Chapter 12
Voluntary Participation as an Incentive of Construction Dispute Mediation—A Reality Check

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Abstract In recent years, the use of mediation as an alternative to arbitration/litigation has gathered momentum at both industry and national levels. One characterising feature of the mediation movement is keeping voluntary participation as one of the core design features of mediation arrangements. The use of mediation in construction has started in the mid-eighties in Hong Kong. Despite the concerted efforts of the Hong Kong Government and the mediation services providers, its adoption had soon flattened off after an initial rise. A slight decline in usage has in fact been recorded recently. Use of mediation to resolve construction disputes has not been as promising as expected. From a pragmatic point of view, this study identified four potential mismatches between contracting arrangements with the voluntary participation. These are (i) principal-agent relationship; (ii) power asymmetry between the parties; (iii) quasi-imposed adoption; and (iv) biases of the disputing parties on the process. It is concluded that voluntary participation may not directly lead to the adoption of construction dispute mediation.

Keywords Construction dispute mediation · Reality check · Voluntary participation · Compulsion · Indifference

1 Introduction

Construction disputes are likely to increase because of the disruption caused by COVID-19 to construction projects (Kim et al., 2021). Dispute should be resolved early with negotiation being the most used method (Cheung et al., 2000). However, negotiation is not always successful in reaching a settlement and the dispute will need the service of other more formal dispute resolution processes (Chong & Zin, 2012). Currently, the most designated methods of construction dispute resolution

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are mediation and arbitration (Chan & Suen, 2005). Arbitration clause is included in most of the standard forms of contract and was originally introduced as a less notorious to litigation. Moreover, it has been developed as a replicate of litigation due to the adversarial process the arbitral procedures have adopted (Harmon, 2003). Furthermore, most contract dispute resolution clauses specify that arbitration cannot be commenced until the construction work has reached substantial completion or the contract is terminated. Thus, the two parties may be stuck in a sour relationship for a long time, especially if the dispute occurs early in the project (Chau, 2007). Furthermore, typical construction contract dispute resolution provisions are multi-tiered, with mediation incorporated as an intermediate step before arbitration. The attempt of mediation is often served as a condition precedent to arbitration.

Using mediation to resolve dispute has a long history. Knowing the broad concept of mediation in both local and international contexts would help understanding better the design of the process. The Hong Kong judiciary (2020) defined mediation as a voluntary process in which a trained and impartial third person, the mediator, helps the parties in dispute to reach an amicable settlement that meets their needs. The American Arbitration Association (2004) defined mediation as a process in which an impartial third party facilitates communication and negotiation and promotes voluntary decision making by the parties to settle the dispute across different forms and contexts. The European Union Directive (2008) on "Certain Aspects of Mediation in Civil and Commercial Matters" defined mediation as "a structured process, however named or referred to, whereby two or more parties to a dispute attempt by themselves, on a voluntary basis, to reach an agreement to settle their dispute with the assistance of a mediator. This process may be initiated by the parties or suggested/ordered by a court. Therefore, the definitions of mediation in different countries and regions share a common design that mediation should be regarded as a voluntary dispute resolution process and to be assisted by an impartial mediator. In Australia, Canada and the United Kingdom where mandatory mediation is implemented, it is found that there is no significant difference in the settlement rate between voluntary and mandatory mediation (Quek, 2009). In fact, there is little concern over mandatory use if the outcome is self-determined. Moreover, involuntary use may create the debate of denial to justice that has always been viewed as a constitutional right (Boettger, 2004; Wissler, 1997). There will not be a simple black or white answer to make voluntary participation a divine design principle of mediation. Voluntariness is a multidimensional concept and encapsulates the idea of participation at one's own will. To arouse the interest of the disputing parties, voluntary participation offers the attraction that parties have nothing to lose in attempting mediation. This study looks into the viability of voluntary participation as a bait for use with reference to prevailing construction contracting practice. In this connection, a thorough review of construction dispute resolution is conducted to unveil the potential incompatibilities. This study therefore works as a reality check of the following: can voluntary participation be an incentive of construction dispute mediation?

2 Construction Dispute Resolution

The literature review on construction dispute resolution covers the following topics:

- Nature of construction dispute
- Approaches in resolution
- Resolution methods
- Use of mediation in the Hong Kong.
- Voluntary participation of CDM.

2.1 Nature of Construction Dispute

Disputes in the construction industry can result from a variety of reasons; contractual, environmental, and behavioural. Typical construction projects last for several years, during which many changes may happen. Furthermore, physical, and environmental conditions may also prove to be materially different from those envisaged at tender. It has often been proved in vain for efforts to exhaust all contingencies. Disputes frequently occur when there is no provision to deal with unanticipated happenings. Cheung and Pang (2014) suggested that construction disputes have three primary contributing factors: task, contract incompleteness, and people (Cheung, & Pang, 2014).

Task Factor

It is imperative to do a thorough risk assessment during the tendering process. The time to do a risk assessment at tender is frequently very short. There are many examples of projects that take far longer to complete than that time anticipated and agreed upon because the risks of the project were not sufficiently evaluated ex ante. Inevitably, delay would incur increased expenses by the contractor. The owner's potential to sue for delay damages would made the contracting environment extremely acrimonious. Project risks could have an impact on the project's potential.

Uncertainty is the discrepancy between the information needed to complete the task and the information already available (Klir, 2006). The complexity of the task and the performance requirements determine the amount of time and cost required. Uncertainty means that not all project elements can be planned out before work begins (Marti et al., 2010). When uncertainty is high, initial designs and specifications will inevitably be insufficient. If disputes happen, project participants will have to work together to find solutions.

Contractual Incompleteness

Every construction contract dispute must have a contractual basis (Totterdill, 1991). Standard contract forms explicitly set out the risks and responsibilities which contracting parties have agreed to undertake. Moreover, this drafting objective may not be achieved for transactions of long duration and with works to be executed

in uncertain environment. When customised contracts or amended standard forms are used, inconsistencies or unintended misunderstandings will lead to disputes. In extreme circumstances, contradictory provisions are resulted. As such, incompleteness, omissions, errors etc., may cause disagreement over risk ownership by the contracting parties.

People Factor

While incomplete contracts create minefields, opportunism behaviours exploited by contracting parties can take the form of commitment violations, forced renegotiations, responsibility evasion, and refusals to adapt (Wathne & Heide, 2000). Since contracts cannot account for every eventuality, when a problem surfaces, one party may wish to take advantages of as much as possible. The counterpart may pretend to be ignorance and avoid taking responsibilities. The parties may also have different interpretations of the happening. It is also common for the parties to find their expectations being miles apart from the outcome. Another sting of the situation is when the project team members are having personal conflict among them (Mitropoulos & Howell, 2001). The emotion involved frequently intensifies the conflict and prevents the parties from taking rational decisions.

2.2 Approaches in Resolution

Construction problems are prevalent, which suggests that there is a need to identify suitable ways to manage them before being blown out as major disputes. In fact, there are quite a number of methods that have been put into practice. Most construction contracts would specify several methods, usually in a tiered arrangement, to resolve disputes arising from the project. Moreover, tiered dispute resolution is far often being deployed as separate independent options. Construction contract drafters frequently overlook the fact that dispute prevention and dispute resolution techniques can be integrated to maximize the chance of disposing the disputes. The following three resolution approaches are commonly used.

Dispute Avoidance

The construction industry has made significant strides in creating more effective dispute resolution procedures over the past few decades. In fact, experts usually named the construction sector as offering cutting edge of innovation. However, it appears that the construction industry has not given enough thoughts to prevent dispute. Dispute prevention techniques are routinely overlooked in the design of dispute resolution clauses in the construction contracts. One notable exception is the use of Dispute Resolution Advisor (DRA) in the HKSAR government works contracts. DRA aims to facilitate early resolution of problems that arise during the construction before these crystalize into dispute.

It is crucial to comprehend the individual project specificities to avoid disputes in the construction projects. In this sense, it might be wise to work with a DRA or

another impartial third party during the construction stage. By aiding the parties to create appropriate dispute prevention strategies, the value of DRA can be influential.

DRA is currently used for projects in Hong Kong with the Architectural Services Department and the Housing Authority. The DRA is tasked with preventing disputes at the main contract and nominated subcontract levels. DRA is jointly appointed by both the employer and the main contractor.

The fundamental idea behind a Dispute Resolution Advisor (DRA) is the use of an impartial third-party neutral who counsels the parties to a prospective dispute and offers viable solutions to settle it. From the start of the contract through its conclusion, the employer, and the contractor jointly appoint the DRA. The primary responsibility of the DRA is to help the parties identify possible solutions to the issue and assist in settling those conflicts before they become official disputes. The DRA does not have any decision-making authority, and his/her role is to encourage parties to collaborate and complete the works in line with the contract.

Negotiated Resolution

Most disputes are settled by inter party negotiation without outside assistance. The Contract shall permit the provision of various options for dispute resolution techniques to enable the contractual matters of different opinions be negotiated before triggering the more formal procedures. Construction contracts typically resolve disputes through arbitration or litigation if the interparty negotiations fail. However, not every disagreement can be settled by the parties themselves. In those circumstances, intervention by a third party would become necessary. Nonetheless, it is advisable to use more flexible ways first because litigation and arbitration are expensive and time-consuming.

At this point, the participation of a third-party neutral adds value by facilitating exchanges to aid the parties in resolving the issue quickly and effectively before it worsens to the point where it has a significant negative impact on the project. A skilful third-party neutral can help the disputing parties to exchange more focused proposals by providing advice. Expedited settlement and low costs are the obvious advantages of negotiation. Additionally, facilitated discussions help to maintain good relations between the parties and do not typically disrupt the project.

Binding Resolution

Not all disagreements can be settled by negotiation. To address these issues, a complete dispute resolution framework must include options like mediation, adjudication, arbitration, or litigation. However, comprehension of the construction business and construction conflicts is essential for providing advice and making decisions in such disputes, particularly in complicated construction disputes. In litigation, the parties may select a counsel with relevant knowledge, but they have no right to choose the judge. Arbitration does allow the appointment of construction-related arbitrators by the parties. As a result, using arbitration as a dispute resolution method rather than litigation may give the parties a more construction appropriate outcome. Post-completion arbitration is the general arrangement in most construction contracts in Hong Kong. Moreover, in recent years adjudication and voluntary mediation have

been introduced as pre-arbitration intermediate proceedings. Additionally, to obtain expedited resolution, contracting parties should be required to pursue alternative dispute resolution if one of them causes the event. This would eliminate the necessity for a mutual consent. Nevertheless, the Guidelines on Dispute Resolution (HKCIC, 2010), states that alternate dispute resolution may not be adequate to address the various sorts of issues that may arise throughout the course of the contract.

2.3 Resolution Methods

It is impossible to resolve every issue and account for every possibility at the pre-contract stage simply because of the unpredictability and complexity faced by every construction project. The reality is that unanticipated risks may surface after the project commencement. When the responsibility for the parties is unclear, dispute arises. In such situation, the contracting parties would first try to resolve it amicably since this is probably the quickest and most cost-effective course of action. Prompt mediation would allow the project to go without interruption and preserving strong working relationships. If this isn't an option, it could be essential to look for a third party to assist settlement. However, going to court to resolve a dispute can be costly, complicated, contentious, and time-consuming.

Speedy settlement of disputes is always preferred so that the work can move forward. A close working relationship would also be helpful. Unfortunately, this is seldom the situation. As a result, provisions for use of alternative dispute resolution (ADR) processes are planned and incorporated into the contract dispute resolution procedure. ADR processes are usually less formal than the court proceedings and are intended to be quicker, cheaper, less time-consuming, and allow the parties to preserve the relationship.

It is advised that the contracting parties be given the option to select any or a combination of the following dispute resolution procedures: 1. Mediation, 2. Adjudication, 3. Arbitration, 4. Litigation. The contracting parties may opt for post-completion arbitration as the final means of dispute resolution. An account of each of the commonly used resolution method is given here follows.

Negotiation

Almost all dispute resolution commences with negotiation. It has been well documented that negotiation is the most resource efficient resolution method. In fact, before triggering the dispute resolution clause of the contracts, the parties having differences are likely to have exchanged their positions. Categorically, dispute negotiations follow a stepped approach. The frontline project personnel are usually the initial negotiators. However, it is found that the success rate is not very high at this round of negotiation. Chow et al., (2015) opined that this is likely because they are the people making the decisions that are in dispute. This makes it very hard for both sides to back down without a fight. There are many research studies to champion negotiation in providing prescriptive advice (Fisher et al., 2011), quantitative tools Zaden

(1965) and behavioural deliberations (Afzalur and Bonoma (1979). Conventional wisdom suggests that most disputes were settled through negotiation. While there is no doubt about the versatility of negotiation. The quantum of major construction disputes makes negotiation relatively less successful. In fact, almost all construction contracts would not rely solely on negotiation, instead more formal dispute resolution provisions like arbitration are incorporated.

Mediation

In mediation, a neutral third party assists to reconcile the conflicts between the disputing parties through a mutually agreed procedure. In the facilitative form of mediation, a neutral third party, the mediator, helps the disputing parties to negotiate a settlement. A mediator does not have the authority to determine the core issues. For the past 20 years, Hong Kong has accumulated a reasonable amount of mediation experience in the building sector. Although post-completion arbitration is still predominantly used for major dispute, especially for public works projects.

The following are some characterizing features of mediation. The mediator can meet with a party in private. The parties may end the mediation at any time and the mediator does not render a decision or opinion. If the mediation succeeds, a settlement agreement that is a contract supplemental to the construction contract will be signed. If the mediation fails, the dispute will advance to the next tier of resolution.

Adjudication

An impartial third person, the adjudicator, is tasked with making decision on the disputes referred to him. After the parties have presented their evidence and made their written and/or spoken arguments, the adjudicator renders a decision. The decision is binding unless being challenged. In post-completion arbitration, the adjudicator's decision can be reviewed by the arbitrator. The decision of an adjudicator therefore is often described as interim binding only. In Hong Kong, adjudication has not been utilized much. Several adjudications were conducted under the Airport Core Programme (ACP) in the 1990s. The Government has adopted the DRA system in conjunction with voluntary adjudication for major engineering works contracts valued at more than HK$200 million. More recently, the Hong Kong Government has introduced the Security of Payment provisions for the use in Government projects. Adjudication is used to provide quick decisions on payment related disputes, at least on an interim basis. How popular adjudication will become is yet to be seen. It is anticipated adjudication will be a strong competitor of mediation.

Arbitration

Arbitration is a private yet highly regulated method to resolve disputes. Most construction contracts in the world designate arbitration as the final resolution forum. In some arbitration friendly jurisdictions, such as Hong Kong and the United Kingdom, arbitration can be agreed by the contracting parties as the ultimate form of dispute resolution. In simple terms, all disputes arising from the project will be resolved by arbitration and the right to litigation is limited. In essence, a dispute

will be settled by an arbitrator or arbitration panel chosen by the disputing parties. Disputes are decided based on appropriate legal precedents and evidence on the facts. An arbitrator is appointed by the disputing parties or nominated by the designated appointing authority to conduct the arbitration, according to any applicable contractual clauses and the relevant statutory regulatory framework. The costs of the arbitration shall be borne by the losing party. Arbitration has evolved to follow many civil court procedures. In general, only a handful of cases are eligible for appeal as a very strict rule on appeal are imposed under most arbitration law.

Litigation

Litigation is the practice of pursuing or opposing legal action in court to settle disputes. The party's rights or responsibilities may be enforced or determined by the court. Even with arbitration friendly jurisdictions, there remains a fair amount of construction disputes decided by the court. Conflicts in the construction industry can result from a mix of factual and legal issues. Defective contract documents are one of the prime sources of legal disputes. To maintain fair proceedings, litigation procedures are suspectable to the tactics that may end with protracted proceedings with significant cost implications. It may take years to get a judgment from the court and the drawn-out process has proved to be a nightmare for less resourceful litigants. Litigation is open to the public and may generate undesirable publicity.

2.4 Use of Mediation in Hong Kong

Mediation has been promoted for use in the Hong Kong construction industry as an alternative to costly arbitration and litigation (Chau, 2007). Construction mediation was introduced in about mid 1980s. Since then, its use has been part of the mediation movement in Hong Kong. With the Hong Kong Government aiming to promote Hong Kong as a regional dispute resolution services hub, facilitations in the forms of legislation and revisions of court practice direction, mediation has been well placed as the mainstream alternative dispute resolution (ADR) regime in Hong Kong. The mediation movement reached its peak in 2009 when the Hong Kong Civil Justice Reform (CJR hereafter) came into effect. With these policies driven efforts, the use of mediation is expected to rise. Nevertheless, the adoption of mediation has not been particularly impressive. For example, the success rate of building management disputes has fluctuated in recent years. The number of building management mediation cases has shown a gradual decline since 2015 (The Hong Kong Judiciary, 2021a). The averaged data for 2008–2013 and annual data for 2013–2020 for the building management cases are shown in Fig. 1.

Another record also portrays a similar decline in use. The mediation reports filed with the Court of First Instance from 2011 to 2021, the number of mediations conducted in 2020 underwent a sharp decline (The Hong Kong Judiciary, 2021b). As shown in Table 1, the number of mediation certificates increased from 2012 to 2015. Since 2015, there has been no growth in use. Instead, a graduate decline is observed.

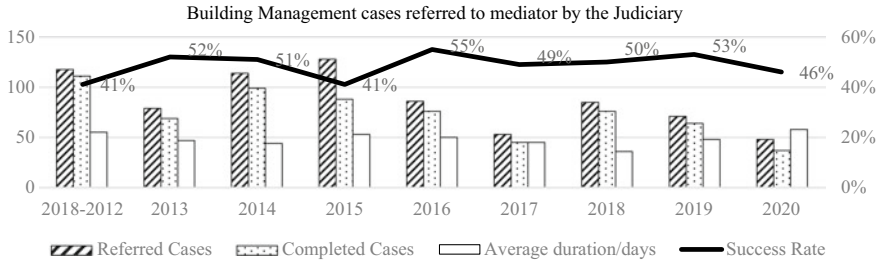

Fig. 1 Building Management cases referred to mediators by the Hong Kong Judiciary

Table 1 Number of mediation related documents filed in the court of first instance*

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Mediation certificate	2,977	2,878	3,271	3,668	3,623	3,716	3,590	2,138	1,793	1,703
Mediation notice	1,146	1,164	1,223	1,381	1,380	1,399	1,248	958	627	642
Mediation response	1,062	1,031	1,078	1,258	1,181	1,249	1,140	876	553	550
Mediation minutes	508	541	602	652	666	663	634	478	266	303
Settlement rate	38%	45%	48%	46%	48%	48%	51%	51%	47%	42%

* It only includes cases commenced by the 5 CJR related case types in the Court of First Instance, i.e., Civil Action (HCA), Admiralty Action (HCAJ), Commercial Action (HCCL), Construction and Arbitration List (HCCT)

To examine the use of mediation in major construction disputes, the following summaries are collected. Table 2 presents the number of Construction and Arbitration Proceedings (HCCT)-related cases (Legal Reference System, 2022).

The Hong Kong International Arbitration Centre (HKIAC hereafter) is the main dispute resolution provider in Hong Kong, their record of mediation shall be useful reference of the practice pattern. Tables 3 and 4 summarise the number of disputes handled by the HKIAC It can be observed that there has been no increase in the use of mediation for construction disputes.

Table 2 Number of construction and arbitration cases filed in the high court

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
HCCT	22	18	21	9	16	14	20	26	30	32	28

Table 3 Number of disputes involving HKIAC in recent years

	2014	2015	2016	2017	2018	2019	2020	2021
Arbitration	252	271	262	297	265	308	318	277
Mediation	24	22	15	15	21	12	16	12
Adjudication	0	0	0	0	0	1	0	0

Table 4 Ratio of construction disputes involving HKIAC

	2015	2016	2017	2018	2019	2020	2021
Construction dispute	22.2%	19.2%	19.2%	13.7%	14.8%	10.7%	9.4%

2.5 Voluntary Participation of CDM

Most mediation research are about understanding the mediation process. Mediation engages parties and the mediator in moving through a sequence of developmental stages. The general sequence of a mediation is outlined in Fig. 2 (Moore, 2014). The potential activities and moves of the mediator, mainly two broad categories of stages: (1) those conducted before the formal problem-solving sessions begin, often with the intermediary meeting and working with parties individually to better understand the conflict and develop possible mediation strategies; and (2) those conducted in stages after the mediator has entered into formal discussions with multiple disputants, either in a joint session or by shuttling between them, and has commenced some aspect of problem-solving.

A rise in use of mediation happened after the Civil Justice Reform came to effect in 2009. However, the rise was not sustained. Instead, a plateauing off soon surfaced then followed by a slight drop in the last five years. This happening is unexpected and quite disheartening to the mediation advocates.

In search for an explanation of this, the design and practice of mediation are first reviewed. The main attractions of mediation include privacy and flexibility. Voluntary participation is identified as the characterising feature to exemplify the

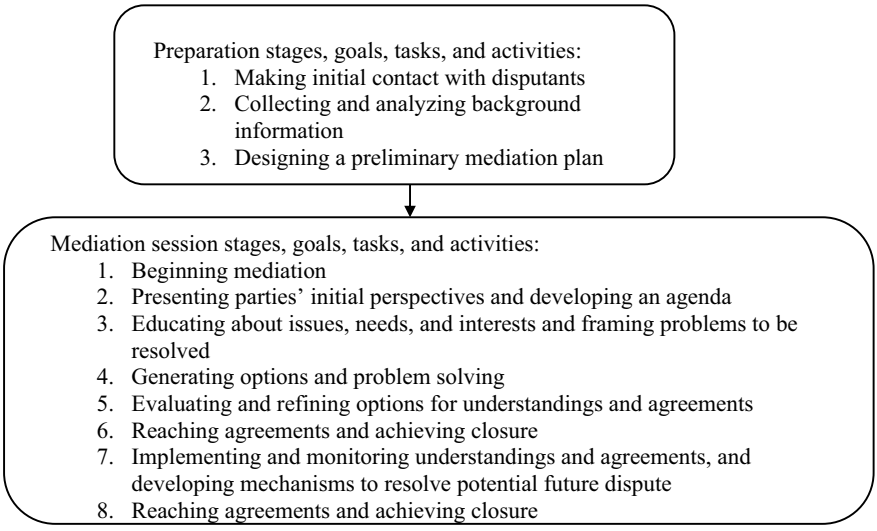

Fig. 2 The mediation process roadmap (Moore, 2014)

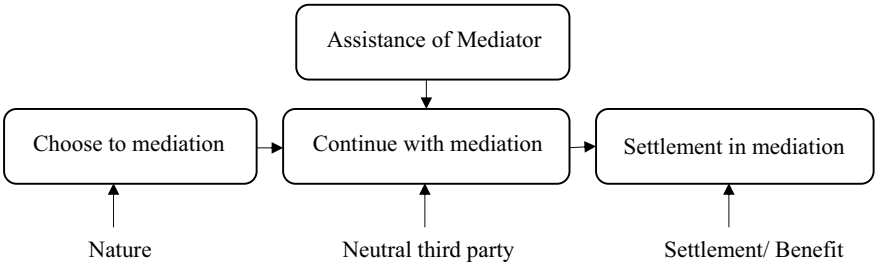

Fig. 3 Critical attributes of the mediation process

self-determination nature of the proceeding. This is supported by not conferring any decision power to the mediator. The freedom of exit at any time is attractive to disputants who are new to the process. Coercion runs against the voluntariness and can have three facets: coercion to mediate, coercion to continue and coercion to settle. Cheung et al. (2002) examined mediation from four aspects: nature, the neutral third party, settlement, and benefits. Those critical attributes are shown in Fig. 3. The first aspect normally serves as the main reason for choosing mediation, and the second aspect is usually used to justify continuing mediation. The last two aspects are mostly related to the willingness to settle.

Nature

Apart from voluntariness, confidentiality and enforceability are other major attractive attributes of mediation (Cheung, 1999). Confidentiality is very important to organisations, especially for listed companies. The potential of having long drawn litigation is detrimental to their share price. Thus, this form of loss is to be avoided. It is now well recognised the importance of keeping the whole mediation proceeding private and confidential. In some mediation rules also specifically state that the discussion during mediation proceedings shall not be used in subsequent resolution forums should the mediation fails to achieve a settlement. Nevertheless, how to invoke the parties' desire to mediate remains a challenge. Good faith provisions have been used to augment the value of mediation. Nevertheless, such provisions are vulnerable in common law courts.

Neutral Third Party

Mediation is a form of assisted negotiation; thus, the input of the mediator can have pivotal influence. For disputes over technical issues, it is useful to have mediator having the relevant technical background. Mediation services providers should enlist mediators of different backgrounds. Nevertheless, mediators shall discharge their function impartially. It can therefore be expected that the qualifications for mediators to be regulated especially for substantive disputes. At the moment, it seems that mediation does not have attraction for major disputes.

Settlement/Benefit

Only parties who are having the willingness to settle can lead to a sensible resolution. Aggression is therefore not the appropriate strategy for non-adversarial mediation process. Instead, identifying common interests would pave a path to settlement. As for settlement, mediation has the advantage of offering a wider range of remedies than formal proceedings. Non-monetary terms of settlement are possible as the settlement is in the form of contract rather than arbitration ward/court judgement. Very often remedy that ease the tension between the parties can help structuring a settlement agreement. Apology is the most obvious example. Lateral thinking is vital in considering settlement options. The average duration of mediation is within several days at the most. The associated benefits are self-evident.

The tension between voluntary participation as an underlying core value of mediation and quasi-imposition cannot be underestimated. Although some studies reported that parties can still benefit from using ADR even though their participation is not voluntary (Sherman, 1992). The prominence of self-determination in many mediation guidelines demonstrates the significance of voluntary participation in mediation (Hedeen, 2005). Some researchers have remarked that voluntary action in mediation is part of the "magic of mediation" that would lead to better outcomes: higher satisfaction with process, higher rates of settlement, and greater adherence to settlement terms (Shack, 2003, Wissler, 2004). And it is commonly held that mediators are expected to protect and nurture parties' self-determination and to facilitate the parties to be ultimate decision-makers (Welsh, 2001). If mediation is forced upon unwilling parties, the likely consequence is making the process perfunctory (Smith, 1998).

Nevertheless, consensus mediation as a key success factor remains non-conclusive. Welsh (2001) notes that many speak of "self-determination" but that they understand the term quite differently. The "dialogue of solidarities" perspective of voluntary participation (Petrzelka & Bell, 2000) reminded that individuals are embedded not only in ties of interest, but also in sentimental affection and normative commitment. Some researchers emphasise party's self-determination as participating freely at all stages of the process of the mediation (Merry, 1989). Self-determination theory (SDT hereafter) identifies three innate needs of competence, relatedness, and autonomy (Ryan & Deci, 2000). Competence refers to the capabilities to understand the possible results and effectiveness for the decision (Harter, 1978). Relatedness is based on the instinct to interact with others and considers whether the decision has an opportunity to interact with others (Baumeister & Leary, 2017). Autonomy refers to whether the motivation is from the heart and whether the behaviour is self-decided and not influenced by others (Deci & Vansteenkiste, 2003). Furthermore, SDT can be used to distinguish intrinsic and extrinsic motivation. Intrinsic motivation is the natural, inherent drive to seek out challenges and new possibilities that SDT associates with cognitive and social development while extrinsic motivation comes from external sources (Deci & Ryan, 1985; Vallerand, 1997).

Apart from Self-determination theory, there are other theoretical explanations that could be used to study the willingness to mediate (Pederson et al., 2007, Esses &

Dovidio, 2002). Social exchange theory, transaction cost economics theory, transactional value theory, social cognitive theory and planned behaviour theory are notable examples (Martins & Monroe, 1994, Wu, et al, 2014, Williamson, 1993, Zajac et al., 1993, Bandura, 1986, Schifter & Ajzen, 1985).

Transaction cost economics (TCE hereafter) explains how transactions are organized with the aim of minimizing transaction costs (Williamson, 1979). TCE suggests that each type of transaction produces coordination costs of monitoring, controlling, and managing transactions, in which cost is the primary determinant of such a decision (Williamson, 1979). The spectrum of transaction costs is extended to include any mechanism for coordinating the actions of individuals, which includes the costs of deciding, planning, arranging, and negotiating actions and the terms of exchange between two or more parties (Williamson, 1993). Zajac et al. (1993) examined inter-organisational strategies from a transactional value rather than transaction cost perspective to maximize joint value and create value.

Social cognitive theory (SCT hereafter) states that when people observe a model performing a behaviour and the consequences of that behaviour, they remember and use this information to guide the subsequent behaviours (Bandura, 1986). SCT can be applied to interpret the willingness to participate in the mediation and mainly aims to explain the influence of past mediation participation experience on current mediation participation.

Planned behaviour theory (PBT hereafter) is an improved model based on the rational behaviour theory that explains individuals' attitudes, subject norms, and perceived behavioural control in the light of their intention (Schifter & Ajzen, 1985). Although TPB was originally developed for the study of individual behaviours, it has been extended to understand organizational behaviour in recent years (Cheng, 2016).

The literature on mediation is growing, but the anchoring voluntary participation in mediation has not been scrutinised and in fact seems has been taken for granted. Voluntary participation embraces the implicit assumptions of intentional action, absence of controlling influences and no-role restriction. Based on the literature review conducted for this study, Cao (2021) summarised a list of manifestations of voluntary participation as presented in Table 5. Nelson et. al. (2011) focused on intention and the absence of coercion and manipulation. Appelbaum et al. (2009) on the other hand looked into inducement and persuasion to indicate the exertion of external forces. The approach of Brunk (1979) centered on manipulation. The societal stance of Kamuya et al. (2011) is thought provoking yet lacking construction perspective. As voluntariness is best identified by the parties' own initiative, no compulsion, and no indifference proposed by Poitras (2005) are adopted in this study.

Table 5 Identifications of voluntariness (Cao, 2021)

Dimensions of voluntariness	Manifestations	References
Intentional action	The party in the performance of actions uses intentional action	Nelson et al. (2011)
The absence of persuasion	No side persuading another side believes something through the merit of reasons proposed	
The absence of coercion	No side intentionally forces another side or uses credible and severe threats of harm to control another side	
The absence of information manipulation	There is no use of non-persuasive means to alter a side's understanding of a situation	
The absence of reward manipulation	No side motivates another side to do what the agent of influence intends	
Inducement	No offer to provide incentives are made	Appelbaum et al. (2009)
persuasion	No application of interpersonal pressure or by an exhortation to self-interest or community norms is applied	
Force	No enforcement by non-consensual intervention or the issuance of threats is used	
Diminished capacity	Supply or funding chains are disrupted	Brunk (1979)
Goals	There is a willingness to mediate the dispute to achieve a mutual goal	
Manipulation	The choice of action is free from constraints imposed by other persons or social institutions	
Understanding of the proposed program	Potential participants have an adequate understanding of specific aspects of the proposed program or even of the program in general	Kamuya et al. (2011)
Social norms	No side considers decision making by the other side as the social norm	
Social relations	Cross-cutting interpersonal and contextual domains do not make it difficult to say no	
Value	There is a willingness to mediate the dispute for shared value	

(continued)

Table 5 (continued)

Dimensions of voluntariness	Manifestations	References
Inducements	The voluntariness of the disputants is undermined by "inducements" or "offers" designed to encourage the parties to enter mediation	

3 Reality Checks on Construction Contracting and Mediation

Mediation is one of the most common means of ADR used in Hong Kong to resolve construction disputes. However, every means has her own advantages and shortcomings. There is a need to review the practicality of the design assumptions. This section serves as realty checks on the conventional construction dispute mediation design.

3.1 Principal-Agent Relationship

One of the earliest and most popular theories to explain how organisations interact is the principal-agent theory (PAT hereafter). In a typical principal-agent arrangement, the principal delegates authority to the agent, to act and make decisions on his behalf. Moreover, the principal and the agent may have inherent conflicting interest (Jensen & Meckling, 2019; Meckling & Jensen, 1976). Eisenhardt (1989) also employed an agency perspective to study the problems of cooperation within coalition of members of diverse background. The typical principal-agent relationships in construction are those between developer and contractor, between the main contractor and the subcontractor. Although it is typically expected that all parties will work together to effectively complete a construction project, the principle-agent theory suggests that because each party is motivated by their own interests, inherent conflict between them is inevitable. Additionally, due to the characteristics of construction projects, such as their high level of asset specificity and uncertainty (Zhu & Cheung, 2021), their relationship may change as far as interdependency is concerned. The special characteristics are illustrated as follows:

First, Williamson (1983) proposed six dimensions of asset specificity: (i) human asset specificity; (ii) physical asset specificity; (iii) site specificity; (iv) dedicated asset specificity, (v) capital specificity; (vi) temporal specificity (Masten et al., 1991; Riordan & Williamson, 1985). Among them, construction projects highlight dedicated asset specificity and temporal specificity. Dedicated assets are those that have been specifically made for a particular transactional. It is therefore built on the anticipation of a long-term partnership. In contrast to a standard buyer–seller contractual relationship, termination of a construction contract, particularly in the middle and later stages of the project, could have serious financial implications. According to

Masten et al. (1991), temporal specificity relates to the significance of timing and coordination needed for a transactional relationship. When it comes to construction projects, on-time delivery becomes essential to avoid costly delays (Chang & Ive, 2007). Furthermore, there has been much discussion about how asset specificity relates to the performance of inter-firm relationships. According to the TCE, asset specificity raises the risks associated with opportunism (Heide & Stump, 1995). Nevertheless, the relational exchange theory (RET hereafter) is more focused on the resource efficiency of the firms (Pitelis, 2007). Lui et al. (2009) found that the development of intangible, relation-specific assets and trust-based collaborative behaviour would improve inter-firm relationship.

Second, every project is subject to the uncertainty of, among others, scope, environment, and human decisions (Ward & Chapman, 2003). It is not a random act but methodically related to the elements of people's workplace, activities, and resources (Williamson, 1979; Love et al., 2020). Uncertainty in construction projects can come from five different sources: (i) program: bad weather and environmental approvals; (ii) quality: substandard work, non-conformance, and inadequate quality assurance; (iii) management: supervisors and engineers' behaviour, stakeholder relations; (iv) design: contract variations, errors and omissions in documentation, approval; (v) safety: safety culture, fatigue, competency of construction plant operators. Because each construction project is unique, they inherently carry new risk. This uncertainty is exacerbated by the intrinsic complexity and ambiguity of the construction process, which is also rendered worse by process variability (Cheung & Yiu, 2006; Love et al., 2016).

3.2 Power Asymmetry

The discussion of asset specificity in construction projects in Sect. 3.1 has brought out the issue of power between the contracting parties. Empirical evidence is available to confirm that power differential does exist between contracting parties (Gaski, 1984; Dwyer et al., 1981; McAlister et al., 1986).

Emerson (1962) contends that power is a function of resource availability and criticality: power increases when a particular organization's resource is in higher demand and less generally available. Likewise, asymmetric information may also be a function of power whereby one party is having better information (Schieg, 2008). For instance, the contractor will be in an information advantaged position when the developer is not able to observe the performance of the contractor. Equity theory (ET hereafter) explains the negative impact of imbalanced distribution of output in relation to the respective input (Adams, 1963). Emerson's (1962) power-dependence theory (PDT hereafter) also points out the use of benchmarks to determine if the outcome is a gain or not. Power, according to negotiation professionals (Fisher et al., 2011), is a function of what alternatives one has instead of reaching a settlement. Power asymmetry permeates basically every phase of mediation.

Power asymmetry combines both the substantive and relational aspects of mediation by comparing with the other party to create a valuable perspective. The extent to which the parties have outside options, substantial resources, or other means of preserving some level of independence from their counterpart and expected risks and returns could vary greatly. In this way, it unites issues and people rather than separating them from issues.

3.3 Quasi Imposition of Construction Mediation

The high level of uncertainty in construction projects coupled with bounded rationality renders the construction contract incomplete. The level of contract completeness influences the type of conflict whereby different resolution approaches would deemed appropriate (Lumineau & Malhotra, 2011). Although ADR usage patterns vary, Hong Kong has been actively developing and promoting the use of mediation as an efficient means of dispute resolution. There are several reasons for this preference, but the main ones include the time and cost savings, allowing parties to maintain control over the issue resolution, and flexible structuring of settlement options (Stipanowich & Lamare, 2014).

Mediation can be used at any stage of a dispute, and voluntary participation is one of the central designs (Nolan-Haley, 2012). A voluntary mediation process is one freely chosen by the participants. that is freely chosen by the participants; voluntarily made agreements; parties are not forced to mediate and settle by an internal or external party to a dispute (Moore, 2014). Stulberg (1996) notes that "there is no legal liability to any party refusing to participate in a mediation process. Since a mediator has no authority to impose a decision on the parties, he/she cannot threaten the recalcitrant party with a judgment." During a mediation, every party is free to suggest options. The alternative to a negotiated agreement is considered the outcome is accruing to a party from not interacting with the other party and not agreeing to participate in the mediation with them. If the party's mediation outcomes are equal to or exceed their alternative outcomes, they will continue with the mediation. On the other hand, if the alternative outcomes exceed the one on the table, they will take steps to improve, and if failed, they will withdraw from the mediation (Wall, 1981). However, voluntary participation does not mean that they may not be 'compelled' to try mediation (Moore, 2014). Other disputants or external figures, such as friends, colleagues, constituents, authoritative leaders, or judges, may put pressure on a party to attempt mediation. In addition, some courts on family and civil cases in the United States require parties to participate in mediation and make good faith efforts for a settlement before the court will be willing to hear the case. Apart from that, attempting mediation does not mean that the participants must settle. Apparently, forced negotiation may not provide the necessary conducive platform for genuine attempts to settle (Trakman & Sharma, 2014). Moreover, there has been a call for the mandatory use of mediation to accelerate its adoption (Nolan-Haley, 2011; Quek, 2009). As far as the practice of mediation is concerned, any form of imposition has been viewed as a departure

of voluntary participation. Nevertheless, in construction contracting, certain effort to overcome the inertia is necessary. In this connection, By analyzing the current arrangements related to construction mediation, the mediation rules, contractual use, court encouragement and court-connected, an analysis of voluntary participation is illustrated.

Mediation Rules

The Hong Kong International Arbitration Centre (HKIAC) is the leading dispute resolution services provider in Hong Kong. The rules of the HKIAC are most representative of the conduct of mediation in Hong Kong. According to the HKIAC mediation rule, a failure by any party to reply within 14 days shall be treated as a refusal to mediate. Thus, mediation can only be conducted if all parties agree to mediate. This echoes the conceptual approach that mediation should be participated voluntarily (Katz, 1993). Delay tactics are less likely to be pursued if the disputants decide to mediate at their own will. The parties are much more likely to make meaningful contribution, such as negotiating in good faith. In addition, in fully voluntary mediation. Afterall, the parties are free to leave at any time.

Contractual Use of Mediation

Most construction contracts have adopted a tiered- resolution procedures that include mediaton as an intermediate step before binding resolution forums. Cheung (2016) summarised the construction mediation landscape as follows. Typically, a three-tiered dispute resolution procedure is used. According to the HKG General Conditions of Contract for Building Works/Civil Engineering Works/Design and Build Contracts Clause 86 and General Conditions of Contract for Term Contract for Building Works Clause 92/Civil Engineering Works Clause 89, when a dispute arises, it shall be reported to and settled by the designated contract administrator. If either party is dissatisfied with the decision made, they can refer the matter to mediation within 28 days of the decision. If the matter cannot or does not need to be resolved by mediation, any reference to arbitration shall be made in accordance with the Arbitration Ordinance within 90 days. A similar design is also adopted in the private building projects form of contract. More recently, the New Engineering Contract (NEC) has been used extensively for public works projects in Hong Kong. The 2017 NEC4 Dispute Resolution Service Contract (DRSC) offers three dispute resolution options (W1, W2, and W3), and Z-clauses that provide bespoke additional contract conditions can be added, allowing unique requirements for local dispute resolution practices. W1 and W2 under NEC4 use adjudication as the primary means of dispute resolution, W3 uses dispute avoidance, while mediation can be added to the Z-clauses as a construction dispute resolution tool in the NEC, such as adjudication and arbitration. This contractual use of mediation is quite different from its mandatory use because voluntary participation is retained. To ensure the validity of ADR clauses, it is important that mediation provision should be specific enough so that objective criteria can be deduced to determine compliance or otherwise. As such, a mediation clause should specify the model and rules to be used. In addition, a clear time frame for its implementation, the nominating authority and the minimum amount of

participation are essential items to be incorporated to develop an enforceable mediation clause. Besides, contractual mediation clauses are often found in construction contracts which mandate mediation when a dispute arises, like a statutory mandate. However, the initial decision to mandate mediation for disagreements is made by the parties themselves and leaves intact voluntariness of the agreement (Nelle, 1991).

Court Encouraged Mediation

The legislation and judicial pronouncements appear to be pushing the parties to mediate. Some researchers worried that mediation de facto would lose its voluntary nature (Ahmed, 2012). However, the initial decision to mediate their disagreements is made by the parties themselves, and as such voluntariness is maintained (Nelle, 1991). According to Section F of Hong Kong High Court Practice Direction 6.1, construction cases reaching the Hong Kong High Court are encouraged to attempt mediation. Accordingly, upon receiving the Mediation Notice, the Respondent should respond to the Applicant in writing within 14 days, although he has the right to refuse to mediate. The principal way to encourage an attempt to mediate to involves the imposition of cost sanctions where a party unreasonably refuses to attempt. However, if a party (1) has engaged in mediation to the minimum level of expected participation agreed upon by the parties beforehand or as determined by the court or (2) has a reasonable explanation for nonparticipation, he should not suffer any adverse costs order.

Court-Connected Mediation

The dilemma of compeling parties to voluntary mediation is a paradox in itself (Cao, 2021). The debate over imposition of mediation will never (Cheung, 2016; Hilmer, 2013; Leung, 2014; Meggitt, 2018). In Canada, Australia, the United Kingdom and Singapore, the courts are more open about the use of compulsory ADR. Court-annexed mediation is the most direct way to ensure attempts of mediation. The Civil Justice Reform's (CJR's) Working Party has proposed court-annexed mediation; in its Interim in 2000. However, the proposal was finally rejected and no court-annexed mediation is put to practice (Cheung, 2016; Hilmer, 2013; Meggitt, 2018). Statutory use denotes that disputes will be automatically directed for mediation, irrespective of its nature. The downside is the parties only mediate perfunctorily (Leung, 2014). Parties being forced to mediate are unlikely mediate in good faith (Meggitt, 2018). Court-annexed mediation undermines the voluntary nature of mediation (Cheung, 2016). If parties are forced to mediate, particaption may merely be taken to satisfy the mandatory requirements. Rules of law and justice may not even be on the agenda, which may address commercial issues in a way that lacks clarity and certainty (Hilmer, 2013).

3.4 Disputants' Perceptions of the Used of Mediation

Biases in construction projects can be in the following forms: strategic misrepresentation and normalization of deviation (Pinto, 2013); opportunistic decision criteria and value perception (Brewer & Runeson, 2009); heuristics and organizational learning (Winch & Kelsey, 2005); anchoring, overconfidence, self-serving, hindsight, and confirmation (Cheung & Li, 2019). Previous studies mainly focused on bias a mediator holds toward the disputants, as an impartial role in mediation procedures. Anchoring and confirmation, both forms of bias were found to be more likely to occur in construction dispute (Cheung et al., 2019; Izumi, 2010). Moreover, unintentional biases may also affect disputants' judgment who need to be rational to achieve better outcomes. The selective accessibility model argues that anchoring involves estimating the target closes to the anchor that may not be realistic or rational (Strack et al., 2016). Disputant who is influenced by anchoring bias is more likely to make judgments based on the first set of information they have. It is challenging to make appropriate judgments on a final assessment in this situation that can differ significantly from the disputants' preconceptions. Confirmation bias describes the tendency to search or interpret information that conform to those already held views, expectations, and situational context. (Kassin et al., 2013; Nickerson, 1998). With the presence of confirmation bias, it can be expected that disputants would make decisions based on the information in possession. It can therefore be assumed that biases may affect the disputing parties if they have certain pre-occupation on the process.

4 Voluntary Mediation and the Reality

Table 5 gives the dimensions of voluntariness. It is advocated that in the context of and is advocated that these dimensions have two characteristics: no compulsion and no indifference. This section discusses the compatibility between reality and the use of voluntary participation as an incentive for the use of mediation. Table 6 summarises the initial evaluations. Apparently, the reality may not render voluntary mediation a pragmatic option. In addition, the actual practice also suggested that pure voluntary participation is not easy to come by.

The following two sub-sections argue that the reality checks of the use of construction mediation in Hong Kong do not neatly meet the "no compulsion" and "no indifference" views of voluntariness.

Table 6 Reality check and elements of voluntariness

Principal agent relationship *(Characterized by self-interested principal and work-averse agent)*	Power asymmetry *(Characterized by differential in resource, information, and expectation)*	Quasi-imposition *(Characterized by use of adverse sanction on non-compliance)*	Disputants' perception (Characterised by anchoring and confirmation)
No Compulsion? No Indifference?			

4.1 Power Asymmetry

Principal agency theory highlights the inherent conflict of interest between the principal and the agent (PA hereafter). In construction contracting, although the relationship between the employer and the contractor can be largely identified as one of principal and agent. Moreover, the increasing involvement of the employer during construction has significantly made the relationship with the contractor as one between collaborators. Nevertheless, the asymmetric conditions inherited from a P-A relationship remain. Apparently, mediation is a kind of assisted negotiation and assumes parties enjoy free negotiation as formulated in most negotiation theories. With a P-A relationship the power differentials can be in the form of resources and information. From a behavioural perspective, the process assumes open negotiation with the disputants having no worries about the consequences if the mediation fails. Moreover, mediation is only one of the steps of a multi-tiered arrangement (Li & Cheung, 2018). The caveat that mediation is being used as a rehearsal of planned arbitration and even litigation cannot be overruled. It is therefore advocated that power asymmetry can deter the use of mediation due to the inevitable power asymmetry. The degree of power asymmetry between the parties appears to be directly related to the initiation of mediation (Richmond, 1998). Not much research on the influence of asymmetric conditions between the disputants in construction dispute mediation have been identified. It is crucial to further this study by developing the constructs of power asymmetry and investigate the implications of voluntary participation of mediation.

4.2 Quasi-Imposition

The use of mediation to resolve construction dispute is largely contractual based. Contractual use of mediation was first introduced in Hong Kong in the 80's with the Hong Kong Government Architectural Services Department taking the lead. Voluntary mediation was enabled for allowing proceed to next tier of resolution when a referral to mediation is not met with positive response. This approach has been taken in most contracts used in Hong Kong. When a construction case reaches to the High

Court of Hong Kong, the provisions of minimum participation of mediation under PD 6.1 shall apply. To avoid adverse cost order, it is necessary to attempt mediation though reasonable refusal is allowed. Thus, the immediate question is: "under these conditions can voluntary participation still be claimed as far as no compulsion?". According to mediation theories, like the Harvard concept (Fisher et al., 2011), developing as many options as possible and with no fixed position are the underlying principles of successful mediation. Human judgment biases always affect disputants' decisions since they are having varied experiences and certain degrees of irrationality. Anchoring and confirmation biases are sources of entrenched positions which should be properly managed. Mediators need to facilitate the disputants to eliminate biases, therefore discovering a better solution, or achieving a better outcome than they would have done without such a mechanism.

However, the procedure has inherent default because the disputants are somehow steered by the 'imposed' procedures. For example, one's willingness to make concessions is simply not be imposed. During a mediation, various factors have an impact upon the willingness to negotiate. The general definition of a mediation is that the disputing parties voluntarily come together to try and discover a better solution or accomplish a better result than they would have done without such a mechanism. As for "no indifference", it is not unheard of the perfunctory attitude taken by the participating parties when the mediation is quasi-imposed. The caveat of using mediation as rehearsal equally applies in this situation.

5 Voluntary Participation as an Incentive for Use of Construction Dispute Mediation

Sections 4.1 and 4.2 highlight the possible incompatible conditions against voluntary participation in construction dispute mediation. Power asymmetry between disputants and the quasi-imposition are identified as two interesting inherent obstacles that would marginalise the incentivising function of voluntary participation.

The principal–agent problem refers to conflict of interest arises when one entity (the "agent") acts on behalf of another entity (the "principal") (Grossman & Hart, 1992). The approach/inhibition theory of power examines how power influences individual's psychological states and transform their behaviour (Keltner er al., 2003). The principle-agent problem frequently happens between construction project parties due to the high level of asset specificity and unpredictability. In dyadic relationships, the more powerful partner is linked to positive affect, attention to rewards, automatic information processing, and unrestrained conduct. Conversely, a weaker party is linked to negative affect, attention to threat, restrained information processing, and social inhibition. This study applies principal–agent problem and approach/inhibition theory of power to explain whether and how power asymmetry affects the voluntary

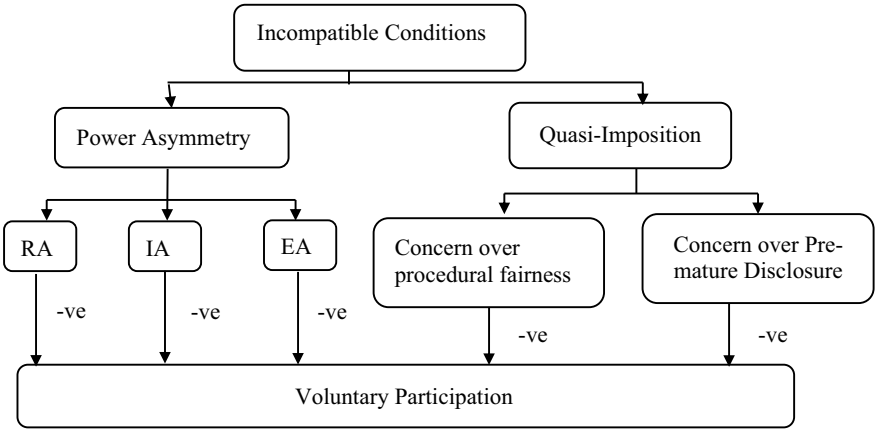

Fig. 4 Obstacles against voluntary participation

to participate in mediation. A principal agent relationship is characterized by a self-interested principal and a work-averse agent, and power asymmetry is characterized by differences in resource, information, and expectation.

Consider current arrangements related to construction mediation, contractual use, court encouragement and court-connected mediation, this study argues that quasi-imposition negates parties' willingness to mediate. Perception of fairness has been an important variable when studying behavioral willingness (Maxwell, 2002). And bias which has been found to be pervasive in negotiation obviously has an impact on perceived fairness (Gelfand et al., 2002).

This study points out that concerns of disputant may over the procedural fairness, and the way mediation is installed would negate the willingness to mediate. Apart from the mediation at the table, there still have concerns about the opportunistic motive in conducting the mediation. Such as treating this as a rehearsal of arbitration. It is pointed out that voluntary participation can be a sweetener of mediation adoption. However, due to the prevailing contracting arrangement and practice, willingness to mediate can be marginalised by the structural issue of power asymmetry as well as the implementation issue of quasi-imposition. Figure 4 summarises the key arguments put forward by this study.

6 Summary

This chapter first reviews the landscape of construction dispute resolution including nature of dispute, approaches to resolution, forms of resolution. It is also found that mediation has been identified as the preferred alternative dispute resolution method for civil disputes by the Hong Kong government. In construction, several governmental initiatives have been taken to promote its use. These promotional

efforts are to upbring potential users' knowledge on the benefits of using mediation. Reported usage of mediation has dropped recently after promising initial uptake after the 2009 Civil Justice Reform. Voluntary participation has been one of the key attributes promoted by mediation service providers. The control of the proceedings by the disputing parties is considered as a very appealing feature. Thus, voluntary participation has been the core design of mediation procedures whether it is contractual or court-encouraged. A reality check on contracting practice revealed two note-worthying incompatible contracting conditions that would negate willingness to mediate. This study serves a timely reminder of the limitations of construction dispute mediation through a reality check on the prevailing construction contracting practice.

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