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### **Conflict Management Climate in Contractor's Project Team: Conceptualizing its Relationship with Interface Management and Project Performance**

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**Conflict management climate in contractor’s project team: conceptualizing its relationship with interface management and project performance.**

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**ABSTRACT**

Functional heterogeneity symbolizing different “thought worlds” in an organization has a potential to cause intra-organizational conflicts. On construction projects, the general contractor’s project organization is an entity that is tasked with transforming drawings into reality and conflicts at its functional interfaces (execution-safety interface, execution-planning interface, execution-quality interface and execution-commercial interface) could jeopardize a project’s successful completion. Effective interface management therefore seems to be contingent on the successful management of conflicts. This research is built on the long-term perspective of conflict management, which argues for proactive conflict management by introducing structural changes in a system. Climate is a notion which deals with shared perceptions of individuals with regard to distinct phenomena and hence combining the notions of long-term perspective with that of climate will allow researchers to measure shared perceptions of individuals with regard to structural variables theorized to foster collaborative conflict management. The notion of CMC therefore provides opportunity to see how the shared perceptions of individuals with regard to collaborative conflict management influence the notions conceptually linked with CMC. Hence, three notions i.e. CMC, interface management and project performance and the link between them are conceptualized in this paper. Finally the paper concludes by developing three propositions about the nature of relationship between the constructs.

**KEYWORDS:** Interface management, conflict management climate, project performance.

**INTRODUCTION**

Construction project management literature has given extensive space to inter-organizational interfaces and their management since the publishing of Latham’s (1994) and Egan’s (1998) reports, but it is difficult to find research on intra-organizational interfaces which have a potential of influencing project performance by reducing waste, delays and rework. General contractor’s project organization, which takes a challenge of transforming drawings into reality, faces challenges with regard to intra-organizational interface management as there are multiple specialized teams working together to deliver projects successfully. The empirical work

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available on intra-organizational interfaces to allow one to comprehend the relevance and importance of intra-organizational interfaces and their management is disparate in nature. Execution-safety interface could mostly be seen in literature without direct mention of the term interface. Saurin et al. (2004) have developed a model to integrate safety management with production planning and control processes on the premise that production planning done in isolation and without regard to safety requirements will lead to accidents ultimately undermining the essence of production planning. The premise underlying Saurin et al.'s (2004) model underscores the importance of production-safety interface and its management. Similarly, Pavitt and Gibb (2003) have pointed out the importance of production-planning functional interface while discussing the physical interface of roof/cladding. In the similar vein, Laufer and Tucker (1987) have long ago highlighted the shortcomings in the function of planning and most of the shortcomings could be attributed to the poor management of production-planning interface. One of the great challenges in achieving effective interface management is that of effective collaboration between different intra-organizational teams, because due to different “thought worlds” (Dougherty, 1992), it is very likely that people from different functional teams will get into conflict during the process of information sharing and decision making.

Individuals working in organizations may avoid conflicts by developing “silo thinking”. However, the drawback of “silo thinking” is that it does not allow alternative views and explanations which may create difficulties for organizations at a later stage in the form of delays, reworks and conflicts with other stakeholders (Ellegaard & Koch, 2014; Goh et al., 2012). Alternatively, individuals who try to take others’ perspectives into account to plan and execute work may get into the trap of conflict owing to different “thought worlds” or functional heterogeneity. This whole situation calls for a perspective which could explain theoretically as to how the individuals from different functional teams of an organization keep their dialogues constructive and benefit from the cross-fertilization of ideas and avoid getting into the abyss of dysfunctional conflict. A possible research question which then follows this discourse is: Is there any role of context in keeping the dialogue constructive? To address this question of theoretical and practical importance, this paper is built on the long-term perspective of conflict management (Thomas, 1992) which posits that structural parameters of a system influence thoughts and emotions which in turn determine the course of conflict management. Long-term perspective of conflict management argues for proactive conflict management and therefore is appealing for those who want to reap the benefits of proactive conflict management. To measure the state of structural variables theorized to foster collaborative conflict management, the notion of climate has been combined with the long-term perspective of conflict management. The notion of climate allows researchers to measure consensus with regards to distinct phenomena through its attribute of ‘strength’ which in turn allows researchers to see the consequential effects of climate strength on the theorized outcomes. Therefore we contend that, the notion of conflict management climate will allow researchers to know about the ‘strength’ of structural variables and to see their consequential effects on theorized outcomes. In recent years, construction project management literature has acknowledged the importance of interface management in the

backdrop of project management. Taking into account the other function's perspective while planning and executing work is at the heart of interface management and therefore this paper has argued for the link between CMC and interface management as climate epitomizing the environment of trust, normative norms, and social support will provide critical foundation to understand different perspectives and to reach to an integrative solution without getting into conflict. In turn, this paper conceptualizes a link between interface management and project performance, with the premise that teams taking other teams' perspectives into account during the planning and execution of tasks are most likely to complete their tasks without schedule delays and quality issues. Thus the objective of this paper is to conceptually link three notions i.e. CMC, interface management and project performance so as to reflect on their importance in the backdrop of construction project management.

### **THEORETICAL PERSPECTIVES UNDERPINNING THE RESEARCH RATIONALE**

Pelled and Adler (1994) proposed a conceptual model for intergroup conflict in multifunctional product development teams. They proposed that functional heterogeneity, or in other words functional differentiation, give rise to selective perceptions. The selective perception view holds that the goals, views, and traditions of a particular department restricts an individual to attend only to certain information while performing a task or resolving a problem (Dearborn & Simon, 1958). This “selective perceptions” view is similar to the concept of “silo mentality”, where an individual makes decisions without considering the impacts of his decisions on the system as a whole. While task conflict, owing to the selective perceptions, may prove useful in performing tasks, it may also lead to emotional conflict (Pelled & Adler, 1994). Figure 1 reflects the pivotal role of general contractor in construction projects as it is this organization which is responsible to client for delivering project successfully. However, functional heterogeneity as represented by different teams — quality, commercial, execution, planning and estimation— in general contractor's project organization may lead to selective perceptions and ultimately have a propensity of turning into emotional conflict. The two social psychological mechanisms through which selective perceptions lead to emotional conflict are “categorization” and “intergroup anxiety” which are explained below.

**Categorization:** A cognitive process described by Taylor et al. (1978) whereby individuals overestimate the similarities among the members of their own group and tend to underestimate the similarities between people from their group and those from other groups. The process of categorization or generalization is used by humans in order to cope with the over load of information, whether the information is about people or objects. However, when categorization is about people it sets the basis of hostile attitude of one group towards the other group.

**Intergroup anxiety:** In addition to the cognitive process of categorization, another social psychological process through which functional diversity leads to emotional conflicts more directly is intergroup anxiety. Intergroup anxiety refers to the discomfort and apprehension that

people feel while interacting with the members of other groups (Stephan & Stephan, 1985). Pelled and Adler (1994) posit that the combination of both categorization and intergroup anxiety leads to negative expectations that can be self-conforming, eventually feeding emotional conflict.

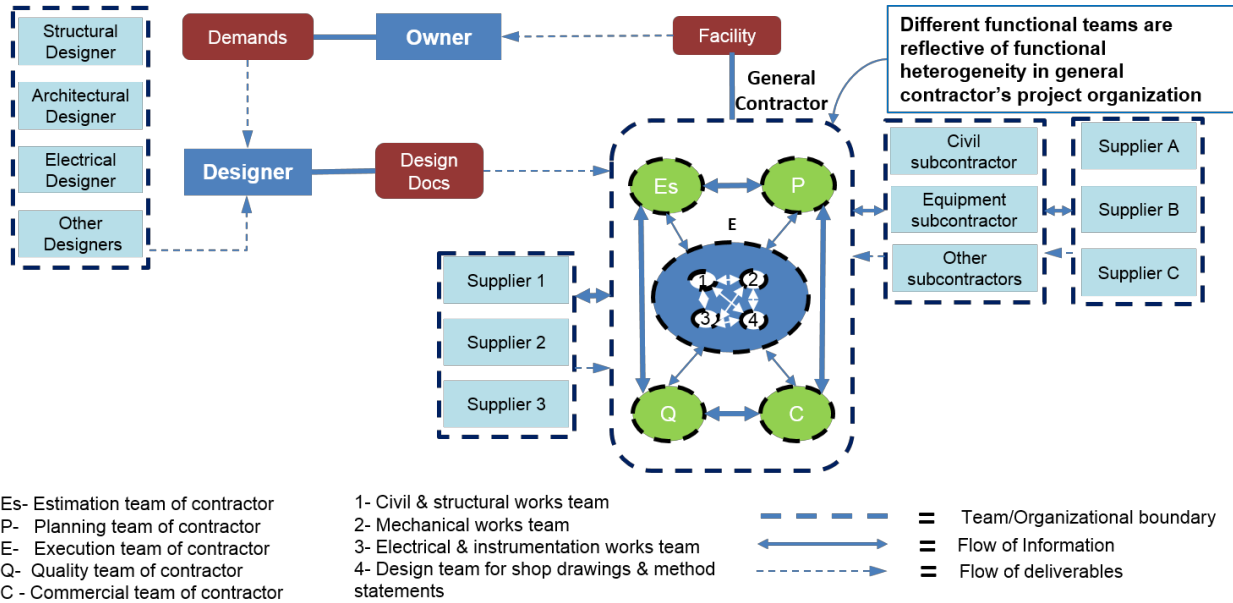
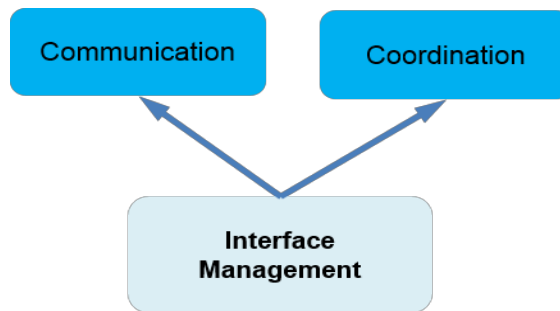


Fig.1 Diagram showing functional heterogeneity in general contractor's project organization  
Adapted from Xue et al. (2007)

## CONCEPTUALIZING INTERFACE MANAGEMENT

Interface is defined as a boundary across which two independent systems meet and act on or communicate with each other (Walker, 1996). According to Nootboom (2004), interface management refers to the management of boundaries common between people, systems, equipment and concepts. In the field of civil engineering, Wideman (2015) provided two definitions of interface management: (1) “the management of communication, coordination, and responsibility across a common boundary between two organization, phases, or physical entities which are interdependent; and (2) “managing the problems that often occur among people, departments, and disciplines rather than with in the project team itself”. In the context of safety, Kelly and Berger (2006) have defined interface management as “the systematic control for ensuring timely and effective verbal and written communications among participants.” Considering the majority of definitions of interface management, this study defines interface management as management of communication and coordination across a common boundary between people, functions, organizations, phase or physical entities. Stuckenbruck (1988) identified three main interfaces — personal interfaces, organizational interfaces and systems interfaces. Healy (1997) proposed four main interfaces — time interfaces, geographic interfaces, technical interfaces and social interfaces. Laan et al. (2000) identified three main interfaces — functional interfaces, physical interfaces and organizational interfaces. Pavitt and Gibb (2003) proposed three main interface types: physical interfaces, contractual interfaces and

organizational interfaces. Following Laan et al.'s (2000) & Stuckenbruck's (1988) categorization, this study adopts the term 'functional interface' which is defined as the boundary across which two interdependent functions communicate and coordinate for the accomplishment of tasks. The importance of effective communication and coordination in the backdrop of interface management could be ascertained from Chen et al.'s (2008) observation. They have observed that communication across a party's boundary is rather challenging and hence becomes "one of the major causes for wide variety of interface issues". Also, poor coordination may hamper the compatibility of components/subsystems and may lead to disagreements with regard to schedules, site activities and resource utilization. Interface management is important as it creates an understanding about the interdependence between systems, the appropriate methods for handling interfaces, the requirement of resources and their organization at the job site and the respective responsibilities of the parties to manage the interface (Chen et al., 2007). Therefore, in the backdrop of this study, the communication and coordination across functional interfaces is of immense importance. According to the definition of interface management adopted in this study, communication and coordination are the two dimensions of this notion which are shown in fig 2 and explicated as under:



*Fig.2 The construct of interface management*

## **COMMUNICATION**

Mohr and Spekman (1994) studied communication as the characteristic of successful partnership between firms and characterized the notion with three dimensions i.e. communication quality, information sharing, and participation. We adopt this characterization in this study as it clearly captures the essence of communication behavior. The three dimensions of communication are as under:

### **Communication quality**

Communication quality refers to such aspects like accuracy, timeliness, adequacy, and credibility of information exchanged (Daft & Lengel, 1986). Another aspect that reflects the quality of communication is of paramount importance especially from the perspective of interface management. Lovelace et al. (2001) building on the negotiation literature identified "collaborative" and "contentious" types of communications. They noted that differences of

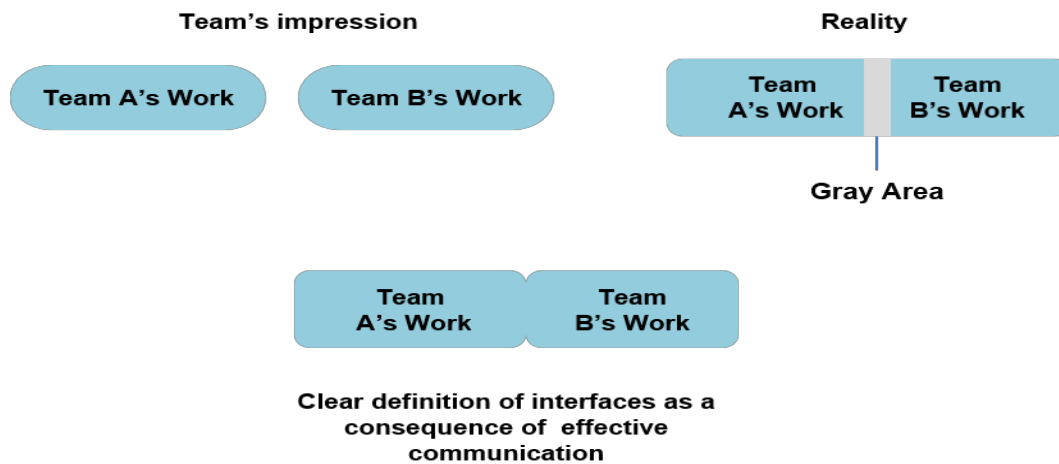
opinions may lead to beneficial outcomes when the participants engage in collaborative communications rather contentious. They argued that collaborative communications are typified by explicit desire of finding an integrative outcome as opposed to contentious communications that are typified by their win-lose outlook. All of these aspects including accuracy, timeliness, adequacy, credibility and nature of communication refers to the dimension of communication quality.

### Information sharing

Information sharing refers to the extent to which critical information is shared among parties during the performance of a task. From the information processing view (Galbraith, 1977), in uncertain conditions, continuous information processing is required to adjust with the changing needs in schedules, resource requirements and priorities. Effective information exchange builds foundations for a successful project and on the contrary communication delays leads to delays and other project failures (Chen et al., 2008).

### Participation

Participation refers to the extent in which interdependent parties engage in joint planning and goal setting (Mohr & Spekman, 1994). Joint planning provides foundation for mutual expectations and in turn becomes a basis for cooperative efforts from either side of the interface (ibid). Joint planning and goal setting is the activity that allows parties to clearly establish their respective responsibilities. Chua & Godinot (2006) identified problematic gray areas which exist because each party on either side of the interface keeps assuming that certain activities are the responsibility of the other party. Such confusion later creates bottlenecks and potentially cause delays and reworks. As shown in figure 3, gray areas get removed as a consequence of effective communication. In essence it is this participation in which both parties engage in joint planning and goal setting to remove gray areas.



*Fig.3 Consequence of effective participation  
Adapted from Chua & Godinot (2006)*

## **COORDINATION**

Coordination is one of the most sensitive functions of management (Chitkara, 1998). Higgin and Jessop (1965) state, “Looking at the building process, we can distinguish three main functions. Two are obvious: Design and construction. The third is coordination.” Coordination has been defined as managing interdependencies to achieve mutual goals (Crowston, 1997; Mintzberg, 1973). Chitkara (1998) states that coordination’s main aim is to harmonize planned efforts to achieve project goals. According to Higgin and Jessop (1965) “coordination is almost equivalent in meaning to ‘control’, ‘planning’ or ‘management’ but is descriptive of the relating together of separate activities and their concentrated direction towards a common purpose”. Coordination therefore is distinct from communication in a sense that it is more concerned with the harmonization of the planned efforts to achieve project goals. Where communication refers to information exchange, coordination refers to concerted efforts to manage interdependencies and execute tasks for the accomplishment of project goals.

## **CONCEPTUALIZING CONFLICT MANAGEMENT CLIMATE**

Conflict management refers to the actions which allows one to deal with differences of interests, perceptions, and preferences in order to maximize organizational effectiveness (Singh & Johnson, 1998). The notion of conflict management has always been distinct in its definition to that of dispute resolution or even conflict resolution as it is primarily concerned with the achievement of common goals and solution to problems by channeling the energies and expertise of the conflicting parties (Rahim & Bonoma, 1979). In essence, the notion of conflict management assumes that conflicts can be managed for the benefits of parties involved in a conflict. However, the two main types of conflict — task conflict and relationship conflict— have two different perspectives for the notion of conflict management. Where it is claimed in literature that task conflict leads to creativity and improved performance, it is also claimed that relationship conflict is detrimental for performance and relationships. There are empirical studies (Jehn, 1997) that have further shown that task conflict can also degenerate into relationship conflict. In this scenario, the importance of adopting the right perspective of conflict management increases many folds.

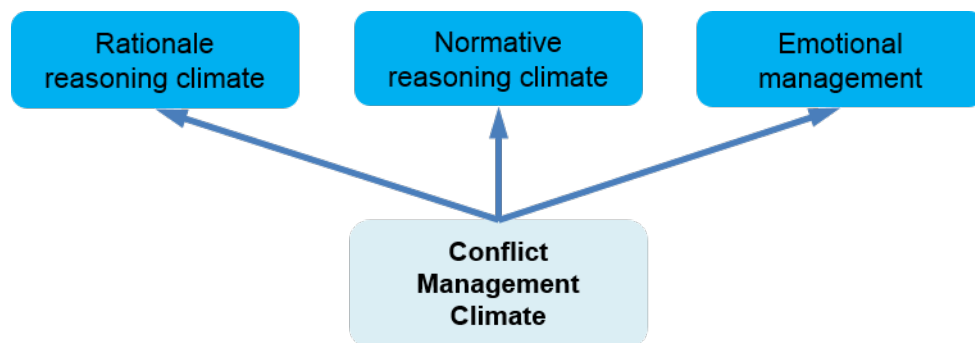
The theoretical underpinning of the notion of ‘conflict management climate’ is grounded in the theoretical distinction between short-term conflict management and long-term conflict management. Short-term conflict management refers to those actions that are undertaken to deal with immediate conflict situations. In short-term conflict management, the context is considered as given and the real goal is to find the best possible solution considering the opportunities/constraints impinged by the context in which the conflict is being managed. Thomas (1992) notes that the short-term approach’s focus on finding a solution and keeping the current conditions in perspective restricts their search of a solution to a “local optimum” and hence he argues that in order to move beyond the limitations of the prevailing conditions, the focus should be on improving the structural conditions — the approach which he term as long-term conflict management. Long-term approach considers situational variables as changeable



that pave way to set a goal of reducing constraints and enhancing opportunities to “achieve a more globally optimal set of outcomes for the beneficiary”. A very critical observation made by Thomas (1992) is that the conflict processes do not occur in vacuum. Instead, it is the structural conditions of the system that shape the course of events at the interface between the parties. Further on, Thomas (1992) observes that structural conditions shape the conflict outcomes including both task and social outcomes. The idea to have situational conditions that give rise to collaborative/problem solving/integrative conflict management provided a rationale to bring conflict management climate as a theoretical lens to study interface management within contractor’s project organizations. However, for empirical research purposes it was difficult to measure the state of structural variables, which according to Thomas (1992) are fundamental in fostering collaborative conflict management. Climate is a notion in psychology that informs about the shared perceptions of individuals about a distinct phenomena at a certain level of analysis (e.g. at team level, or organization level) (Schneider et al., 2013) . Some examples of the notion of climate that have been used to measure perceptions with regard to some distinct phenomena are: service climate, safety climate, procedural justice climate, psychological safety climate etc. Therefore, the notion of climate was combined with the concept of conflict management to ease the difficulty of measuring structural conditions theorized to foster collaborative conflict management. Conflict management climate therefore is a notion that measures shared perceptions of people with regard to structural parameters of a system and is theorized to be an aggregated construct of the organizational level.

### **Dimensions of conflict management climate**

Drawing on Thomas’ (1992) framework of structural variables for collaborative conflict management and the theory of climate, the proposed three dimensions of the construct are shown in fig 4 and explicated as under:



*Fig.4 The construct of Conflict management climate*

### **Rational reasoning climate**

Drawing on the theory of climate and structural variables posited to foster rationale reasoning, the notion of rationale reasoning climate is defined as shared perceptions of the individuals with regard to structural variables— positive mutual regard, mutual trust, power parity, commitment to organization mission, organic climate and collaborative reward systems— that foster rationale reasoning necessary to achieve collaborative conflict management. Building on the expectancy theory, Thomas (1992) has identified two distinct types of structural variables i.e. integrative incentives and feasibility conditions. Integrative incentives are those variables that contribute towards the valence of an intended outcome (in this case the collaborative outcome), whereas feasibility conditions are those that contribute towards the expectancy that such an outcome is attainable. Therefore, rationale reasoning climate is a construct that measures whether the individuals in the organization attach valence and expectancy in the attainment of integrated outcome.

### **Normative reasoning climate**

Normative reasoning climate is defined as shared perceptions of the individuals about the structural variables that foster normative reasoning, which in turn allows collaborative conflict management to be achieved. Synthesizing Fishbein's model (1963), Thomas (1992) noted that “force of each normative system on the individuals' intention to collaborate is assumed to be a multiplicative product of (a) the degree to which that normative system prescribes collaboration and (b) the degree to which the party is motivated to comply with that normative system.” These structural factors are referred to as ‘collaborative norms and precepts’ and ‘acceptance/internalization factors’, respectively. Therefore, normative reasoning climate is a construct that measures the perceptions of individuals about the organizational norms, shared collaborative expectations, and organizational cohesiveness.

### **Emotional management**

It is now a well-accepted notion that conflicts can only be productive if the emotions during the episode of conflict are positively channelized (De Dreu & Weingart, 2003). In line with the definition of collaborative conflict management that is concerned with confrontation and cooperation, the collaborative efforts requires reality centric handling of the conflict situation. Thoits (1984) has named this reality centric handling of conflict as “problem-focused coping” where party handles the conflict in a pragmatic way rather than depending on defensive mechanisms such as cognitive distortion — a process that constructs a psychological protection from the threat to self-concept (Thomas, 1992). Thomas (1992) has identified ‘social support’ as a variable that buffers between individuals and the effects of stressor. Thomas (1992) also notes that “social support is also a major source of positive affect which, as discussed earlier, serves to block the expression of negative emotions and to provide a motivational force for cooperation.” Thomas (1992) further notes that social support is not merely a notion of providing comfort to individuals; rather, research shows that colleagues also help individuals to steer them away from

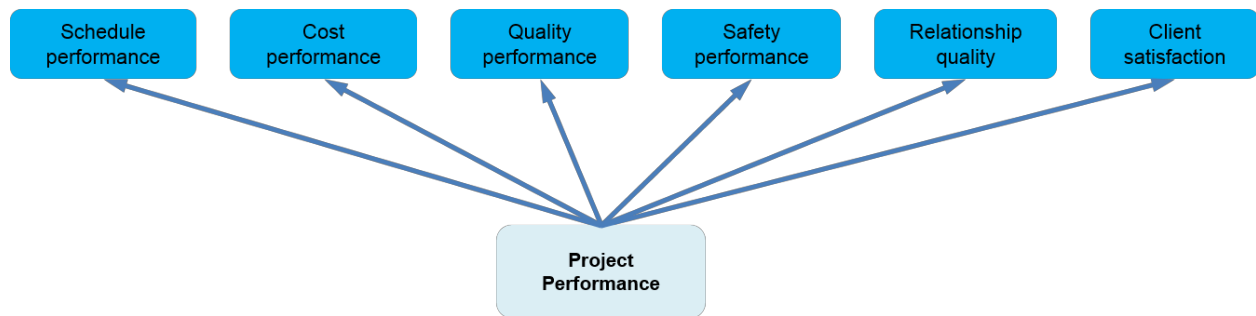
the distorted interpretations of events “that generate inappropriate or maladaptive negative emotions”.

## **CONCEPTUALIZING PROJECT PERFORMANCE**

Project performance is defined as a construct that measures the extent of successful completion of project (Cheng et al., 2012). The concept of successful project performance is highly subjective and clients, contractors, subcontractors each have their own definition of successful project performance (Menches & Hanna, 2006). Also, the characterization of the construct of project performance is to some extent context specific and hence there is variability in its characterization. For example, for a project where client is highly sensitive to the environmental impacts of a project, the measure of project performance will not be considered valid if dimension of environmental impact is not incorporated into the scale. Cox et al. (2003) found support to their hypothesis that key performance indicators vary according to the management’s perspective. Therefore, we contend that the notion of project performance is highly subjective and its meaningful characterization is dependent on the context of study and the research questions which the respective study is aiming to answer. From this study’s perspective, the notion of interface management and the perspective of contractor shape the characterization of the notion of project performance. Typically, the measure of project performance has been characterized with the three dimensions of time performance, cost performance and quality performance. Also, both quantitative and qualitative measures have been used to measure project performance e.g. Cho et al. (2009) employed both quantitative and qualitative indices to measure project performance. Where quantitative indices were used to measure cost and time performance, qualitative indices were used to measure quality and owner’s satisfaction.

Ashley et al. (1987) identified the six determinants of construction project success which are budget performance, schedule performance, client satisfaction, functionality, contractor satisfaction, and project manager/team satisfaction. Similarly, Chua et al. (1999) in their bid to identify critical success factors first defined success characterized by three dimensions of budget success, schedule success and quality success. Apart from the frequently employed dimensions (time, cost and quality), scholars have started bringing in other dimensions to characterize the notion of project performance (e.g. safety, environmental impact, work environment and innovation) (c.f. Cole (2000); Ling et al. (2009) ; Dulaimi et al. (2003); Caldwell et al. (2009)). Cox et al. (2003) identified quantitative performance indicators which are units/MH, \$/Unit, cost, on-time completion, resource management, quality control, percent complete, earned man-hours, lost time accounting and punch list. The qualitative performance indicators identified by Cox et al. (2003) include safety, turnover, absenteeism and motivation. After analyzing the survey data, Cox et al. (2003) identified six KPIs — Units/MHR, \$/unit, safety, total cost, on-time completion, quality control/rework— to have frequently received the respondents confidence which led them to conclude that these six performance indicators are perceived as most significant. In a rather recent study, Menches and Hanna (2006) asked project managers about

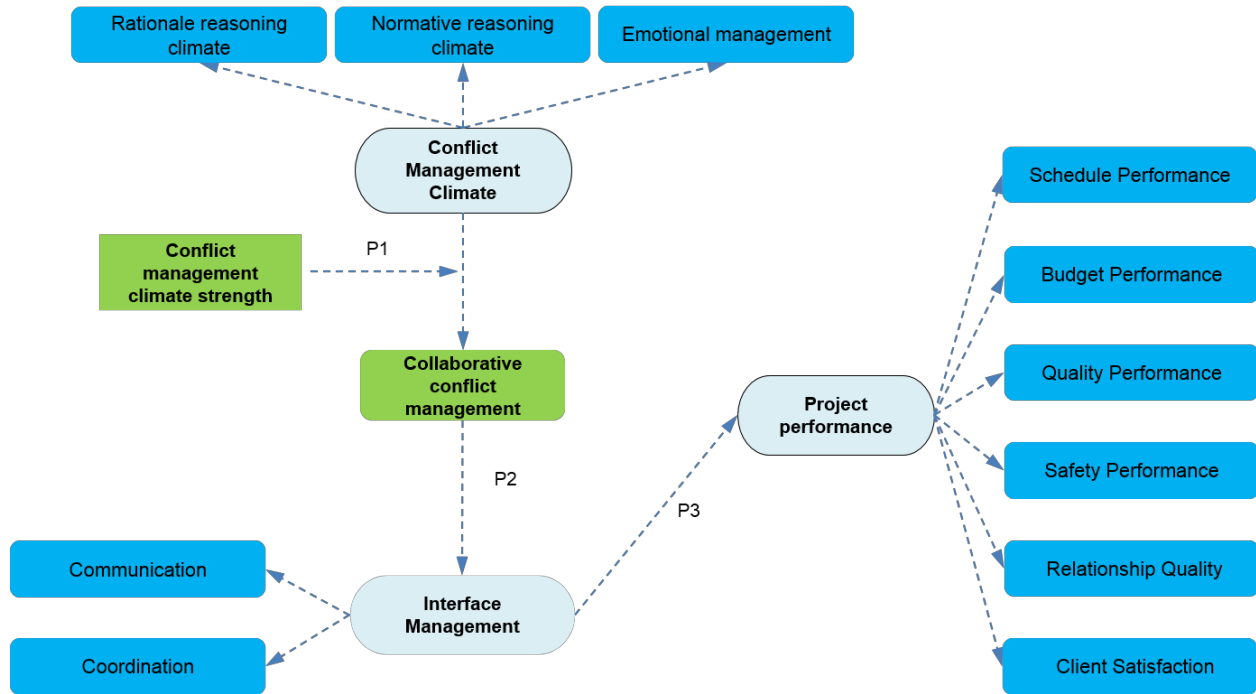
their definition of successful performance. The project manager’s definition of successful project performance was not very different from those identified by other academics or practitioners in other studies. The top ten definitions of successful performance included profitable project, customer satisfaction, repeat business, good work relationships, safe worksite, schedule success, pride, good communication, achieved quality and budget success. This brief literature review on the notion of project performance shows that in almost all studies respondents have considered the dimensions of budget performance, schedule performance and quality performance as a good reflection of project performance. Besides that, safety performance has also been considered as an important aspect of project performance. Considering that the objective of interface management is to deliver project without delays and re-work, it seems pertinent to incorporate all four dimensions — budget performance, schedule performance, quality performance and safety performance — to characterize the notion of project performance from this study’s perspective. Successful interface management is also reflective of smooth working relationships between different functions and therefore, another dimension of relationship quality is incorporated to characterize the notion. At last, we expect that interface management may also influence another widely reported dimension of project performance i.e. client satisfaction as it is expected that project being executed without delays and quality issues will bring satisfaction to a client. Therefore, the sixth and last dimension of the notion of project performance from this study’s perspective is client satisfaction. Thus project performance in this study characterized by six dimensions as shown in figure 5 are budget performance, schedule performance, quality performance, safety performance, relationship quality and client satisfaction.



*Fig.5 The construct of project performance*

**CONCEPTUAL FRAMEWORK**

The integrated conceptual framework of this study comprising constructs of conflict management climate, interface management and project performance is proposed in figure 6. Foregoing lines have conceptualized the three notions which provides foundation to conceptualize relationships between the three constructs. Hence, the following section presents the conceptualization of links between CMC and interface management and interface management and project performance.



*Fig.6 Conceptual framework*

## CONCEPTUALIZING LINK BETWEEN CONFLICT MANAGEMENT CLIMATE AND INTERFACE MANAGEMENT

Conflict management provides a critical foundation to team members to reflect on the team work which then allows them to be more productive and effective (Tjosvold et al., 2003). Although conflict carries negative connotations in the past, researchers have argued that task conflicts if managed well can contribute to improved performance (Tjosvold, 2003). However, the relationship between task conflict and performance is not that simple. Jehn (1997) in her seminal work on conflict has meticulously noted the neglect on the issue of interplay between task and relationship conflict. Jehn (1997) argues that it is quite possible that a task conflict may transform into relationship conflict if conflicts remain unresolved and parties attribute this non-resolution to personality differences. Jehn's (1997) argument therefore is fundamental in a sense because it allows one to comprehend the multiplicity of forces acting upon the parties in conflict even if it categorized as a task conflict. De Dreu and Weingart (2003) conducted a meta-analysis to confirm whether task conflict and relationship conflicts have positive and negative team performance outcomes respectively. Surprisingly they didn't find difference between their effects on team performance as both were found to be negatively correlated with team performance. However, they indicated that team performance may benefit from task conflict only when they remain constructive, implying that relationship conflicts to be kept at their lowest. Prevailing conflict management theories and models have not paid enough attention to strive for optimum solution of conflicts while considering the multiplicity of forces acting upon the parties when they are in conflict (Thomas, 1992). Accounting for multiplicity of forces acting upon

parties involved in conflict, the notion of conflict management climate is conceptualized and built on Thomas' (1992) structural framework which he proposed for collaborative conflict management. The underlying motivation of the notion of conflict management climate is to have an understanding of the perceptions of people about those structural parameters that shape one's reasoning (i.e. rationale reasoning, normative reasoning, and emotions) to collaborate in a conflict situation. In essence, conflict management climate captures the tendency of individuals to manage conflicts collaboratively. Climate strength is a concept that captures the degree of agreement among individual perceptions: the greater the consensus, the stronger the climate (Schneider et al., 2002). Therefore, it is expected that conflict management climate strength will moderate the relationship between conflict management climate and collaborative conflict management. As shown in figure 6, our first proposition derived out of this conceptualization is:

*P1: The higher the strength of conflict management climate, the better the collaborative conflict management in contractor's project organization.*

Collaborative conflict management refers to an attempt to achieve an integrative settlement by fully satisfying the concerns of both the parties involved in conflict (Thomas, 1992). Owing to the nature of this type of conflict management, it has also been labelled as problem solving, synergy, integrating and confronting (ibid). Twenty-eight CEOs of organizations considered collaborative conflict management as the best approach when the objective is to learn, to find an integrative solution and to merge insights of different people with different perspectives (Thomas, 1992). Interface management is therefore believed to be linked to conflict management climate via collaborative conflict management because collaborative conflict management provides critical foundation to understand different perspectives and to reach to an integrative solution—the idea which is at the heart of interface management. Also, owing to the uncertain environment of complex projects, iterative working practices are required to successfully complete a task at hand. Iterative working practices are to be benefited most by collaborative conflict management as people will tend to communicate and coordinate with each other without getting into task or relationship conflict. Therefore, our second proposition, as shown in figure 6, derived out of the above conceptualization is:

*P2: Collaborative conflict management in contractor's project organization positively influences interface management.*

## **CONCEPTUALIZING LINK BETWEEN INTERFACE MANAGEMENT AND PROJECT PERFORMANCE**

Interface management allows the integration of teams, work, information and other attributes to cut waste, avoid delays and reworks (D. K. Chua & Godinot, 2006). The two dimensions of interface management — communication and coordination— have tremendous potential in influencing project performance. Communication between different functional teams

allow one function to get other function's perspective thereby providing alternative views and explanations (Ellegaard & Koch, 2014). As conceptualized earlier, communication is characterized by three dimensions: communication quality, information sharing and participation. The three dimensions of communication revolves around the accuracy of information, timelines of its transmission, and the extent to which parties engage in joint planning and goal setting. Similarly, coordination refers to 'control', 'planning' or 'management' but it is more concerned with the interdependence of two activities and the concerted effort required to complete them. Seeing it from the lens of information processing theory (Galbraith, 1977), both communication and coordination have their fundamental role in the execution of tasks that are executed in a construction project as a lot of information is required to be processed during the execution of a task to adjust to the changing need of resources, schedules and priorities (c.f. (Thamhaim and Wilemon (1975)). Project performance (time performance, cost performance, quality performance and safety performance, relationship quality and client satisfaction) is therefore contingent on the communication and coordination between functions of a contractor's project organization. Therefore, our third proposition, as shown in figure 6, derived out this conceptualization is:

*P3: Interface management between different functions of contractor's organization positively influences project performance.*

## **CONCLUSION**

This paper has presented a conceptual framework encompassing relationships between conflict management climate, interface management and project performance. The proposed conceptualization of the constructs and their relationships is important from both theoretical and practical standpoints. The conceptualization of construct of conflict management climate by adopting long-term conflict management perspective is expected to add value to conflict management literature as prevalent conflict management theory and models are more concerned with the short-term perspective of conflict management. Also, intra-organizational interface management from the perspective of contractor's project organization is expected to encourage other academics to investigate interface management at this level in order to achieve further improvements at the operational level. From a practical standpoint, upon successful testing of this model, this research is expected to provide an understanding about the structural variables that could influence project performance through their mediating effect on interface management. There is an ample research on integration of different stakeholders in construction project; this paper has provided a different perspective that focuses on the integration of different teams within a general contractor's project organization.

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