

# Negotiation for Managing Conflict in Construction Industry with Multicultural Context: A Systematic Review of Literature

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The construction business plays a significant part in economic growth nowadays, conflicts occurred in the project phases will slow down the construction progress, or drive to the worst scenario in abandoning the project. Negotiators need to overcome the conflict and smoothen the progress of the construction project with minimum harm to project stakeholders. This study conducted a systematic literature review of 60 publications published globally on conflict and negotiation areas to analyse and identify the negotiation factors. Based on the review and descriptive statistical analysis, the findings show there are linkages among the construction, business, and psychology sectors in handling conflicts through negotiation. However, culture-based negotiation or conflict management in construction industry studies are very few. There is an opportunity for future researches to bridge the study on culture-based negotiation and conflict management in the construction industry with multicultural context.

***Keywords:*** *negotiation, conflict management, conflict factors, culture, construction, negotiation strategy.*

## 1. INTRODUCTION

In the construction industry, the major parties that involved in a construction project are sponsors, architects, engineers, quantity surveyor, land surveyor, construction team members, and suppliers. Since all parties are playing a major role in the project, any small conflicts, regardless of magnitude, will affect the project negatively and cause the escalation of cost, time, and quality. Conflicts can be triggered by differences in cultural background, unclear objectives, or even political desires in groups.

In addition, other factors that cause conflicts by individuals are poor communications and management, and personal opinions and attitudes, arguments over methods and procedures (Lester, 2017). Work culture and behaviour aspects in the construction industry are very challenging for the project manager to handle project due to team members' different understanding, and their behaviours influence the structure of the interactions cause conflicts (Tabassi et al., 2017), most individuals are doing things in the way that prevalent in their history rather than following instructions (Mejia-Arauz et al., 2018).

Conflict is unavoidable (Tang et al., 2020), and it happens as long as there is a human present. In such a situation, each individual's emotion and behaviour may reflect in his or her actions to turn the conflict into dispute. Conflict is defined as a struggle or disagreement between people with different beliefs, thoughts, needs, values, or objectives, it also can be categorized between two or more individuals or groups. Due to multicultural based construction industry, the conflict is more likely higher and can be triggered easily by its work cultures and behaviours; that culture implies the structure of recognized styles which are common across a working environment among members in different intellectual beliefs, expectations, and attitudes, practices and interactions (Braithwaite et al., 2017).

This study is to identify the cultural behavioural factors that offer a guideline for researchers to develop negotiation models and strategies purposely aim at the construction industry with a multicultural context in the future.

## 2. LITERATURE REVIEW

Construction projects play a significant role in the country's economy through its infrastructure development (Yong & Mustaffa, 2017), this sector includes civil engineering, special trades, non-residential building, and residential buildings. Besides that, the development of the construction sector is directed to the reinforcement of the construction career, and reassurance of new investment (Bakhary et al., 2017).

The construction work involved for the group of parties with different views and levels of capabilities to work together in the construction industry by accomplishing certain goals that they are planned for (Yong & Mustaffa, 2017), the standards of the time, cost and quality were widely determined (Choi et al., 2021; Kamar et al., 2019) as well as others such as health and safety, technical availability are factors with increasing concerned.

### 2.1 Work culture

There are different working cultures in all different places, where culture is defined as the norms and values, and beliefs distinctive of the people from that country and the legal systems, social setting, economic that provide a form of social interface; somehow, not everyone in culture trails the same standards or holds the same morals (Brett, 2017).

Tight culture with strong social norms guiding interpersonal behaviour, social monitoring of that behaviour, and allowing of deviations in strong social cultures. However in loose cultures was dependent on individual and there was a larger diversity of behaviour (Brett, 2017; Masuda et al., 2020). Not everyone follows the same norms or embraces similar values the same way within a culture as the culture was not certain since there was difference around the cultural dominant propensity, and cultural behaviour can be labelled when it was consistent with the central tendency, which was difficult to change.

Workers' cultural values and behaviours forms working value (Tabassi et al., 2017) in a multi-cultural country, and dissimilar beliefs and identities cause each cultural group may not share the same values. Many workers would likely only work together as a group with common characteristics or patterns, otherwise,

others just prefer to work alone with less communication within the group.

## **2.2 Conflicts in the construction industry**

Conflict and dispute are two different notions in the construction sector (Fenn et al., 1997); conflict is pandemic, it existed where is an opposition of interest, it can be managed and possible to the extent of avoiding a dispute ensuing from the conflict. On other hand, the dispute is related to different justiciable matters and it requires resolution. The process of dispute resolution lends itself to a third interference.

Construction projects are all about human working relationships, and conflict happens as long as there is a human present. Conflict is defined as a strong disagreement with different perspectives among parties (Contu, 2018; Lester, 2017; Martin & Benson, 2021), it can be triggered by differences in cultural background, unclear objectives, or even political desires in groups. Conflict is also a contest or struggle among a wide diversity of individuals or groups with different objectives, attitudes, thoughts, and views (Lester, 2017), it is associated with irreversible destructive effects (Godiwalla, 2016). Obstinate conflicts are intractable, nonrational, and resistant to resolution as they generate complicated conversations (Ellis, 2020).

Furthermore, a dispute is identified as a serious cause of the low achievement and deficit in construction projects (Charehzehi et al., 2017). Disputes are stated to as long-term unrestrained and unresolved disruptive conflicts. They commented there were tightly linking “claim”, “dispute”, and “conflict” among each other in most the scenarios within the construction industry.

### **2.2.1 Conflict occurs in construction project**

The common construction conflicts are classified into main categories in internal and external factors (Yap et al., 2020; Yong & Mustafa, 2017). In which the internal conflict-related factors included project owner, contractor, design, contract, human behaviour, project issue. External factors were pointing to weather, legal and economic factors, and the

fragmented structure of the sector. In their findings, the analysis discloses that the contractor-related disputes and their sub-dispute categories in an extension of time, work in progress postponement, financial deficiency of the contractor, technical inadequacy, and quality of works, were the common aspects in the construction industry. These factors are aligned with Mohd-Rahim et al. (2018) risk management factors for project lifecycle that are categorized in macro, meso, and micro aspects.

In addition, Yong and Mustafa (2017) stated the general construction industry underperforming that based on poor profit margins and a lack of investment in training, research, and development. Limited trust, unwillingness to cooperate, poor communication, and an adversarial relationship were among the construction industry's major issues. (Martin & Benson, 2021). Project management and planning, as well as the perspectives of project stakeholders, have more influences and reflective consequences on the performance outcome of a project during the project implementation stage (Isa et al., 2019). As a result, respondents had a high level of awareness of the impact of human-related aspects like dedication, capability, communication, and teamwork on the success of a construction project. (Lu et al., 2020). Workers were working in scattered, disorganized, and none cooperative working environments in the construction industry (Chen & Sharif, 2020). The situation may decrease the productivity which is based on the new digital technologies and new behaviours involvement that workers were working individually in their way without collaboration with the factors related to economic engagement, nomadic workforce, and human behaviour.

Construction contract claim management system brings the attention to all while it deals with monetary matters, disputes raised in the aspects of lack awareness, insufficient knowledge, and insufficient time in the category of problems in claim identification. In addition, unclear verbal instructions are given by the superintendent officer, and inaccurate information (Bakhary et al., 2018) will impede the project progression. Besides, the

construction industry is having a high risk for injuries and deaths cases especially at a construction site, particularly pointing to multi-culture context. Cultural differences in language and individual behaviour cause communication barriers (Shepherd et al., 2021).

### **2.2.2 The conflict caused by internal factor**

Conflict can arise for many reasons throughout the project lifecycle, it is a struggle between people with opposite ideas, beliefs, needs, values, or goals, disagreement between two or more individuals or groups that trying to gain acceptance or recognition of their view other others (Halevy & Cohen, 2019; Mu et al., 2021). Personal or group attitude and behaviour cause conflict among project member groups in a multi-cultural working environment (Tabassi et al., 2017). Most individuals are doing things in the way that is prevalent in their history rather than following instructions. Moreover, Culture refers to characteristics of a recognised style that are shared by employees with differing cognitive views, assumptions, and attitudes, as well as activities and interactions. (Braithwaite et al., 2017). If the workers work in their preferred way instead of following the directions, this situation creates real chaos since all the project tasks are linked together towards the project goal.

Bakhary et al. (2017) looked into project team members' lack of awareness in well-preparing documents during the work and for the work done stage to record information that caused claimed problems, they discovered a lack of contract knowledge among site employees, as well as a lack of time due to a high workload. The contractor may be exposed to contractual defences if he or she fails to communicate and identify a claim until the project is completed. And, Charehzehi et al. (2017) categorized the conflicts into three sections that involved monetary manners: 1) Cause of conflict by the client, identified with high index in delaying running bill payment and excessive change orders. 2) Cause of conflict by contractors, with high index in the monitoring of schedule with update requirements and payment to subcontractors is insufficient. And 3) Cause of conflict by the consultant, excessive quantity variations and a high index of design mistakes and omissions. This aligned with Mohidin et al.

(2019) that consultants have to understand the cultural context for the design stage in the preconstruction phase.

## **2.3 Conflict Management**

Conflict Management is prudence in dealing with tense situations to prevent or deescalate them (Elgoibar et al., 2017). Conflict resolution is a critical aspect of project management because it allows all of the various parties to combine and align their interests to achieve project objectives (Prieto-Remon et al., 2015). There are few management styles to handling conflict that commonly stated by most researchers since earlier years in the categories of Avoiding, Compromising, Forcing, Collaborating, and Accommodating based on the conflict factors. And, alternative dispute solutions in Arbitration, Negotiation, Mediation, Adjudication, and Litigation.

### **2.3.1 Conflict management style**

Prieto-Remon et al. (2015) discussed Project managers are forced to manage the interests of diverse stakeholders with differing points of view and to deal with conflicts of various origins as a result of consensus around the fact that projects have great leverage in multicultural and multidisciplinary settings, forcing them to manage the interests of diverse stakeholders with differing points of view and to deal with conflicts of various origins. The findings from their research indicated that in most situations, project managers choose confrontation and compromise as their first options, emphasising the importance of responsibility degree elements in how conflicts are handled within a project team. The factors were categorized in culture, individual behaviour, organizational differences, management skills, and communication skills. Elgoibar et al. (2017) emphasized the natural and positive aspects of conflict management in strategy that building trust and methods of constructive disagreement within team tasks, processes, and relationships. They also pointed out conflict behaviour, conflict management, and conflict resolution were in diverse layers of a conflict process; which behavioural linked to the involvement of frustration, and conflict management was the deliberate action to deal

with conflictive circumstances. By referring to Blake and Mouton, Pruitt and Rubin's models in self-concern and others-concern in five handling styles naming in 1) Forcing, 2) Integrating, 3) Compromising, 4) Avoiding, and 5) Accommodating. Trusting was one of the factors in managing conflicts constructively, including recognizing each other's concerns, and using opposing views to comprehend the problem better, also, trust plays a crucial role throughout the negotiation process, and culture enhances the complexity of the negotiation (Kong & Yao, 2019). However, avoiding style should not be the handling style to manage conflict while it occurred (Tabassi et al., 2017).

## 2.4 Negotiation

Negotiation is a universal social activity in organizational behaviour and physiology terms, by people having a discussion when they cannot achieve their goals without the collaboration of others, as people collaboratively engage in a single process, as a group (Mejia-Arauz et al., 2018). Negotiation's goal is to reach an agreement through debate and compromise (Brett, 2017), it is the primary strategy to resolve conflicts among many alternatives dispute resolutions that may avoid court issues in saving costs and times, and outcomes in a less hostile environment for conflicting parties (Echternach-Jaubert et al., 2021). Negotiation is the most common method for resolving such disagreements before they turn into disputes, it also raises the risk of higher cost impact to the project during the negotiation progress (Tang et al., 2020). The competency for negotiators is categorized in moral wisdom, relationship building, negotiation intelligence, language, and emotionality (Smolinski & Xiong, 2020). Moreover, Li et al. (2018) claimed that the negotiation study was independent of the cultural variations between the two parties or parties in the business discussion, relating to people's thinking patterns, language arts, and psychological needs, which the needs of the negotiation are the goal expects. In intergroup conflict negotiation, Friend and Malhotra (2019) identified three main domains in cognitive, affective, and motivated psychosocial barriers with their resolutions. However, both sides' ambitions were frequently at odds; two sides focus their requirements on

inflammatory issues and frequently believe that concessions have harmed their interests. It may lengthen the negotiation cycle, resulting in disagreements and damaged sentiments, as well as the breakdown of negotiations. In addition, when individuals form acknowledgements for the cause of conflict, their beliefs about the position, stability, and controllability of the basis may influence their emotional response (Hurt & Welbourne, 2018; Zhang et al., 2021). Negotiation can be identified in several complexity levels of analysis (Dorjee & Ting-Toomey, 2020): Macro (region, social, religion), Exo (political, legal), Meso (communities), Micro (intrapersonal, interpersonal).

### 2.4.1 Negotiation model

Palha (2019) had created a web-based negotiation model for mediator agents to facilitate procurement in contracts to reduce the number of interactions needed to reach an agreement for flexible and interactive trade-off, by facing the issue of decision-makers having difficulties in the preference focus process, which becomes tedious and time-consuming due to problems not being well defined and a lack of information, the aiming of this negotiation method was to improve the joint gains, unbiased mediator (third party from the project) to help and prevent the decision-maker making any judgment by his or her preferences; where the negotiation process involved one mediator facing more than one negotiator. The author divided the negotiation phases into pre-negotiation, negotiation, and post-negotiation. Elements involving issues, range and internal variation of criteria, and time constraints aspects for the first phases in pre-negotiation, and to present compromise solutions after the process of the best alternative to a negotiated agreement for the second phase in negotiation. Pose-negotiation concerning documentation for contracts and interactions. the mediator agent does not help the decision-makers to provoke their preferences but to understand which commitment could be most easily accepted.

Wang et al. (2018) proposed a market-like negotiation mechanism and developed the balancing price and system-optimal solutions; under negotiating protocols, by using a multi-round ascending pricing framework on

production scheduling level for the linear subcontracting scheme. In the decentralised decision-making environment, where both the company and the subcontractor have private information on their market orders, subcontracting and scheduling of various orders. They discovered the order subcontracting and scheduling issue, in which the subcontractor's equipment processes at a different speed than the firm's, which affected the product supplies. The mechanism enables the negotiation will end with only limited engagement between the participants by using the formula to calculate and analyse the elements in revenue, deadline, processing time, current number, or production machine.

Saorin-Iborra and Cubillo (2018) examined supplier bargaining behaviour and how it impacted the result from the client's aspect in the business sector and proposed a negotiation model that further elaborations acknowledge negotiation behaviour based on integrative acts, suitable competitive action, and improper competitive activity; which the negotiation model was targeted on suppliers. The findings show that providers who perform integrative actions are better aware of their consumers' needs and can tailor a business offer to meet those needs. Furthermore, they also stated that gathering information from both parties involved in the negotiation appeared to be a significant issue for researchers, as the behaviour of all parties plays a vital role in attaining the mutuality rule during the negotiation process.

Brett and Thompson (2016) adapted Jeanne Brett's negotiation model (Inter-cultural negotiation model in the year 2000) to examine the additional factors that affect the 3 key measures in negotiators' interest and priorities, strategy, and community interactions. The focus was on two-party negotiations in which people talk and choose to reach an agreement in cooperative negotiations on their own volition, the additional factors of this study included psychological and sociological; Psychological elements such as cognition and biases, emotions, personality, inspiration, and the tendency to trust, as well as societal ones such as reputation and relationships, gender, authority and position, and culture. The

negotiation strategy they implied in distributive, integrative, reciprocity, and partner effects manners. Their research had made a significant movement in understanding motive and technique employed by negotiators, however dealing with issues relating to the dynamic interplay between and among negotiators from other disciplines in economic, social psychology, political science, and communications.

In the intercultural negotiation model, Brett (2017) enhances her negotiation models by adding the factors by learning the counterparts' interests, priorities, political-legal, economic, social environment in cultural aspects. She stated that negotiation effectually in a worldwide environment was to obtain a clear comprehension of the negotiator's priorities and interests, how to make the strategy works regardless of culture that neither party is truly content with, and an interest-based agreement that maximises both parties' results can be significant.

Aslani et al. (2016) carried out their negotiation strategies to predict cultural differences in negotiators' objectives. The study analysed negotiation strategy by illustrating dignity, face, and honour in countries. They stated that negotiators who used their clout to elicit worries from their opponents distributed rewards more unequally. When compared to face and honour cultures, the accommodating path linked information sharing, insight, and strong joint gains, resulting in reliable predictions of changes in self-esteem. Furthermore, when a face or honour culture negotiators are at the counter, a very competitive interface should be expected, at best when negotiating new commercial ties.

Meng et al. (2019) built an agent-based negotiation model of designing optimization time for the construction industry that based on the scenario the contractor is both competitive and socially responsible. They pointed that the sides in the negotiation had independent decision-making abilities as well as heterogeneity, which meant they could adjust their behaviour as they saw fit in reaction to changes in their opponent's behaviour. There are three typical social preference types: self-interest, viable, and social welfare. Also, typical social preferences of the contractor, such as

competitive and social welfare preferences, have a considerable impact on the negotiation process and project outcomes. According to their findings, the jealousy component of competitive preference had a substantial impact on the subject's income, whereas the greed component had no significant impact on the revenue-sharing coefficient.

Xiaowei et al. (2017) proposed a negotiation model of profit distribution optimization by considering fairness concerns in the construction industry. Their research was investigating the cost-cutting method for construction projects, research approach by implementing 3 case studies with the experimental scenarios in either designer's behaviour or project owner's behaviour in fairness in negotiation progress, or both parties came across the negotiation with fairness behaviours. The research resulted that the suitable behaviour of two negotiators' fairness concerns was respected in improving their benefits, however resulted in a longer negotiation cycle, which is counterproductive to achieving optimization. Furthermore, the authors also stated that The owner's motivating the designer with the design optimization profit was also uncommon; this occurred mostly because owners typically have residual control and claim rights in the construction engineering design contract.

#### **2.4.2 Negotiation strategy**

Negotiations take numerous forms, beginning with the preliminary stage of preparation, the negotiation process itself, and the outcome (Costin, 2015). Moreover, negotiators' perceptions and biases affect attain agreements that reflect their benefits and effect differences in their primaries, and these categories are split into the conditions of unconscious prejudices and priming, motivational prejudices, and adjusting prejudices and learning (Brett & Thompson, 2016). Historical acknowledgement and learning of practical wisdom are also a fact in focusing on the peace-making process and allied with its long-term psychological and emotional effect in early-stage and the critical moment of negotiation (Hirsch, 2020; Sharpe, 2020).

In the strategy section, there are two types: 1) Soft bargaining, which came with friendly

relation parties with an environment of trust in offering an exchange. 2) Hard bargaining, came with a competitive relationship with environmental distrust in giving threat (Hoorn & Whitty, 2019). In addition, Susskind (2020) claims that breakthrough collaboration allows conflicting parties to take advantage of a critical moment to initiate trust and share information. Brett et al. (2017) stated that negotiators used the questions and answers technique in some parts of the world, by ignoring traditional cultural explanations could be a valuable strategy for interdependent decision making more broadly. Also, they mentioned that neither two negotiators from substantiation and offer typical cultures nor two negotiators from questions and answers at the bargaining table, traditional approach cultures collide and it's doubtful that their behaviour will alter very much. They also made some further suggestions of the framework for the literature on culture and negotiation along with the numerous management literature focusing on interdependent decision-making.

No one can deny that the role of negotiation is to devise a strategy for resolving conflicts and reaching agreements. Li et al. (2018) claimed that micro-level negotiation in the economic ground for both adverse and positive side of negotiation tactic happens in the same culture or international circumstances, both negotiation strategy and skill were significant for a successful negotiation programme. Negotiators have to put their faith in their negotiation skills., knowledge background, authority, and flexibility when important provisions of the agreement are disputed by parties and a compromise plan is reached.

Furthermore, cultural values and conventions may influence the strategic negotiating processes of negotiators. Not all members of a cultural group who share the same set of values believe and act in the same way, the norm that pointed to negotiators' interests and priorities, strategy, and social interactions. Costin (2015) mentioned negotiators' efforts to comprehend the other side's cultural surroundings, with all the attitudes, values, beliefs, and perceptions that entails, conditioned productive talks.

Brett (2017) stated that the difficulty in effectively negotiating in a global environment was gaining a clear knowledge of negotiators'

aims and interests, and how to make the strategy works regardless of culture, there might be a distinction between no agreement, an agreement that neither party is happy with, and an interest-based agreement that maximises both parties' outcomes. Given the parties' disparate interests and priorities, an integrative or interest-based agreement was the best option because it included trade-offs between high and low priority and interest concerns. People from various cultures primarily responded with different bargaining methods, indicating that, from a strictly behavioural perspective, culture gives functional solutions to social interaction problems.

#### **2.4.3 Negotiation behaviour in culture value**

This section covers the negotiation behaviours that is divided into three main relevant norms which the elements are taken into consideration in the negotiation progress, defined by researchers in the negotiation area regardless in business or project basis: 1) Culture norm, 2) Distributive context, and 3) Integrative context.

#### **2.5 Culture norm.**

The values, beliefs, customs, and behavioural patterns of a group define its culture (Brochner, 2021). It refers to a group's distinct personality, as well as the values and beliefs that distinguish people from that country, as well as the political, economic, and legal systems that offer a framework for social interaction (Adair, 2019; Brett, 2017).

When it comes to exchanging knowledge, cultures differ. The cultural values direct the attention of group members to what is more and less essential. Cultural values that are relevant to norms and strategies for negotiation include 1) Individualism versus collectivism, 2) Egalitarianism versus hierarchy, 3) Direct versus indirect communication (Masuda et al., 2020). Moreover, the purpose of a cultural institution is to conserve cultural values and standards, give them authority, and create a setting for social interaction. Negotiators build their behaviour on intuition based on an understanding of processes like attribution and social interaction in negotiation (Kesting & Nielsen, 2020). Below are the cultural values

that being defined by researchers who carried out their negotiation studies:

a) Stereotypes, rely on simplifications and current restrictions. Because other contextual elements such as time, setting, individual context features, and personal traits of the negotiators always play a role in negotiations (Costin, 2015).

b) Individualistic, it is treated independently by society and to protect individual rights. Normally these cultural norms will focus on self-interest and personal goal in negotiation, and go their way regardless of how the other behaves (Masuda et al., 2020).

c) Collectivism, promotes the interrelationship of individuals through importance on social responsibility; that people however create cooperative behaviour in negotiation for a mutually satisfying agreement among each other (Masuda et al., 2020).

d) Reciprocity and partner effects. Negotiators with various interests, priorities, and strategic orientations interact. (Brett & Thompson, 2016).

e) Personal aspect, in emotional intelligence and cognitive ability (Khosravi et al., 2020). Emotions have interpersonal and intrapersonal consequences in negotiations, and emotions influence negotiations on both an interpersonal and intrapersonal level (Brett & Thompson, 2016; Hunsaker, 2017). Ingerson et al. (2020) had indicated relevant irrational personal behaviours on narcissism, antisocial personality disorder, Machiavellianism, borderline personality disorder, passive-aggressive tendencies in negotiation strategies.

f) Gender aspect, in the gender and racial discrimination in negotiations outcome may differ that based on individual values on male to male, male to female (Brett & Thompson, 2016). Women are thought to be less forceful and agentic than men, according to popular belief. Because many individuals think of negotiation as a circumstance that necessitates forceful and agentic behaviour, stereotypically female characteristics may appear incompatible with negotiation after the link is established (Pierce & Thompson, 2018).

g) Emotions and moods, these values do not consider in the behavioural study of negotiation but they are a key focus in psychological aspect. Anger motivates the counterparty to make benefits in negotiation progress (Brett &



Thompson, 2016; Hunsaker, 2017). In conflict circumstances, the presence of high emotions and low expectations for agreement suggests alternative injunctive and descriptive norms for engaging in dispute resolution. (Khosravi et al., 2020; Marin et al., 2019).

h) Trust, when it comes to exchanging information about goals and interests with negotiators who are sensitive to manipulation throughout the negotiating process, (Brett & Thompson, 2016; Honeyman et al., 2020). Negotiators can exchange the information needed for integrative agreements in trust. Negotiators who are distrustful of their counterparts are hesitant to offer information or ask questions, feeling that their counterparts will take advantage of the information and answer their inquiries dishonestly (Khosravi et al., 2020). In addition, negotiators may be tempted to employ dishonesty to increase their profits. Trust is an important factor to negotiate deals successfully, overcome conflicts, and form value within and across cultures (Kong & Yao, 2019), with the alignment of collaborative problem-solving in schedule and technical support in construction in the industry (Nevstad et al., 2021).

i) Reputations and relationships. This area comes with individual perceptions, it affects negotiators use of strategy in their preferences regardless of more or less attractive alternatives bargaining (Brett & Thompson, 2016; Zhang et al., 2021). The quality of negotiators' relationships is crucial to the development of negotiations, and the outcome might differ significantly among cultures. (Marin et al., 2019).

## **2.6 Distributive context.**

In a distributive context, the norm shows that the negotiations are making threats or using arguments in hierarchical cultures to make status and power inequalities evident, negotiators deploy positional and persuasive arguments (Masuda et al., 2020). Moreover, negotiators are self-focusing on claims as much value as possible for themselves. The issue with this technique is that it fails to develop the knowledge required for shared benefits, and negotiators aren't driven to seek out the implicit information that emerges as the negotiations gain (Brett & Thompson, 2016).

Negotiation normally relates to how negotiators allocate restricted resources among themselves., and the outcome agreement can be the term "compromise" in a win-win situation. There are three focuses in this distributive norm:

a) Egalitarianism, refers to culture's flat social structure. To settle a disagreement, it encourages direct, face-to-face discussions, mediation, or facilitation by a peer, as well as collective decision-making. However, an agreement between two parties who are at odds with each other may not allocate resources fairly (Masuda et al., 2020).

b) Hierarchy refers to social status implies social power, with rights which social inferiors are expected to respect and obey their superiors' requests. Conflict within hierarchy cultures poses a threat to the social system, as it is the norm in such cultures not to question high-status individuals' commands. The result from the negotiation that involved higher status negotiators reinforced without requiring debating separated status with the counterpart, as would be the case if one party won and the other lost, he or she can exercise his or her authority. (Masuda et al., 2020).

c) Power. It is using the best alternative to a negotiation agreement status and is undoubtedly a significant aspect of any negotiation (Mandell et al., 2020). This Status refers to a psychological image of one's negotiating prowess, which is likely to be skewed by self-concern, securing, and framing (Masuda et al., 2020). Secondly, it is subjected to influences such as persuasion, ingratiation, and validation (Brett & Thompson, 2016).

## **2.7 Integrative context.**

In an integrative context, the norms show that the negotiation results in some ways, meets the interests of both parties, and it suggests that the outcome cannot be improved without causing harm to one or more of the parties involved. Negotiators' interests and priorities values are taking consideration among others. This approach uses implicit information exchange, and sharing as integrative strategies (Brett & Thompson, 2016), and can help negotiators avoid negotiation deadlocks. However, negotiation progress might face difficulty

engaging when they are also highly emotionally engaged.

## **2.8 Communication effectiveness in negotiation**

Communication skill is crucial for negotiators to handle conflicts that happen regardless in business, organization, or construction sectors. In communication effectiveness for the construction industry involved two types identified by researchers: firstly, verbal communication, which refers to the project stakeholders' ability to respond to each other's needs in terms of mutual needs, issues, difficulties, and suggestions (Yong & Mustaffa, 2017). Secondly, documentation refers to a construction contract agreement that regulates the relationships between the client and the contractor that creates a product of communication due to unfair behaviour (Oyedele et al., 2020), and technical information that sharing among consultants in assessment readiness (Maharika et al., 2020). Moreover, it is operationalized through negotiation behaviours, conflict communication strategies, dialogic proficiency, and communication intimidation (Adair, 2019). Extensive communication is also linked to technical specifications in construction aspects while dealing with conflicting parties (Nevstad et al., 2021).

Communication failure in terms of verbal and written format causes conflict due to misunderstanding, misleading, or misconception (Eddington et al., 2020; Harding, 2020). Project members from different disciplines are using their languages and working together, with poor communications without alignment among project members will lead to chaos because all members have their own opinion, judgment and argument over methods and procedures for construction work in progress (Lu et al., 2020; Yong & Mustaffa, 2017). One of the communication issues in multi-culture countries was the language that used in the construction industry should be simple and understandable by the majority due to low level educated involved parties, different understanding will cause a conflict regarding expectations between the contracting parties. Negotiation can go beyond decision making if negotiators focus on communication that people

are rational when having reasons for accepting an offer by communicative rationally (Arvanitis et al., 2019).

### **2.8.1 Direct and indirect communications**

Two types of communications attach to different context cultures: Direct communication occurs in low-context cultures, and Indirect communication occurs in a high-context culture.

Direct communication refers to low-context cultures. In this culture, information is presented in a clear message with no gradation in meaning and is context-free. The implication for this group is solution-oriented and action-oriented, as information is laid out in further detailed communications, a direct approach to information sharing is information sharing about preferences and priorities. People state their intended messages more explicitly so that listeners do not have to "read between the lines" to deduce meaning (Brett et al., 2017).

On other hand, indirect communication refers to the message itself containing high-context cultures with little information. In further elaboration, this high-context comes with messages that are transmitted indirectly and implicitly, that People communicate through hints, stories, or metaphors, so listeners must infer meaning based on the context of the communication (Brett et al., 2017).

## **3. RESEARCH METHODOLOGY AND ANALYSIS**

This research adopted a systematic literature review that focuses on the journals that publish civil engineering, construction management, negotiation in cultural behaviour, and negotiation strategy research. By looking into the effective negotiation behaviour, firstly the identification of conflicts factors that occur in the construction project is crucial, followed by the approaches that fit the cultural context in negotiation manners. The research approach is divided into five stages that consist of identification of studies, screening relevant papers, filtering relevant papers, information extraction, categorizing the factors with a result by referring to the used method by Wawak et al. (2020) in understanding the key factors in construction projects. Figure 1 summarized the

process of conducting a systematic literature review for this study.

Step 1	Step 2	Step 3	Step 4	Step 5
Identification of studies	Screening relevant papers	Filtering relevant papers	Information extraction	Categorize conflict factors
a) Define searching keywords  b) Searching mainly through Science Direct database, Research Gate, and others  Total: 340 Papers	relevant criteria:  a) Conflict in the construction industry  b) Negotiation model for construction industry  c) Cultural-based negotiation  Total: 135 papers	a) Filtering with keywords based on abstracts of the papers.  Total: 65 papers	a) Data extraction in excel  b) Identify conflicts and negotiation factors	a) Categorize manageable conflict factors for future negotiation strategy development

**Figure 1.** Systematic Review Process

Firstly, keywords such as negotiation, conflict, cultural behaviour, conflict management, negotiation strategy in the construction industry were used to search and identify the relevant sources from the database. Related academic journals, articles, conference proceedings, books that relevant to negotiation, culture-based negotiation, and conflict management in the construction industry were studied. 340 publications were searched and downloaded after searching in databases in total. These publications were screened based on the key terms based on negotiation strategy and conflict management in the construction industry, others

irrelevant were excluded. There were only 135 publications that remained after the screening process including the involved abstract of the publications. The following stage is filtering the keywords based on abstracts of the papers, there were 65 relevant papers selected for review within the scope of this study. Next, these related papers were extracted using MS Excel tabulation for systematic review and categorizations. Information extracted and tabulated including author(s), paper title, year of publication, country lead author, publication type, publication nature, and research strategy, as shown in Table 1.

**Table 1.** Information of Selected for the Study.

	Number of papers	Percentage %		Number of papers	Percentage %
<i>Type of publications</i>			<i>Geographical distribution of publications</i>		
Journal	63	95.5	United States	26	40.0
Conference	3	4.5	Malaysia	12	18.6
<i>Year of publications</i>			China	8	12.3
2021	6	9.2	Australia	4	6.2
2020	21	32.3	United Kingdom	3	4.6
2019	13	20.0	Canada	2	3.1
2018	9	13.9	Denmark	2	3.1
2017	10	15.4	Spain	2	3.1
2016 and before	6	9.2	Brazil	1	1.5
<i>Nature of the publications</i>			Central America	1	1.5
Conceptual	51	78.4	France	1	1.5
Case study	8	12.3	Greece	1	1.5
Model development	6	9.3	Japan	1	1.5
<i>Database</i>			Sweden	1	1.5
Sciencedirect	21	32.3			
Researchgate	12	18.5			
Negotiation Conflict Management Research	10	15.4			
Negotiation Journal	10	15.4			
Journal of Design and Built Environment	5	7.7			
Others	7	10.7			

Based on Table 1, there were 95.5% of journal papers and 4.5% of conference papers. The relevant papers in terms of the recent three publication years in 2019, 2020, and 2021 for the related papers with 61.5% in total. Some papers were published in the year 2016 and before with 6.0%. It was discovered that the conflict management and negotiation studies in the construction sector presented common factors in business, organization, and psychology sectors, but without deeper study in cultural manners negotiation. In addition, there were only culture-based negotiation model studies in the psychology and organization sectors.

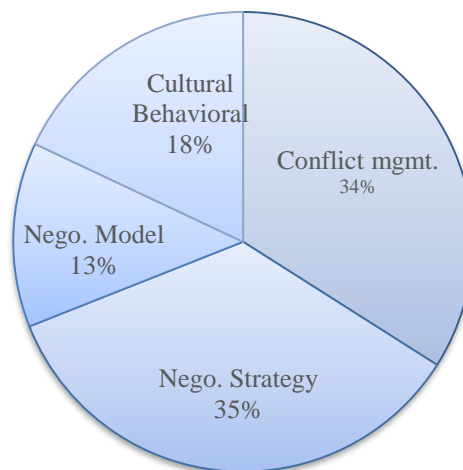
Table 1 also revealed the geographical distribution of the selected papers. It illustrated that selected papers related to conflict negotiation studies were cross over the countries, that majority from USA (40.0%), Malaysia (18.6%), and China (12.3%). On the

nature of the study of the selected publication, 51 papers (78.4%) were based on conceptual reasoning and literature review, however, 8 papers (12.3%) were on case studies and negotiation models with 6 papers (9.3%). In the development of negotiation models, only 3 papers (4.6%) were culture-based intended.

Figure 2 revealed the classification of studies in negotiation aspects. The studies were mainly based on the construction industry aspects, project stakeholders' manners included business sector which involved sales and purchases issues that relevant to goods supply, organization sector that relevant to construction companies, and psychology sectors that relevant to stakeholders' behaviours. Conflict management field (34%), this study focused on conflicting factors in the construction industry and business sectors. It was to identify the conflict causes and the overall conflict

management approaches. The negotiation strategy field (35%) included of construction industry and business sectors, to study the approaches in negotiation decision support for negotiators in selecting appropriate methods. Negotiation model (13%), in case-based and culture-based aspects in all construction industry, business, and psychology sectors. The

study was to understand and identify the sequences for negotiators to handle conflicts based on certain factors to get the expected outcome from the negotiation model. Cultural behavioural (18%) studies were to identify cultural aspects that affect a person's preference in negotiation progress.



**Figure 2.** Classification of Studies in Negotiation Aspects.

Conflicting factors in the construction industry with multicultural context were one of the focused areas of research for the research. The researchers identified the critical project issues that raise conflict, by their target population

mainly concentrated on professionals, contractors, managers, project sponsors. However, there was a lack of focus on suppliers and subcontractors, site workers in Table 2.

**Table 2.** Studies to Identify and Analyses the Major Conflicts Caused by Human Factor in Multicultural Construction Industry Context.

Author	Finding	Targeted population
Bakhary et al. (2017)	The findings from the authors highlight the three key issues: claim identification, claim notification and claim documentation, that cause claims to conflict among the project sponsor and contractor.	Contractors, consultants
Bakhary et al. (2018)	The authors identify the need for a good documentation system and the competencies of site staff to handle project claims. The affecting conflict factors can be externally and internally.	Project manager, quantity surveyor, professional engineer, architect
Charehzehi et al. (2017)	The authors propose a building information modelling approach to controlling conflict causes before a dispute arises due to project internal issues.	Consultants, contractor, project manager, contractor, construction manager, project director
Chen and Sharif (2020)	Analyse the issues on a technology system that makes workers are working in a disorganized, scattered, and no collective workforce environment.	Freelancer, remote worker, nomadic worker.
Yong and Mustaffa (2017)	Analyse human-related factors in macro and micro viewpoints in satisfaction time, cost, performance, safety, and environment human factor for project critical success.	42 literature reviews

In the negotiation models' study, there is a total of 8 papers, stated in Figure 2 with 13%. Yet, 2 out of 8 papers are more relevant to the

negotiation mechanism. 6 papers that are relevant to the proposed negotiation model were listed in Table 3.

**Table 3.** *Negotiation Model Study for Determining the Process Pattern in Negotiation Behaviour.*

Author	Sector/ Location	Proposed negotiation model	Challenge
Palha (2019)	Construction /Brazil	A model for e-negotiation in a typical procurement process in the construction industry.	Agent-based. Only applicable for the third party.
Xiaowei et al. (2017)	Construction /China	Developed negotiation model of design expansion profit distribution considering subjects' fairness and concern behaviour.	Excessive consideration fairness issues expressed by the two negotiators may increase the negotiation cycle, which is not advantageous in achieving optimization.
Meng et al. (2019)	Construction /China	Developed an agent-based model and creates an experimental situation in which the contractor prioritises competitive and social wellbeing.	Increasing the greed component of viable preference will result in a longer negotiation duration and, to a lesser extent, a worse negotiation success rate.
Saorin-Iborra and Cubillo (2018)	Business /Central America	In supplier negotiation behaviour, the suggested negotiation model determines a customer's perceived degree of satisfaction.	Obtaining information from all parties participating in the negotiation appears to be an outstanding difficulty, since the behaviour of both parties plays such a significant role throughout a negotiation process, the mutuality rule's execution.
Wang et al. (2018)	Business /China	Proposed market-like negotiation mechanism and developed the balancing price and system-optimal solutions for subcontracting and scheduling problem	Negotiation process restricting from external market factors, and decentralized decision-making circumstances in which both parties have partly private knowledge that affects and results in diverse decision-making behaviours.
Brett and Thompson (2016)	Psychology /USA	Inter-cultural negotiation model with additional examining factors in negotiators' interest and priorities, strategy, and social interactions.	Facing issues specifically the dynamic interplay between and among negotiators from other disciplines in economic, social psychology, political science, and communications.

By comparing all the selected papers in this study, Table 4 shows the categorized conflict factors which those factors were taken into the consideration of negotiation strategy. Most of the factors were commonly mentioned to Individual behaviour with the count number of appeared frequency of 43. The second higher

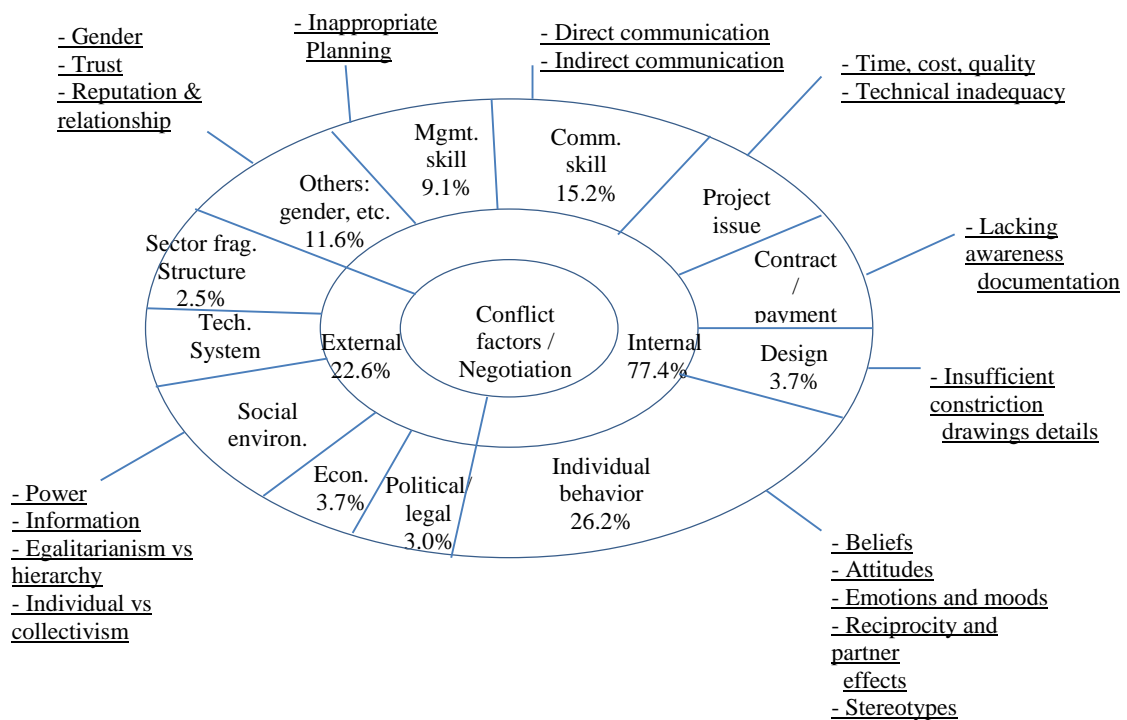
number of communication skills with 25, following with the social environment and others with 19. Figure 3 reveals the percentage of the frequency of appearance in the selected papers and being tackle points in negotiation strategy.

**Table 4.** Identification of Conflict Factors for Negotiation.

Authors	Negotiation elements / conflict causes / culture behaviour											
	External Factors					Internal Factors						
	Political/legal	Econ.	Social environ.	Tech. sys.	Sector frag.	Individual	Design	Contract/ payment	Project issue	Comm. skill	Mgmt. skill	Others: gender, etc.
Adair (2019)		•	•			•				•		
Arvanitis et al. (2019), Halevy and Cohen (2019), Masuda et al. (2020)			•			•				•		
Aslani et al. (2016), Friend and Malhotra (2019), Ingerson et al. (2020), Tabassi et al. (2017)						•						
Bakhary et al. (2017)						•	•	•		•	•	
Bakhary et al. (2018)	•	•			•	•	•	•	•	•	•	
Braithwaite et al. (2017), Mejia-Arauz et al. (2018), Meng et al. (2019)			•			•						
Brett (2017), Dorjee and Ting-Toomey (2020)	•	•	•			•						
Brett and Thompson (2016), Hurt and Welbourne (2018), Kong and Yao (2019), Martin and Benson (2021), Pierce and Thompson (2018), Sharpe (2020)						•						•
Brett et al. (2017), Brochner (2021), Hunsaker (2017)			•			•						•
Charehzehi et al. (2017)						•	•	•	•	•	•	
Chen and Sharif (2020)				•	•							
Choi et al. (2021)						•		•				
Contu (2018)		•	•		•							
Costin (2015), Harding (2020)										•		
Echternach-Jaubert et al. (2021)								•				•
Eddington et al. (2020)						•	•			•		
Elgoibar et al. (2017)						•					•	
Ellis (2020)	•					•				•		•
Godiwalla (2016)			•	•		•				•		
Hoorn and Whitty (2019)										•	•	
Khosravi et al. (2020), Smolinski and Xiong (2020), Zhang et al. (2021)						•				•		•
Li et al. (2018), Tang et al. (2020), Lu et al. (2020)					•	•		•		•	•	
Marin et al. (2019)			•							•		
Nevstad et al. (2021)						•		•	•	•	•	•
Oyedele et al. (2020)						•		•		•	•	
Palha (2019)						•		•			•	
Prieto-Rejon et al. (2015)						•		•	•	•		
Saorin-Iborra and Cubillo (2018)						•		•				
Shepherd et al. (2021)						•				•		

Authors	Negotiation elements / conflict causes / culture behaviour											
	External Factors					Internal Factors						
	Political/ legal	Econ.	Social environ.	Tech. sys.	Sector frag.	Individual	Design	Contract/ payment	Project issue	Comm. skill	Mgmt. skill	Others: gender, etc.
Wang et al. (2018)								•			•	
Xiaowei et al. (2017)							•					
Yap et al. (2020)							•	•	•	•	•	
Yong and Mustaffa (2017)	•	•	•	•		•						
Hirsch (2020), Mandell et al. (2020)			•									•
Kesting and Nielsen (2020)			•									
Honeyman et al. (2020), Susskind (2020)												•
Mu et al. (2021)								•	•			

Figure 3. Conflict Factors in Work Culture.





#### 4. DISCUSSION AND CONCLUSION

The findings from the review verified that culture-based negotiation takes effectiveness in conflict management by covering wide scenarios by the cultural terms, especially for multicultural context. By summarizing and analysing the literature research, it was discovered that negotiation is one of the most important and relevant metrics for measuring and analysing dispute resolution in the construction business, especially for those construction projects that involved multicultural context that facing all the conflicts escalated to a court case. Failure of a project has ramifications for a country's development and economic progress, negotiation studies range from the process or academic level studies to industry-level studies involving various industries and nations should be valued. No matter how the study of factors, strategies, issues, and problems is associated with solving conflicts, it aims to the win-win outcome through negotiation.

Generally, negotiations are typically defined in the literature as communications between individuals or groups of people to establish a mutual agreement. Negotiators in cross-cultural environments are deemed efficient when they achieve their aims without breaching any of the limits given by the rules of the relevant cultures in suitable negotiation.

Based on the systematic literature review and descriptive statistical analysis, there is linkage among the construction, business, and psychology sectors in handling conflicts through negotiation. However, culture-based negotiation or conflict management in construction industry studies are very few. There is an opportunity for future researches to bridge the study on culture-based negotiation and conflict management in the construction industry with multicultural context.

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