



CONTRACT NEGOTIATION APPROACH AND PERFORMANCE OF WATER SUPPLY PROJECTS IN NYAMASHEKE DISTRICT UNDER DIDE ORGANIZATION

UWINGABIYE Alice¹, Dr. Eugenia Nkechi Irechukwu, PhD²

¹Department of Project Management, School of Business and Economics, Mount Kenya
University, Kigali, Rwanda

²Department of Business Administration, School of Business and Economics, Mount Kigali
University, Kigali, Rwanda

Corresponding Author: UWINGABIYE Alice, Email: uwingalice2020@gmail.com

ABSTRACT

This study examined the influence of contract negotiation approaches on the performance of water supply projects in Nyamasheke District under DIDE Organization, Rwanda. Using a descriptive cross-sectional research design, data were collected from 114 employees through structured questionnaires and analysed using SPSS version 23.0. The study employed Pearson correlation and simple linear regression analyses to assess the relationship between contract negotiation practices and project performance. Results revealed that contract negotiation had a significant positive influence on project performance ($\beta = 0.703$, $p < 0.001$), explaining 49.4% of variance in project outcomes ($R^2 = 0.494$, $F = 108.76$, $p < 0.001$). Key negotiation practices including collaborative approaches, clarity of contract terms, flexibility in problem-solving, and effective communication were strongly associated with improved project delivery in terms of cost efficiency, time adherence, quality standards, and stakeholder satisfaction. The study recommends strengthening organizational capacity in collaborative negotiation techniques, developing standardized negotiation frameworks, providing regular training for project personnel, and establishing post-negotiation review mechanisms. These findings have important implications for infrastructure project management in Rwanda and similar developing country contexts.

Keywords: Contract Negotiation, Project Performance, Water Supply Projects, Collaborative Negotiation, Infrastructure Development, Rwanda

1. INTRODUCTION

Contract negotiation has emerged as a critical determinant of project success in infrastructure development worldwide. In the context of water supply projects, effective negotiation ensures that contractual arrangements align with project objectives, establish clear expectations, and create foundations for successful delivery within budget, schedule, and quality parameters (Kerzner, 2017). Contract negotiation encompasses the systematic processes through which parties deliberate over contract terms to reach mutual agreement on rights,

obligations, and deliverables, timelines, and payment mechanisms. These processes are essential for establishing accountability frameworks, minimizing misunderstandings, and ensuring successful project outcomes.

In Rwanda, the government has prioritized infrastructure development as a key pillar of Vision 2050, with water supply projects forming a crucial component of this strategy. The National Strategy for Transformation (NST1) emphasizes universal access to clean water as fundamental to achieving sustainable development goals and improving citizens' quality of life. However, despite significant investments in water infrastructure, challenges persist in project delivery. According to the MINECOFIN Budget Execution Report (2024), approximately 40% of government projects implemented through private organizations fail to deliver on time due to poor contract management practices, with inadequate negotiation processes identified as a primary contributing factor. This presents significant challenges including financial losses, reduced public trust, delays in achieving development goals, and suboptimal utilization of scarce resources.

Contract Theory provides theoretical foundation for understanding how negotiation practices influence project outcomes. Contract Theory, pioneered by economists such as Oliver Hart and Bengt Holmström, examines how economic actors construct contractual arrangements under conditions of asymmetric information and uncertainty (Hart, 1995). The theory emphasizes that well-designed contracts, achieved through effective negotiation, can align incentives, reduce opportunistic behaviour, and facilitate efficient resource allocation. In project management contexts, Contract Theory suggests that clear specification of rights, obligations, deliverables, and remedies established during negotiation reduces transaction costs and improves project outcomes.

Despite the recognized importance of contract negotiation, there remains limited empirical evidence on how specific negotiation approaches affect project performance in the Rwandan context, particularly in the water supply sector. Most existing studies have focused on developed country contexts or have examined contract negotiation in isolation from specific project outcomes. This study addresses this gap by comprehensively examining how contract negotiation approaches influence the performance of water supply projects in Nyamasheke District under DIDE Organization, focusing on collaborative strategies, clarity of terms, flexibility mechanisms, and communication effectiveness.

3. RESEARCH METHODOLOGY

3.1 Research Design

This study adopted a descriptive cross-sectional design using both quantitative and qualitative methods to examine contract negotiation practices and project performance at one point in time. The design enabled efficient collection of data from all 114 respondents, providing a snapshot of negotiation behaviour and its effects, while mixed methods enhanced validity by combining numerical analysis with contextual interpretation (Creswell & Creswell, 2018).

3.2 Target Population

The target population comprised 161 employees involved in the Nyamasheke District water supply project under DIDE Organization, including 25 project managers, 35 engineers, 20 procurement officers, 22 finance staff, 40 field operations personnel, and 19 administrative staff. This diverse group was selected because of its direct engagement with contract processes and informed perspectives on negotiation and performance.

3.3 Sample Size and Sampling

Using Yamane's (1967) formula at a 95% confidence level and 5% margin of error, the study derived a sample size of 114 respondents from a population of 161. Stratified random sampling ensured proportional representation of all departments for example, 28 respondents from field operations, 25 from engineering, and 14 from procurement thereby reducing bias and improving representativeness across the organization.

3.4 Data Collection Instruments

Data were collected using structured questionnaires divided into three sections and containing 28 items, including 16 items measuring contract negotiation across four dimensions and 12 items measuring project performance. Each dimension consisted of 4 items, and all items used a 5-point Likert scale from 1 (Strongly Disagree) to 5 (Strongly Agree), allowing sufficient variability for quantitative analysis while remaining easy for respondents to understand.

3.5 Validity and Reliability

Validity was established through expert review and comparison with prior studies, while reliability testing using Cronbach's Alpha confirmed strong internal consistency across all constructs, with values ranging from 0.795 to 0.891. The overall instrument achieved $\alpha = 0.876$, and a pilot test of 15 respondents (10% of the sample) informed minor revisions that improved clarity and eliminated redundancy before full data collection.

3.6 Data Collection Procedure

Data were collected over a four-week period in April 2024 after securing ethical clearance and organizational approval. A total of 114 questionnaires were distributed and all were completed, resulting in a 100% response rate, achieved through in-person distribution, close follow-up, and strong institutional support. This high completion rate enhanced the reliability and generalizability of the results.

3.7 Data Analysis

Data were analysed in SPSS version 23 through four stages involving data cleaning, descriptive analysis, correlation, and regression. Descriptive statistics summarized demographic distributions and item means, while Pearson correlations quantified linear relationships between negotiation and performance. Simple linear regression tested the predictive effect of negotiation practices using the model $Y = \beta_0 + \beta_1 X$, with diagnostic checks confirming acceptable assumptions including a Durbin-Watson statistic between 1.5 and 2.5.

3.1 Theoretical Framework

Contract Theory, pioneered by Oliver Hart and Bengt Holmström, explains how contractual arrangements are designed under conditions of uncertainty and information asymmetry, emphasizing that well-structured contracts align incentives, reduce opportunism, and enhance resource efficiency. The theory highlights that negotiation is central to determining contract quality and, consequently, performance outcomes. In water supply projects, it suggests that clearly negotiated terms such as transparent pricing, realistic schedules, and precise performance standards strengthen project success. Key principles include addressing information asymmetries through open communication, aligning incentives through appropriate payment and penalty mechanisms, incorporating flexibility to manage unforeseen conditions, and reducing transaction costs through clear specifications and shared understanding. It also stresses the importance of explicitly negotiated monitoring and enforcement mechanisms to address principal agent challenges. Overall, Contract Theory provides a strong foundation for this study by demonstrating how effective negotiation practices clarity, collaboration, flexibility, and communication directly contribute to improved project performance.

4. RESEARCH FINDINGS AND DISCUSSION

4.1 Response Rate

All 114 distributed questionnaires were completed and returned, yielding a 100% response rate. This unusually high participation was achieved through the researcher's direct involvement in distributing and collecting questionnaires, clear communication that built rapport with respondents, strong organizational support from DIDE management, sufficient time for thoughtful completion, and consistent follow-up. The

perfect response rate eliminates non-response bias, ensures full representation of the target population, enhances statistical power, and significantly strengthens the reliability and generalizability of the findings far exceeding typical organizational survey response rates of 30–60%.

4.2 Descriptive Analysis

Contract Negotiation Practices

Contract negotiation practices were assessed through 16 items measuring four dimensions: collaborative approach, clarity of terms, flexibility provisions, and communication effectiveness. Respondents rated their agreement with various statements about negotiation practices in their organization using a 5-point Likert scale.

Table 4: Contract Negotiation Practices (N = 114)

Statement	SD (%)	D (%)	N (%)	A (%)	SA (%)	Mean	St. Dev
Collaborative Approach							
Collaborative mind-set fosters positive negotiating environment	1.8	4.4	10.5	43.9	39.5	4.15	0.90
Interest-based negotiation enhances mutual understanding	2.6	5.3	10.5	40.4	41.2	4.12	0.95
Early stakeholder involvement improves negotiation outcomes	1.8	4.4	12.3	42.1	39.5	4.13	0.89
Negotiation focuses on relationship-building not just terms	2.6	4.4	11.4	42.1	39.5	4.11	0.93
Collaborative Approach Mean						4.13	0.92
Clarity of Terms							
Breaking down complex contracts mitigates misunderstandings	0.9	5.3	8.8	42.1	43.0	4.21	0.87
Clear specification of deliverables reduces disputes	0.9	5.3	9.6	43.9	40.4	4.18	0.86
Transparent cost structures facilitate agreement	2.6	4.4	11.4	42.1	39.5	4.11	0.93
Unambiguous language eliminates interpretation gaps	1.8	4.4	10.5	44.7	38.6	4.14	0.88
Clarity of Terms Mean						4.16	0.89
Flexibility Provisions							
Flexibility in negotiations leads to quicker agreements	2.6	3.5	9.6	43.0	41.2	4.17	0.93
Adjustment mechanisms address unforeseen circumstances	2.6	5.3	11.4	40.4	40.4	4.11	0.95
Alternative solutions meet core objectives effectively	1.8	6.1	12.3	42.1	37.7	4.08	0.93
Renegotiation clauses provide adaptive capacity	3.5	5.3	10.5	43.0	37.7	4.06	0.98
Flexibility Provisions Mean						4.11	0.95
Communication Effectiveness							
Effective communication is crucial in negotiations	1.8	4.4	11.4	41.2	41.2	4.16	0.91
Active listening improves mutual understanding	1.8	5.3	10.5	43.9	38.6	4.12	0.89
Transparent information exchange builds trust	2.6	4.4	11.4	42.1	39.5	4.11	0.93
Verification ensures shared understanding of terms	1.8	5.3	12.3	41.2	39.5	4.11	0.90
Communication Effectiveness Mean						4.13	0.91
Overall Contract Negotiation Mean						4.13	0.92

SD = Strongly Disagree, D = Disagree, N = Neutral, A = Agree, SA = Strongly Agree

The descriptive analysis of contract negotiation at DIDE Organization indicates strong and balanced performance across all four dimensions. Collaborative approach scored a mean of 4.13 (SD = 0.92), with high agreement on interest-based negotiation, early stakeholder involvement, and relationship-building, reflecting

alignment with Fisher and Ury's (2011) principled negotiation model. Clarity of terms achieved the highest rating ($M = 4.16$, $SD = 0.89$), particularly for breaking down complex contracts ($M = 4.21$, 85.1% agreement), demonstrating systematic attention to unambiguous specifications, deliverables, and transparent cost structures. Flexibility provisions scored slightly lower ($M = 4.11$, $SD = 0.95$), with renegotiation clauses ($M = 4.06$) showing room for improvement, while higher variability suggests inconsistent implementation or differing perceptions of the balance between flexibility and contractual stability. Communication effectiveness was strong ($M = 4.13$, $SD = 0.91$), with consistent recognition of active listening, transparency, and information verification as essential to negotiation success. Overall, the mean contract negotiation score of 4.13 ($SD = 0.92$) reflects comprehensive, widely accepted negotiation practices, with moderate variability (0.89–0.95) indicating genuine experiential differences. These findings, supported by high reliability ($\alpha = 0.847$), confirm that DIDE Organization has developed robust, multidimensional negotiation capabilities that provide a strong foundation for enhancing project performance.

4.3 Project Performance

Project performance was measured through 12 items covering four dimensions: cost efficiency, time adherence, quality standards, and stakeholder satisfaction. Table 5 presents detailed results.

Table 5: Project Performance (N = 114)

Statement	SD (%)	D (%)	N (%)	A (%)	SA (%)	Mean	St. Dev
Cost Efficiency							
Project stays within allocated budget	1.8	5.3	10.5	45.6	36.8	4.10	0.90
Cost overruns are minimized effectively	1.8	6.1	12.3	42.1	37.7	4.08	0.93
Resources are utilized efficiently	1.8	5.3	11.4	43.9	37.7	4.10	0.90
Cost Efficiency Mean						4.09	0.91
Time Adherence							
Project meets planned timelines	2.6	4.4	11.4	44.7	36.8	4.09	0.92
Milestone deadlines are achieved	2.6	5.3	10.5	43.0	38.6	4.10	0.94
Schedule delays are minimal	1.8	6.1	12.3	42.1	37.7	4.08	0.93
Time Adherence Mean						4.09	0.93
Quality Standards							
Quality standards are consistently achieved	1.8	5.3	9.6	46.5	36.8	4.11	0.88
Project deliverables meet specifications	1.8	4.4	10.5	45.6	37.7	4.13	0.88
Technical performance meets expectations	2.6	4.4	9.6	45.6	37.7	4.11	0.91
Quality Standards Mean						4.12	0.89
Stakeholder Satisfaction							
Stakeholders are satisfied with project outcomes	2.6	5.3	10.5	43.0	38.6	4.10	0.94
Community benefits are realized as planned	2.6	5.3	9.6	42.1	40.4	4.12	0.94
Project contributes to development goals	1.8	4.4	10.5	44.7	38.6	4.14	0.88
Stakeholder Satisfaction Mean						4.12	0.92
Overall Project Performance Mean						4.11	0.91

Note: SD = Strongly Disagree, D = Disagree, N = Neutral, A = Agree, SA = Strongly Agree

The Nyamasheke water supply project demonstrated strong overall performance, with a mean score of 4.11 ($SD = 0.91$) across cost efficiency, time adherence, quality standards, and stakeholder satisfaction, reflecting balanced outcomes without major weaknesses. Cost efficiency ($M = 4.09$) and time adherence ($M = 4.09$) indicate effective budget and schedule management, exceeding national averages where 40% of projects face overruns or delays. Quality standards achieved the highest rating ($M = 4.12$), showing consistent fulfilment of technical specifications, while stakeholder satisfaction ($M = 4.12$) underscores successful alignment with beneficiary needs and broader development goals. High agreement rates (82–83%) across dimensions suggest

that effective contract negotiation through realistic budgeting, scheduling, clear specifications, and stakeholder engagement plays a key role in achieving these strong, balanced outcomes, supporting Rwanda's Vision 2050 priorities.

4.4 Correlation Analysis

Pearson correlation analysis examined the strength and direction of the linear relationship between contract negotiation and project performance. Table 6 presents correlation results.

Table 6: Correlation between Contract Negotiation and Project Performance

Variables	Contract Negotiation	Project Performance
Contract Negotiation	1.000	
Project Performance	0.703***	1.000

Note: *** Correlation is significant at the 0.001 level (2-tailed)

Correlation analysis revealed a strong, positive, and highly significant relationship between contract negotiation and project performance ($r = 0.703$, $p < 0.001$), indicating that improvements in negotiation practices are associated with proportional increases in project outcomes. According to Cohen's (1988) guidelines, $r = 0.703$ represents a large effect size, with the coefficient of determination ($r^2 = 0.494$) showing that contract negotiation alone explains approximately 49.4% of the variance in project performance. The positive and substantial relationship supports the theoretical expectation that effective negotiation enhances project success and provides strong evidence for rejecting the null hypothesis. These findings align with prior studies Turner (2016) reported improved outcomes through collaborative negotiation in UK construction projects, Suprpto et al. (2016) found relational contracting explained 43% of project success in European industrial projects, and Mowlaei (2017) highlighted the role of negotiation clarity in reducing disputes and delays demonstrating that negotiation practices are critically important in the Rwandan water supply project context.

4.5 Regression Analysis

Simple linear regression was used to examine the predictive effect of contract negotiation on project performance after verifying key assumptions. Linearity was confirmed via scatter plots showing a clear positive relationship with data points evenly distributed around the regression line. Independence of errors was supported by a Durbin-Watson statistic of 1.92, within the acceptable range of 1.5–2.5. Homoscedasticity was evident from residual plots, which displayed relatively constant variance across predicted values, while normality of residuals was confirmed through Q-Q plots and the Shapiro-Wilk test ($W = 0.983$, $p = 0.142$), indicating no significant deviation from normality. With all assumptions satisfied, the regression analysis was deemed appropriate and reliable for testing the research hypothesis.

4.5.1 Model Summary

Table 7: Model Summary

Model	R	R ²	Adjusted R ²	Std. Error of Estimate	Durbin-Watson
1	0.703	0.494	0.489	0.652	1.92

Predictor: Contract Negotiation

Dependent Variable: Project Performance

The regression model indicates that contract negotiation accounts for 49.4% of the variance in project performance ($R^2 = 0.494$), with an adjusted R^2 of 0.489, confirming the model's robustness and minimal inflation from model complexity. The multiple correlation coefficient ($R = 0.703$) reflects a strong positive relationship, while the standard error of estimate (0.652) suggests that predicted performance scores are, on average, within 0.65 points of actual values about a 13% prediction error, indicating good accuracy. These

results demonstrate that contract negotiation is a major determinant of project success, though the remaining 50.6% of unexplained variance points to additional influences such as resource availability, organizational capacity, stakeholder engagement, political support, environmental conditions, and technical complexity, which merit further investigation

4.5.2 ANOVA Results

Table 8: Analysis of Variance (ANOVA)

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	46.248	1	46.248	108.76	.000***
Residual	47.632	112	0.425		
Total	93.880	113			

Note: *** Significant at $p < 0.001$

Predictor: Contract Negotiation

Dependent Variable: Project Performance

The ANOVA results confirm that the regression model is highly significant ($F(1,112) = 108.76, p < 0.001$), indicating that contract negotiation is a strong predictor of project performance. The F-statistic of 108.76, substantially exceeding critical values, provides robust evidence that the observed relationship is not due to chance, with the p-value indicating less than 0.1% probability of randomness. The large F-value also reflects good model fit, as the regression mean square (46.248) greatly exceeds the residual mean square (0.425), demonstrating that the model explains substantially more variance in project performance than it leaves unexplained.

4.5.3 Regression Coefficients

Table 9: Regression Coefficients

Variable	Unstandardized B	Std. Error	Standardized β	t-value	Sig.	95% Lower	CI 95% Upper	CI
(Constant)	0.524	0.268	—	1.96	.053	-0.006	1.054	
Contract Negotiation	0.869	0.083	0.703	10.43	.000***	0.704	1.034	

Note: *** Significant at $p < 0.001$

Dependent Variable: Project Performance

The regression coefficients reveal a strong and substantive relationship between contract negotiation and project performance. The intercept ($\beta_0 = 0.524, p = 0.053$) suggests that baseline project performance is negligible without negotiation, while the unstandardized coefficient for contract negotiation ($B = 0.869, p < 0.001$) indicates that each one-point increase in negotiation practices predicts a 0.869-point increase in project performance. The standardized coefficient ($\beta = 0.703$) and highly significant t-value ($t = 10.43, p < 0.001$) confirm a large, genuine effect. The 95% confidence interval (0.704–1.034) excludes zero, reflecting precise estimation. The regression equation, $\text{Project Performance} = 0.524 + 0.869(\text{Contract Negotiation})$, enables prediction of outcomes; for instance, improving negotiation from 3.0 to 4.0 predicts a 0.87-point performance gain. Using the sample mean negotiation score (4.13) yields a predicted performance of 4.11, perfectly matching the observed mean and confirming the model's accuracy.

4.6 Discussions

Descriptive analysis shows that all four negotiation dimensions collaborative approach ($M = 4.13$), clarity of terms ($M = 4.16$), flexibility provisions ($M = 4.11$), and communication effectiveness ($M = 4.13$), received strong positive ratings, reflecting balanced and comprehensive negotiation capabilities. High collaboration

supports principled negotiation (Fisher & Ury, 2011), fostering early stakeholder engagement, interest-based problem solving, and relationship building, while clarity of terms, especially simplifying complex contracts ($M = 4.21$), reduces misunderstandings and rework. Flexibility provisions, though generally positive, indicate room for improvement in formal renegotiation mechanisms ($M = 4.06$), and effective communication ensures transparent information exchange, preventing disputes. These findings align with Contract Theory, which emphasizes complementary practices clarity, collaboration, flexibility, and communication as jointly driving performance. Mechanisms linking negotiation to outcomes include expectation alignment, risk management, relational quality, realistic commitments, adaptive capacity, and structured dispute resolution, all reinforced by Rwanda's contextual factors such as institutional capacity, resource constraints, community engagement, regulatory compliance, and national development priorities.

The study confirms and extends prior research, demonstrating the universal relevance of negotiation principles in Rwandan water supply projects, with quantitative evidence showing that negotiation explains 49.4% of performance variance a notably strong effect in infrastructure management literature. Theoretically, the results validate Contract Theory in developing contexts, emphasizing well-designed contracts, relational contracting, and adaptive provisions. Practically, the study offers actionable recommendations: implementing agencies should prioritize negotiation strategically, invest in capacity building, standardize procedures, monitor outcomes, and allocate resources; government and RPPA should establish guidelines, training programs, and oversight integrating negotiation quality; donors should include negotiation components in project design and evaluation; and communities should engage actively and transparently. Limitations include reliance on a single organization, cross-sectional design, self-reported measures, and equal weighting of negotiation dimensions, suggesting future research should adopt multi-organization, longitudinal, and objective-metric approaches while exploring dimension-specific effects. Overall, the study demonstrates that high-quality contract negotiation substantially drives project performance in Rwandan water supply projects, providing robust theoretical, empirical, and practical guidance for improving infrastructure delivery in similar developing country contexts.

5. CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

This study concludes that contract negotiation is a critical driver of water supply project performance in Nyamasheke District, Rwanda, with strong, positive, and statistically significant effects ($r = 0.703$, $\beta = 0.703$, $p < 0.001$) explaining 49.4% of performance variance. Balanced strengths across collaborative approach, clarity, flexibility, and communication enable improvements in cost, time, quality, and stakeholder satisfaction. The findings validate Contract Theory in a developing country context, showing that well-negotiated contracts align incentives, reduce transaction costs, and facilitate successful project delivery. Practically, investing in negotiation capacity through training, standardized procedures, skilled personnel, and adequate process time yields substantial performance gains. Effective negotiation also supports efficient resource use, stakeholder engagement, and alignment with Rwanda's Vision 2050 and sustainable development goals. Overall, high-quality contract negotiation should be treated as a strategic priority rather than a procedural formality to maximize project success.

5.2 Recommendations

DIDE Organization should strengthen negotiation capacity through targeted training, standardized frameworks, post-negotiation reviews, adequate time allocation, and improved flexibility provisions. Government and RPPA are advised to develop national negotiation guidelines, implement sector-wide capacity-building programs, and balance regulations for accountability and adaptability, and monitor negotiation-performance links. Development partners and donors should integrate negotiation support into project design, allow sufficient negotiation time, emphasize quality in conditionality, and support research on negotiation effectiveness. Future studies should explore longitudinal, multi-organization, and sector-specific analyses, assess dimension-specific effects, incorporate objective metrics, and evaluate capacity-building interventions to guide evidence-based improvements.

REFERENCES

- Akintoye, A., Beck, M., & Hardcastle, C. (2003). *Public-Private Partnerships: Managing Risks and Opportunities*. Blackwell Science Ltd.
- Amoatey, C. T., Ameyaw, Y. A., Adaku, E., & Famiyeh, S. (2015). Analyzing delay causes and effects in Ghanaian state housing construction projects. *Journal of Construction in Developing Countries*, 20(1), 67-80.
- Anvuur, A. M., & Kumaraswamy, M. M. (2007). Conceptual model of partnering and alliancing. *Journal of Construction Engineering and Management*, 133(3), 225-234.
- Atkinson, R. (1999). Project management: Cost, time and quality, two best guesses and a phenomenon, it's time to accept other success criteria. *International Journal of Project Management*, 17(6), 337-342.
- Atkinson, A., Crawford, L., & Ward, S. (2006). Fundamental uncertainties in projects and the scope of project management. *International Journal of Project Management*, 24(8), 687-698.
- Baron, R. A. (2017). *Conflict in organizations*. In C. L. Cooper & I. T. Robertson (Eds.), *International Review of Industrial and Organizational Psychology* (pp. 197-216). John Wiley & Sons.
- Cheung, S. O., & Pang, K. H. Y. (2013). Anatomy of construction disputes. *Journal of Construction Engineering and Management*, 139(1), 15-23.
- Clough, R. H., & Sears, G. A. (2005). *Construction Contracting: A Practical Guide to Company Management* (7th ed.). John Wiley & Sons.
- Cohen, J. (1988). *Statistical Power Analysis for the Behavioral Sciences* (2nd ed.). Lawrence Erlbaum Associates.
- Creswell, J. W., & Creswell, J. D. (2018). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* (5th ed.). SAGE Publications.
- Fenn, P., Lowe, D., & Speck, C. (1997). Conflict and dispute in construction. *Construction Management and Economics*, 15(6), 513-518.
- Fisher, R., & Ury, W. (2011). *Getting to Yes: Negotiating Agreement Without Giving In* (3rd ed.). Penguin Books.
- Garcia-Vidales, M. A. (2018). Conflict management in construction projects: Alternative dispute resolution techniques. In *Handbook of Research on Building Information Modeling and Construction Informatics* (pp. 321-340). IGI Global.
- Goldratt, E. M. (1984). *The Goal: A Process of Ongoing Improvement*. North River Press.
- Gordon, C. M. (2015). Compatible risk-sharing contracts for building projects. *Journal of the American Planning Association*, 81(2), 161-169.
- Grundt, L. (2021). *Contract administration in construction projects: A comprehensive guide*. Construction Management Press.