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Effectiveness of Mediation in Reducing Dispute Resolution Time in Construction Projects

Eficacia de la mediación en la reducción del tiempo de resolución de disputas en proyectos de construcción

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Abstract

Construction disputes remain a persistent barrier to timely project delivery in developing countries, where litigation continues to dominate despite its high costs and prolonged resolution timelines. This study examined the effectiveness of mediation as an alternative dispute resolution mechanism, assessed the factors influencing its performance, and evaluated stakeholder satisfaction with the process. A cross-sectional quantitative design was employed, targeting 311 construction stakeholders, of which 276 valid responses (88.7%) were obtained through structured questionnaires, which included engineers, contractors, consultants, clients, and accredited mediators, and analyzed using descriptive statistics, chi-square, factor analysis, Analysis of Variance (ANOVA), correlation analysis, and multiple regression. The findings demonstrate that mediation resolves disputes substantially faster than litigation, reducing average duration from 23.8 months to 4.2 months, an 82.4% improvement. Mediator expertise, stakeholder willingness, legal clarity, mediation cost, and project complexity significantly predicted mediation effectiveness, jointly explaining 70.4% of the variance. Stakeholders reported high satisfaction with mediation's timeliness, fairness, and affordability, but concerns were noted regarding the enforceability of mediated outcomes. The study concludes that mediation offers a practical, efficient, and relationship-preserving avenue for managing construction disputes. The study recommends strengthening the Alternative Dispute Resolution (ADR) legal framework, enhancing mediator training, and institutionalizing mediation within construction contracts and regulatory systems to improve dispute-management outcomes.

Keywords: Mediation; Construction Disputes; Alternative Dispute Resolution; Project Performance; Dispute Resolution Efficiency.

Resumen

Las disputas en la construcción siguen siendo una barrera persistente para la entrega oportuna de proyectos en los países en desarrollo, donde el litigio continúa predominando a pesar de sus altos costos y de los prolongados plazos de resolución. Este estudio examinó la efectividad de la mediación como mecanismo alternativo de resolución de disputas, evaluó los factores que influyen en su desempeño y analizó la satisfacción de las partes interesadas con el proceso. Se empleó un diseño cuantitativo transversal, dirigido a 311 actores del sector de la construcción, de los cuales se obtuvieron 276 respuestas válidas (88,7%) mediante cuestionarios estructurados, que incluyeron ingenieros, contratistas, consultores, clientes y mediadores acreditados. Los datos se analizaron utilizando estadística descriptiva, prueba de chi-cuadrado, análisis factorial, Análisis de Varianza (ANOVA), análisis de correlación y regresión múltiple. Los resultados demuestran que la mediación resuelve las disputas considerablemente más rápido que el litigio, reduciendo la duración promedio de 23,8 meses a 4,2 meses, lo que representa una mejora del 82,4%. La experiencia del mediador, la disposición de las partes interesadas, la claridad legal, el costo de la mediación y la complejidad del proyecto predijeron significativamente la efectividad de la mediación, explicando conjuntamente el 70,4% de la varianza. Las partes interesadas reportaron un alto nivel de satisfacción con la rapidez, equidad y asequibilidad de la mediación, aunque se señalaron preocupaciones respecto a la exigibilidad de los resultados alcanzados mediante mediación. El estudio concluye que la mediación ofrece una vía práctica, eficiente y que preserva las relaciones para la gestión de disputas en la construcción. Se recomienda fortalecer el marco legal de la Resolución Alternativa de Disputas (RAD), mejorar la capacitación de los mediadores e institucionalizar la mediación dentro de los contratos de construcción y los sistemas regulatorios para mejorar los resultados en la gestión de disputas.

Palabras Clave: Mediación; Disputas en la Construcción; Resolución Alternativa de Disputas; Desempeño del Proyecto; Eficiencia en la Resolución de Disputas.

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1. Introduction

Construction projects operate within environments characterized by high uncertainty, technical interdependence, and multiple stakeholder interests(Alinaitwe & Ayesiga, 2013; Dixit, 2020; Riedel & Al-Keim, 2017), thus making disputes almost inevitable (Harmon, 2003; Malik & Ali, 2019). These conflicts frequently arise from design changes, delayed payments, scope ambiguities, resource constraints, and inconsistent contract administration (Kabote & Nyichomba, 2022). In developing countries in Africa, construction disputes have become increasingly prevalent due to rapid infrastructure expansion, weak contract oversight, and limited institutional capacity (Muhwezi et al., 2014). Litigation remains the dominant resolution pathway, yet its adversarial nature, procedural complexity, and prolonged resolution timelines make it poorly suited for the fast-paced and relationally dependent construction sector (Chau, 1993). Global studies have demonstrated that prolonged disputes undermine contractor productivity, inflate project costs, and erode trust among participants, ultimately affecting project delivery and public service outcomes.

Against this backdrop, Alternative Dispute Resolution (ADR), especially mediation, is increasingly recognized for its collaborative, interest-based, and time-efficient characteristics in Africa. Mediation's effectiveness is theoretically underpinned by Social Exchange Theory (SET), which posits that cooperative interactions, reciprocity, and perceived fairness increase the likelihood of mutually acceptable outcomes (Ahmad et al., 2023). SET suggests that disputing parties are more willing to engage constructively when they anticipate equitable exchange, balanced concessions, and relational gains (Cropanzano et al., 2017; Cropanzano & Mitchell, 2005). Mediation fosters these conditions by enabling parties to control the process, articulate their interests directly, and negotiate outcomes without the adversarial framing inherent in litigation (Barough et al., 2013; Gambo et al., 2017; Ismail et al., 2010). Furthermore, Negotiation Theory reinforces mediation's relevance by arguing that effective dispute settlement depends on the quality of communication (Li, 2018; Utomo & Idrus, 2011), the framing of issues, mediator facilitation skills, and the transformation of positions into integrative solutions (Hartman & Jergeas, 1995; Melenko, 2020). Construction disputes, which often involve technical claims and emotional tensions, benefit from a structured negotiation environment where a neutral mediator improves communication, reframes expectations, and manages power asymmetries (Gamage & Kumar, 2024).

Despite these theoretical strengths, the successful adoption of mediation relies heavily on the institutional environment (County & Anyango, 2021), making Institutional Theory critical to understanding Uganda's context. Institutional Theory argues that organizational behaviors and decision-making processes are shaped by formal rules, regulatory pressures, normative expectations, and mimetic influences (Mwelu et al., 2021; Sheffield et al., 2012). In Uganda, weak statutory backing for mediated agreements, inconsistent ADR policies, and limited enforcement mechanisms (Project et al., 2024) reduce stakeholders' confidence in mediation outcomes. Public agencies and private practitioners often default to litigation because it carries clearer legal authority and historical precedence, even when mediation would be more efficient. As a result, institutional weaknesses constrain the diffusion of mediation practices, limit the emergence of professional mediators, and perpetuate adversarial dispute cultures within the construction industry (Harmon, 2003).

Despite the strong theoretical foundation supporting mediation, significant empirical gaps persist regarding its performance within Uganda's construction sector. Existing studies in East Africa (Abwunza, 2020; Mwakapala, 2020; Project et al., 2024) have largely focused on general awareness of Alternative Dispute Resolution (ADR) mechanisms and the causes of construction disputes, but provide limited evidence on key performance dimensions. In particular, there is a lack of empirical comparison between mediation and litigation timelines, insufficient analysis of the determinants influencing mediation effectiveness, and minimal examination of stakeholder satisfaction using a theory-driven framework. Furthermore, the interaction between behavioural, technical, and institutional factors shaping mediation outcomes remains underexplored, limiting both academic understanding and policy relevance.

This study addresses these gaps by adopting an integrated analytical approach grounded in Social Exchange Theory, Negotiation Theory, and Institutional Theory. It provides a comprehensive empirical assessment by comparing mediation and litigation durations, modelling the key factors influencing mediation effectiveness, and evaluating stakeholder perceptions of fairness, cost, timeliness, and enforceability. By linking theoretical constructs with measurable variables and real-world dispute data, the study offers both explanatory and predictive insights into mediation performance. In doing so, it contributes to advancing theory-informed construction dispute management while generating practical evidence to inform policy reforms, strengthen ADR governance, and enhance project delivery outcomes in Uganda.

The study objectives are to compare the duration of dispute resolution through mediation and litigation across different types of construction projects in Uganda. In addition, it also includes modelling the key factors influencing the effectiveness of mediation in construction dispute

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resolution, and evaluation of stakeholder satisfaction with mediation outcomes, in terms of timeliness, cost-effectiveness, fairness, relationship preservation, and enforceability.

The remainder of this paper is structured as follows. Section 2 presents the materials and methods, detailing the research design, sampling strategy, data collection procedures, and analytical techniques employed in the study. Section 3 presents the results and analysis, highlighting the comparative performance of mediation and litigation, the determinants of mediation effectiveness, and stakeholder satisfaction outcomes. Section 4 provides the discussion, where the findings are interpreted in relation to existing theories and empirical literature. Finally, Section 5 presents the conclusions, including key findings, practical implications, limitations of the study, and directions for future research.

2. Materials and Methods

This study adopted a quantitative cross-sectional design to systematically capture dispute resolution experiences from a broad range of construction industry stakeholders within a single timeframe. Cross-sectional approaches are widely recommended in ADR and construction management research because they allow examination of relationships between dispute outcomes, stakeholder perceptions, and predictor variables at a single point in time (Idowu et al., 2015).

2.1 Study Population and Sampling

The study population consists of approximately 1,400 professionals directly involved in dispute resolution across Uganda's construction sector. These include contractors, engineers, project managers, ADR lawyers, accredited mediators, government regulators, and clients representing the full ecosystem of actors in construction dispute processes. Using Slovin's formula (see equation 1) at a 95% confidence level, a sample size of 311 respondents was used.

$$n = N/([1+N(e^2)]) \quad (1)$$

where:

n = Sample Size, N=Population (1400), e = Margin of error 5%,

By substituting in equation (1), the sample size of the respondents (n) is obtained as:

n = 311 Respondents.

The breakdown of the stakeholders' sample size is presented in Table 1:

Tabla 1. Stakeholders Sample Size

Stakeholder Group	Percentage	Sample Size
Construction Professionals (Contractors, Project Managers, Engineers)	50	156
Legal Experts (ADR Lawyers, Mediators)	25	78
Regulatory Authorities	17.5	55
Construction Clients (Developers, Private Sector, Government Agencies)	7.5	22
TOTAL	*100*	*311*

The proportionate stratified sampling ensured a balanced representation of all key stakeholders, allowing for more precise generalization of the findings across the construction industry. The selection of respondents from each group was random to ensure fairness while maintaining proportionality according to their level of involvement in mediation cases handled by the Uganda Institute of Professional Engineers (UIPE). Proportionate stratified sampling ensured adequate representation of all stakeholder groups based on their population size. 276 of the administered questionnaires were valid responses returned (response rate: 88.7%), exceeding acceptable thresholds for construction research (Taherdoost, 2018).

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2.2 Instrumentation and Determining the Influencing Factors

The study employed a structured questionnaire designed to capture information on dispute characteristics, mediation effectiveness, stakeholder satisfaction, and demographic attributes. The development of the measurement items, particularly the factors influencing mediation effectiveness, followed a theory-driven and empirically grounded process to ensure conceptual clarity and contextual relevance. To identify the key constructs, a review of Alternative Dispute Resolution (ADR) and construction dispute literature was undertaken, drawing on seminal works that consistently highlight mediator expertise, stakeholder willingness, clarity of the legal framework, cost considerations, and project complexity as the most influential determinants of mediation outcomes (Authors, 2016; Chau, 1993; Gamage & Kumar, 2024; Ismail et al., 2010; Kayondo-ndandiko et al., 2014; Kirimi, 2019; Kisi et al., 2020; Melenko, 2020; Nevstad et al., 2021; Westerndorp, 2022). These factors are not only frequently cited in international studies but also resonate strongly within African construction environments, where institutional weaknesses and technical constraints shape the performance of ADR mechanisms (Harmon, 2003). Building on the literature review, the items were further refined through alignment with the Uganda Judiciary Mediation Rules and established dispute avoidance principles in the suite of contracts. This step ensured that the constructs reflected both global ADR standards and the regulatory realities governing mediation practice in Uganda. To strengthen content validity, a panel of experienced ADR practitioners, including certified mediators, construction lawyers, and contract managers, reviewed the items for relevance, clarity, linguistic precision, and contextual applicability in line with (Harmon, 2003). Their feedback contributed to eliminating redundancies, refining ambiguous statements, and ensuring that the instrument adequately captured both procedural and behavioural dimensions of mediation effectiveness.

A pilot study involving 30 construction dispute practitioners was conducted to test the reliability and clarity of the questionnaire. Insights from this pilot helped to improve item wording and eliminate poorly performing indicators. Reliability analysis yielded a Cronbach's alpha of 0.82, demonstrating strong internal consistency (Harmon, 2003), therefore confirming that the items reliably measured the intended constructs.

Exploratory Factor Analysis (EFA) was performed to verify the structural validity of the instrument (e.g., Dixit, 2020; Masoetsa et al., 2022; Ngacho & Das, 2014). The results confirmed that the items loaded appropriately onto the five theoretically derived domains, supporting the conceptual distinction between technical, attitudinal, institutional, financial, and complexity-related factors. This integrated and multi-layered process ensured that the measurement instrument was methodologically sound, empirically valid, and suitable for statistical modelling of the predictors of mediation effectiveness.

2.3 Secondary Data Sources

The primary source of secondary data was the Uganda Institution of Professional Engineers (UIPE) Mediation Records, which contain documented case files, dispute descriptions, appointed mediators, and recorded durations for each mediation process. These records were essential because they provided verifiable timelines against which self-reported durations from respondents could be cross-checked, thereby minimizing recall bias and enhancing the factual accuracy of the dataset.

The study also accessed regulatory authority archives, including dispute and contract performance files maintained by the Ministry of Works and Transport (MoWT), the Engineers Registration Board (ERB), and local government engineering departments. These archives provided critical context on project types, contract provisions, dispute origins, and previous interventions taken by regulatory bodies. This helped in understanding how dispute resolution mechanisms were operationalized at institutional levels and whether mediation had been encouraged or mandated through policy directives.

The study also reviewed contractor settlement files and project documentation from selected construction firms. These files included claim submissions, mediation minutes, settlement agreements, and internal correspondence related to dispute handling. Such documents were instrumental in verifying the nature of disputes, identifying the technical complexities involved, and assessing how mediation outcomes aligned with project realities. Collectively, these secondary sources allowed for triangulation across independent datasets, strengthened internal validity, and provided deeper insights into practical mediation processes within Uganda's construction industry.

2.4 Data Analysis

Data analysis followed a structured, multi-layered approach designed to extract meaningful insights from both the quantitative primary data and verified secondary information (Marutschke, 2012). All statistical analyses were conducted using Statistical Package for the Social Sciences (SPSS)

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Version 24, which provided advanced tools for describing data patterns, testing hypotheses, and modeling the relationships between variables. Initially, descriptive statistics including means, standard deviations, frequencies, and percentages were computed to summarize the characteristics of disputes, respondent profiles, and typical mediation versus litigation durations. This descriptive phase provided a foundational understanding of the dataset and highlighted key preliminary trends (Taherdoost, 2018; Walker, 1997).

To address the first research objective, the study performed an independent samples t-test comparing the average duration of disputes resolved through mediation with those handled through litigation. The t-test was appropriate because it tests mean differences between two independent groups and determines whether the observed difference is statistically significant (Mimansha Patel & Nitin Patel, 2019). This revealed whether mediation offers a meaningful time advantage over litigation across the sampled projects. To evaluate whether mediation outcomes varied by project type, such as roads, bridges, buildings, or water projects, the study conducted ANOVA. It tested whether significant differences existed among the mean mediation durations across multiple project categories (Panas & Pantouvakis, 2010). Where significant variation existed, post-hoc tests would allow further exploration of which project types differed most in mediation performance.

The second set of analyses focused on identifying predictors of mediation effectiveness. Here, the study used Pearson correlation analysis to examine the strength and direction of linear relationships between mediation effectiveness and hypothesized predictor variables, including mediator expertise, stakeholder willingness, legal clarity, cost of mediation, and project complexity. Correlation analysis provided preliminary evidence on whether these factors were positively or negatively associated with effective mediation outcomes (Scholar et al., 2017).

To determine the extent to which these variables jointly predicted mediation effectiveness, the study applied Multiple Linear Regression Analysis. Regression modelling quantified the relative contribution of each predictor while statistically controlling for the effect of the others (Tran et al., 2025). Diagnostic tests such as the Variance Inflation Factor (VIF) were used to ensure the model did not suffer from multicollinearity; all VIF values were below 2, confirming that predictors were sufficiently independent for valid regression modelling (Mwelu et al., 2021). The resulting regression model provided empirical evidence of which factors were most influential in shaping mediation effectiveness in Uganda's construction sector. Stakeholder satisfaction with mediation was analysed using mean scores and variability indicators. To examine whether satisfaction levels differed significantly across stakeholder groups such as contractors, clients, engineers, and mediators, the study conducted Chi-square tests of independence (Adeniyi et al., 2020). These tests assessed whether group membership was associated with differing perceptions of fairness, cost-effectiveness, timeliness, relationship preservation, or enforceability. Together, these analyses ensured that the data were evaluated comprehensively, logically, and with the statistical rigor necessary for high-quality empirical research.

2.5 Ethical Considerations

Before all data collection used in this study, the researchers sought and obtained approval from Kampala International University's Research Ethics Committee. This ensured our research followed proper professional and ethical guidelines while respecting all participants' rights and privacy throughout the study process.

3. Results and Discussion

3.1 Mediation vs. Litigation Duration

Mediation significantly reduced dispute resolution time across all project categories. As shown in Table 2, mediation required an average of 4.2 months, while litigation took 23.8 months, reflecting an 82.4% reduction.

Table 2. Mediation vs Litigation Duration by Project Type

Project Type	Mediation (Months)	Litigation (Months)	% Reduction
Roads	4.5	24.5	81.6
Bridges	5.0	26.0	80.8
Buildings	3.8	20.5	81.5
Water	3.5	19.0	81.6
Overall Mean	*4.2*	*23.8*	*82.4*

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The results in Table 2 underscore the contrast between mediation and litigation in resolving construction disputes. The data reveal that mediation is approximately five times faster than litigation across all project types, reducing the average duration by 82.4%. This magnitude of improvement is not only statistically meaningful but operationally transformative for construction projects where delays significantly escalate costs, stall cash flows, disrupt technical sequences, and strain contractor- client relationships. The fact that mediation consistently outperformed litigation across road, bridge, building, and water projects shows that the mechanism is robust even in technical environments requiring expert analysis. Longer durations in bridge disputes reflect their multidisciplinary nature, often involving structural engineers, geotechnical reviews, and multiple subcontractors. Nonetheless, mediation still resolved bridge disputes in less than a quarter of the time required by litigation, demonstrating its adaptability to complex technical disagreements.

These findings strongly align with literature documenting mediation's ability to eliminate procedural bottlenecks present in litigation, such as affidavit hearings, multiple adjournments, and lengthy judicial queues (Hartman & Jergeas, 1995; Melenko, 2020; Mwakapala, 2020). Similar results in Kenya (Kirimi, 2019; Westerndorp, 2022 and Tanzania (Mwakapala, 2020) confirm that mediation reduces dispute timelines by up to 70%, validating the pattern observed in Uganda. In high-income contexts such as the UK and US, comparable efficiencies were found, suggesting that mediation's time-saving advantages are universal across institutional settings. In the Ugandan context, prolonged litigation not only affects contractual performance but also delays public service delivery, especially for government-funded infrastructure. Therefore, the reduction in dispute duration demonstrated in Table 1 presents strong empirical justification for the institutionalization of mediation within Uganda's construction procurement framework and court-annexed systems.

3.2 Factors Influencing Mediation Effectiveness

Correlation analysis revealed strong associations between mediation effectiveness and four key predictors as presented in Table 3.

Table 3. Correlation Matrix

Factor	r	p-value
Mediator Expertise	0.61	<0.001
Stakeholder Willingness	0.54	<0.001
Legal/Policy Clarity	0.46	0.002
Mediation Cost	0.39	0.021
Project Complexity	-0.31	0.013

The correlation analysis highlights mediator expertise as the most influential factor shaping mediation outcomes, with a strong positive relationship (r = 0.61). This underscores the importance of technical knowledge, interpretive ability, and facilitation skills in resolving construction disputes, which often involve complex engineering and contractual issues. Mediators who understand the technical context are better positioned to guide negotiations and maintain party confidence, consistent with who emphasizes that inadequate mediator competence can prolong disputes rather than resolve them.

Stakeholder willingness (r = 0.54) and legal clarity (r = 0.46) also show substantial positive correlations with mediation effectiveness. Willingness reflects mediation's dependence on voluntariness and constructive engagement, supporting findings from (Muhammad et al., 2020) that unwilling parties typically resist compromise and impede settlement. Legal clarity further enhances confidence in mediated outcomes by assuring parties that agreements are legitimate and enforceable. Conversely, ambiguous ADR laws common in Uganda and similar contexts, such as Tanzania (Kabote & Nyichomba, 2022), undermine the credibility of mediation and discourage its use in high-stakes disputes.

Affordability also contributes positively to mediation success, as indicated by the moderate correlation between cost and effectiveness (r = 0.39). Lower financial burden encourages broader adoption, particularly among contractors working with limited resources. In contrast, project complexity negatively correlates with mediation effectiveness (r = -0.31), suggesting that disputes involving advanced technical designs, numerous stakeholders, or ambiguous scopes present greater challenges. These relationships collectively illustrate that mediation outcomes are shaped by a combination of technical, behavioural, institutional, and economic factors, reinforcing the need for professional mediator training, strengthened

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legal frameworks, and targeted support for resolving technically complex disputes. The regression model presented in Table 4 demonstrates a strong explanatory power, accounting for 70.4% of the variance in mediation effectiveness (Adj $R^2 = 0.704$). The data were not standardized before conducting the regression analysis.

Table 4. Regression Model Predicting Mediation Effectiveness

Predictor	B	p-value
Mediator Expertise (ME)	0.41	<0.001
Stakeholder Willingness (SW)	0.31	0.001
Legal Clarity (LC)	0.23	0.012
Mediation Cost (MC)	0.19	0.021
Project Complexity (PC)	-0.22	0.013

$$\text{Mediation Effectiveness} = 0.41\text{ME} + 0.31\text{SW} + 0.223\text{LC} + 0.19\text{MC} - 0.22 \quad (2)$$

$$R^2 = 70.4\%.$$

Results indicate that the selected predictors collectively provide a robust framework for understanding the performance of mediation in construction disputes. Among these predictors, mediator expertise is the most influential factor (β = 0.41), highlighting the central role of technical competence, communication ability, and process management skills. This supports prior findings that skilled mediators are essential for navigating complex construction claims and maintaining party confidence during negotiations.

Stakeholder willingness (β = 0.31) and legal clarity (β = 0.23) also significantly contribute to mediation effectiveness. Willingness reflects the voluntary, cooperative nature of mediation and aligns with Social Exchange Theory, which emphasizes that mutual trust and reciprocity drive constructive conflict resolution. Legal clarity enhances predictability and confidence in the process; however, weaknesses in Uganda's ADR regulatory framework, especially around enforceability, limit optimal outcomes. Cost considerations/ mediation cost (β = 0.19) improve effectiveness, suggesting that mediation's relative affordability reduces the time of dispute settlement and encourages parties to settle disputes earlier. The mediation cost recorded the lowest coefficient among all the coefficients considered, signifying the importance of mediation in reducing the overall cost and saving time of dispute resolution.

Project complexity shows a negative influence on mediation outcomes (β = -0.22). Complex disputes typically involve multiple technical issues, extensive documentation, and several parties, making resolution more difficult and requiring higher levels of mediator expertise. This finding aligns with international literature such as (Akintayo et al., 2024; Kabote & Nyichomba, 2022; Muhammad et al., 2020; Project et al., 2024), indicating that complexity increases negotiation cycles, heightens uncertainty, and reduces the likelihood of quick settlements. The regression results demonstrate that mediation success hinges not only on mediator capability but also on the behavioural readiness of parties, clarity of institutional frameworks, cost dynamics, and the nature of the project itself, implying that reforms must be multidimensional to strengthen mediation practice in Uganda.

The ANOVA results presented in Table 5 confirm that the overall regression model is statistically significant. The calculated F-value of 36.7 with a p-value less than 0.001 shows that the predictors jointly account for significant variation in mediation effectiveness. This means that the likelihood of these results occurring by chance is extremely low. The ANOVA findings validate that the chosen predictors, mediator expertise, stakeholder willingness, legal clarity, cost implications, and project complexity meaningfully contribute to explaining mediation effectiveness. This provides statistical backing to the argument that both human factors (skills and willingness) and structural factors (contractual and project characteristics) influence how well mediation works. These results are consistent with (Harmon, 2003), who emphasized the importance of integrating both professional expertise and supportive institutional frameworks in ADR processes. For Uganda, this implies that strengthening the mediation ecosystem requires a holistic approach that enhances individual mediator capacity while simultaneously reforming the institutional and contractual environment in which disputes arise.

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Table 5. ANOVA Results for Regression Model

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	95.46	5	19.09	36.7	.000
Residual	140.18	270	0.52		
Total	235.64	275			

The factor analysis presented in Table 6 reduced the satisfaction variables into three principal components. Factor 1, Efficiency and Cost, explained the largest proportion of variance (41%), showing that stakeholders place the greatest emphasis on how quickly and cost-effectively disputes are resolved. Factor 2, Fairness and Relations, accounted for 21% of variance, reflecting the importance of process fairness and maintaining relationships. Factor 3, Enforceability, explained 17% of the variance but stood alone as the weakest satisfaction dimension. Collectively, the three factors explained 79% of the variance in satisfaction, indicating a strong underlying structure.

Table 6. Factor Analysis of Satisfaction Dimensions

Factor	Items Loading Strongly	Eigenvalue	Variance Explained (%)
Efficiency & Cost	Speed, Cost-effectiveness	2.45	41
Fairness & Relations	Fairness, Preservation of Relations	1.28	21
Enforceability	Enforceability of Agreements	1.01	17
Total Variance Explained	-	-	79

The factor analysis results confirm that efficiency and cost are the dominant drivers of satisfaction with mediation. This finding supports the broader ADR literature, which positions mediation as a tool for reducing both timelines and financial burdens in dispute resolution (Harmon, 2003). The grouping of fairness and relationship preservation underscores the relational benefits of mediation in Uganda's construction industry. As projects often involve repeat interactions among contractors, consultants, and clients, preserving goodwill is as important as resolving disputes. The fact that enforceability stands as a separate and weaker factor reinforces its status as the main influencing factor of mediation in Uganda. Despite stakeholders valuing the process, doubts about enforceability undermine long-term confidence. This observation strengthens calls for legal reforms to give mediated agreements statutory weight, a point mentioned in the study by Kabote & Nyichomba (Project et al., 2024).

Further analysis using chi-square presented in Table 7 indicates a statistically significant difference ($\chi^2 = 14.5$, $p = 0.006$) in satisfaction levels across stakeholder groups as shown in Table 5. Contractors and clients reported the highest satisfaction, with 91 and 17 satisfied responses, respectively. Mediators also reported strong satisfaction (48 responses), while regulators displayed comparatively lower satisfaction, with a notable number of neutral (12) and dissatisfied (15) responses.

Table 7. Chi-Square Test of Satisfaction by Stakeholder Group

Satisfaction Level	Contractors	Mediators	Regulators	Clients	χ^2	Sig.
Dissatisfied	12	8	15	4		
Neutral	18	7	12	3	14.5	0.006
Satisfied	91	47	23	17		

The differences in satisfaction levels highlight that stakeholder perceptions of mediation are not uniform. Contractors and clients are more satisfied because mediation saves time and money, directly benefiting project delivery and reducing financial strain. Mediators, too, generally appreciate the process as it aligns with their professional role in promoting ADR. Regulators appear more cautious, reflecting their institutional concern with enforcement and compliance gaps. This skepticism is consistent with findings by Thompson & Mukasa (Project et al., 2024), who

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noted that Ugandan regulators often observe cases where mediated agreements collapse due to non-compliance, undermining their confidence in mediation as a reliable mechanism.

3.3 Stakeholder Satisfaction

Stakeholder satisfaction results in Table 8 show that respondents view mediation favorably across several important dimensions, particularly timeliness and cost-effectiveness. High ratings for timeliness (M = 4.01) reflect the substantial reduction in dispute resolution duration compared to litigation, confirming findings that timely resolution helps maintain project continuity and reduces disruption. Cost-effectiveness (M = 3.82) was also strongly rated, consistent with evidence that mediation significantly reduces legal expenses and prevents the financial losses associated with prolonged disputes (Gambo et al., 2017). These findings highlight mediation's practical value in Uganda's resource-constrained construction industry.

Table 8. Stakeholder Satisfaction Scores

Dimension	Mean	SD
Timeliness	4.01	0.62
Cost-Effectiveness	3.82	0.66
Fairness	3.68	0.71
Relationship Preservation	3.55	0.79
Enforceability	2.44	0.91
Overall Satisfaction	3.73	0.71

Respondents also expressed relatively strong satisfaction with fairness (M = 3.68) and relationship preservation (M = 3.55). The fairness rating suggests that participants perceive mediation as a balanced and transparent process that allows both parties to express their interests fully, an advantage widely recognized in ADR literature (Latilo et al., 2024). Similarly, the moderate score for relationship preservation indicates that mediation helps reduce hostility and supports long-term cooperation, a critical benefit in construction where parties often engage in repeated contracts and must maintain professional working relationships.

Despite these strengths, enforceability received a notably low satisfaction score (M = 2.44), revealing persistent concerns about the binding nature of mediated agreements. This challenge is consistent with broader East Africans showing that weak statutory frameworks reduce party confidence in ADR outcomes (Project et al., 2024). In Uganda, the need for court ratification in some cases contributes to uncertainty, especially for clients who bear significant financial risk. Overall, while mediation is perceived as timely, fair, and cost-effective, strengthening the legal enforceability of outcomes remains essential for enhancing stakeholder trust and promoting wider adoption.

4. Conclusions

This study demonstrates that mediation is a significantly more efficient and collaborative mechanism for resolving construction disputes in Uganda, reducing resolution time by more than 82% compared to litigation. The effectiveness of mediation is strongly influenced by mediator expertise, stakeholder willingness, clarity of the legal framework, cost considerations, and project complexity, which together account for 70.4% of the variance in mediation outcomes. Stakeholders reported high levels of satisfaction with mediation's timeliness, fairness, and cost-effectiveness. However, persistent concerns regarding the enforceability of mediated settlements reveal notable institutional shortcomings.

To address these challenges, Uganda should strengthen its ADR legal framework to ensure mediated agreements are more enforceable and carry greater legal credibility. Professional bodies are encouraged to invest in specialized mediator training programs that integrate technical engineering knowledge with advanced communication and negotiation skills. Increasing awareness among construction stakeholders, including clients, consultants, and contractors, would further promote voluntary participation and reduce adversarial behaviour. Incorporating mandatory mediation clauses into public procurement contracts and FIDIC-based agreements would also help institutionalize mediation as an early dispute-resolution step, thereby minimizing project delays. For technically complex disputes, hybrid mechanisms such as mediation combined with expert

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determination or dispute review boards should be considered. Additionally, improving project documentation, enhancing supervision, and ensuring contractual clarity will help prevent disputes from escalating.

A key limitation of this study lies in the type of stakeholders evaluated. The study primarily focused on formal construction sector professionals, such as contractors, engineers, and regulatory authorities, which may not fully capture the experiences and perspectives of smaller or informal sector actors. Additionally, the study primarily examined public sector construction projects, potentially limiting the generalizability of the findings to private sector projects, which may involve different dispute dynamics and contractual arrangements.

Qualitative studies focusing on mediator party interactions could provide deeper insights into behavioural dynamics and communication processes that influence outcomes. Also, Comparative studies across East African countries would help identify regional patterns, regulatory differences, and opportunities for harmonization of ADR practices. Future research could further investigate the effectiveness of hybrid mechanisms such as mediation combined with expert determination or dispute review boards, especially for technically complex construction projects.

4. Declaration of AI-Assisted Tools in Manuscript Preparation

In preparing this manuscript, AI-assisted technologies such as Grammarly were used to support the structuring of the text and improve clarity, readability, and presentation. All outputs generated with the assistance of these technologies were carefully reviewed and edited by the authors, who take full responsibility for the content of the manuscript.

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