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Abstract. Negotiators are not always rational. Prior studies have found that negotiators tend to be overconfident about their ability to win and underestimate the possibility of negotiation failure. This biased judgment may lead to irrational evaluation and miss the chance to settle. It is argued that negotiators handle a negotiation respective to their perception of the risk of failing. The perception of failure therefore has a pivotal influence on the negotiation outcome and warrant deeper conceptual treatments. In this regard, this study aims to conceptualize construction dispute negotiators' perception of negotiation failure. Applying the construal-level theory (CLT) and the concept of psychological distance (PD), a psychological distance of negotiation failure (PDNF) framework was developed. With data collected from construction negotiators, the PDNF framework was statistically supported. Four types of psychological distance of negotiation failure were identified, which are uncertainty, temporal distance, social distance, and frequency. The empirical findings provide a psychological perspective of how negotiators perceive the potential failure. Management can adopt the PDNF framework to gauge negotiators' perceptions of failure. Timely interventions, such as conducting internal reviews with detailed information, taking periodic negotiation training, as well as assistance by third-party neutrals, are suggested to offset negotiators' biased judgment.

1. Introduction

In highly competitive and profit-seeking environment, dispute is not uncommon in construction projects. Relationship among construction contracting parties is typically regarded as adversarial due to their diverging goals, positions, and interests respective to their roles in the project [1]. For example, the owner hopes to obtain a quality project at the lowest cost and the shortest construction period. On the other hand, the contractor would aim for a higher profit with fewer restrictions. In addition to their inherent divergent positions, there are still a host of reasons causing disputes, such as stringent contract governance, inadequate preparation, poor coordination among parties, complexity of the project, and environmental or financial issues [2]. Any one of the reasons may ruin a project unless the dispute can be properly resolved. In this regard, construction dispute resolution is quite significant in project administration and is also a popular research topic [3-4].

Compared to arbitration and litigation, negotiation is the more efficient way to resolve differences [5]. Negotiation is almost a daily routine for construction practitioners. Furthermore, it is highly recommended due to its characterizing features of confidentiality, cost and time efficiency, and relationship maintenance [6]. Even though with these merits, negotiation failure is an ineluctable

occurrence. The consequences of failed negotiations can be severe. For contractors, the breakdown of negotiation would not only stifle the ongoing project but also might cost future work opportunities. This can be fatal for contractors as the construction market is generally a buyer's market [7]. Private developers would not invite contractors with whom they had a bitter prior experience like perfunctory dispute negotiations. For owners, protracted or failing negotiations also delay projects and incur unexpected costs [8].

Although there is no guaranteed success in every negotiation, moreover, it is not uncommon for a negotiation to reach an impasse even when there is still a chance to negotiate at the table. Negotiators sometimes miss the opportunity to settle and are unaware that they are heading towards failure. “How could I miss that” is a typical action when reviewing the event. Cheung and Li [9] suggested that negotiators cannot always be rational due to the existence of bias. Bazerman and Chugh [10] highlighted that negotiators’ decision is limited by their bounded rationality, which renders them ignore the failure signs and symptoms. As suggested by social cognitive theory, how people react to risk depends on their construal of the risk [11]. In this connection, negotiators' different perception of failure would create variations in their attitude and behavioral tendency towards negotiation.

This study posits that overlooking potential negotiation failure may in fact foster the happening of failure. However, few studies have explored how negotiators perceive failure from an ex-ante perspective. In this study, we aim to identify and conceptualize how negotiators perceive negotiation failure through the conceptual lenses of the theory of construal-level and psychological distance. This study identifies negotiation failure as failing to put an end to the disputes.

2. Psychological Distance of Negotiation Failure

Liberman and Trope [12] used the construal-level theory (CLT) to explain and predict one’s decision in terms of the psychological distance (PD) of the event. The cognition of PD is egocentric and is expressed as the extent to which an object is removed from the self in the here and now [13]. According to Trope and Liberman [14], PD can be measured by four dimensions: spatial distance, temporal distance, social distance, and uncertainty. In essence, PD is the perceived distance between the perceiver and the happening of the event in question, e.g., how certain it is that event will happen. Any changes in these four dimensions can cause psychological distance of the perceiver on the event [15]. When people view an object or event psychologically close, it tends to be perceived in more concrete, low-level terms and enhances the feasibility of a behavior's adoption. On the other hand, if the object/event is viewed as psychologically distant, their interpretation would be abstract and construed at a high-level.

CLT explains that negotiators will rely on mental construal of what would happen during negotiation to portrait different psychological distances of the potential failure (i.e., distal or proximal) [16]. In this connection, we define psychological distance of negotiation failure (PDNF) as negotiators’ mental perception of how far that negotiation failure is from the self. It can be measured by the afore-mentioned dimensions: spatial distance, temporal distance, social distance, and uncertainty. Considering the characteristics of construction dispute negotiation, proposals and issues can be negotiated for many interactions. The frequency of signs of failure perceived by negotiators can also be a significant measurement of PD. Furthermore, as negotiators are in the negotiation case, the spatial distance should be zero and is therefore not included in this study. As such, PDNF is developed from temporal distance (PDTE), social distance (PDSC), uncertainty (PDUC), and frequency (PDFQ). The conceptual framework of PDNF is presented in Figure 1. Measurement items are adopted and revised from the study of psychological distance of project failure [17] and psychological distance of disaster [13].

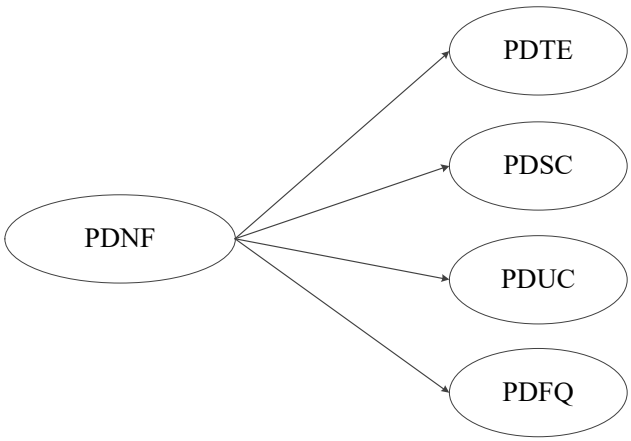

Figure 1. A conceptual framework of PDNF

3. Research Methodology

3.1. Questionnaire design and data collection

A questionnaire was developed to collect data on construction negotiators' perception of negotiation failure. It contains two parts. Part I focuses on the respondents' particulars, including gender, experience, and organization. Part II requires the respondents to recall a recent negotiation case they were involved in and answer questions about their perceived failure feelings. The definition of negotiation failure is also provided for the respondents. Four types of failure distance questions are: "how close (immediate to very remote) …" to measure the temporal distance, "how tangible (definitely to not at all) …" to measure the social distance, "how likely (no way to very likely) …" to measure the uncertainty, and "how often (never to very often) …" to measure the frequency. These questions respectively represent the four dimensions of psychological distance. Questionnaires were mainly distributed online. In total, 101 valid data were received.

3.2. Partial Least Squares Structural Equation Modelling (PLS-SEM) analysis

SEM method is a commonly used multivariate statistical tool in social science studies [18]. In SEM, observable variables can be directly measured, while latent variables are theoretical constructs inferred from observable variables. SEM enables a maximally efficient fit between data and the structural model. Furthermore, it can simultaneously test confirmatory factor analysis (CFA) and path analysis. The main forms of SEM analysis include covariance-based SEM (CB-SEM) and partial least squares SEM (PLS-SEM). Based on the objectives and data characteristics in this study, the two primary reasons for choosing PLS-SEM are:

(1) Non-normal data. CB-SEM requires normal data to ensure goodness-of-fit when evaluating a path model. Nevertheless, data collection is not always ideal for following a multivariate normal distribution. PLS-SEM is more compatible than CB-SEM, as the PLS algorithm can transform non-normal data by applying the central limit theorem [19].

(2) Small sample sizes. This is the critical reason for most researchers to choose PLS-SEM. Data volume is always a challenge in the construction domain, with only practitioners are considered appropriate for answering the questionnaire. Compared to CB-SEM, PLS-SEM requires much smaller sample sizes even with complex models [19, 20].

Accordingly, PLS-SEM was conducted in this study with the software of Smart-PLS 3. PDNF is developed as a second-order variable with four first-order variables (i.e., PDTE, PDSC, PDUC, and PDFQ). Each variable is measured with three observable behaviors. CFA was conducted to test the relationship between the observable variables and their latent variable to determine whether the data fit the proposed research framework [21]. The reliability and validity of the measurement models were

assessed with results shown in Table 1. Bootstrapping technique with the setting of 5000 samples was applied to test the path coefficients. Bootstrapping results are shown in Figure 2.

Table 1. Reliability and validity results of the PDNF framework

Variable	Measurement items	Factor loadings	AVE	CR	Cronbach's a	Discriminant validity			
						PDTE	PDSC	PDUC	PDFQ
PDTE	PDTE1	0.875	0.667	0.857	0.756	0.817			
	PDTE2	0.728							
	PDTE3	0.840							
PDSC	PDSC1	0.782	0.697	0.873	0.785	0.318	0.835		
	PDSC2	0.876							
	PDSC3	0.844							
PDUC	PDUC1	0.827	0.667	0.857	0.750	0.126	0.087	0.816	
	PDUC2	0.779							
	PDUC3	0.843							
PDFQ	PDFQ1	0.707	0.627	0.833	0.704	0.103	0.095	0.342	0.792
	PDFQ2	0.769							
	PDFQ3	0.888							

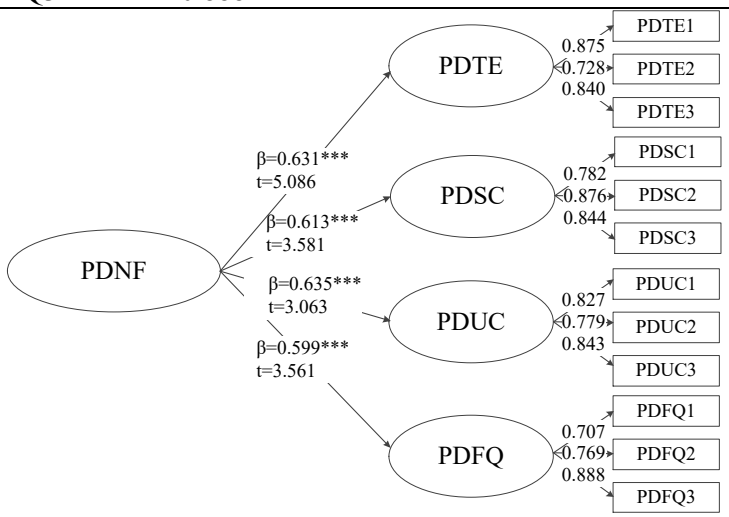

Figure 2. PDNF research framework in construction dispute negotiation

4. Discussion and Implications

The PLS-SEM results support the proposed four dimensions of PD to identify negotiators' perceptions of failure in real-life circumstances. Findings indicate that the research framework is reliable and valid. The path coefficients are positive and significant at 0.05 level. Accordingly, temporal distance, social distance, uncertainty, and frequency are significant contributors to PDNF.

Uncertainty (path coefficient=0.635) achieves the highest contribution to PDNF. It describes how likely negotiators perceive that negotiation failure will happen. If negotiators predict no chance of failure, they may underestimate the difficulty of work and will not put in full effort. On the contrary, if they perceive the high risk of failure, more coping strategies to mitigate the risk are expected. Temporal distance (path coefficient=0.631) gets almost equal significance as uncertainty. Temporal distance represents how close negotiators perceive failure in terms of time. When negotiators take a proximal perception of the temporal distance, in other words, they feel failure will occur soon, it is suggested that

they will be more sensitive and prudent in this case. Social distance (path coefficient=0.613) ranks third and it means how tangible negotiators feel the failure outcome will affect their related audiences (e.g., project groups, colleagues, and themselves). Negotiators will get a close psychological distance if the negative impacts are serious and relevant to themselves. Frequency (path coefficient=0.599) is the only dimension not up to 0.6, but it is still quite noteworthy in CDN because it usually takes many rounds to reach a mutual agreement. Frequent occurrences of failure signs can be a wake-up call for negotiators.

It can be summarized that proximal psychological distance from negotiation failure elevates the intensity of affective responses and coping actions. More specifically, negotiators will react more strongly to the potential failure if they perceive that failure is very likely, the time is quite close, failure signs occur quite often, and the failure results will negatively affect them. The four dimensions of PDNF can work as the measurement tool for project managers to predict negotiation outcome and also help with the evaluation of whether negotiators have a rational judgment. Devaluating failure and overestimating negotiation situations can be the cause of some failures, which are also the manifestations of distal psychological distance of failure. In this connection, some managerial activities to lower the four PD dimensions are provided.

Firstly, according to the theory of construal-level, the detailed and contextualized features can form concrete explanation and proximal psychological distance. It is thus suggested that negotiators should spend more time collecting information from failure signs and symptoms displayed by both parties in dispute [22]. The more comprehensive and specific signals can bring a close psychological distance in time, uncertainty, and frequency. Secondly, to lower social distance, negotiation training and regular reviews are necessary for daily work. Negotiators should be clearly assigned their roles and responsibilities in a negotiation. They should be reminded of the harmful effects on both parties if the negotiation fails. Moreover, negotiators may be trapped in their own biases and anchor on unreasonable prior assessments. It would be instrumental in having impartial experts like third-party neutrals to help raise the objectivity of evaluations [23]. Through reality testing method by the third-party neutrals, negotiators can review and re-estimate their negotiation situations, thus preventing them from overconfident judgment.

5. Conclusions

Failure studies have primarily focused on post-event analysis. With due regard to wisdom of "prevention is better than cure," this study seeks to understand how negotiators construe the potential failure during the negotiation process. To achieve this, construal-level theory and psychological distance were applied to develop a psychological distance negotiation failure (PDNF) framework that was validated by SEM-PLS with data collected from Hong Kong. Four dimensions of psychological distance were identified. These are temporal distance, social distance, and frequency. The PDNF framework can be used as a management tool to evaluate negotiators' perception of negotiation situation. Early inspection can leave a chance for management to intervene in negotiators' overconfidence and biased perception of potential failure. Practical suggestions are provided to prevent devaluating the chance of failure.

6. References

[1] Cheung SO, Yiu TW, and Yeung SF 2006 A study of styles and outcomes in construction dispute negotiation *J Constr Eng Manag.* **132** 871-81
[2] Yiu TW, Cheung SO, and Lok CL 2015 A fuzzy fault tree framework of construction dispute negotiation failure *IEEE Trans Eng Manag.* **62** 171-83
[3] Lu W, Zhang L, and Bai F 2016 Bilateral learning model in construction claim negotiations *Eng Constr Archit Manag.* **23** 448-63
[4] Brett J and Thompson L 2016 Negotiation *Organ Behav Hum Decis Process.* **136** 68-79
[5] Yousefi S, Hipel KW, and Hegazy T 2010 Attitude-Based Negotiation Methodology for the Management of Construction Disputes *J Manag Eng.* **26** 114-22
[6] Lin S and Cheung SO 2021 Analyzing intention to settle in construction dispute negotiation *In: CCC 2021.* Opatija

[7] Brooks SP 2008 Enforcing a turning point and imposing a deal: An analysis of the Darfur abuja negotiations of 2006 *Int Negot.* **13** 413-40
[8] Cheung SO and Li K 2019 Biases in construction project dispute resolution *Eng Constr Archit Manag.* **26** 321-348
[9] Cheung SO, Li K and Levina B 2019 Paradox of bias and impartiality in facilitating construction dispute resolution *J Leg Aff Disput Resolut Eng Constr.* **11** 1-9
[10] Bazerman MH and Chugh D 2006 Bounded awareness: focusing failures in negotiation *Front Soc Psychol Negot.* **7**
[11] Bandura A 1993 Perceived self-efficacy in cognitive development and functioning *Educ Psychol.* **28** 117-48
[12] Liberman N and Trope Y 1998 The role of feasibility and desirability considerations in near and distant future decisions: A test of temporal construal theory *J Pers Soc Psychol.* **75** 5-18
[13] Deng Y, Wang M and Yousefpour R 2017 How do people's perceptions and climatic disaster experiences influence their daily behaviors regarding adaptation to climate change? — A case study among young generations *Sci Total Environ.* **581** 840-47
[14] Trope Y and Liberman N 2010 Construal-level theory of psychological distance *Psychol Rev.* **117** 440-63
[15] Spence A, Poortinga W and Pidgeon N 2012 The psychological distance of climate change *Risk Anal.* **32** 1-15
[16] Trope Y, Liberman N and Wakslak C 2007 Construal levels and psychological distance: Effects on representation, prediction, evaluation, and behavior *J Consum Psychol.* **17** 83-95
[17] Liu J, Geng L, Xia B and Bridge A 2017 Never let a good crisis go to waste: Exploring the effects of psychological distance of project failure on learning intention *J Manag Eng.* **33** 1-7
[18] Lim BTH, Ling FYY, Ibbs CW, Raphael B and Ofori G 2011 Empirical analysis of the determinants of organizational flexibility in the construction business *J Constr Eng Manag.* **137** 225-37
[19] Hamdollah R and Baghaei P 2016 Partial least squares structural equation modelling (PLS-SEM): An emerging tool in business research *Pract Assessment Res Eval.* **21** 1-16
[20] Hair JF, Matthews LM, Matthews RL and Sarstedt M 2017 PLS-SEM or CB-SEM: updated guidelines on which method to use *Int J Multivar Data Anal.* **1** 107-22
[21] Liu J, Lin S and Feng Y 2018 Understanding why Chinese contractors are not willing to purchase construction insurance *Eng Constr Archit Manag.* **25** 257-72
[22] Cannon MD and Edmondson AC 2001 Confronting failure: Antecedents and consequences of shared beliefs about failure in organizational work groups *J Organ Behav.* **22** 161-77
[23] Li K and Cheung SO 2020 Embracing debiasing in mediator's tactic of reality testing *J Leg Aff Disput Resolut Eng Constr.* **12** 04519046