisfaction by leader				
Constant	3,67	4,09	,90	,376
Leader's promotion of sensemaking (LPSM)	,32	,75	,43	,672
Task conflict (TaC)	,08	1,12	,07	,945
Interaction LPSM x TaC	,01	,21	,05	,964
Team viability by leader				
Constant	6,10	3,88	1,57	,125
Leader's promotion of sensemaking (LPSM)	,06	,71	,09	,929
Task conflict (TaC)	-,36	1,06	-,34	,737
Interaction LPSM x TaC	,05	,20	,27	,791