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The Role of Communication and Stakeholder Management in Reducing Construction Disputes with Trust as an Intervening Variable in Infrastructure Project

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ABSTRACT:
Infrastructure development projects are highly complex and involve multiple stakeholders with diverse interests, making construction disputes a recurring challenge. Ineffective communication, poor stakeholder management, and low levels of trust are frequently identified as key contributors to disputes in construction projects. This study aims to analyze the role of communication and stakeholder management in reducing construction disputes, with trust acting as an intervening variable in infrastructure projects. The research adopts a mixed-method approach, combining qualitative expert validation and quantitative analysis. Data were collected through surveys and interviews involving construction practitioners engaged in infrastructure projects in DKI Jakarta. Structural Equation Modeling–Partial Least Squares (SEM-PLS) was employed to examine the relationships among communication, stakeholder management, trust, and construction dispute reduction. The findings indicate that effective communication has a significant positive effect on trust among project stakeholders. Similarly, stakeholder management practices significantly enhance trust within infrastructure projects. Trust is proven to have a direct and significant impact on reducing construction disputes. Furthermore, trust plays a mediating role in the relationship between communication and dispute reduction, as well as between stakeholder management and dispute reduction. These results highlight the importance of strengthening communication strategies and stakeholder management practices to build trust among project participants. Practically, the study provides valuable insights for project owners, consultants, and contractors to minimize disputes through trust-based management approaches. Academically, this research contributes to the construction project management literature by confirming trust as a critical intervening variable in dispute reduction within infrastructure projects.

Keywords: Communication; Stakehoder Management; Trust; Construction Disputes; Infrastructure Projects.

INTRODUCTION

Infrastructure development that is being intensively implemented by the government can create the potential for construction disputes during its execution. Law No. 2 of 2017 on Construction Services regulates the implementation of construction services, with one of its objectives being to realize the orderly delivery of construction services that ensure equality of position between service users and service providers in carrying out their rights and obligations, and to improve compliance in accordance with the provisions of laws and regulations (Secretariat of the Directorate General, Ministry of PUPR, 2018).

The main problem faced by the construction industry in Indonesia is the occurrence of disputes between service users and service providers as a result of claims or demands submitted by service users, especially in public sector construction (Kustiah et al., 2022; Simanjuntak et al.,

2023). The construction industry is one of the sectors that frequently faces various types of disputes. These disputes can arise from a range of factors, such as design changes, contract ambiguities, project delays, and quality issues. Ineffective stakeholder communication and management often exacerbate these problems (Assaf et al., 2019; E-Sayegh et al., 2020; Hemanth Sai Kayan et al., 2022; Kebede, 2022). The effectiveness of stakeholder communication and management is critical to ensuring the smooth progress of construction projects and reducing the potential for disputes that may disrupt implementation. Business disputes in the construction sector are recorded to dominate cases resolved by arbitration compared to other business sectors. The Chairman of the Indonesian National Arbitration Board (BANI) in Palembang, Joni Emirzon, stated that of the 1,300 business cases handled by BANI, about 35% were related to the construction industry (Emirzon, 2019). Dispute resolution data from the Indonesian National Arbitration Board and Supreme Court rulings show that in the past five years, 473 cases of disputes were recorded by the authorities. These figures indicate that construction disputes remain common and continue to dominate business-related legal cases in Indonesia (Chan & Oppong, 2017; Shahbaz et al., 2018; Yang & Shen, 2015; Oaou Titus et al., 2023).

Coordinating Minister for Economic Affairs (Menko) Airlangga Hartarto, as Chairman of the Priority Infrastructure Development Acceleration Committee (KPPIP), revealed that based on the evaluation results as of January 2023, there were 27 Proyek Strategis Nasional (PSN) in the DKI Jakarta area with an estimated total investment value of Rp313 trillion. “Of the 27 projects, 3 PSN have been operating, 4 are partially operational, 6 are under construction, and 14 are in the preparation and transaction stages,” said Airlangga during a ministerial coordination meeting related to the acceleration of PSN infrastructure development in Jakarta (Sindonews, 2023). Based on available data, these 27 national strategic projects have the potential for construction disputes.

Effective communication and good stakeholder management are two essential factors in the success of any construction project (Naji et al., 2020; Tanriverdi et al., 2021; Amoah & Nkosazana, 2022; Iankoon et al., 2022). According to Taeb et al. (2017), the project communication management plan plays an important role in regulating how communication is planned, organized, monitored, and controlled throughout the project. Communication lies at the core of every project, particularly in large-scale construction initiatives. Without a structured communication strategy, projects can face significant challenges and potentially experience failure (Gai, 2021).

Stakeholder management becomes crucial in construction projects given the complexity and transitory nature of relationships among stakeholders (Taimu et al., 2020). Stakeholder management helps coordinate and engage stakeholders to build better relationships and reduce project complexity. The relationships established by project managers with stakeholders greatly influence project success in the construction industry (Montenegro et al., 2021). Research by Cheung et al. (2020) showed that a conflict management approach centered on trust and transparency can improve satisfaction with conflict resolution outcomes in construction projects.

When team members feel trusted and treated fairly, they are more likely to be satisfied with the results of negotiations and decisions made.

The primary purpose of this research is to analyze the role of communication and stakeholder management in reducing construction disputes, with trust acting as an intervening variable in infrastructure projects. The specific objectives are: (1) to examine the effect of communication on trust among stakeholders in infrastructure projects; (2) to examine the effect of stakeholder management on trust; (3) to examine the effect of trust on the reduction of construction disputes; (4) to analyze the mediating role of trust in the relationship between communication and dispute reduction; and (5) to analyze the mediating role of trust in the relationship between stakeholder management and dispute reduction.

This research is expected to make significant theoretical and practical contributions. Theoretically, it contributes to the construction project management literature by providing empirical evidence for a mediated model of dispute reduction, thereby enriching our understanding of the social and relational aspects of project success. It confirms the pivotal role of trust as a key relational mechanism. Practically, the findings offer valuable, evidence-based insights for project owners, consultants, contractors, and policymakers. By demonstrating that trust is a critical pathway through which communication and stakeholder management efforts are realized, the study provides a clear rationale for investing in trust-building activities. These may include facilitated workshops to build shared understanding, transparent decision-making processes, and consistent, reliable actions from all parties. Ultimately, this research aims to provide a practical framework for minimizing disputes and fostering a more collaborative and successful infrastructure project environment in Indonesia.

METHOD

Based on the contextual background outlined in Chapter 1: Introduction, this study employs a quantitative descriptive research approach that utilizes numerical data subjected to statistical analysis. According to Darmawan (2013), quantitative research is a methodology that aims to systematically, factually, and precisely describe the characteristics and aspects of a particular population or to provide a detailed explanation of a phenomenon. The descriptive method, as described by Sugiyono (2012), involves formulating questions related to the existence of independent variables, whether they pertain to a single variable or multiple variables (where the independent variable stands alone, distinct from the dependent variable).

In line with the aforementioned research methodology, the objective of this study is to explain the findings derived from the processed data, evaluated in accordance with the explored theory, ultimately leading to a sound conclusion.

Research Design

The design of this study is a mixed-methods approach that combines quantitative and quaitative methods. This study invoves a survey to coect quantitative data from various

stakehoders of the infrastructure project to be conducted in-depth research and interviews to gain quaitative insights.

This study uses a mixed methods approach by combining quantitative and quaitative approaches to obtain a comprehensive understanding of the roe of communication and stakehoder management in reducing construction disputes on infrastructure projects. The quantitative approach was conducted through surveys using ikert scae-based questionnaires to measure the effectiveness of communication, stakehoder management, and trust in efforts to reduce construction disputes. Meanwhie, the quaitative approach was conducted through in-depth interviews with purposivey seected respondents to expore in more depth the factors that affect stakehoder communication and management in arge-scae infrastructure projects in the DKI Jakarta area. The object of research is focused on arge-scae infrastructure projects in Jakarta with respondents who are experienced construction actors.

Research Data sourced from primary data obtained directy through questionnaires and interviews, as we as secondary data derived from iterature studies and previous research. The study popuation incuded a stakehoders invoved in the impementation of infrastructure projects in DKI Jakarta, with a simpe random samping technique. Based on the cacuation of the Sovin formua, the minimum sampe requirement of 80 respondents was obtained, but this study invoved 100 respondents to improve data reiabiity. Respondents were seected based on criteria of work experience of at east five years, direct invovement in the management of infrastructure projects, as we as experience in handing construction disputes.

RESUTS AND DISCUSSION

The data to be collected and analyzed comprise factors related to the roles of communication, stakeholder management, and trust in reducing construction disputes. The first stage of data collection involves the distribution of questionnaires for the validation of variables, dimensions, and indicators based on expert experience. During this initial validation stage, only variables that have been approved are retained. These validated variables are then incorporated into the second-stage questionnaire, which is administered to respondents whose number and capability to complete the questionnaire have been carefully determined in advance. The data obtained from the questionnaires are subsequently processed and analyzed. Furthermore, the variables are examined using the Structural Equation Modeling–Partial Least Squares (SEM-PLS) technique to assess the effects of each variable and to test the proposed hypotheses.

Expert opinions are required to assess the proposed variables and to determine whether any variables should be added or removed in relation to their influence on reducing construction disputes. In the first stage of the questionnaire, responses were obtained from three experts with extensive experience in arbitration in Indonesia, including senior academics and practitioners specializing in construction arbitration. The profiles of the experts are presented in the table below.

Tabe 1 Research Expert Profies

Name	Professiona Position	Educationa Background	Experience
Expert1	Arbiter	S2	>10 year
Expert 2	Senior ecturer	S3	>10 year
Expert 3	Arbiter	S2	>10 year

Based on the expert vaidation tabe, each expert provided feedback, suggestions, and evauations for each research indicator item. The first-stage questionnaire is presented in the research appendix. The expert questionnaire resuts were processed by revising or eiminating variabes or indicators that were considered unnecessary by the experts. Consequenty, ony variabes and indicators that had been vaidated by the experts were retained for further anaysis. The resuts of the expert vaidation are presented beow and summarized in the Expert Vaidation Resuts Tabel.

Tabe 2 Expert Vaidation Resuts

Indikator	Dimensi	Variabe
X1.1.1 – X1.1.0	Message Carity (X1.1)	Communication (X1)
X1.2.1 – X1.2.7	Communication Channe Effectiveness (X1.2)	
X1.3.1 – X1.3.5	Communication Frequency (X1.3)	
X1.4.1 – X1.4.4	Communication Openness (X1.4)	
X1.5.1 – X1.5.5	Communication Satisfaction (X1.5)	
X1.6.1 – X1.6.7	Information Reevance (X1.6)	
X1.7.1 – X1.7.5	Feedback and Responsiveness (X1.7)	
X2.1.1 – X2.1.14	Stakehoder Management Strategy (X2.1)	Stakehoder Management (X2)
X2.2.1 – X2.2.4	Effective Communication (X2.2)	
X2.3.1 – X2.3.5	Aignment of Objectives and Stakehoder Needs Management (X2.3)	
X2.4.1	Stakehoder Socia Responsibiity (X2.4)	
X2.5.1 – X2.5.3	Decision-Making Process (X2.5)	
X2.6.1 – X2.6.7	Management Support and Commitment (X2.6)	
X2.7.1 – X2.7.5	Adequate Knowedge of Project eaders and Stakehoders (X2.7)	
Z1.1.1 – Z1.1.6	Reiabiity (Z1.1)	Trust (Z1)
Z1.2.1 – Z1.2.6	Commitment (Z1.2)	
Z1.3.1 – Z1.3.6	Transparency (Z1.3)	

Tabe 2 Expert Vaidation Resuts

Indikator	Dimensi	Variabe
Z1.4.1 – Z1.4.6	Reputation (Z1.4)	
Z1.5.1 – Z1.5.6	Credibiity (Z1.5)	
Z1.6.1 – Z1.6.5	Reationship Proximity (Z1.6)	
Y1.1.1 – Y1.1.3	Contractua Disputes (Y1.1)	Construction Disputes (Y1)
Y1.2.1 – Y1.2.2	Payment Disputes (Y1.2)	
Y1.3.1 – Y1.3.2	Quaity and Standards Disputes (Y1.3)	
Y1.4.1 – Y1.4.2	Project and Management Disputes (Y1.4)	
Y1.5.1 – Y1.5.2	Permitting and ega Disputes (Y1.5)	

The first step in implementing SEM-PLS involves importing data from the questionnaire processing results in CSV file format, followed by specifying the structural paths that connect latent variables in accordance with the theoretical framework within the inner model. Subsequently, the outer model is defined to represent the relationships between latent variables and their indicators or observable variables. The direction of the arrows indicates the desired bidirectional influence between variables.

The results of data processing using SEM-PLS indicate that communication risk (X1) has a significant effect on trust (Z1) in construction projects, with a T-statistic value of 3.726 and a p-value of 0.000. The results also show that stakeholder management risk (X2) has a significant effect on trust (Z1) in construction projects, with a T-statistic value of 8.821 and a p-value of 0.000. Furthermore, the findings demonstrate that communication risk (X1) has a significant effect on the reduction of construction disputes (Y1) through trust (Z1) in construction projects, with a T-statistic value of 3.311 and a p-value of 0.000. Similarly, stakeholder management (X2) has a significant effect on the reduction of construction disputes (Y1) through trust (Z1) in construction projects, with a T-statistic value of 6.727 and a p-value of 0.000.

CONCUSION

Based on the research objectives and the results of the hypothesis testing, the conclusions of this study indicate that communication has a significant effect on trust in construction projects. This finding demonstrates that the better the quality of communication among project stakeholders, the higher the level of trust that is established. Stakeholder management also has a significant effect on trust in construction projects. This implies that well-planned and systematic stakeholder management is capable of strengthening trust among the parties involved in the project. Trust has a significant effect on the reduction of construction disputes. The higher the level of trust among project stakeholders, the lower the likelihood of construction disputes occurring. Communication has a significant effect on the reduction of construction disputes

through trust. This indicates that effective communication not only has a direct impact but also an indirect impact by enhancing trust, thereby minimizing the potential for disputes. Likewise, stakeholder management has a significant effect on the reduction of construction disputes through trust. Accordingly, effective stakeholder management builds trust, which ultimately plays a crucial role in reducing the potential for construction disputes in infrastructure projects.

REFERENCES

Amoah, C., & Nkosazana, H. (2022). Effective management strategies for construction contract disputes. Internationa Journa of Buiding Pathoogy and Adaptation, 41(6), 70–84. https://doi.org/10.1108/IJBPA-01-2022-0004

Assaf, S., Hassanain, M. A., Abdaah, A., Sayed, A. M. Z., & Ashahrani, A. (2019). Significant causes of caims and disputes in construction projects in Saudi Arabia. Buit Environment Project and Asset Management, 9(5), 597–615. https://doi.org/10.1108/BEPAM-09-2018-0113

Chan, A. P., & Oppong, G. D. (2017). Managing the Expectations of Externa Stakehoders in Construction Projects. Engineering Construction & Architectura Management, 24(5), 736–756. https://doi.org/10.1108/ecam-07-2016-0159

Cheung, S. O., Zhu, ., & Yu, K. I. (2022). The vaue of apoogy in construction dispute negotiation. Internationa Journa of Construction Management, 22(10), 1910–1923. https://doi.org/10.1080/15623599.2020.1744797

E-Sayegh, S., Ahmad, I., Ajanabi, M., Herzaah, R., Metry, S., & E-Ashwa, O. (2020). Construction disputes in the UAE: Causes and resoution methods. Buidings, 10(10). https://doi.org/10.3390/BUIDINGS10100171

Gai, B. J. (2021). Effective Strategies for Managing Communication in a Project. Internationa Journa of Appied Industria Engineering, 8(1), 1–6. https://doi.org/10.4018/ijaie.20210101.oa1

Hemanth Sai Kayan, B., Sekar, A., Sindhu Nachiar, S., & Ravichandran, P. T. (2022). Discerning Recurrent Factors in Construction Disputes through Judicia Case Studies—An Indian Perspective. Buidings, 12(12). https://doi.org/10.3390/buidings12122229

Iankoon, I. M. C. S., Tam, V. W. Y., e, K. N., & Ranadewa, K. A. T. O. (2022). Causes of disputes, factors affecting dispute resoution and effective aternative dispute resoution for Sri ankan construction industry. Internationa Journa of Construction Management, 22(2), 218–228. https://doi.org/10.1080/15623599.2019.1616415

Kebede, S. (2022). Assessment of causes and settement mechanisms of construction disputes in pubic work contracts: An Ethiopian perspective. Archives of Civi Engineering, 68(1), 145–168. https://doi.org/10.24425/ace.2022.140161

Koc, K., & Gurgun, A. P. (2022). Causa Reationships of Readabiity Risks in Construction Contracts. Teknik Dergi/Technica Journa of Turkish Chamber of Civi Engineers, 33(2), 11823–11846. https://doi.org/10.18400/tekderg.962928

Montenegro, A., Dobrota, M., Todorović, M., Savinski, T., & Obradović, V. (2021). Impact of Construction Project Managers' Emotiona Inteigence on Project Success. Sustainabiity, 13(19), 10804. https://doi.org/10.3390/su131910804

Naji, K. K., Mansour, M. M., & Gunduz, M. (2020). Methods for modeing and evauating construction disputes: A critica review. IEEE Access, 8, 45641–45652. https://doi.org/10.1109/ACCESS.2020.2976109

Oaou Titus, O., iyana binti Taju Ariffin, H., & Nita Ai, K. (2023). Construction dispute and contract incompeteness in Nigeria construction industry. In Ain Shams Engineering Journa (Vo. 14, Issue 10). Ain Shams University. https://doi.org/10.1016/j.asej.2023.102153

Shahbaz, M. S., Chandio, A. F., Oad, M., Ahmed, A., & Uah, R. (2018). Stakehoders' Management Approaches in Construction Suppy Chain: A New Perspective of Stakehoder's Theory. Internationa Journa of Sustainabe Construction Engineering Technoogy, 9(2). https://doi.org/10.30880/ijscet.2018.09.02.002

Simanjuntak, I. J., Hardjomujadi, S., & Amin, M. (2023). Faktor Penyebab Kaim yang Menyebabkan Sengketa Pada Proyek Pengerukan dan Rekamasi Berdasarkan FIDIC Form of Contract for Dredging and Recamation Edition 2016 (Bue Book). Konstruksia, 15(1), 15-26.

Taimu, M., Awuzie, B., & Ngowi, A. B. (2020). Success Factors for Effective Contractor-ed Stakehoder Reationship Management: Perspectives From the Botswana Construction Industry. Matec Web of Conferences, 312, 02014. https://doi.org/10.1051/matecconf/202031202014

Taeb, H., Ismai, S., Wahab, M. H., Mardiah, W. N., Rani, W. M., & Amat, R. C. (2017). An Overview of Project Communication Management in Construction Industry Projects. Jomeino, 1–9. https://doi.org/10.31039/jomeino.2017.1.1.1

Kustiah, H., Hardjomujadi, S., & Amin, M. (2022). Faktor Pengaruh Variation Order pada Konstruksi Jaan dan Jembatan untuk Mengurangi Kaim Konstruksi. Jurna Konstruksia, 13(2), 81-91.

Tanriverdi, C., Atasoy, G., Dikmen, I., & Birgonu, M. T. (2021). Causa mapping to expore emergence of construction disputes. Journa of Civi Engineering and Management, 27(5), 288–302. https://doi.org/10.3846/jcem.2021.14900

Yang, R. J., & Shen, G. Q. (2015). Framework for Stakehoder Management in Construction Projects. Journa of Management in Engineering, 31(4). https://doi.org/10.1061/(asce)me.1943-5479.0000285