www.ijprems.com
editor@ijprems.com

INTERNATIONAL JOURNAL OF PROGRESSIVE RESEARCH IN ENGINEERING MANAGEMENT AND SCIENCE (IJPREMS)
(Int Peer Reviewed Journal)
Vol. 05, Issue 09, September 2025, pp : 1555-1564

e-ISSN : 2583-1062
Impact Factor : 7.001

NON-ADVERSARIAL DISPUTE RESOLUTION TECHNIQUES AND PUBLIC-PRIVATE PARTNERSHIP PROJECT DELIVERY IN SOUTHWEST, NIGERIA

Oladimeji, A.A.[1], Olowokere, E.N[2], Ojo, O.J[3], Aladejebi O.A[4]

[1,2,3,4]Federal University of Technology, Akure, Nigeria.

ABSTRACT

Public-Private Partnerships (PPP) is one of the mechanisms that have gained popularity in the delivery of infrastructure across the world, not being an exception to Nigeria. Nonetheless, conflicts between stakeholders have often compromised their performance, in most instances causing delays, cost escalations and even project cancellations. This paper examined how much of non-adversarial dispute resolution techniques have been used in PPP infrastructure projects and their impact on project delivery in Southwest Nigeria. It utilized a quantitative survey research design where data were collected through 379 respondents who were selected to participate in the study as government agencies, private concessionaires, contractors and consultants involved in PPP projects. They were elicited with structured interviews in the forms of questionnaires and analyzed with descriptive statistics and Relative Importance Index (RII), Analysis of Variance (ANOVA), and regression analysis. The results indicated that the most commonly used mechanisms of dispute resolution were negotiation (RII = 0.824) and arbitration (RII = 0.818) and the least used mechanisms were mini-trials (RII = 0.564) and Dispute Review Boards (RII = 0.539). The results of ANOVA showed that there were no differences that were significant between the usage of non-adversarial techniques by firms of different size ($F = 0.017$, $p = 0.983$). Regression findings also indicated that the non-adversarial dispute resolution methods did not have a significant impact on the project delivery of PPP ($R^2 = 0.001$, $p = 0.482$). The paper finds that though non-adversarial strategies are integrated into PPP contracts, the impact that these strategies have on the project performance is not demonstrated significantly. It suggests stronger institutions, awareness of stakeholders, and better contractual structures to make sure that dispute resolution can play a more significant role in the delivery of infrastructure in Nigeria.

1. INTRODUCTION

Background to the Study

In recent decades, Public-Private Partnerships (PPP) have become a well-received model of infrastructure delivery across the entire world and also in Nigeria. The PPP method has been embraced by governments around the world to overcome the huge infrastructure gap, especially in transport (roads, railways, ports, airports), energy, water, and social services (hospitals, schools) (Chidi and Izuwah, 2018; (World Bank, 2020). The increasing shortage of infrastructure that is estimated at more than a hundred billion dollars has rendered PPPs a strategic necessity in Nigeria, particularly amid the scarcity of the public funds and a surge in the demand of the basic services (Yarling, 2022). The necessity to utilize the capital of a privat sector, technical skills, and operational effectiveness and distribute project risks and liabilities is the main reason to consider using PPPs (Kang et al., 2019). According to Umar et al. (2023) PPPs represent a chance of providing infrastructure in a cost-efficient and timely manner, in addition to enhancing the service quality. One of the fundamental goals PPP projects undertake to achieve is to provide infrastructure under agreed timeframes and budgets and have optimal value-of-money to all stakeholders (Akram et al., 2023). But despite the promise of PPPs, many projects have been faced with bottlenecks in their performance, delays, and in some cases failures.

A major issue that has been a problem in the implementation of the PPPs success is the infrequent occurrence of conflicts and disagreements among the stakeholders in the project. The cause of these disputes can be related to poor allocation of risks, ambiguity in contractual terms, cost overruns, delays, scope change and governance failures (Gunduz, Naji and Al-Sharafi, 2024; Osei-Kyei and Chan, 2017). Conflicts can arise in all stages of the PPP lifecycle, planning, design, construction, operation, or handover, and frequently be caused by divergent interests among the actors, both public and private (Jebur and Rashid, 2024).

The nature of the PPP contracts that are more complex and long-term in nature makes them especially prone to disagreements. Contracts usually have a duration of 20-30 years and more than two parties, each having different goals, performance expectations, and financial obligations (World Bank, 2019). Such characteristics increase the chances of misunderstanding, infringement and conflict. As a case in point, with the Lagos-Ibadan Expressway PPP, substantial disagreements between the concessionaire and government parties led to delays and eventual contract

www.ijprems.com
editor@ijprems.com
INTERNATIONAL JOURNAL OF PROGRESSIVE RESEARCH IN ENGINEERING MANAGEMENT AND SCIENCE (IJPREMS)
(Int Peer Reviewed Journal)
Vol. 05, Issue 09, September 2025, pp : 710-718
e-ISSN : 2583-1062
Impact Factor : 7.001

termination, which underscores the actual cost of unmanaged disputes (Oyedele, 2016) In Nigeria, the dispute resolution process in PPPs is generally tiered or hierarchical, whereby the initial tier is negotiation, followed by mediation or other alternative dispute resolution (ADR) mechanisms, and, as the last resort, arbitration or litigation (Ahatty This stair case methodology follows international best practices and aims at solving problems at the lowest level possible before going up to more formal and expensive avenues. Nigerian legal framework with the Arbitration and Mediation Act of 2023 offers legal support to such mechanisms and emphasizes the significance of ADR in business conflicts (Aderoju , 2023).

According to the Nigeria Infrastructure Concession Regulatory Commission (ICRC), any PPP contract must include a detailed dispute resolution system, which will allow the parties to settle the dispute without threatening the progress of the project (ICRC, 2025). The framework must start with reference to the project steering committee, then further to the nominated representatives of each party, then go to nonbinding ADR approaches like mediation or expert determination, and then lastly, to final adjudication in the form of arbitration or court proceedings (Gamage and Kumar, 2024).

To guarantee expedited dispute resolution in PPP contract, litigation is not an option because unreasonable delay and no expert adjudication exist. Thus, to eliminate the bottlenecks of the inefficient litigation system, the several numbers of alternative dispute resolution techniques are delineated in the PPP contract and may be employed to solve PPP disputes. Simplified settlement of disputes through the most advanced means is the spirit of using the alternative dispute resolution techniques. No definite answer however exists to the question of what kind of resolution procedure to use in each and every situation. However the capability to effectively overcome the disagreements that can take place anytime in the hierarchy of the PPP is important to the long run viability and profitability of the project itself.

2. PROBLEM STATEMENT

The development of Public Private Partnerships (PPP) is becoming more and more applied in the world to provide infrastructure through the use of the capital and expertise of the private sector to augment limited public funds. Nevertheless, infrastructure PPP initiatives can be complicated, long-term agreements with many stakeholders, and they tend to have contractual disagreements because the risk distributions are not clear, can have various expectations, and are subject to changes to project conditions (Bashar et al., 2021). Conflict in PPPs may result in untimely termination, change of ownership, cost inflations, or delays in time, which has a major negative impact on value-for-money and service delivery.

High-stakes infrastructure projects, like the Lekki-Epe Expressway and the Lagos-Ibadan Expressway, have influenced the PPP structure of the Nigerian, with the former enjoying the benefits of timely intervention in the form of negotiation and mediation (Amadi, 2016), the latter suffering significant delays because of long-term, unresolved conflicts that ultimately resulted in the termination of the contract. These opposite results prove the importance of dispute resolution mechanisms to maintain a high level of PPP performance and prevent a failure of a project in the long-term (Mehra, 2024).

The methods of dispute resolution available in PPPs include negotiation and mediation, arbitration and litigation. Litigation and arbitration as forms of adversarial dispute resolution are more apt to formalize the parties involved and make the resolution process more costly and time-intensive, potentially putting an undue stress on a business relationship and complicating further project delivery (Pablo, 2024). On the other hand, alternative dispute resolution (ADR) options like mediation and conciliation are now being suggested as more lenient, time friendly, and relationship saving. Nonetheless, ADR is under-used, which is partly because it is associated with legal uncertainties, institutional cultures of adversity, and poor knowledge of stakeholders (Joseph, 2017).

Moreover, as much as arbitration is mentioned as the best option because of privacy and binding, it is not always the most appropriate in all types of disputes and project stages. The decision on how the dispute is to be resolved, adversarial or non-adversarial, must be matched to the lifecycle stage of the project, the complexity of the dispute and the speed and continuity required. However, there is no solid information on how these methods are actually used, perceived by stakeholders, and even the effect on the outcomes in the Nigerian PPP ecosystem.

3. OBJECTIVES OF THE STUDY

The general objective of the study assessed dispute resolution in public-private partnership (PPP) infrastructure contracts with a view to suggesting the most suitable approach to dispute resolution in PPP contracts. The specific objectives are to:

- investigate the extent of usage of non-adversarial dispute resolution techniques in resolving disputes in PPP projects executed
- examine the effect of dispute resolution techniques on the PPP projects delivery in the study area.

www.ijprems.com
editor@ijprems.com
INTERNATIONAL JOURNAL OF PROGRESSIVE RESEARCH IN ENGINEERING MANAGEMENT AND SCIENCE (IJPREMS)
(Int Peer Reviewed Journal)
Vol. 05, Issue 09, September 2025, pp : 710-718
e-ISSN : 2583-1062
Impact Factor : 7.001

4. SIGNIFICANCE OF THE STUDY

The results of this study will provide a theoretical and empirical underpinning for investigating PPP disputes within the existing PPP literature. The understanding of dispute resolution methods within the contractual framework will assist PPP stakeholders to negotiate the resolution mechanisms that would have less adverse impact on the project and maintain parties' relationship. Besides, the knowledge of dispute resolution methods would assist parties to PPP contract select the appropriate or suitable dispute resolution mechanisms to PPP disputes.

This study will be of great value to public authority /government, private sponsors /Special Purpose Vehicle (SPV) that is Project Company, main contractors, sub-contractors and other stakeholders such as consultants, operators, managers and facility users. The study is useful for business, academia as well as the public sector. Essentially, the findings of this study will contribute to providing relevant information for potential international investors to ensure their successful practices in PPP projects. The study will contribute to the body of knowledge about dispute resolution methods in PPP infrastructure projects.

5. LITERATURE REVIEW

Non-Adversarial Dispute Resolution Techniques

Within the setting of Public-Private Partnership (PPP) infrastructure delivery in Sub-Saharan Africa, the use of non-adversarial methods of dispute resolution has become more prominent courtesy of its versatility, affordability, and focus on maintaining long-term connections among the stakeholder. Due to the nature and duration of the contracts of PPP, conflicts are nearly unavoidable. With this, alternative dispute resolution techniques such as negotiation, mediation, conciliation, expert determination, mini-trial, dispute resolution boards (DRBs), and arbitration are being increasingly incorporated in PPP systems as a means of constructively and efficiently resolving conflicts (Oyeyoade, 2025; Osei-Kyei and Chan, 2015).

a. Negotiation

The simplest kind of dispute resolution is negotiation where the parties face one another in a negotiation without the intervention of a third party. It focuses on self-regulation and adaptability, whereby parties are left to establish the settlement conditions by themselves, mostly at the very first step of a conflict. In a multi-step dispute resolution clause, negotiation is often the initial stage of a project in PPP (jellymarketing, 2024). It is economical, confidential and a relationship-saving strategy, which is essential in long-term infrastructure relationships (Osei-Kyei and Chan, 2018). The effectiveness of negotiation hinges on the good faith disposition by both the parties (public and private). A high number of PPP contracts in Sub-Saharan Africa, such as in Nigeria and South Africa, incorporate tiered negotiation structures via which disputes are moved up into top management in case of failure in the initial negotiations (National Treasury, 2004; ICRC, 2021).

b. Mediation

Mediation brings about a third party which is neutral and helps the parties to communicate and discuss settlement deals. In contrast to arbitration or litigation, the mediator does not force a decision as he assists parties to come to an agreeable solution that is acceptable to all sides (Menkel-Meadow, 2025). The method works particularly well in the PPP environment when it is essential to maintain working relationships (Tanifum and Fabien, 2024). Mediation is more adaptable and quicker than adjudicative processes and it enables innovative solutions not provided by courts (Tanifum and Fabien, 2024). Mediation is slowly becoming a part of PPP guidelines and legislations in Sub-Saharan Africa. To take an example, the Public Private Partnerships Act (2021) of Kenya and the Infrastructure Concession Regulatory Commission (ICRC) principles of Nigeria offer mediation as a middle-ground mechanism before arbitration (Republic of Kenya, 2021).

c. Conciliation

The process of conciliation is comparable with the mediation process, but the conciliator can be more active in suggesting settlement terms. It is a non-binding process, unless parties are happy with the proposal and is well used in civil law jurisdictions. Conciliation is often employed in conjunction with mediation as a technique of early dispute resolution in Sub-Saharan Africa where mixed legal traditions are the order of the day and cultural appropriateness is a primary prioritization (McQuoid-Mason, 2020). Conciliation is a successful path in PPPs to prevent an escalation especially in a conflict that emerges in the implementation of the project (Krakoff, 2023).

d. Expert Determination

Expert determination is the submission of a technical matter to a technical expert whose decision can be final or advisory in nature depending on the contract. It is specifically applicable when there are engineering standard PPP infrastructure disputes, cost evaluation, or performance standards (Almeida & Loureiro, 2019). This is an effective

way of addressing the narrow disputes without the procedural formality of arbitration or litigation. Its applicability and impartiality however are occasionally doubted in Sub-Saharan Africa because of issues with independence and right to appeal (Ehle, 2024). However, with the maturity of PPP systems, the element of expert determination is also being incorporated as a quick-track mechanism of resolving technical differences (Osei-Kyei & Chan, 2015).

e. Mini-Trial

The mini-trial is an organized, unofficial procedure in which the top executives of both companies listen to a short discussion of the conflict, which is commonly mediated by a neutral consultant. It incorporates the elements of negotiation with evaluative and is aimed at supporting executive decision-making (Chukwuemeka, 2018). Although mini-trials are not applied to African PPP projects, they provide a strategic benefit in in-depth disputes with a huge monetary stake. They enable the top-level stakeholders to grasp the legal and factual matters within a short time and conduct significant settlement negotiations (Menkel-Meadow, 2020). With the growing complexity of the infrastructure projects in the area, mini-trials can become more popular as the sides are looking to find effective methods of settling high-value claims without negatively affecting future collaboration.

f. Dispute Resolution Boards (DRBs)

DRBs or Dispute Adjudication Boards (DABs) are usually put in place when a major PPP project is being initiated and continues through the lifecycle of the project. These boards have technical experts and legal experts who are proactive in overseeing the performance of projects and making decisions in case of any disputes (FIDIC, 2017). Other areas in which DRBs have been successfully applied are transport and energy PPPs, where they provide interventions in time to avert minor problems before they become a major problem (Ehle, 2024). Their non-binding suggestions have a tendency to be honored because of the credibility of board members and the spirit of collaboration of the process. DRBs can be proactive, which suits the preventive style, which is becoming dominant in the African PPP frameworks (Osei-Kyei et al., 2019).

g. Arbitration

Arbitration is adjudicative in nature, but is part of most non-adversarial systems since it is typically only employed when informal mechanisms have been exhausted. Arbitration is an alternative dispute resolution that is confidential, neutral and binding and especially important in cross-border PPP arrangements (UNCTAD, 2019). The Lagos Court of Arbitration, Kigali International Arbitration Centre (KIAC), and Cairo Regional Centre of International Commercial Arbitration (CRCICA) have become established in Sub-Saharan Africa in hosting arbitrations involving PPP (Ehle, 2024). The arbitration is a common choice with regard to litigation because of the fear of delays in courts, insufficient technical expertise, and the possibility of bias in local courts (ICRC, 2020). It is enforceable as per the New York Convention which is accessible to the majority of Sub-Saharan states (UNCTAD, 2019).

Overall, non-adversarial dispute resolution methods are important to the effectiveness of PPP infrastructure delivery in Sub-Saharan Africa. These approaches facilitate prompt, economical and relationship-saving solutions, which are critical in dealing with the complexities and risks that long term infrastructural contracts have. International best practice has now emerged as a tiered dispute resolution model, beginning with negotiation, then moving to mediation, conciliation, expert review and eventually arbitration (Almeida and Loureiro, 2019; Menkel-Meadow, 2020). As African nations proceed to perfect their PPP structures, more institutionalization and context sensitivity of these non-adversarial mechanisms will become crucial towards project sustainability and value-on-money.

Effects of dispute resolution techniques on PPP projects delivery

Proper dispute resolution plays a very important role in determining successful completion of PPP projects. This empirical review focuses on the impact of Alternative Dispute Resolution (ADR) approaches, like mediation, arbitration and negotiation as well as litigation on the PPP infrastructure projects. Based on empirical research, the review cites effects of these dispute resolution methods on outcomes of projects, relationships with stakeholders and general project efficiencies.

Impact on Project Timeliness.

Performance in PPP infrastructure projects is mostly manifested through timeliness because delays can translate into financial losses, contractual fines and societal discontent. Empirical studies are increasingly finding that non-adversarial dispute resolution (ADR) processes like mediation, negotiation and early neutral evaluation are more likely to settle disputes faster than complete arbitration/litigation. As an example, Gandu et al. (2023) discovered that despite the ADR application in Nigerian construction projects, time extensions were still observed in the process, although ADR was more time-efficient than litigation, and the impact factor of time overrun they computed was 0.70 (i.e., a 70% probability of time overrun) (Gandu et al., 2023). This implies that though ADR will reduce the period of dispute resolution compared to litigation, it does not necessarily remove delays.

A recent chapter of ADR in construction law (2025) confirms the perception across the world: ADR techniques are becoming more popular in order to reduce delay, lessen friction in procedures, and avoid court congestion (ResearchGate, 2025). The international construction and infrastructural industry is moving towards a more active use of ADR in order to keep the projects on schedule (Global Arbitration Review, 2023). Due to the frequent delays associated with the court process in litigation, voluminous document sharing, appeals, formal discovery, litigants are now more willing to use ADR to ensure that project timelines are not stalled (Global Arbitration Review, 2023).

Nigeria and similar jurisdictions Stakeholders have noted the importance of incorporating expedited dispute escalation tracks or mini-trial or summary determinations in order to avoid problems and keep construction schedules on track before they spiral out of control (Quest Journals, 2024). These are mechanisms that promote site or executive level resolution, which will minimize backlog and limit the harm of prolonged conflict.

Effect on Project Cost

High-costs particularly those that relate to contentions are a grave menace to PPP feasibility. ADR mechanisms are largely considered to save on legal and administrative costs in comparison to complete legal procedures. Gandu et al. (2023) found in the Nigerian context that cost extension under ADR had an average impact factor of 0.69, i.e. a 69 percent likelihood of cost increase despite the use of ADR- though these cost increases were typically less than litigation options (Gandu et al., 2023). This highlights the fact that, although ADR would dampen the cost escalation, it would not completely remove it.

This idea is supported by other empirical and industry commentaries. According to a 2025 empirical study on dispute resolution in construction law, ADR was associated with lower transactional costs, including the cost of litigation, fees paid to expert witnesses, and administrative costs related to litigation. This paper has observed that in complicated infrastructure projects, ADR practices are cost-effective since they save a lot of resources due to the lack of time-consuming court cases and the general ease of the evidentiary rules (ResearchGate, 2025).

Global arbitration and construction law commentary explains that ADR is a less expensive substitute of litigation. The expense of arbitrations remains, yet they are less predictable and cost-controllable than full court battles as a result of reduced procedural burdens and fewer appeals (Global Arbitration Review, 2023). The movement of ADR globally is partly fuelled by the fact that litigation expenses in major infrastructural contracts are devastating, particularly in countries where courts are known to have sluggish judicial processes.

In projects that are specialized or institutional in nature, case studies have highlighted the fact that when ADR protocols (e.g. dispute review boards, mediation timeframes, escalation ladders) are well formulated and followed, cost savings can be material. The trick is to make deadlines on the stages, have little scope to resort to dilatory tactics, and make dispute resolution not costly as to discourage application (Quest Journals, 2024). The inefficiency of the ADR mechanisms (open-ended mediation, lack of control over document exchange) can undermine the benefits of cost, and the drafting of the contract needs protection against abuses.

Effect on Project Quality

Although time and cost effects of the methods of dispute resolution are the most frequently considered, the quality of delivered infrastructure is also susceptible to the conflict dynamics. (Unresolved conflicts, escalations, and belligerent postures) can undermine teamwork, trim technical supervision, and promote attitudes of it as being done minimally well enough that results in diminished workmanship or design rigor.

Despite the lack of empirical research that directly measures quality erosion due to dispute resolution decisions in PPP environments, the theoretical and qualitative literature evidence is quite robust. In the construction field more generally, schedule and cost pressures that arise due to disagreements tend to cause contractors to either hasten the project, cut corners, or omit testing to salvage lost time thereby reducing the quality of the work in terms of functionality or durability (Amila Gamage and Kumar, 2024).

Additionally, construction-related claim management research (Kalogeraki et al., 2024) points out that effective claim management is the key to maintaining the flow of project execution. Delays or disputes in settling claims or standoffs between teams can distract, delay inspections, or technical control and indirectly undermine compliance of the scope or reliability. The authors observe that the introduction of such technologies as BIM, smart contracts, and digital validation have a chance to reduce claim disputes, ensure quality by introducing increased transparency and traceability in design, execution, and claims (Kalogeraki et al., 2024).

Conflicts disrupting the continuity of cooperation or prompting rapid remediation efforts can jeopardize the quality results in PPP settings, in which the quality of performance is frequently evaluated by numbers (e.g. service levels, maintenance standards). Therefore, although the main purpose of ADR methods is to minimize the effects of time and

cost loss, the ability to facilitate continuous cooperation and uphold technical custodianship is also relevant to quality infrastructure provision in PPP.

6. METHODOLOGY

This research design was a quantitative survey research because it aimed to investigate the level of application of non-adversarial dispute resolution methods and their effect on the PPP project delivery in southwest Nigeria. The use of a quantitative method was influenced by the fact that empirical evidence that can be statistically tested to be generalized was required.

Population and Sampling

The sample of the study consisted of stakeholders engaged in direct projects of PPP infrastructure, i.e. government ministries, departments, and agencies (MDAs), private concessionaires, main contractors, subcontractors, and consultants. A sample of 379 respondents was calculated based on purposive and stratified random sampling methods with sufficient representation of the stakeholder categories and sizes of firms. This was an appropriate size as per recommendations of surveys based studies in which statistical test like regression and ANOVA are used.

Data Collection Instrument

The structured questionnaire that was used to collect data was designed according to the objectives of the study. The tool was composed of closed-ended questions, whose measurements were evaluated on a five-point Likert scale with Strongly Disagree (1) and Strongly Agree (5) as extremes. The questionnaire included the demographic data, the degree of using the techniques of dispute resolution, and an understanding of how they influenced the project delivery. The scale was pre-tested in respect to clarity and reliability, with alpha of Cronbach having values higher than the recommended 0.70 which means that it has a satisfactory internal consistency.

Data Analysis Techniques

Both descriptive and inferential statistics were used to analyze the data. The degree of utilization of dispute resolution mechanisms was assessed using descriptive statistics that comprised of means, standard deviations, and Relative Importance Index (RII). ANOVA was also used to examine the adoption of these mechanisms in relation to the size of firms and regression analysis was done to assess the correlation between non adversarial technique and project delivery. The level of analysis was applied at a significance of 5% ($p < 0.05$), which offers a strong model of testing the hypothesis.

Study Area

The research was done in Southwest Nigeria where there have been high profile PPP infrastructure undertakings, including the Lekki-Epe Expressway and Lagos-Ibadan Expressway. The geographical scope was informed by the fact that PPP initiatives in this zone are concentrated, hence it would be an appropriate location to study dispute resolution activities and the implication they have on infrastructure provision.

7. RESULTS AND DISCUSSIONS

Extent of Usage of Non-Adversarial Dispute Resolution Techniques in PPP Projects

Table 1 presents the descriptive analysis and Relative Importance Index (RII) for various non-adversarial dispute resolution techniques employed in Public-Private Partnership (PPP) contracts. The findings reveal varying degrees of integration and reliance on these techniques, shedding light on the prevailing contractual approaches to dispute avoidance and resolution in Nigerian PPP projects.

Among the non-adversarial techniques assessed, negotiation emerged as the most widely utilized, with a mean score of 4.12 and an RII of 0.824, ranking it first among the seven techniques evaluated. Over 81% of respondents either agreed or strongly agreed that their PPP contracts specify negotiation as the first step in resolving disputes. This finding aligns with best practices in dispute management, which emphasize early engagement and collaborative problem-solving. The high usage underscores the prioritization of cost-effective, relationship-preserving approaches that enable parties to address disagreements at an early stage without escalation.

Closely following negotiation is the inclusion of arbitration as the binding and final tier in dispute resolution processes. With a mean of 4.09 and an RII of 0.818, arbitration was ranked second, and classified as “Highly Used.” This suggests a significant level of contractual maturity, whereby parties recognize the importance of having a structured and enforceable mechanism should earlier non-binding processes fail. The dual prominence of negotiation and arbitration indicates that Nigerian PPP contracts increasingly reflect a multi-tiered dispute resolution architecture, combining informal and formal processes.

Mediation ranks third with a mean score of 3.53 and an RII of 0.707, also falling within the “Highly Used” category. Although its usage is not as prevalent as negotiation or arbitration, over 52% of respondents agreed or strongly agreed

to its inclusion. This reflects a growing but still moderate acceptance of mediation in the local PPP landscape. Mediation's role in preserving relationships and encouraging mutually acceptable outcomes is recognized, but its implementation may be constrained by institutional, legal, or cultural barriers.

Conciliation and expert determination received mean scores of 3.14 and 3.09, respectively, with corresponding RIIs of 0.628 and 0.618. Both were ranked fourth and fifth, and categorized as "Moderately Used." These techniques appear to be embedded in some PPP contracts, particularly where specialized technical issues or impasses arise. However, their usage remains uneven, possibly due to limited awareness of their distinctions from mediation or the perceived complexity of managing such processes within contractual timelines. These findings suggest a nascent but growing interest in expanding the range of non-adversarial tools available to PPP stakeholders.

At the lower end of the spectrum are mini-trial and the establishment of Dispute Review Boards (DRBs). Mini-trial scored a mean of 2.82 (RII = 0.564), while DRB/DB recorded the lowest with a mean of 2.69 (RII = 0.539), ranking sixth and seventh, respectively. These techniques were both rated as "Moderately Used," but the relatively low means and rankings indicate limited adoption. This could reflect the high resource demands and procedural complexity associated with these methods, especially in contexts where dispute resolution capacity and contractual sophistication may vary significantly across projects and sectors. Notably, DRBs, while beneficial in large-scale infrastructure, require early establishment and ongoing resourcing, which may deter their use in smaller or less formalized PPP arrangements.

The grand mean of 3.36 across all techniques suggests that non-adversarial methods are generally well represented in Nigerian PPP contracts, albeit with considerable variation in depth and breadth of use. The contractual preference for negotiation and arbitration reflects a pragmatic balancing of informal and formal mechanisms, while moderate use of other ADR techniques points to opportunities for capacity building and policy harmonization. To further strengthen dispute resolution in the Nigerian PPP ecosystem, there is a need for increased awareness, training, and institutional support around underutilized methods such as DRBs, expert determination, and mini-trials. Moreover, standard contract templates could be revised to better integrate tiered ADR provisions, supported by enforceable timelines and clear process governance.

Table 1: Extent of Usage of Non-Adversarial Dispute Resolution Techniques in PPP Projects

Non-Adversarial Dispute Resolution Techniques	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	RII	Rank	Remark
Most PPP contracts typically specify negotiation as the first step in resolving disputes.	0	0.5	18.5	49.3	31.7	4.12	0.824	1	Highly Used
Arbitration is specified as the binding, final tier in PPP contracts.	0	0.5	18.2	53.0	28.2	4.09	0.818	2	Highly Used
PPP contracts include mediation as an early-stage option.	2.4	11.9	33.5	34.6	17.7	3.53	0.707	3	Highly Used
Conciliation is expressly provided for in PPP contracts.	5.5	19.8	38.3	27.7	8.7	3.14	0.628	4	Moderately Used
Expert determination is provided for technical disputes in PPP contracts.	5.8	21.4	37.7	28.0	7.1	3.09	0.618	5	Moderately Used
PPP contracts allow mini-trial (executive panel) before binding processes.	11.9	23.7	40.1	19.0	5.3	2.82	0.564	6	Moderately Used
A standing Dispute Review/Resolution Board (DRB/DB) is established at project commencement.	15.8	26.9	35.1	16.4	5.8	2.69	0.539	7	Moderately Used
			Grand Mean			3.36			Moderately Used

www.ijprems.com
editor@ijprems.com
INTERNATIONAL JOURNAL OF PROGRESSIVE RESEARCH IN ENGINEERING MANAGEMENT AND SCIENCE (IJPREMS)
(Int Peer Reviewed Journal)
Vol. 05, Issue 09, September 2025, pp : 710-718
e-ISSN : 2583-1062
Impact Factor : 7.001

Source: Field Survey, 2025

H02: There is no Significant Difference in the Extent of Usage of Non - Adversarial Dispute Resolution Techniques

Table 2 presents the results of a one-way Analysis of Variance (ANOVA) conducted to determine whether the extent of usage of non-adversarial dispute resolution techniques in PPP projects differs significantly across firms of various sizes. This analysis is crucial for understanding whether organizational scale influences the adoption and implementation of alternative dispute resolution (ADR) mechanisms such as negotiation, mediation, conciliation, and expert determination within the PPP framework.

The between-group variance shows a Sum of Squares of 0.004, with 2 degrees of freedom, yielding a Mean Square of 0.002. In contrast, the within-group (residual) variance is considerably larger, with a Sum of Squares of 44.950, 376 degrees of freedom, and a Mean Square of 0.120. The computed F-ratio is 0.017, and the associated p-value is 0.983.

This extremely high p-value (greater than the conventional significance level of 0.05) indicates that there is no statistically significant difference in the usage of non-adversarial techniques across firms of different sizes. In practical terms, whether a firm is small, medium, or large does not significantly affect the extent to which it employs non-adversarial techniques in resolving PPP-related disputes.

To assess the magnitude of the observed differences (regardless of statistical significance), several effect size estimates were computed. The Eta-squared (η^2) value is 0.000, indicating that 0% of the variance in the usage of non-adversarial techniques can be explained by firm size. Similarly, the Epsilon-squared and Omega-squared (both fixed and random effect models) are negative (though retained as less biased estimates), further supporting the conclusion that the effect of firm size on non-adversarial technique usage is negligible.

These findings underscore the statistical and practical insignificance of firm size as a determinant of ADR adoption in Nigerian PPP contexts. This may suggest a relatively uniform contractual approach to dispute resolution across the sector, or a convergence of practice due to regulatory, legal, or funding partner expectations.

Hypothesis Testing

Based on the ANOVA results ($F = 0.017$, $p = 0.983$) and effect size estimates ($\eta^2 = 0.000$), the null hypothesis cannot be rejected. There is no statistically significant difference in the extent to which small, medium, and large firms use non-adversarial dispute resolution techniques in resolving disputes in PPP projects. The hypothesis (H_{02}) is therefore accepted.

Table 2: ANOVA results on the extent of usage of Non-Adversarial dispute resolution techniques across various firms' sizes

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	0.004	2	0.002	0.017	0.983
Within Groups	44.950	376	0.120		
Total	44.954	378			

ANOVA Effect Sizes		Point Estimate	95% Confidence Interval	
			Lower	Upper
Non-Adversarial Dispute Resolution Techniques	Eta-squared	0.000	0.000	0.000
	Epsilon-squared	-0.005	-0.005	-0.005
	Omega-squared Fixed-effect	-0.005	-0.005	-0.005
	Omega-squared Random-effect	-0.003	-0.003	-0.003

a. Eta-squared and Epsilon-squared are estimated based on the fixed-effect model.

b. Negative but less biased estimates are retained, not rounded to zero.

Source: Field Survey, 2024=5

Effect of non-adversarial dispute resolution techniques om PPP projects delivery

The model summary in Table 3 reveals a very weak relationship between the independent variable (Non-Adversarial Dispute Resolution Techniques) and the dependent variable (PPP Project Delivery). The correlation coefficient (R) is

INTERNATIONAL JOURNAL OF PROGRESSIVE RESEARCH IN ENGINEERING MANAGEMENT AND SCIENCE (IJPREMS)
(Int Peer Reviewed Journal)
www.ijprems.com
editor@ijprems.com
Vol. 05, Issue 09, September 2025, pp : 710-718
e-ISSN : 2583-1062
Impact Factor : 7.001

0.036, which indicates a near-zero linear relationship. The R Square value is 0.001, meaning that non-adversarial techniques explain only 0.1% of the variance in project delivery. Furthermore, the Adjusted R Square is negative (-0.001), suggesting that the model does not improve upon the mean in predicting project delivery. The standard error of estimate (0.55498) also indicates moderate dispersion of actual values around the regression line. These findings collectively imply that the predictor variable contributes little to explaining project delivery performance in PPP contexts.

The ANOVA table (Table 4) provides statistical evidence to assess whether the regression model significantly predicts the outcome variable. In this case, the F-value is 0.495, with an associated p-value (Sig.) of 0.482, which is far above the standard threshold of 0.05 for statistical significance. This result implies that the overall regression model is not statistically significant, and that non-adversarial dispute resolution techniques do not significantly predict project delivery performance. The lack of statistical significance also reinforces the findings from the model summary, confirming that the relationship between the variables is negligible.

The coefficients table (Table 5) provides information on the contribution of the independent variable to the regression model. The constant (intercept) is 3.572, which represents the estimated value of project delivery when the usage of non-adversarial techniques is zero. The unstandardized coefficient (B) for non-adversarial techniques is -0.058, indicating a negative slope; this implies that for every one-unit increase in the use of non-adversarial techniques, project delivery decreases by 0.058 units. However, this coefficient is not statistically significant, as shown by the t-value of -0.704 and a p-value of 0.482.

Moreover, the standardized beta coefficient is -0.036, further confirming the very weak negative relationship between non-adversarial dispute resolution techniques and PPP project delivery. The standard error of 0.083 is relatively large in relation to the coefficient itself, suggesting variability and uncertainty in the estimate.

H_{05}: Non-adversarial dispute resolution techniques have no significant effect on PPP project delivery.

The regression analysis (Tables 4.14 to 4.16) provides consistent evidence in support of the null hypothesis: R^2 = 0.001 (explains only 0.1% of variation); F(1, 377) = 0.495, p = 0.482 (not significant); t = -0.704, p = 0.482 for the predictor coefficient. The null hypothesis is accepted. Non-adversarial dispute resolution techniques do not have a statistically significant effect on PPP project delivery in the sample studied.

Table 3: Model Summary of the effect of non-adversarial dispute resolution techniques have no significant effect on PPP project delivery

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.036[a]	0.001	-0.001	0.55498

a. Predictors: (Constant), Non-Adversarial Dispute Resolution Techniques

Source: Field Survey, 2024

Table 4: ANOVA results of the effect of non-adversarial dispute resolution techniques have no significant effect on PPP project delivery

	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	0.152	1	0.152	0.495	.482[b]
	Residual	116.117	377	0.308		
	Total	116.269	378			

a. Dependent Variable: Project Delivery

b. Predictors: (Constant), Non-Adversarial Dispute Resolution Techniques

Source: Field Survey, 2024

www.ijprems.com
editor@ijprems.com
INTERNATIONAL JOURNAL OF PROGRESSIVE RESEARCH IN ENGINEERING MANAGEMENT AND SCIENCE (IJPREMS)
(Int Peer Reviewed Journal)
Vol. 05, Issue 09, September 2025, pp : 710-718
e-ISSN : 2583-1062
Impact Factor : 7.001

Table 5: Regression Coefficients results of the effect of non-adversarial dispute resolution techniques have no significant effect on PPP project delivery

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.572	0.279		12.790	0.000
	Non-Adversarial Dispute Resolution Techniques	-0.058	0.083	-0.036	-0.704	0.482

a. Dependent Variable: Project Delivery

Source: Field Survey, 2024

8. CONCLUSION

This paper examined the application of non-adversarial methods of dispute resolution in the PPP infrastructure delivery in Southwest Nigeria with a particular focus on their level of application and impact on the project outcomes. The results showed that although negotiation and arbitration have been well-integrated in the PPP contracts, other methods like mediation, conciliation, expert determination, mini-trials and Dispute Review Boards are less common. Notably, statistical analyses showed that the size of a firm was not a major factor in the adoption of these mechanisms, and regression findings showed that non-adversarial methods did not have any significant impact on project delivery.

The findings highlight the fact that even though PPP contracts in Nigeria are made to be in line with international best practice through integration of tiered dispute resolution systems, there is no significant effect of such systems in improving timeliness, cost, and quality results. This discontinuity could be a sign of institutional inefficiency, lack of awareness among stakeholders or poor implementation of contractual agreements.

The research thus concludes that institutional frameworks need to be reinforced, that stakeholders need to be specifically trained and that clearer and enforceable timelines in PPP contracts must be put in place so as to make sure that the dispute resolution mechanisms play a positive role in delivering infrastructure in a sustainable manner. Moreover, more focus is to be drawn towards underutilised options like Dispute Review Boards and mini-trials that have been used in other jurisdictions successfully. In the end, enhancing the dispute resolution practices will increase investor confidence, maintain relationships between stakeholders and help make PPP projects in Nigeria viable over the long-term.

9. RECOMMENDATIONS

- Strengthen institutional frameworks by enforcing the Arbitration and Mediation Act (2023) and ICRC guidelines within PPP contracts.
- Promote stakeholder awareness and training on underutilized non-adversarial techniques such as mediation, conciliation, and Dispute Review Boards.
- Embed enforceable timelines in PPP dispute resolution clauses to prevent delays and cost escalations.
- Standardize PPP contract templates with multi-tiered dispute resolution mechanisms to ensure consistency across projects.
- Encourage capacity building through professional bodies and PPP regulatory agencies to enhance negotiation and mediation skills.

10. REFERENCE

[1] www.irjmets.com
[2] www.ijprems.com