

# Production Planning & Control

## The Management of Operations

ISSN: (Print) (Online) Journal homepage: [www.tandfonline.com/journals/tppc20](http://www.tandfonline.com/journals/tppc20)

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To cite this article: Amin Akhavan Tabassi, David James Bryde, Roula Michaelides, David Bamford & Maria Argyropoulou (08 Feb 2024): Leaders, conflict, and team coordination: a relational leadership approach in temporary organisations, Production Planning & Control, DOI: [10.1080/09537287.2024.2313518](https://doi.org/10.1080/09537287.2024.2313518)

To link to this article: <https://doi.org/10.1080/09537287.2024.2313518>



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# Leaders, conflict, and team coordination: a relational leadership approach in temporary organisations

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## ABSTRACT

This study explores how the level of relational leadership of team leaders influences team members' conflict-handling style and team coordination in temporary organisations (TOs). Leaning upon Socio-Psychological and relational leadership theories, the research also evaluates how the cultural background of leaders moderates the nature of the association between relational leadership and project team performance. This contribution is unique by engaging with three moderating cultural groups while drawing on data from 126 teams in TOs using PLS path modelling. The results explain that relational leadership influences team members' cooperative and conflict-avoiding styles, which are, in turn, positively associated with team coordination and team performance. The judicious and considered use of conflict-avoiding should be recognised as a thoughtful style in multicultural team contexts and as a consequence of relational leadership. Team coordination and performance, however, are related more to relational leadership with the sample of leaders from a specific within-nationality cultural background.

## ARTICLE HISTORY

Received 4 January 2023  
Accepted 24 January 2024

## KEYWORDS



Relational leadership; conflict management; team performance; within nationality cultural backgrounds; temporary organisations; SDG 8: decent work and economic growth


## 1. Introduction

Conflict is a typical feature of group operations and occurs frequently when people, as part of organisations, interact in the workplace (c.f. Tjosvold 2008; Humphrey et al. 2017; Driskell, Salas, and Driskell 2018; Hristov et al. 2024). The extant literature indicates that conflict is not always detrimental to performance and, if handled in a certain way, can be highly constructive in team performance (Bachrach and Mullins 2019; Tabassi, Abdullah, and Bryde 2019), particularly in temporary organisations (TOs). A TO is defined as the formation of temporary systems, i.e. projects, programs or task forces, intended for the achievement of business strategies (Bakker 2010; Ding et al. 2017). So, TOs are viewed as groups of individuals who are working together for a shared cause in a time-limited framework (Agarwal et al. 2021; Tyssen, Wald, and Heidenreich 2014). TOs can be challenging working environments for employees due to mental and physical exhaustion, social isolation, the need for resilience and high levels of stress (Goetz, Wald, and Freisinger 2021) that increase the likelihood of conflict among the members. Hence, TOs are environments evidencing various sources of potential conflict, resulting in managerial apprehension and challenges to effective relationships and team coordination (Zerjav, Edkins, and Davies 2018). Consequently, the coordination of project teams in TOs is a prominent challenge for

project managers and leaders (Sanchez-Manzanares et al. 2020). This situation has led to a call for competent leadership practices in TOs among project managers (Fellows et al. 2002; Marques-Quinteiro et al. 2022; Garengo and Betto 2022; Delmas and Pekovic 2017).

As business environments continue to evolve, becoming more dynamic, uncertain, and complex, there has been a growing academic and professional interest in the application of adaptive leadership styles (c.f. Roberson and Perry 2021; Muller, Gerald, and Turner 2012; McClean and Collins 2019). This heightened interest appears to be driven by the perceived suitability of adaptive leadership in facilitating organisational growth while simultaneously enabling individuals to attain their objectives (DuBryn 2012). Despite extensive research on leadership-related topics in permanent organisations, many TOs continue to struggle with effective team coordination and dealing with conflict, resulting in a substantial decline in productivity (van Berkel, Ferguson, and Groenewegen 2016). Hence, knowledge gaps continue to exist regarding the most appropriate leadership styles for managing teams in TOs (c.f. Beck et al. 2022; Gemünden, Lehner, and Kock 2018; Tabassi, Abdullah, and Bryde 2019). A key question is how do leadership styles work to facilitate effective relationships between leaders and subordinates to meet shared objectives (Khan, Khan, and Soomro 2020) and to improve team coordination in a TO? Consistent with this

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 Supplemental data for this article can be accessed online at <https://doi.org/10.1080/09537287.2024.2313518>.

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view, a school of thought has been developed to discover the nature of leadership as a relational process and is typically seen as mutual interactions in leader-follower dynamics (Roberson and Perry 2021; Gittell and Douglass 2012). Although the relationship-oriented approach has been presented in the body of knowledge since the earliest structured research of leadership in organisations (Stogdill and Coons 1957), the relational leadership terminology has been introduced in the late 1990s (Murrell 1997). The theory of relational leadership is still a developing perspective that occurs in a broader team-based environment and is looked upon as a vital enabler for making improvements to social interactions (Uhl-Bien 2006) and in dealing with 'team-level conflict'. Despite the emphasis of relational leadership on building positive relationships and fostering collaboration for effective leadership and organisational success (Roberson and Perry 2021; Kissi, Dainty, and Tuuli 2013; Gittell and Douglass 2012), there is still a lack of empirical research on how relational leadership relates to team performance in TOs. Most contemporary leadership theories build on the assumption of stable and permanent organisations, which frequently neglect complex interactions between leader and followers, focusing on relationships, as significant features of TOs (Tyssen, Wald, and Heidenreich 2014). To address this gap, our study investigates the role of relational leadership in TOs, focusing on projects as a common form of TOs in modern businesses (Beck et al. 2022). Please note that the terms projects and TOs are used interchangeably throughout this paper.

Additionally, while relational leadership is recognised as essential for permanent organisations' success (Kissi, Dainty, and Tuuli 2013; Muller, Gerdali, and Turner 2012; Tabassi et al. 2017), limited empirical research has explored the dimensions of relational leadership behaviour among team leaders and its influence on team members' conflict resolution in TOs. Our research aims to provide a more comprehensive understanding of this subject, offering insights to guide future research and inform project practitioners.

Lean upon Socio-Psychological theories (hereinafter referred to as 'SPTs') (Maslow 1943; Festinger 1954; Baumeister and Leary 1995), which assert that individuals and teams are interlinked, we adopted an integrative theoretical approach that fuses conflict management and relational leadership concepts in the context of the TOs formed to execute construction projects. This research also addresses the need for further explanation of conflict management in TOs with task interdependence, such as construction teams, as highlighted by Upadhyay (2021), Rispen, Jehn, and Steinel (2021), and Marques-Quinteiro et al. (2022). Additionally, we focus on multicultural TOs in Malaysia, which present cross-cultural management challenges (Goetz, Wald, and Freisinger 2021). Specifically, our study examines TOs in Malaysia that comprise leaders and team members from three within-nationality cultural backgrounds (see Raithel, van Knippenberg, and Stam 2021 for within-nationality cultural differences): Malay, Chinese and Indian. Within-nationality cultural differences in temporary organisations refer to the nuanced variations in cultural norms, values, behaviours, and communication patterns that exist within a single nationality or country (Raithel, van Knippenberg, and Stam 2021). While it is common to associate cultural differences with interactions

between individuals from different national backgrounds, this concept recognises that even within a single nation, there can be diverse cultural practices and perspectives based on factors such as regional, linguistic, socioeconomic, or generational variations (Liden et al. (2014). In contrast to neighbourhood concepts, which often pertain to localised communities or geographical areas, within-nationality cultural differences emphasise the intricate dynamics that emerge when individuals from the same nationality interact within the context of TOs. These differences can significantly impact collaboration, decision-making, and overall organisational effectiveness (Raithel, van Knippenberg, and Stam 2021), and understanding them is crucial for fostering successful cross-cultural interactions within TO settings.

We analyse the moderating role of the within-nationality cultural background of leaders, as prior studies suggest that it might play a role in the effective coordination of complex social systems (Love, Edwards, and Irani 2008; Chung, Ko, and Kim 2020; Marques-Quinteiro et al. 2022), which is one conception of construction projects as TOs that limited research has been performed around it. Our study also addresses the research gaps highlighted by Marques-Quinteiro et al. (2022), Joseph and Van Buren (2021), Ojiako et al. (2023), and Garengo and Betto (2022) regarding supportive climate, culture, team coordination, leadership, and team performance in TOs. It aims to advance the model of relational leadership behaviour in multicultural TOs. Therefore, the study aims to answer the following question:

How does relational leadership influence team coordination and team performance in TOs?

In seeking answers to this question, we offer insights into how relational leaders with diverse within-nationality cultural backgrounds influence team members' conflict-handling styles. These design attributes likewise enable us to advance our theoretical understanding of the concept of relational leadership and team coordination in TOs. In the remainder of our paper we, first, review the salient literature on relational leadership, team coordination, team performance, and conflict approaches, and then we set out our arguments, which lead to our conceptual model, which we then test empirically.

## 2. Theoretical background and literature review

Socio-Psychological theories (SPTs) refer to a range of theories that seek to explain human behaviour by taking into account both social and psychological factors. SPTs suggest that human behaviour is shaped by the interaction between individuals and their social environment, including cultural norms, group dynamics, and social structures. They also acknowledge the importance of psychological factors in shaping behaviour. SPTs offer insights into why people behave in certain ways in different situations and how they form their attitudes, beliefs, and values.

According to SPTs, an individual strives to meet the needs of the team and the team helps an individual to attain their goals. SPTs also explain how humans' essential desires are associated with elements, such as motivation (Maslow 1943), social comparison (Festinger 1954), and belongingness (Baumeister

and Leary 1995). Team members need to maintain meaningful relationships with others as people use such relationships as a measure of their acceptance by, or position within, the team. In line with SPTs and based on Murphy and Ensher (2008), we have spotted leader values and actions as potential powers that influence team members in building relationships and supporting one another, handling interpersonal conflicts, and seeking information to perform group activities and gain success. Hence, a relational leadership style may influence the way employees interact with each other in dealing with conflicts in multicultural TOs.

Situating our study in SPTs, we extend the work of Zhang, Cao, and Tjosvold (2011), who investigated the relationships between transformational leadership and conflict management styles of leaders, which focused on cooperative and competitive approaches to managing conflict in a permanent work environment and among homogenous cultural groups. Our study complements earlier work that built on a leadership theory that was not specifically developed to capture the role of leadership in culturally diverse teams in TOs. Our point is not to argue against the value of the works drawing on 'generic' leadership perspectives; rather, we contend that there is a value-added in complementing such generic perspectives with a perspective specific to relational leadership and team diversity in TOs—and in this case specific to team leader cultural diversity—because this adds insights unique to the relational leadership in TOs and cultural diversity that would not follow from such generic perspectives. Our model put further steps by using SPTs as the foundation of the study and offers the impact of relational leadership as a special breed of leadership phenomena by proposing four directions for this leadership style, which has not been yet verified in the extant literature, on the conflict-handling style of team members in multicultural TO environments. Moderating the cultural background of team leaders in the above relationships will be the other stream of uniqueness in this study. The model employs relational leadership (Moon, Choi, and Armstrong 2018; Uhl-Bien 2006) and conflict management theories (Blake and Mouton 1964; Rubin, Pruitt, and Kim 1994; Rahim and Magner 1995) on the foundation of Socio-Psychological attributes to explain team coordination and team performance. We analyse the main elements of our conceptual model and explain the theoretical areas supporting the hypotheses contained therein.

### 2.1. Relational leadership

A leader plays a key role in group performance and productivity (Zerjav, Edkins, and Davies 2018). Some scholars have specified the key capabilities of leadership behaviour for superior team performance (Geoghegan and Dulewicz 2008; Murphy and Ensher 2008; Ollus et al. 2011; Garengo and Betto 2022). As we grappled with the way to shift from hypothesising leadership as discrete individual-oriented ways to leadership taking place in a group environment and in embedded relationships, we increasingly referred to the extant literature on relational leadership. Relational leadership is endorsed by interpersonal relationships (Hiller, Day, and Vance 2006), and is outlined as mutual interactions

between leaders and followers in group environments. In relational leadership contexts, team members understand different situations, figure out the action to be done in each situation, and have insights on how to do it (Gittell and Douglass 2012). It is fond of supporting subordinates and building high standards, empowering, and trusting relationships within the team environment (Fitzsimmons and Callan 2020; McCauley and Palus 2021). Existing literature indicates that the relational leadership style is well-suited for group settings. Relational leaders establish norms of active advisement and engagement, fostering shared decision-making among followers within groups or organisations (Roberson and Perry 2021). This approach enables subordinates to surpass the status quo and promote innovation and agility in team environments (Uhl-Bien 2006; Moon, Choi, and Armstrong 2018).

Some relational leadership schools of thought centre on practices within social contexts and communications (Crevani, Lindgren, and Packendorff 2010; Drath et al. 2008; Ollus et al. 2011), while other relational practices view leadership as the relationships and connections of individuals on a group basis (Balkundi and Kilduff 2006). According to Uhl-Bien (2006, 655), relational leadership is 'a social influence process through which emergent coordination and change are constructed and produced'. Relying on Uhl-Bien's work, Cunliffe and Eriksen (2011, 1433) saw the behaviour of relational leadership as 'a way of being-in-the-world; encompasses working out, dialogically, what is meaningful with others; means recognizing that working through differences is inherently a moral responsibility and involves practical wisdom'. The relational leadership style is vital for effective leadership in complex and interconnected environments, including TOs. However, the lack of a standardised measurement scale for assessing relational leadership poses a significant challenge for researchers and practitioners in the field. This absence hinders comparisons of different relational leadership styles, impedes the evaluation of practices across organisations, and limits the development of new theories and models. To address this gap, this study aims to establish a survey questionnaire that identifies key constructs related to relational leadership in TOs, specifically in managing conflict and promoting team coordination. This section outlines the process of formulating the four dimensions of relational leadership through an extensive literature review.

Ruppert-Winkel (2018) views a relational mindset in leadership wisdom as an approach to change the focus from the individual (e.g. leader) to the collective dynamic (for the current study: team coordination and team performance). We perceive an assigned team leader as one voice among many in a coordinated group of people. It is also expressed in the early literature on relational leadership that these 'leaders share responsibility with others for the construction of a particular understanding of relationships and their enactment' (Dachler and Hosking 1995, 15: cited in Uhl-Bien 2006). As a result, shared responsibility arises as a dimension of relational leadership measure in this study.

Further review directed us to the effectiveness of communication and the overall impacts on team performance (Zerjav, Edkins, and Davies 2018; Roberson and Perry 2021;



Mayfield and Mayfield 2016). From extant literature, we know the constitutive role of communication in the effective coordination process of teams (Mikkelsen, York, and Arritola 2015; Roberson and Perry 2021). Therefore, communication is the other construct that we think will shape effective relational leadership behaviour of team leaders that needs to be included in our measurement.

Preceding research indicated that conflict may favourably impact project team performance if it encourages knowledge sharing among the project team members (Delmas and Pekovic 2017; Radaelli et al. 2022). On the flip side, knowledge acquisition from peers may encounter difficulties and elevate harmful conflict in team coordination (Alexopoulos and Buckley 2013). Knowledge sharing is, however, an information exchange process that involves offering reviews and feedback, going over what went wrong and what went well, and figuring out the best solution for concluding a task (Kim, Kim, and Yun 2015; Radaelli et al. 2022). Extensive leadership skills and abilities are required to cultivate the concept of knowledge sharing in a TO environment. We believe that encouraging knowledge sharing among team members is one of the key characteristics of relational leaders that promote team coordination, especially in TOs where access to knowledge is critical for better management of conflict. Consequently, knowledge sharing has been considered as another construct to form the relational leadership behaviour of team leaders in this study.

An emphasis on a process that creates mutual respect for managing conflict in a cooperative and/or constructive way has been encouraged by the extant literature (Mikkelsen and Humle 2020; Joseph and Van Buren 2021). In this study, mutual respect has been formulated as the other construct that measures the relational leadership behaviour of leaders.

In fact, relational leadership is considered a dynamic approach that very likely varies based on the actions performed by the leader (Fitzsimmons and Callan 2020). Thus, relational leadership behaviour should be conceptualised as a context-dependent construct. We consider relational leadership as a higher-level abstraction construct that richness the relationship between leader and followers. Accordingly, different dimensions of leaders' relational behaviours holistically play roles in the dyadic relationships between leaders and followers. Yet, the conceptualisation and operationalisation of relational leadership as a second-order construct have not been explored in the context of TOs. In this study, relational leadership is perceived as a narrative perception and hypothesised as a second-order variable that consists of four first-order constructs incorporating shared responsibility, shared knowledge, mutual respect, and communication.

Relational leadership is, however, a growing concept that emerged from complex social dynamics in group environments (Uhl-Bien and Ospina 2012). Hence, leadership behaviour is not merely a personal identity but is determined by those socially constructed members of a team (DeRue and Ashford 2010; Marchiondo, Myers, and Kopelman 2015). As a result, team members' behaviour and interactions in working with different situations and cultures—in this case, handling conflict among themselves in TOs—could mirror the relational leadership behaviour of the leaders.

## 2.2. Leadership in temporary organisations

TOs continue to attract attention in business and organisational studies (Delmas and Pekovic 2017; Ollus et al. 2011). TOs establish methodical, orderly, and organised procedures for managing workflows, allocating resources across a project, and monitoring and controlling work progress (Gemünden, Lehner, and Kock 2018). Projects inevitably invoke layers of social complexity that managers are simply unable to predict (Delmas and Pekovic 2017). The relationship between a project manager/leader and temporarily embedded team members might last for a relatively limited time. Relational leadership, which has been recognised as an effective approach to working through team differences and involves practical wisdom, cannot be understood, or evaluated separately from the social and temporal context in which it takes place (Horila and Siitonen 2020). For that reason, the foundation of this study was based on SPTs.

In TOs, communication, handling conflict, and managing interpersonal relationships are among the major leadership challenges for ensuring effective work (Toor and Ofori 2007; Tabassi and Bakar 2009; Delmas and Pekovic 2017). The focus on relationships was further stressed by Nixon, Harrington, and Parker (2012) in that the way individuals interact with each other is one of the critical elements of the leadership process in project-based industries. Therefore, relationship leadership is conceptualised as a supportive course of action influencing the team's ability to accomplish goals (Yang, Huang, and Wu 2011; Annosi et al. 2020). In addition, the dynamic environment of TOs elevates uncertainties within the various phases of the life-cycle of projects and results in group contexts characterised by pressure, stress, conflict, and risk (Ollus et al. 2011; Brown et al. 2020). Team members in these dynamic work environments are considered particularly responsive to the meaningful relational leadership behaviours of team leaders (Jansen, Vera, and Crossan 2009). Relational leaders could foster desirable characteristics in teams, such as open communication (Chiniara and Bentein 2018), conflict resolution, and high levels of cohesion. They encourage formal and informal communication paths simultaneously among group members (Northouse 2011; Mikkelsen, York, and Arritola 2015; Mayfield and Mayfield 2016), which is necessary for teams that include people with different cultural backgrounds and working in TOs. As a result, relational leadership has the potential to strengthen interpersonal relationships among members (Geoghegan and Dulewicz 2008; Mayfield and Mayfield 2016), particularly in conflict situations. The preceding literature on permanent organisations has suggested the influence of interpersonal relationships among members on team coordination (McCauley and Palus 2021) and team performance (Gardner et al. 2021). Building on these prior findings, we would like to know the degree of influence of our modelled factors of relational leadership (see Section 2.1) on team coordination and performance in TOs that have not been evaluated yet. To do so, we formulate the following hypotheses in the environment of TOs:

Hypothesis 1: A positive relationship holds between the relational leadership level of a project team leader and the level

of team coordination in the context of within-nationality cultural differences in TOs.

Hypothesis 2: A positive relationship holds between the relational leadership level of a project team leader and team performance in the context of within-nationality cultural differences in TOs.

### 2.3. Relational leadership and conflict management

As stated earlier, relational leadership aims to cultivate 'high-quality', 'trustworthy', and 'collaborative relationships' (Uhl-Bien and Ospina 2012) between leaders and followers. Through consistent interactions, leaders shape desired behaviours and empower teams to work as partners. Establishing high-quality relationships within multicultural workgroups, where conflicts can arise from various sources (Chiniara and Bentein 2018), enhance cooperation (Chong et al. 2011; Moon, Choi, and Armstrong 2018). Factors such as the need for agreement (Joseph and Van Buren 2021), power dynamics (Wörn et al. 2004), the complexity of the organisation's tasks and interdependence of the units (Humphrey et al. 2017), cultural differences, and leadership styles (Tinsley and Brett 2001; Ollus et al. 2011; Schieman et al. 2020) all influence conflict management at the project team level. It is well-established that conflicts have a direct impact on performance, especially in TOs dedicated to project execution (Wu et al. 2017), including conflicts arising from within-nationality cultural differences (Raitchel, van Knippenberg, and Stam 2021).

Conflicts within multidisciplinary teams working on projects are influenced by complex relational dynamics. While conflict can harm performance, it can also be beneficial when managed effectively. Therefore, it is crucial to address conflict behaviours at an optimal level rather than ignoring them (Leung, Yu, and Liang 2014). Resolving conflicts enhances work stability, fosters team members' self-efficacy, reduces the likelihood of future negative conflicts, and contributes to long-term financial growth for companies (Mitchell et al. 2015; Rubin, Pruitt, and Kim 1994). According to the findings of Jian (2021) and Chiniara and Bentein (2018), relational leadership is most effective during conflicts, as it addresses individual anger, fear, hurt, and frustration by providing supportive behaviours that positively impact individuals and teams. Relational leaders also possess the ability to recognise team members' emotions (Jian 2021; Fitzsimmons and Callan 2020; Jansen, Vera, and Crossan 2009), which is particularly valuable in conflict situations. They inspire individuals to surpass the status quo and handle conflicts more effectively, enhancing their adaptability in team environments. Additionally, relational leaders acknowledge and respond to the negative emotions that may arise among team members when faced with conflict (Jian 2021; Chiniara and Bentein 2018; Jansen, Vera, and Crossan 2009). Thus, we hypothesise these mechanisms will take place inside the project team context as follows:

Hypothesis 3: The level of relational leadership engaged in by the team leaders will positively influence the conflict management behaviour of team members in the context of within-nationality cultural differences in TOs.

Conflict-handling styles refer to the strategies individuals employ when dealing with interpersonal or business conflicts (Tinsley and Brett 2001; Kleinman, Palmon, and Lee 2003). Various theories have been proposed regarding the effectiveness of different conflict-handling styles (see, for example, Blake and Mouton 1964; Rubin, Pruitt, and Kim 1994; Rahim and Magner 1995; Kleinman, Palmon, and Lee 2003). Blake and Mouton's dual concern model remains widely used in conflict management research (Tjosvold, Wong, and Chen 2014; Kay and Skarlicki 2020). Thomas (1976) re-evaluated Blake and Mouton's styles within a group context, identifying five distinct conflict-handling styles based on cooperativeness (attending to peers' concerns) and assertiveness (prioritizing personal concerns): cooperative, competitive, accommodating, avoiding, and compromising (cited in Rahim and Magner 1995).

The dynamic and complex nature of construction projects, along with the frequent changes in requirements, necessitate effective conflict management styles for construction teams (Tabassi et al. 2016). A previous study examining the relationship between conflict management styles and team coordination in the construction industry found that 'cooperative' and 'avoiding' approaches have the potential to enhance teamwork effectiveness (Tabassi, Abdullah, and Bryde 2019).

#### 2.3.1. Cooperative approaches to conflict

Team members can develop a cooperative conflict resolution strategy by concentrating on teams' shared pursuits. They need to demonstrate that they are seeking mutual benefits, interested in everyone's viewpoint, and looking to integrate different suggestions to set up practical solutions. This strategy can result in better team coordination (Deutsch 1990; Tjosvold 1985; Lee, Choi, and Kim 2018). Managing conflict in a cooperative context is characterised by precise and open communications, responsiveness, common understanding, and the development of mutually favourable alternatives (Sanders and Schyns 2006; Ayoko 2016). The relationships between cooperative conflict management style, team coordination and individual behaviour have been previously explored (Y. Q. Chen, Zhang, and Zhang 2014; Tjosvold, Poon, and Yu 2005). We extend previous research by focusing on the specific context of TOs. Furthermore, we posit that a cooperative conflict management strategy has a role in mediating the relational leadership behaviour of team leaders and team coordination within-nationality cultural differences in TOs. This assertion leads to the next two hypotheses.

Hypothesis 4: A positive relationship holds between cooperative conflict management among team members and the level of team coordination in the context of within-nationality cultural differences in TOs.

Hypothesis 5: Cooperative conflict management among team members mediates the positive relationship between the relational leadership style of team leaders and team coordination in the context of within-nationality cultural differences in TOs.

### 2.3.2. *Avoiding approaches to conflict*

This conflict-handling style has been categorised as buck-passing, disengagement, or sidestepping (Rahim 2002). Cultural context influences the use of this style. For instance, Tjosvold (2008) and Uchida (2021) describe how East Asian collectivist cultures have a tendency towards interdependence and acknowledge that individuals depend upon one another. As a result, some relational leadership behaviours may encourage a conflict-avoiding style at team levels because the leaders see it as an approach that maintains harmonious relationships with subordinates and peers, especially in multicultural TOs. We delve deeper into this concept by investigating whether this conflict-handling style positively impacts team coordination. We also posit that conflict-avoiding management has a role in mediating between relational leadership and team coordination in TOs. Hence, our next two hypotheses are as follows:

Hypothesis 6: A positive relationship holds between conflict-avoiding style among team members and the level of team coordination in the context of within-nationality cultural differences in TOs.

Hypothesis 7: Conflict-avoiding style among team members mediates a positive relationship between relational leadership style and team coordination in the context of within-nationality cultural differences in TOs.

### 2.4. *Team coordination, performance, and within-country cultural backgrounds*

Teams are rationally different from individuals in performing similar assignments, as members of a team should coordinate their work. Once individuals come together in teams to perform tasks, they must manage the interdependencies inherent in teamwork to be effective (Van De Ven, Delbecq, and Koenig 1976). Group and organisational literature regard team coordination as a key element of effectiveness (Gittell 2002; Hoegl and Gemuenden 2001). Consistent with this evaluation, Malone and Crowston (1994) conceived team coordination as the additional work performed so that the team members achieve their common goals, other than the activities they undertake as individuals. To work with each other productively, team members' efforts need harmonising. Coordination involves this harmonisation, in part, through orchestrating the relationships between team members, especially in TOs with members with different cultural backgrounds. It also involves arranging interdependent activities, for example, assigning tasks to each member, managing work in progress, and outlining methods and standard procedures for performing project activities (Yukl 2006). Likewise, team coordination is an obligatory practice for project teams to share necessary information and align team members' actions with project objectives (Marks, Mathieu, and Zaccaro 2001; Tuncdogan et al. 2017). In a 'shared' or 'team' coordination model (Cooke et al. 2000), individual team members overlap or complement each other in terms of knowledge, task content, and accuracy. Hence, shared coordination models enable team members to describe, explain, and predict each other's

behaviours. A shared model facilitates the ability of team members to coordinate activities, which is directly related to team performance in a project environment.

While the link between team coordination and performance has been the target of a wide range of scholars in the management discipline—see Yukl (2006), Zhang, Cao, and Tjosvold (2011), and Tuncdogan et al. (2017)—the focus on evaluating these relationships in project-focused sectors involving within-nationality cultural differences teams has been limited. In these contexts, team coordination is one of the core competencies of project team leaders (PMI 2017). Several challenges around ensuring effective team coordination have been outlined in relation to technology adoption and innovation, organisational design, and team competitiveness, to name just a few (De Dreu 2007; Zhang, Cao, and Tjosvold 2011; Müller et al. 2016; Lee, Choi, and Kim 2018; Ojiako et al. 2021). Multicultural teams operating in project-focused sectors such as construction typically handle complex and dynamic work environments that make effective team coordination a challenge to team leaders (Tabassi, Ramli, and Bakar 2012). Prior research, then, highlights how team coordination is a necessary precondition for effective team performance. We explore this notion further by hypothesising its role as a mediator between relational leadership-conflict handling styles and team performance in TOs.

Typically, an ideal performance condition seeks to boost employee influence on the business along with the effect of inputs, procedures, strategies, the environment, tools and techniques that improve team achievements. Even though the correct application of the term 'performance' is present in the widespread project management body of knowledge, the term generally has several connotations depending on the context in whereby it is applied. Commonly, the term shows the outcomes and assesses if an individual and/or a group is being productive (Zwikael et al. 2022). In project-intensive industries, such as construction, teams are the primary form of work execution (Dainty, Raidén, and Neale 2009). For this reason, we posit that any methods and strategies, including leadership behaviour, conflict handling strategies, and methods for enhanced coordination, established as a means to strengthen teamwork actions ought to have a positive impact on team performance. Hence, we have derived the following two hypotheses:

Hypothesis 8: Team coordination mediates the positive relationship between the cooperative-conflict management style among team members and team performance in the context of within-nationality cultural differences in TOs.

Hypothesis 9: Team coordination mediates the positive relationship between the avoiding-conflict management style among team members and team performance in the context of within-nationality cultural differences in TOs.

According to the literature, there are some frequently identified barriers and enablers to effective team performance that happen to be connected to leaders' personalities, gender, and cultural background (for example see the recent work by Raithel, van Knippenberg, and Stam (2021) that

evaluated the moderating effect of leader cultural background in the relationship between team diversity in terms of culture and their overall performance in one multinational company as a case study). Existing literature indicates a correlation between culture and affect-based trust in subordinates (Pellegrini, Scandura, and Jayaraman 2010) as well as its impact on individual differences in framing awareness and behaviour in relational contexts (e.g. Marchiondo, Myers, and Kopelman 2015). In another sense, several studies implicitly and occasionally explicitly remark on the significance of the cultural backgrounds of leaders in terms of the effectiveness of managing teams (Rosette, Leonardelli, and Phillips 2008; Richardson and Loubier 2008; Carter et al. 2014; Chung, Ko, and Kim 2020). The cultural context is a key driver aimed to generate an internal strategic alignment between the different business levels and oriented to support the employees on their strategic goals' achievement through the improvement of individual skills, training programs, co-working, learning and growth, dialogue, and participation (Hristov et al. 2022).

However, the within-country cultural backgrounds of team leaders have gained limited curiosity within the literature on individual differences in relational leadership discipline (Antonakis, Day, and Schyns 2012) and in TOs, specifically. Consistent with findings from research in permanent organisations and team diversity more broadly (Guillaume et al. 2017), the research by Milliken and Martins (1996) shows that team cultural diversity is a 'double-edged sword' that has the potential to boost as well as disrupt team performance. The limited research on how cultural backgrounds influence leaders' moderating roles in relational leadership within TOs restricts our comprehension of how culture shapes leadership styles and conflict resolution within organisations. This study's explanations of leaders' cultural backgrounds contribute significantly to our understanding of individual variations in leadership patterns. Hence, our final hypothesis is as follows:

Hypothesis 10: The cultural background of team leaders moderates the positive relationship between the level of relational leadership of project team leaders and team performance in the context of within-nationality cultural differences in TOs.

### 3. Conceptual model

Previous studies have highlighted conflict as a common feature of teamwork, particularly in the context of within-nationality cultural differences in TOs. Some research focuses on conflict management and the adoption of different styles to improve team performance (Tjosvold 2008; Wu et al. 2017). In project-intensive organisations, coordination activities directly impact team productivity and project performance (Mitropoulos and Cupido 2009; Ojiako et al. 2021).

This study builds upon SPTs (Maslow 1943; Festinger 1954; Baumeister and Leary 1995), which emphasise the interconnection between individuals and their work environment. It also incorporates relational leadership theory, which recognises leaders as crucial facilitators of positive social

interactions, and conflict management theory, which acknowledges conflicts as potentially beneficial and practical for employee performance.

The literature demonstrates that the dynamic and rapidly changing requirements of the construction industry may necessitate a sophisticated set of leadership phenomena (Tabassi et al. 2016). Therefore, team leaders need to possess relevant leadership styles to enhance teamwork achievements. The conceptual model depicted in Figure 1 is based on SPTs, which emphasise the interconnectedness of individuals and TOs. Considering the dynamic and complex nature of work environments in TOs, there is a high degree of social interaction among team members, increasing the likelihood of conflicts. By drawing upon SPTs, our research aims to enhance understanding of how leaders can assist subordinates in managing conflict at the team level for improved coordination and performance. Relational leadership, measured through four constructs (shared responsibility, shared knowledge, mutual respect, and communication), is employed to explore leaders' contributions to effective teamwork in TOs when conflicts among team members are prevalent.

### 4. Research method

The research is structured within the quantitative paradigm, embracing a positivist epistemological stance that prioritises objectivity, measurement, and causality (Saunders, Lewis, and Thornhill 2019). This choice is justified by our intent to establish and test relationships among variables using numerical data, allowing for statistical inference, and bolstering generalisability. Employing a deductive approach, we ground our study in established theories, facilitating theory testing and contributing to the growing body of knowledge. Our design follows a structured research strategy, encompassing methodical data collection, rigorous analysis, and statistical techniques to thoroughly evaluate hypothesised relationships. This dedication to evidence-based insights emphasises our commitment to the principles of robust quantitative research (Saunders, Lewis, and Thornhill 2019; Hair and Sarstedt 2021).

To build our model, we aimed to improve the literature results using data provided by three different groups of participants. Thus, the hypothesised model in Figure 1 is evaluated by collecting data from project team members, team leaders and team supervisors. This data collection technique was adopted from Zhang, Cao, and Tjosvold (2011) to minimise the risk of common method variance (CMV) and to ensure the validity of research outcomes. Team members rated five types of conflict-handling styles exhibited by themselves in collaboration with peers, including cooperative, competitive, accommodating, avoiding and compromising, as well as their leaders' relational leadership behaviour. The team leaders evaluated their team coordination, and finally, the supervisor of each team rated the team's performance. We used the procedures provided by Richardson and Loubier (2008) to confirm that the data was coherent and that no issues were associated with the data being collected from three sources.



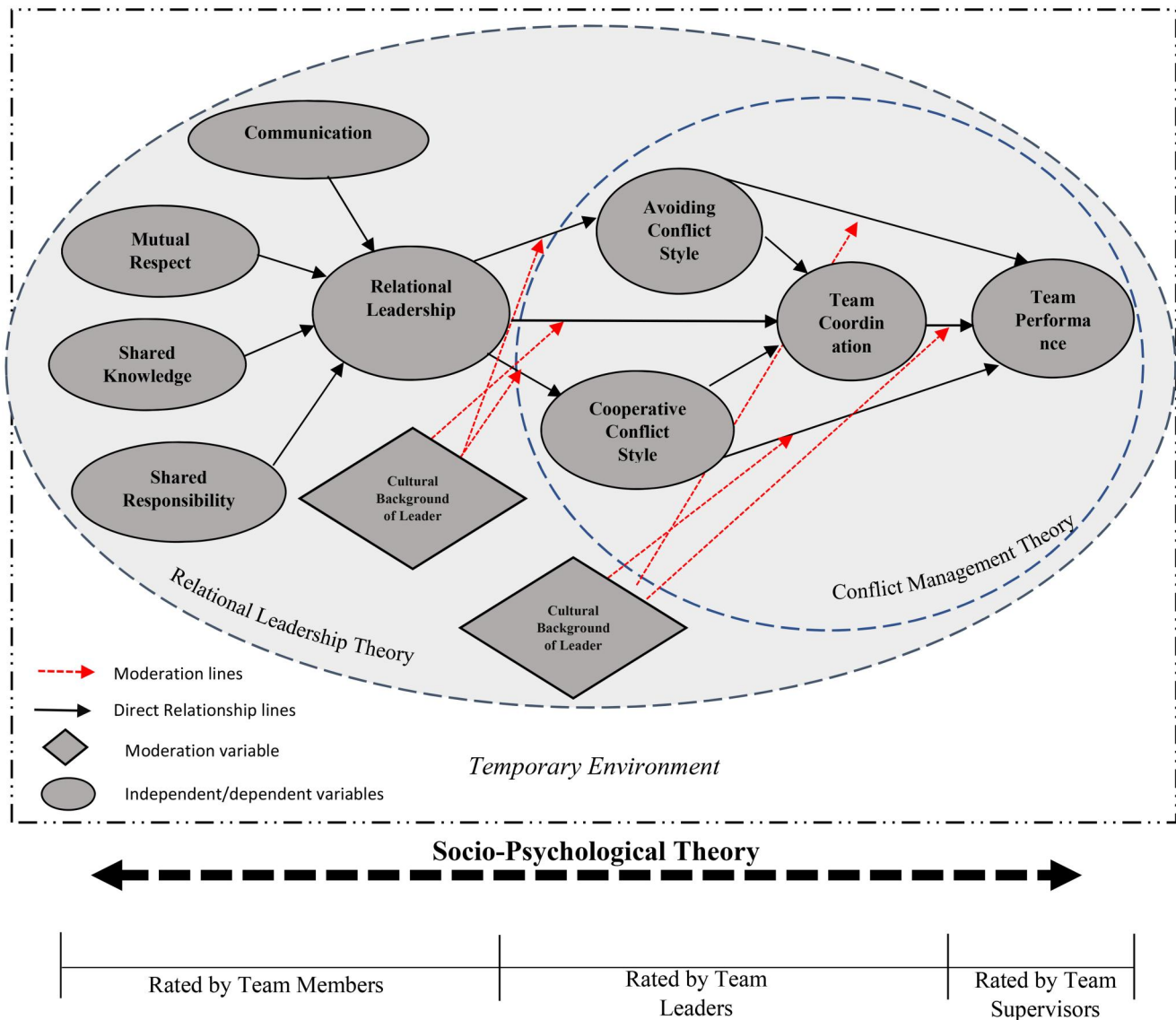


Figure 1. Hypothesised model.

We assessed the dimensions and the constructs of the study employing preceding validated scales and/or tailored some of the items for this research context. [Appendix A](#) presents the constructs, dimensions, sources, and items of the measures applied in this research. Three different survey questionnaires were distributed among the respondents. The questionnaires measured the degree of importance, on a Likert scale, of five ordinal measures. According to DeVellis (2016), the 5-Likert scale is commonly used in survey research and is a reliable and valid method for measuring attitudes or opinions. The team member questionnaire comprised three sections and evaluated the respondents' background, the team leader's relational leadership behaviour, and the conflict management style of team members. Twenty-one questions were set to measure relational leadership style in four broad areas: shared responsibility (SR), shared knowledge (SK), mutual respect (MR), and communication (Com). The shared responsibility, shared knowledge and mutual respect questions were adapted from the works of Moon, Choi, and Armstrong (2018) and Carmeli and Gittell

(2009). Burgoon and Hale's (1987) Relational Communication Scale has been adapted to measure the communication dimension of relational leadership, which has been widely used and validated (Mikkelsen, York, and Arritola 2015). Following established protocols, these four individual components, which typically exhibit high intercorrelations (Yukl 2006; Fu et al. 2010), were joined to form one second-order construct (Tabassi et al. 2014).

Five styles of the conflict-handling questionnaire designed by Northouse (2011) that fall within a scale of assertiveness and cooperativeness was adopted to evaluate team members' conflict-handling behaviour. The styles include cooperative, avoiding, accommodating, compromising and competitive. The team members were requested to evaluate their conflict management style in the team on a 5-point Likert scale (1 = 'Never' to 5 = 'Always').

The team leader questionnaire comprised two parts and evaluated the general background of team leaders and team coordination; the latter part used pre-validated measurement instruments of Zhang, Cao, and Tjosvold (2011) and De Dreu

(2007). Finally, an upper-level supervision office questionnaire was administered, which evaluated the performance of the team, and used pre-validated measurement instruments developed by Tabassi et al. (2016).

#### 4.1. Sampling

One of the greatest challenges for the research team was to choose three groups of participants. The primary method used to collect data in this study was a survey questionnaire, which is a widely used approach among field researchers to obtain information on managerial practices (Evans et al. 2015; Hristov et al. 2024). Additionally, to enhance the significance of the study and provide empirical insights, a structured questionnaire survey was conducted to gather responses from 630 participants who had experience and knowledge related to the research objectives. To choose the participants from contractor firms registered with the Malaysian CIDB, architectural firms from the Board of Architect Malaysia, and developers who agreed to take part in the research, a convenience sampling method was employed. The contact details of the firms were obtained from the CIDB Malaysia, the Board of Architect Malaysia and a directory of the developers in Malaysia. At the end of the day, over 800 large construction companies in Malaysia were targeted, and letters were sent out by post and email inviting them to participate in this study. We also sent three follow-up e-mails, telephone calls and research assistants who also visited company HR divisions to communicate our research and seek their participation in the study. 84 companies agreed to participate in the research by the end of six months. This resulted in a sample comprising 378 individual team members from 126 construction project teams working in 84 companies, their corresponding 126 team leaders and 126 team supervisors from the upper-level management office in each organisation. We used purposive sampling when selecting the sample of projects to maximise their within-nationality cultural diversity in team composition. The research officers visited the respondent's organisations in different regional areas in the capital cities of Malaysia to deliver the three sets of questionnaires to the relevant individuals. We nominated three individuals from each team to evaluate the relational leadership style of the team leader/director to minimise possible bias in the data analysis.

The minimum sample size was tested, and a reactive Monte Carlo analysis was performed (Chin 2010). As a result, the final sample size of 126 teams exceeded the recommended minimum number of 89, deemed adequate for PLS-PM evaluation (Hair et al. 2014). The power analysis method and G\* Power software were also applied to verify the sample size. The minimum sample size required to attain the 75% coefficient of determination at a 95% confidence level for this study was calculated as  $n = 89$ . Having 126 teams from 84 companies were deemed acceptable given the novelty of the topic. Even so, response rates as low as 10–12% are not atypical in construction management research (Chileshe et al. 2018). The size of the investigated teams ranged from 5 to more than 20 members, with an average of 6–10 (SD = 1.47), who were in performing or adjourning

phases. A total of 61.9% of the team leaders were male, and 66.7% had at least 6 years of experience in the construction industry. The different within-nationality cultural backgrounds among team leaders revealed that Chinese (43.6%) represented the highest proportion, followed by Malay (28.6%), Indian (27%) and others (0.8%). This division can clearly be observed in the listed corporate equity ownership based on market value in 2019 that was published in the Twelfth Malaysia Plant, in that Bumiputera (Malays) ownership is only at 17.2 per cent; and it is also in line with the statements of Mohammad and Wasiuzzaman (2020) in that ethnic Malays represent the majority in the ruling government, whereas a majority of the firms listed on the Bursa Malaysia are owned and operated by the Chinese. In terms of educational level, 77.8% of leaders possessed a bachelor's degree or higher, and the remainder had graduated from junior colleges.

#### 5. Data analysis

We selected Smart PLS to evaluate the variables of the hierarchical hypothesised model (Figure 1). PLS path modelling (PLS-PM) has generally been used with a path-weighting structure for inside approximation and with the non-normal distribution of data (Chin 2010).

PLS-SEM is conceptualised as a causal-predictive method (Hair and Sarstedt 2021). It provides researchers with the ability to evaluate their models from both explanatory and predictive standpoints (Chin et al. 2020). In our study, we utilised an explanatory statistical model, which is designed to test causal hypotheses that elucidate how and why specific empirical phenomena manifest. This approach is deemed robust because it facilitates the straightforward examination of causal relationships and measurement errors (Hair et al. 2014; Hair and Sarstedt 2021). Therefore, nonparametric bootstrapping was applied with 500 replications to achieve the standard estimate errors (Chin 2010). As advised by Wold (1985), the method of repeated indicators was implemented to evaluate the higher-order latent variables.

##### 5.1. Assessment of relational leadership style

The relational leadership style of leaders was measured by aggregating team member evaluations of the leaders, following the guidelines set out in previous related studies (Zhang, Cao, and Tjosvold 2011; Tabassi, Abdullah, and Bryde 2019). We used the method of aggregation introduced by James, Demaree, and Wolf (1984) where the measurements of multi-item  $r_{WG(J)}$  are calculated with Equation 1:

$$r_{WG(J)} = \frac{J \times \left(1 - \frac{S_k^2}{\sigma_{EU}^2}\right)}{1 + (J - 1) \times \left(1 - \frac{S_k^2}{\sigma_{EU}^2}\right)} \quad (1)$$

The  $r_{WG(J)}$  index gives the Spearman-Brown prophecy formula to incorporate the total number of measured items in the within-group agreement computation. Hence,  $J$  is the total number of measured items, and  $S_k^2$  is the average

variance of the J items in a cluster of k evaluators. Our calculation shows that the value of  $r_{WG(J)}$  is 0.932 for relational leadership. Although some controversy related to the 'cut-off' value of  $r_{WG}$  exists in the literature (Lance, Butts, and Michels 2006), the value of 0.932 is in excess of the commonly agreed minimum value of 0.70.

### 5.2. Conflict management styles

Since the team shaped the unit of analysis of the research and the data on conflict-handling styles were obtained from individuals, the data were aggregated. Similar to measuring the relational leadership style of leaders, the  $r_{WG(J)}$  index for each conflict-handling style was calculated, with the results as follows: cooperative (0.908), avoiding (0.913), accommodating

(0.91), compromising (0.908) and competitive (0.899). The estimated values of  $r_{WG(J)}$  are greater than the frequently agreed threshold value of 0.70. In addition, the percentage of  $r_{WG(J)} > 0.70$  for the aggregated parameters was 86%. Further analysis showed that no team had a  $r_{WG(J)}$  less than 0.50 across the constructs. The research conceptualised the five conflict-handling styles and assessed their relationship with the relational leadership behaviour of leaders, team coordination, and team performance. The degree of explained variance in the hierarchical model was mirrored in its elements. Only the path coefficients from cooperative and conflict-avoiding styles to team coordination were significant at  $p < 0.01$  and  $p < 0.1$ , respectively. However, the CR and AVE of all constructs were above 0.7 and 0.5, respectively, which surpassed the threshold values (Hair et al. 2014).

**Table 1.** Common method variance.

Constructs	Items	Loading	AVE	CR	R square
Avoiding	Avoid1	0.6628	0.5289	0.8175	0.238
	Avoid2	0.7635			
	Avoid3	0.7521			
	Avoid5	0.7264			
Cooperative	Coop1	0.7563	0.5196	0.7859	0.1214
	Coop2	0.6304			
	Coop3	0.6864			
	Coop4	0.6911			
Communication	Com1	0.7282	0.6398	0.8935	0
	Com 2	0.8451			
	Com 3	0.7765			
	Com 4	0.8344			
	Com 6	0.7856			
Shared knowledge	Com 7	0.8235	0.6094	0.8861	0
	SK1	0.7335			
	SK2	0.7663			
	SK4	0.8196			
	SK5	0.8302			
	SK6	0.7489			
Mutual respect	MR1	0.8223	0.676	0.8621	0
	MR2	0.8527			
	MR3	0.7905			
Shared responsibility	SR1	0.8071	0.5511	0.8293	0
	SR3	0.8121			
	SR4	0.7104			
	SR5	0.6236			
	PER2	0.6775	0.5269	0.8988	0.1235
Performance	PER3	0.7672			
	PER4	0.6978			
	PER5	0.6821			
	PER6	0.7639			
	PER7	0.695			
	PER8	0.7216			
	PER9	0.7926			
Team coordination	TeamCo1	0.8018	0.5342	0.7943	0.5094
	TeamCo2	0.6602			
	TeamCo4	0.6008			
	TeamCo5	0.7328			

CR: composite reliability; AVE: average variance extracted.

### 5.3. Measurement model results

A confirmatory factor analysis (CFA) was performed to determine the constituents of the measurement scales, which was based on Chin (2010) for the evaluation of the reliability and validity, convergence, and discriminant nature of the scales (see Tables 1 and 2). The composite reliability (CR) of the constructs was higher than 0.7 (Gefen, Straub, and Boudreau 2000), and the average variance extracted (AVE) for all constructs was above 0.5 (Fornell and Larcker 1981), so CMV is not a concern. In addition, the results show that most item loadings are in excess of 0.7 and significant at 0.01. Based on Table 2, convergent validity was also demonstrated since all indicators loaded on their specific hypothesised construct when compared to other variables (own-construct loading is higher than cross loadings; Chin 2010). Discriminant validity was assessed based on the Fornell-Larcker criterion. The square root of the AVEs was computed and the correlations were compared with other latent variables. Since the square root of AVE in each construct was higher than its correlation with any other construct in the model, discriminant validity was evidenced (Chin 2010; Fornell and Larcker 1981); no correlation greater than 0.9 was found between the constructs (Hair et al. 2014). Overall, the model was suitable for testing the hypotheses and validating the research.

To evaluate the measurement models, internal consistency (CR), indicator reliability, convergent validity (average outer weights variance extracted), and discriminant validity were analysed. To check for multicollinearity of the relational leadership construct, the variance inflation factor (VIF) was determined. Table 3 shows the tolerance and VIF values for the relational leadership constructs, with all formative indicators

**Table 2.** Correlations among constructs.

	Avoiding	Cooperative	Com	SK	MR	SR	Performance	Team coordination
Avoiding	0.727255113	0	0	0	0	0	0	0
Cooperative	0.1306	0.720832852	0	0	0	0	0	0
COM	0.3676	0.1555	0.79126481	0	0	0	0	0
SK	0.3611	0.1263	0.6139	0.780640762	0	0	0	0
MR	0.5602	0.084	0.4964	0.6547	0.822192	0	0	0
SR	0.3256	0.2866	0.5599	0.6335	0.5959	0.742361098	0	0
Performance	0.2952	0.2626	0.2922	0.1446	0.284	0.3021	0.725878778	0
Team coordination	0.3041	0.5539	0.1894	0.0965	0.1332	0.2922	0.3514	0.730889869

Square root of the AVE's on the diagonal.

being lower than 5 and their tolerance values higher than 0.2. Hence, no collinearity issues emerge with relational leadership as a second-order formative construct (Hair et al. 2014).

Although the data collection technique from three sources minimised the risk of CMV as a possible solution for the validity of research outcomes, data coherence was checked to allow the compatibility of partial conditional assessments. We managed structural zeros that characterised the relevant links among the variables of the study presented in Figure 1. As a result, there is no logical constraint among the variables; hence, the coherence of the conditional assessment is satisfied (Vantaggi 2008). Thus, the trustworthiness of the results of this study with minimising the risk of CMV and having coherence of the data from three sources has been confirmed.

#### 5.4. Assessment of the structural model

Table 4 shows the standardised beta of 0.49 from relational leadership style to avoiding mode of conflict handling, 0.35 from relational leadership style to cooperative conflict handling, 0.302 from conflict-avoiding style to team coordination, 0.56 from cooperative conflict to team coordination, and 0.35 from team coordination to team performance. Hence, H1, H2, H3, H4, and H6 are supported. In addition, the results show that relational leadership style and conflict-avoiding management style positively relate to team coordination, which is significant at the 0.08 level. As a result, the team conflict-avoiding style showed a partially significant effect on team coordination. The relational leadership style and cooperative conflict management, however, showed significant influences on team coordination.

**Table 3.** Assessment of multicollinearity for relational leadership as a second-order formative construct.

		Coefficients	
		Collinearity statistics	
Model		Tolerance	VIF
1	COM	.676	1.480
	SK	.513	1.949
	MR	.577	1.733
	SR	.520	1.921

#### 5.5. Mediating effects

In Figure 2a,b, the mediating influence of conflict management styles on the relationship between relational leadership style and team coordination is shown. Before the analysis, the conditions for mediation were set up as follows (Hair et al. 2014): first, the explanatory variable (relational leadership behaviour of leaders, which was developed as a second-order variable) shows a significant influence on the mediators (avoiding and cooperative conflict-handling styles); second, the mediators exhibit significant impacts on the dependent variable (team coordination; H4 and H6); and finally, the explanatory variable maintains a significant impact on the dependent variable in the absence of the mediators.

To measure the mediating influence of conflict management styles in the model, the indirect influences of  $a \times b$  must be significant (see Figure 2 a + b). The z-statistics presented by Sobel (1982) were applied and were significant at  $p < 0.05$ . Since the z-values exceed 1.96 ( $p < 0.05$ ), H5 and H7 will be approved, which represent the indirect effect from the relational leadership behaviour of leaders through conflict management style on team coordination results. The z-values are defined as Equation 2:

$$z = \frac{a \times b}{\sqrt{b^2 \times s_a^2 + a^2 \times s_b^2 + s_a^2 \times s_b^2}} \quad (2)$$

$$z_a = \frac{0.348 \times 0.625}{\sqrt{(0.625 \times 0.1103)^2 + (0.348 \times 0.0798)^2 + (0.0798 \times 0.1103)^2}} = 2.91$$

$$z_b = \frac{0.488 \times 0.302}{\sqrt{(0.302 \times 0.0685)^2 + (0.488 \times 0.0775)^2 + (0.0685 \times 0.0775)^2}} = 2.99$$

As shown in Figure 2a, relational leadership has a significant influence on the cooperative conflict management style (0.348,  $p < 0.01$ ). In the same way, cooperative conflict management style shows a significant influence on team coordination (0.625,  $p < 0.01$ ). Identical methods have been used to examine the mediating role of the avoiding style of handling conflict, and a significant mediation role of this conflict handling style from relational leadership on team coordination was observed. The z-value was 2.99 ( $p < 0.05$ ), which surpassed the threshold of 1.96. To estimate the size of the indirect effect in the model, the variance accounted for (VAF) value was calculated, which signifies the percentage of the

**Table 4.** Total effects.

	Beta value	t-Value	p-Value	Standard error
COM → Relational Leadership Style	0.2993	4.9134	*****	0.0609
SK → Relational Leadership Style	0.3233	3.6093	*****	0.0896
MR → Relational Leadership Style	0.1795	3.0998	*****	0.0579
SR → Relational Leadership Style	0.3318	5.2604	*****	0.0631
Relational Leadership Style → Avoiding	0.4879	7.1198	*****	0.0685
Relational Leadership Style → Cooperative	0.3484	3.1577	*****	0.1103
Relational Leadership Style → Team Coordination	0.4763	3.748	*****	0.1271
Relational Leadership Style → Performance	0.1674	2.3435	0.01949	0.0714
Avoiding → Team Coordination	0.236	1.746	0.08143	0.0775
Avoiding → Performance	0.302	3.4346	*****	0.0687
Cooperative → Team Coordination	0.625	8.0299	*****	0.0798
Cooperative → Performance	0.1971	4.3371	*****	0.0454
Team Coordination → Performance	0.3514	4.4133	*****	0.0796
R <sup>2</sup> Team Coordination	0.665			
R <sup>2</sup> Team Performance	0.561			



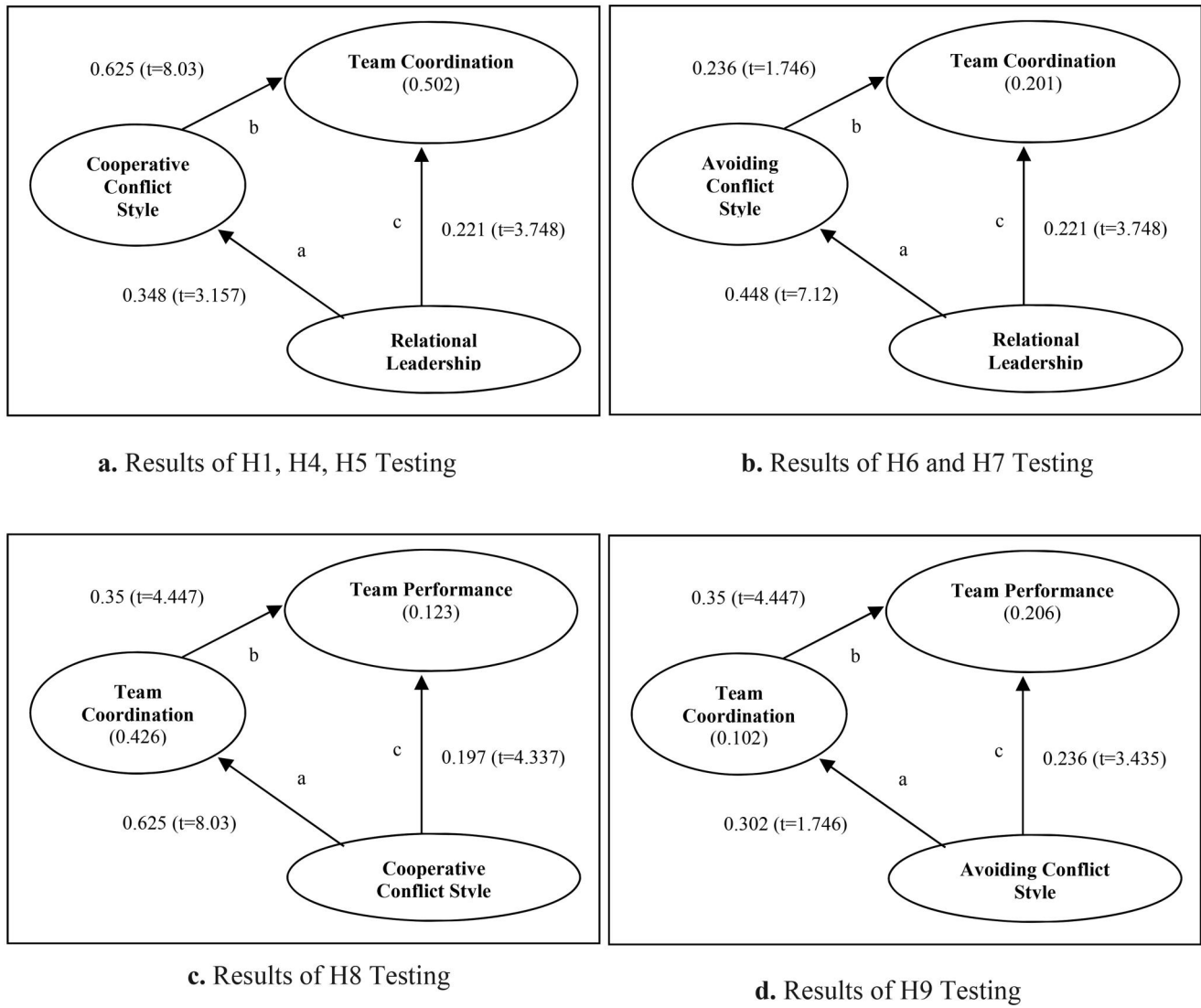


Figure 2. Results of hypotheses testing.

indirect impact to the total effect. The VAF value for the first model (Figure 2a) indicates that almost 50% of the total effect of relational leadership on team coordination is defined by the indirect effect (cooperative conflict management style).

$$VAF_a = \frac{a \times b}{a \times b + c} = \frac{0.348 \times 0.625}{0.348 \times 0.625 + 0.221} = 0.496 \quad (3)$$

The VAF value for the subsequent model (Figure 2b) indicates that nearly 34.3% of the total effect of relational leadership on team coordination is defined by the indirect effect (conflict-avoiding style).

$$VAF_b = \frac{a \times b}{a \times b + c} = \frac{0.488 \times 0.236}{0.488 \times 0.236 + 0.221} = 0.343 \quad (4)$$

Z-statistics tests were also performed for the other models. As shown in Figure 2c, there were significant influences of cooperative conflict style on team coordination (0.625,  $p < 0.01$ ), and team coordination on team performance (0.35,  $p < 0.01$ ). The z-value is significantly greater than 1.96 ( $p < 0.05$ ), so H8 is accepted, with team coordination having an indirect effect on team performance. Significant effects

from the conflict-avoiding style on team coordination (0.236,  $p < 0.01$ ) and from team coordination on team performance were found (0.35,  $p < 0.01$ —see Figure 2b). The z-value also exceeds 1.96 ( $p < 0.05$ ), which gives support for H9.

$$z_c = \frac{0.625 \times 0.35}{\sqrt{(0.35 \times 0.0798)^2 + (0.625 \times 0.0796)^2 + (0.0798 \times 0.0796)^2}} = 3.81$$

$$z_d = \frac{0.302 \times 0.35}{\sqrt{(0.35 \times 0.0775)^2 + (0.302 \times 0.0796)^2 + (0.0775 \times 0.0796)^2}} = 2.86$$

The VAF values for the third and fourth models (Figures 2c and 2d) indicate that almost 52.6% and 31% of the total effects of the cooperative and conflict-avoiding styles on team performance, respectively, are explained by indirect effects through team coordination.

$$VAF_c = \frac{a \times b}{a \times b + c} = \frac{0.625 \times 0.35}{0.625 \times 0.35 + 0.197} = 0.526 \quad (5)$$

$$VAF_d = \frac{a \times b}{a \times b + c} = \frac{0.302 \times 0.35}{0.302 \times 0.35 + 0.236} = 0.309 \quad (6)$$

### 5.6. Moderating effects of culture

The results of the PLS path model show that all measures fulfil the frequently recommended guidelines for model assessment by Hair et al. (2014). In particular, the analyses per cultural group indicate that all items showed CR values above 0.70, and the AVE values were also in excess of 0.50 (Table 5). In addition, the construct discriminant validity tests were performed, and the results support the reliability and convergent validity of the measures.

Table 5. Cultural backgrounds-specific results.

		Chinese	Malays	Indians
Avoiding	AVE	0.5027	0.6257	0.5991
	CR	0.7035	0.8686	0.7884
Cooperative	AVE	0.5307	0.5122	0.5294
	CR	0.8185	0.7028	0.7482
Com	AVE	0.6758	0.6407	0.5890
	CR	0.9122	0.8966	0.8216
SK	AVE	0.5786	0.6928	0.5933
	CR	0.8716	0.9181	0.8786
MR	AVE	0.6139	0.6000	0.7850
	CR	0.8258	0.8180	0.9162
SR	AVE	0.5901	0.6367	0.5002
	CR	0.8495	0.8746	0.7302
Performance	AVE	0.5071	0.5353	0.5742
	CR	0.8801	0.9015	0.9132
Team coordination	AVE	0.5203	0.5050	0.5241
	CR	0.8119	0.7240	0.8118
N		55	36	34
Path relationships				
Avoiding → Performance		−0.018	0.2095**	0.1286*
Avoiding → Team Coordination		−0.0577	0.2797**	0.2911**
Cooperative → Performance		0.165**	0.3737**	0.3432**
Cooperative → Team Coordination		0.5305**	0.499**	0.7771**
Team Coordination → Performance		0.311**	0.749**	0.4417**
Relational Leadership → Performance		0.1691**	0.5149**	0.1321*
Relational Leadership → Team Coordination		0.5438**	0.6874**	0.2991**
R <sup>2</sup> Team Coordination		0.534	0.665	0.750
R <sup>2</sup> Team Performance		0.097	0.561	0.195

CR: composite reliability; AVE: average variance extracted. \*significance at 0.05, \*\*significance at 0.01.

Table 5 shows the differences in seven comparison path coefficient estimates (Chinese vs. Malays, Malays vs. Indians, and Chinese vs. Indians) and presents the results of multi-group comparisons influenced by the parametric method, i.e. Henseler's (2007) approach and the permutation test. The results show the bias-corrected 95% confidence intervals, together with the results of the corresponding multigroup analysis. The cultural background multigroup analysis indicated that, commonly, the results of the multigroup comparison test overlapped very closely. On the other hand, if the parameter estimate for a path relationship of one group (Table 5) fails to slide within the corresponding confidence interval of another group (Table 6) and vice versa, it can be concluded that there is no evident overlap. Hence, we can presume that the group-specific path coefficients are significantly varied on a significance level of  $\alpha$ , which are available in the last column in Table 6. Therefore, support is found for H10.

### 6. Discussion and implications

The study set out to investigate how relational leadership influences team coordination in TOs and whether this in turn improves their performance. Overall, the study found evidence to support these relationships. However, the findings also raise some discussions points, which are presented below in the context of the theory of relational leadership and Socio-Psychological theories (SPTs). As relates to the first part of the research question, the outcomes of the study demonstrate that the relational leadership of the team leaders positively affects conflict resolutions by team members, which influences the team coordination and overall team performance. This incorporated knowledge about relational leadership in temporary-based organisations resulted in a higher level of team effectiveness, and therefore, we expect to see improved organisational performance. These results

Table 6. Multiple comparison test results.

Relationship	Comparison	Difference			Significance
		Path	p-Value	t-Value	
Avoiding → Performance	Malay vs. Chinese	0.228	0.000	4.252	Sig.
	Malay vs. Indians	0.081	0.284	1.081	Nsig.
	Chinese vs. Indians	0.147	0.005	2.855	Sig.
Avoiding → Team Coordination	Malay vs. Chinese	0.337	0.001	3.354	Sig.
	Malay vs. Indians	0.011	0.923	0.098	Nsig.
	Chinese vs. Indians	0.349	0.004	2.993	Sig.
Cooperative → Performance	Malay vs. Chinese	0.209	0.001	3.602	Sig.
	Malay vs. Indians	0.031	0.704	0.381	Nsig.
	Chinese vs. Indians	0.178	0.021	2.346	Sig.
Cooperative → Team Coordination	Malay vs. Chinese	0.032	0.733	0.289	Nsig.
	Malay vs. Indians	0.057	0.583	0.552	Nsig.
	Chinese vs. Indians	0.089	0.482	0.706	Nsig.
Team Coordination → Performance	Malay vs. Chinese	0.438	0.000	5.691	Sig.
	Malay vs. Indians	0.307	0.002	3.290	Sig.
	Chinese vs. Indians	0.131	0.214	1.253	Nsig.
Relational Leadership → Performance	Malay vs. Chinese	0.346	0.000	4.182	Sig.
	Malay vs. Indians	0.383	0.065	1.877	Sig.
	Chinese vs. Indians	0.037	0.836	0.208	Nsig.
Relational Leadership → Team Coordination	Malay vs. Chinese	0.144	0.333	0.974	Nsig.
	Malay vs. Indians	0.388	0.016	2.482	Sig.
	Chinese vs. Indians	0.245	0.046	2.035	Sig.

Notes: Sig. denotes a significant difference at 0.05; Nsig. denotes a nonsignificant difference at 0.05.

recommend several implications for both research and practice. We begin by outlining the potential implications for knowledge development in leadership, then address implications that will be beneficial for practitioners in TOs.

First, this research is distinctive in that it relies on SPTs and concerns the alignment between the relational leadership level of leaders and conflict resolution of team members in TOs that comprises complex and dynamic businesses. TOs, particularly in the construction industry, are characterised by their short-term and project-based nature, leading to unique conflict situations. The organisations under this study bring together individuals from diverse within-nationality cultural backgrounds to work towards a common goal. The time-limited nature of such organisations adds urgency and pressure to meet deadlines, further heightening conflicts. Differences in communication styles, goals, priorities, resource allocation, and recognition can trigger conflicts. Additionally, the absence of pre-existing relationships among team members in most TOs makes conflict resolution and effective coordination more challenging. Consequently, effective conflict management by team members becomes crucial for the success of TOs. In response to SPTs that interlinked individual and team environment as a society, we believed that the leaders need to demonstrate more relational skills when interacting with team members in complex and dynamic settings. Our study challenges the notion that conflict management is thoroughly the responsibility of team leaders, as suggested by Zhang, Cao, and Tjosvold (2011). Instead, we found that leaders who effectively exercise the four dimensions of relational leadership identified in our study are better equipped to facilitate conflict resolution by team members. For example, leaders who foster mutual respect and open communication are more likely to create a safe space for team members to voice their concerns and work collaboratively towards a solution. Our findings emphasise the importance of relational leadership for effective conflict management in TOs. Organisations should prioritise developing these skills among their leaders to create a harmonious and productive work environment. However, there is a lack of empirical research on how relational leadership influences team members' conflict-handling styles and overall team coordination in dynamic TOs like the construction industry (De Clercq and Belausteguigoitia 2017; Kammerhoff, Lauenstein, and Schütz 2019). Therefore, our study investigated the mediating effects of team members' conflict-handling styles and team coordination on the relational leadership behaviour of leaders and team performance in complex TOs, which has not been fully explained in existing literature.

Second, this study is significant in that it empirically tested four dimensions for relational leadership, shared responsibility, shared knowledge, mutual respect, and communication, and their influences on conflict handling style of members, team coordination, and team performance. Previous literature in relational leadership has commonly viewed this style of leadership through the lens of 'high quality', 'trusting' and 'work relationships' (e.g. Uhl-Bien and Ospina 2012; Jian 2021). Our findings show that relational leadership effectiveness can be also obtained through

informal social conversations, alignment and knowledge sharing, sharing a common vision, a great deal of respect between one another at work, and communicate with warmth. We believe that the four dimensions of relational leadership are highly relevant in resolving conflicts among team members in TOs. A relational leadership approach promotes collaboration, transparency, and trust, preventing conflicts from escalating. Shared responsibility is crucial in the context of conflict resolution and encourages all team members to take ownership of the problem and work together towards a solution. Involving all team members in a conflict resolution process fosters a collaborative and inclusive environment. This can help to ensure that all team members are invested in finding a solution to the conflict, rather than placing blame or avoiding responsibility. Shared knowledge encourages the open sharing of perspectives and ideas, helping identify underlying causes of conflicts. By creating a culture of transparency and trust, leaders can encourage team members to share knowledge, which can help to identify the underlying causes of task conflicts. This can also help to prevent misunderstandings and assumptions from escalating the conflict further. The third dimension of relational leadership in our model, mutual respect, values each team member's contributions, preventing personal attacks and blame. Promoting effective communication is finally essential in conflict resolution, as it enables team members to express their needs, concerns, and ideas in a constructive and respectful manner. Leaders can encourage effective communication by actively listening to team members, asking clarifying questions, and responding in a supportive and empathetic manner. This can help to ensure that all team members feel heard and understood, and that the conflict resolution process is collaborative and respectful. Promoting relational leadership creates an inclusive and supportive environment for conflict resolution and better coordination in TOs. Today's fast-paced work environment presents challenges for project managers and leaders to achieve effective coordination in TOs (Goetz, Wald, and Freisinger 2021; He et al. 2019), but our findings demonstrate the significant contribution of the relational leadership dimensions to team coordination in dynamic environments.

Third, we framed team members' conflict-handling styles as hierarchical constructs with two dimensions: cooperative and avoiding styles. The cooperative conflict style was found to have a positive impact on team coordination, which aligns with existing literature (e.g. Tjosvold 2008; Rubin, Pruitt, and Kim 1994; Y. Q. Chen, Zhang, and Zhang 2014, and Tjosvold, Wong, and Chen 2014). On the other hand, the conflict-avoiding handling style showed empirical support for previous conceptual-based studies (Ayoko 2016; A. S. Chen, Hou, and Wu 2016; Tjosvold 2008) suggesting its positive influence on team performance in permanent organisations. Accordingly, the findings of the study showed that in practice, conflict-avoiding management could also positively influence overall team performance in TOs. This finding challenges the existing literature within Western countries (Tinsley and Brett 2001; Ayoko 2016; Kay and Skarlicki 2020). It also responds to the calls of Upadhyay (2021) and Rispens, Jehn, and Steinel

(2021) for further research on conflict-handling styles in TOs. Future research should explore if conflict-avoiding management enhances team coordination and performance in non-Asian cultures.

Our findings highlight the importance of relational leadership behaviours in influencing the appropriateness of conflict-handling styles by team members. The interplay between relational leadership, cooperative and conflict-avoiding styles, team coordination, and team performance is revealed in a nomological network, contributing methodologically to the field of the study. This measurement approach is not widely used in existing literature on relational leadership. The analysis shows that team leaders' relational leadership style significantly influences team coordination ( $R^2 = 0.502$ ), which, in turn, has a positive effect on team performance ( $R^2 = 0.201$ ). Cooperative and conflict-avoiding styles also have significant impacts on team coordination ( $R^2 = 0.426$  and  $R^2 = 0.102$ , respectively), leading to favourable results on team performance ( $R^2 = 0.123$  for cooperative style and  $R^2 = 0.206$  for avoiding style). This significant finding contributes to the applied leadership literature (Wiltshire, Steffensen, and Fiore 2019; Ollus et al. 2011) by supporting contemporary behavioural practices regarding the antecedents and role of relational leadership in enhancing team coordination in complex and dynamic environments.

Forth, our analysis compared three within-nationality cultural backgrounds (Raithel, van Knippenberg, and Stam 2021), utilising permutation-based analysis of variance to control for familywise error rate and ensure statistical power (Mooi and Sarstedt 2011). This approach contributes empirically to the application of multigroup analysis in PLS path modelling. The results reveal variations in the effects among different cultural background groups. For example, conflict-avoiding management has a strong impact on team coordination and performance in the Malay leader subsample but is weaker in the Indian leader subsample. Cooperative conflict management has the strongest impact on team coordination in the Indian subsample, but the moderation effect is not significant. The effects are more balanced in the Chinese leader subsample. Interestingly, the results show that team coordination has the strongest effect on team performance when the leader of the team has been selected from Malay within country background group. The findings empirically support Tinsley and Brett (2001), Carter et al. (2014), Schieman et al. (2020), Raithel, van Knippenberg, and Stam (2021), and Rosette, Leonardelli, and Phillips (2008), who argued that the cultural background of leaders might have a moderating effect on the leadership style and overall performance of a team. Previous research by Schieman et al. (2020) and Marchiondo, Myers, and Kopelman (2015) has suggested that individual differences (i.e. gender) are correlated with affect-based trust in relational contexts. Our findings extend this understanding by showing that within-nationality cultural diversity of leaders also influences relational leadership behaviour in TOs. Cultural backgrounds shape leaders' communication styles, decision-making approaches, and perceptions of shared responsibility and mutual respect. For example, leaders from collectivist cultures prioritise group harmony and collaboration, while leaders from individualistic cultures emphasise

personal achievement and autonomy. High-context cultures rely on implicit communication cues, while low-context cultures prefer direct and explicit communication. These cultural backgrounds influence leaders' relational leadership behaviour. Although this study considered only ethnic groups without specific cultural constructs, it is important to acknowledge the significant role of culture in shaping beliefs, attitudes, and behaviours. Future studies should collect information on leaders' cultural backgrounds to better contextualise findings and draw more accurate conclusions on relational leadership behaviours in relation to culture.

The current research validates the structural solutions of the proposed conceptual framework for practice by employing the method of repeated indicators as recommended by Wold (1985). The findings emphasise the advantages of the four dimensions of relational leadership style in TOs, particularly in the construction industry, for achieving better conflict resolution and building productive teams. This contradicts prior studies highlighting the negative effects of conflict on project performance (Fisher, Ury, and Patton 2011; Wu et al. 2017; Liu et al. 2021). The literature has not extensively explored the inclusion of subordinate conflict resolution style, especially the avoiding style, within the relational leadership behaviour of leaders and its positive relationship with team coordination and performance. The study offers a distinctive perspective on relational leadership and conflict resolution in multicultural teamwork environments. The findings suggest that, in certain situations where conflict is unrelated to the task and team unity is crucial, adopting a conflict-avoiding management style can help preserve team cohesion. Since relational leaders are looking to improve the relationship at the team level, for example, in dealing with temperamental members, exploiting conflict avoidance, mainly on no-added-value matters, may help teams become skilled at this style. Practising conflict avoidance may enhance patience and reduce miscommunications in a high-interaction environment. However, it is important to consider situational factors and potential drawbacks of this approach (A. S. Chen, Hou, and Wu 2016), as it can be perceived as passive and limit the expression of ideas and solutions. Nonetheless, in multicultural project teams, a conflict-avoiding style can be considered effective and culturally acceptable for diffusing conflict and allowing time for regrouping (Mitkus and Mitkus 2014). The study improves understanding of team performance in multicultural project teams. Findings indicate that incorporating individuals from diverse cultural backgrounds may enhance productivity. When selecting team leaders in such environments, decision-makers should consider their relational leadership skills, communication abilities, and social background. It is recommended to appoint fully qualified individuals with relevant relational experience and background as team leaders.

## 7. Conclusion

Our study provides insights and contributions to the existing knowledge. The findings explain the four dimensions of relational leadership in temporary organisations (TOs): shared responsibility, shared knowledge, mutual respect, and



communication. These dimensions have not been previously tested as a second-order construct to evaluate relational leadership behaviour of leaders. The research findings support the positive impact of cooperative conflict-handling styles on team performance, aligning with Sanders and Schyns (2006) and Deutsch (1990) on the western side of the world together with the findings of Tjosvold (2008), Tjosvold, Poon, and Yu (2005), and Ayoko (2016) in East Asia and Australia. Our study challenges the findings of Rahim (2002) by suggesting that the conflict-avoiding handling style can serve as a viable option for enhancing team coordination in TOs. This aligns with the proposition put forward by A. S. Chen, Hou, and Wu (2016), Liden et al. (2014), and Fisher, Ury, and Patton (2011) for consideration. Consequently, in some situations, conflict-avoiding management needs to be recognised as a reliable alternative for better team coordination in TOs. Moreover, the results of the hypothesised model showed that the within-nationality cultural backgrounds of leaders play a moderating role in the relationship between relational leadership behaviour and team coordination in TOs.

In conclusion, the research question of how relational leadership influences team coordination and team performance in TOs is significant for effective team management. The study's findings indicate that relational leadership positively affects team coordination and performance through shared responsibility, shared knowledge, mutual respect, and communication. Additionally, team members conflict-handling styles play a critical mediating role in the proposed research model.

The study provides valuable insights for practitioners in addition to its theoretical contributions. The findings suggest that project teams with diverse cultural groups, i.e. managed by leaders from Malay samples, exhibited improved coordination and performance. Therefore, project team leaders and top management should recognise cultural diversity as a positive solution for enhancing team coordination and performance. This requires gaining knowledge about the positive aspects of conflict and appreciating the varying values and perspectives of individuals in multicultural project environments, such as the construction industry in Malaysia. Furthermore, the key role of relational leaders in the context of SPTs should be emphasised for successful project delivery, especially when dealing with teams consisting of individuals from different cultural backgrounds in TOs.

## 8. Limitations and future research directions

Our study has some limitations that provide a direction for future research. We used project teams that work in the Malaysian construction industry as the empirical case for our data collection. Therefore, further investigation is required to test the generalisability of our findings in other countries and/or other projectification sectors. In addition, while we focused on team-based activities and conceived project performance as a perceptual-based and composite variable, future research may concentrate more on projects in terms of other parameters that rate project 'success', which might assist the predictive strength of the model at the organisational level, programme level and/or at the project

management office level. The current research primarily focused on explanatory aspects. Therefore, future studies should consider establishing a comprehensive model evaluation framework that incorporates both explanatory and predictive elements. This approach will contribute to strengthening the rigour and applicability of findings within the field of project management. Finally, future research could also be directed towards the evaluation of culture and behavioural traits of leaders in relational leadership styles in other multicultural temporary work environments, especially in Western and/or developed countries.

## Ethics approval

All ethics were based on Universiti Sains Malaysia internally approval procedures.

## Informed consent

A Participant Information Sheet and Consent Form were available to all participants.

## Disclosure statement

No potential conflict of interest was reported by the author(s).

## Funding

The authors would like to acknowledge Universiti Sains Malaysia for providing the RUI Grant [No. 1001/PPBGN/816283] as financial support to conduct the research.

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