

# Evaluation of the Construction Industry Payment and Adjudication Act Effectiveness, Challenges, and Doctrinal Influences in Construction Dispute Resolution

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**Abstract:** Persistent payment issues such as delayed, under, and nonpayment continue to affect project performance, undermine project delivery, and strain financial stability in Malaysian construction industry. The Construction Industry Payment and Adjudication Act 2012 (CIPAA) introduced a statutory adjudication framework intended to provide efficient and cost-effective interim resolutions. However, questions remain regarding its practical effectiveness and doctrinal clarity. This study evaluates CIPAA's implementation through a qualitative case study of seven adjudication disputes reviewed by Malaysian superior courts. Each case was examined across four parameters—implementation effectiveness, procedural efficiency, adjudication limitations, and doctrinal influence. Findings indicate that CIPAA has accelerated dispute resolution and curtailed problematic clauses such as pay-when-paid, with adjudication decisions generally delivered within three to six months. Approximately 43% of cases examined provided timely payment relief. Nonetheless, effectiveness is often constrained by judicial intervention, interpretive ambiguities, inconsistent adjudicator performance, and the temporary nature of the decisions. Significant doctrinal uncertainties persist regarding retrospective application, contractual clause interpretation and the use of Section 16 stays postenforcement, where courts may stay the execution of adjudication awards pending arbitration or litigation. Such stays dilute the intended finality and speed of adjudication, undermining its role as a swift payment remedy. The study recommends statutory refinement, enhanced adjudicator training, greater stakeholder education and streamlined enforcement mechanisms. Strengthening CIPAA's framework not only supports payment security and legal certainty in Malaysia's construction sector but also provides insights relevant to improving statutory adjudication practices in construction industry with similar legal and contractual context. **DOI: 10.1061/JLADAH.LADR-1530.** © 2026 American Society of Civil Engineers.

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## Introduction

Payment is one of the most critical aspects of construction project delivery, directly influencing cash flow, contractors' performance, and overall project success. Effective payment flows remain fundamental to project execution. Structured mechanisms such as advance, interim, and final payments are designed to support the

procurement of labor, materials, and equipment, while sustaining contractors' financial stability (Jin et al. 2017; Haron and Arazmi 2020).

Standardized contracts, including the Public Works Department 203A (PWD 203A) and Pertubuhan Akitek Malaysia (PAM 2018), attempt to regulate these flows by prescribing payment schedules, variation procedures, and dispute resolution mechanisms to balance the interests of clients, contractors, and subcontractors (Mohamed Ishak and Ismail 2025). However, in practice, such frameworks have not been sufficient to prevent payment-related disputes from arising. The Malaysian construction industry continues to grapple with persistent payment problems such as delays, underpayments, and nonpayments (Ting et al. 2025). These disputes account for nearly 50% of construction conflicts in Malaysia and disproportionately affect small and medium contractors, who often lack the financial capacity to absorb prolonged cash flow interruptions (Judi et al. 2017).

The impacts extend beyond individual projects as unresolved payment disputes can stall progress, trigger cost overruns, and escalate into legal battles that erode stakeholders' relationships and confidence. In severe cases, they lead to contractor insolvencies, workforce retrenchments and supply chain disruptions, which in turn weaken investor trust and diminish the sector's contribution to national economic growth (Okereke et al. 2021). These systemic challenges disrupt contractor cash flow, delay project delivery and undermine trust across the supply chain (Azman et al. 2013). Left unresolved, they create a ripple effect on the wider construction ecosystem by discouraging investment, destabilizing contractor

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capacity, and threatening the industry's long-term competitiveness. Understanding the underlying causes of these disputes is therefore essential for strengthening payment security and dispute resolution mechanisms in the construction industry. The following section reviews the literature on the key causes of payment issues.

## Literature Review

The causes of payment issues in the construction industry are multifaceted, spanning documentation weaknesses, procedural delays, adversarial practices, contractual ambiguities, and legislative gaps. Persistent issues of underpayment, late certification, and nonpayment stem from a combination of cultural norms, administrative inefficiencies, and financial constraints among paymasters (Ting et al. 2025; Ishak et al. 2019). Poor documentation practices, delayed certifications, and breaches of contract obligations often hinder claims (Azman et al. 2014; Ting et al. 2025). In complex public sector projects, additional approval layers and audit requirements further slow disbursements (Hasmori et al. 2018; Ting et al. 2025). The paymaster's financial mismanagement and budget constraints have also been mentioned as major contributors to late payments, particularly when government allocations lapse midproject (Azman et al. 2014; Nanayakkara et al. 2021; Mohd Fateh et al. 2024).

Beyond procedural inefficiencies, adversarial communication and cultural attitudes also prolong disputes. Unclear instructions and withheld information often lead to delayed claims and weakened stakeholder trust (McNair 2016; Che Haron and Masrom 2020; Mohd Fateh et al. 2024). Gundes et al. (2019) further observed cultural tolerance toward late payments, especially in Malaysia, where contractors often avoid confrontation to preserve reputational ties. This passive risk attitude reinforces a cycle of accepted delays, as Taofeeq et al. (2020) confirmed. Similarly, ambiguous contract wording and scope management deficiencies exacerbate disputes (Che Haron and Masrom 2020; Ting et al. 2025). Even standardized contracts such as PWD 203A and PAM 2018 contain gray areas in payment terms, variation management, and scope changes (McNair 2016).

Contractual arrangements further shape the nature of disputes (Gamage 2023). Lump sum contracts create apparent cost certainty while masking scope fluidity, prompting disagreements over additional charges (Sambasivan and Soon 2007). Measurement contracts often involve quantification and documentation disputes, while design-build schemes suffer from unclear variation instructions during design phases (Nawi et al. 2014; Hayati et al. 2019). Time-and-material (T&M) and cost-reimbursable contracts lack rigorous control, leading to billing disagreements and valuation delays (Othman et al. 2023). Pay-when-paid clauses intensify these challenges by shifting financial risk downstream, delaying subcontractor payments until the main contractor is paid (Mustaffa et al. 2019; Ismail et al. 2023). This practice creates severe cash flow strain for subcontractors (Azman et al. 2014) and is widely criticized as unfair and disruptive to smaller firms (Kamil et al. 2023; Nasir et al. 2017).

Legislative and contractual gaps further compound payment problems in Malaysia's construction sector. Studies show that enforcement mechanisms fail to penalize payment delays effectively, while contracts often lack clear provisions on interim payment timelines, interest for late payments and escalation procedures (Ismail et al. 2023; Duong et al. 2022; Ting et al. 2025; Goh et al. 2023). Ambiguities in procedural instructions also allow clients to exploit technicalities and reject claims, leaving contractors with limited recourse (Che Munaaim et al. 2007; Haron and Arazmi 2020).

These weaknesses can cause unresolved payment issues, frequently escalating into formal disputes, often channeled through litigation due to the absence of accessible alternative dispute resolution (ADR) mechanisms in standard contracts such as PWD 203A (Dorrah and McCabe 2023). Resorting to litigation prolongs resolution, inflates costs, and disrupts project timelines as contractors suspending work pending payment (Azman et al. 2013; Duong et al. 2022). Long-standing disputes not only derail project milestones but also damage reputational trust and discourage future collaborations. These systemic shortcomings highlight the urgent need for statutory ADR frameworks, such as adjudication under CIPAA, to provide faster and more reliable payment remedies in the Malaysian construction industry.

The Construction Industry Payment and Adjudication Act 2012 (CIPAA) was enacted in June 2012 and came into force in April 2014, formally introducing statutory adjudication into Malaysian construction law (Fairul Amir et al. 2024). Its enactment responded to problems of delayed, under and nonpayment that strained contractors' cash flow and disrupted project delivery. Judi et al. (2017) reported that nearly 50% of construction disputes involved payment failures, disproportionately affecting small and medium enterprises (SMEs) and subcontractors lacking bargaining power against conditional payment clauses. CIPAA explicitly prohibits pay-when-paid arrangements and establishes a framework of enforceable interim determinations designed to sustain project momentum. The Act's principal objectives remain threefold—ensuring timely payment, promoting fair and efficient dispute resolution, and enabling recovery mechanisms for unpaid parties (Mazani et al. 2019; Hassan et al. 2019).

CIPAA provides claimants with statutory rights to suspend performance, reduce output, and seek direct payment from principals where upstream parties fail to comply. Rajoo (2018) highlighted that adjudication decisions can be registered as High Court judgments, enabling their enforcement without the need for further arbitration or litigation. By voiding conditional payment clauses, the Act rebalances contractual risk in favor of subcontractors and suppliers, improving cash flow throughout the supply chain (Hadi et al. 2018). Mazani et al. (2019) confirmed that this has reduced subcontractor insolvency and mitigated project abandonment risks. The Act applies to all written contracts for construction, consultancy, and material supply carried out wholly or partly in Malaysia (Chow et al. 2014). This includes projects with cross-border elements, provided some work is performed locally, thereby extending statutory protection to a wide spectrum of stakeholders—contractors, subcontractors, consultants, suppliers, and employers.

CIPAA's adjudication framework is structured around strict timelines. A claimant initiates proceeding by serving a payment claim under Section 5, to which the respondent must reply within ten working days (Section 6). If the dispute remains unresolved, a Notice of Adjudication may be filed under Section 8, triggering the appointment of an adjudicator either by party agreement or by the Asian International Arbitration Centre (AIAC) under Section 9. Once appointed, the claimant submits an adjudication claim within ten days, followed by the respondent's adjudication response within another ten days (Section 10). An optional reply may be lodged within five days (Section 11).

The adjudicator is required to deliver a decision within 45 working days of the last submission (Section 12), with awards binding on an interim basis unless set aside by court or arbitration. If payment is not made, CIPAA grants statutory remedies: claimants may suspend performance, seek direct payment from the principal under Section 30, or enforce the award as a High Court judgment under Section 28. Adjudicators must observe natural justice and may proceed even if a party defaults on submissions (Abdul-Rahman et al. 2015).

Chow et al. (2014) emphasized that these provisions collectively preserve cash flow continuity while disputes are resolved through longer-term mechanisms such as arbitration or litigation.

## Research Gap and Significance

Several studies have examined the Construction Industry Payment and Adjudication Act (CIPAA) since its introduction in 2014, highlighting both benefits and challenges. Nasir et al. (2018) compared CIPAA with adjudication systems in the UK and Australia, noting its relatively narrow scope and recommending procedural refinements and better adjudicator training. Yat (2016) found that contractors perceived CIPAA as faster and more affordable than litigation, though issues of legal literacy and interim decision-making remained. Kamil et al. (2023) further identified knowledge gaps among practitioners and suggested awareness campaigns and simplified guidance materials, while Nik Din and Ismail (2014) reported cautious optimism among CIDB G7 contractors who valued stronger payment enforcement but raised concerns about adjudicator competency and enforcement reliability.

At the same time, other research reinforced CIPAA's practical contributions. Yat (2016) highlighted its cost-effectiveness and utility in addressing undervalued claims. Azman et al. (2014), examining pre-CIPAA conditions, documented widespread payment delays, and poor practices that the Act was designed to address. Ahmi et al. (2023) found strong support among Selangor-based Class A contractors for CIPAA's mechanisms but emphasized the need for broader stakeholder engagement and policy refinements across different regions of Malaysia. Collectively, these studies affirm CIPAA's role in strengthening payment discipline and improving dispute resolution pathways in the construction sector.

Despite these contributions, most prior studies remain largely qualitative and perception-based, relying on interviews and surveys with contractors, consultants, or industry stakeholders. While such approaches provide valuable insights into users' experience, they offer limited doctrinal scrutiny of how CIPAA actually function in practice. Much of the literature stops short of evaluating CIPAA's performance through systematic legal outcomes. Questions remain:

- Are adjudication awards consistently enforced?
- Do contractors receive payment after adjudication?
- Are contractual ambiguities or statutory limitations effectively neutralized in court?

This gap highlights the need for a doctrinal, case-based study that evaluates CIPAA's real-world performance a decade after its enforcement in 2014. This study addresses the identified gap by undertaking a doctrinal analysis of judicial decisions and adjudication awards relating to CIPAA.

The aim is to evaluate how statutory adjudication has functioned in practice over the decade since its introduction. The objectives of the study are as follows:

1. To assess the implementation effectiveness of CIPAA in resolving payment disputes,
2. To examine the procedural efficiency of adjudication processes,
3. To identify recurring legal challenges in enforcement and appeals, and
4. To analyze the doctrinal influence of judicial interpretation on the statute's application.

Through this approach, the study moves away from perception-driven assessments and provides a systematic, legally grounded evaluation of CIPAA's performance in the Malaysian construction context.

This study is important across the legal, industry and policy domains. Legally, it clarifies judicial interpretation of key CIPAA

provisions, advancing construction law scholarship and informing future adjudication frameworks. For construction industry practitioners, the findings highlight common procedural pitfalls and enforcement challenges, enabling better risk management, contract drafting, and claims formulation. At the policy level, the study identifies statutory ambiguities and offers evidence-based recommendations to strengthen CIPAA as a payment protection framework. Ultimately, the research contributes to building a more resilient construction industry in Malaysia and provides lessons relevant to other common law jurisdictions considering or refining statutory adjudication systems.

## Research Methodology

This study adopts a qualitative, doctrinal case study approach focused on document analysis. This method is well suited to examining legal reasoning, adjudication outcomes and judicial interpretation in construction payment disputes, as it emphasizes textual evidence and interpretive analysis over numerical generalization (Bowen 2009). A doctrinal method enables a systematic evaluation of how statutory adjudication has functioned in practice by analyzing adjudicators' determinations alongside court judgments.

The research design is anchored in the four objectives of the study, which are translated into analytical parameters:

- *Implementation effectiveness*—whether CIPAA delivers timely and enforceable outcomes consistent with statutory intent, including consistency between adjudicators' reasoning and judicial interpretation, accessibility to foreign contractors, cash flow impacts, and durability of awards against challenge.
- *Procedural efficiency*—the speed and cost of the adjudication process, measured against statutory timelines, legal and adjudicator fees, and the impact of challenges on overall resolution.
- *Legal challenges and limitations*—the extent to which the temporary and contestable nature of adjudication awards creates uncertainty, measured by the frequency and success of applications to stay, set aside, or appeal adjudication outcomes.
- *Doctrinal influence*—how courts' interpretations shape the application of CIPAA, including judicial treatment of contentious clauses (e.g., pay-when-paid, jurisdictional limits) and areas where statutory ambiguity or contractual silence remains unresolved.

These parameters provide a structured framework to evaluate both the functional performance of CIPAA and its doctrinal development in Malaysian construction law.

Data are collected via case study technique which comprised publicly available adjudication awards and Malaysian court judgments related to construction payment disputes under CIPAA. Case selection was guided by purposive sampling, applying three inclusion criteria: (1) the dispute arose under a construction contract in Malaysia, (2) at least one party was registered with the Construction Industry Development Board (CIDB), and (3) a written decision was issued by the High Court or higher judicial tiers.

Documents were retrieved from official sources including the Malaysian e-Judgment portal to ensure authenticity and completeness. Standard form contracts such as PAM 2018 and PWD 203A, along with CIPAA commentary and prior academic studies (Azman et al. 2014; Judi and Mustafa 2023; Ismail et al. 2023), were also reviewed to contextualize the disputes and identify doctrinal gaps.

For data analysis, a parameter-based coding framework was applied to the collected documents. Key information was extracted into structured tables capturing indicators under each parameter, including consistency of outcomes, timeframes, costs, procedural interventions, enforcement results, and judicial reasoning on disputed

clauses. Recurring themes, such as postaward enforcement delays, jurisdictional objections, clause ambiguities and the temporary nature of awards, were identified and synthesized into thematic categories. These themes were then analyzed against the objectives, providing both doctrinal and practical insights into CIPAA's effectiveness, challenges, and influence on dispute resolution practice in Malaysia.

Only publicly accessible legal materials are analyzed. No confidential sources were used; and all statutory, contractual, and case references are cited in accordance with academic and judicial standards.

## Results and Analysis

The following section presents the data and analysis of seven (7) adjudication-related court cases. The results highlight key insights into how CIPAA operates in practice. These cases are examined

across four (4) dimensions—implementation effectiveness, efficiency of the adjudication mechanism, challenges and limitations and doctrinal influences. Each dimension reflects the interaction between statutory design, judicial interpretation, and stakeholders' behavior, providing a practical view of both CIPAA's strengths and weaknesses.

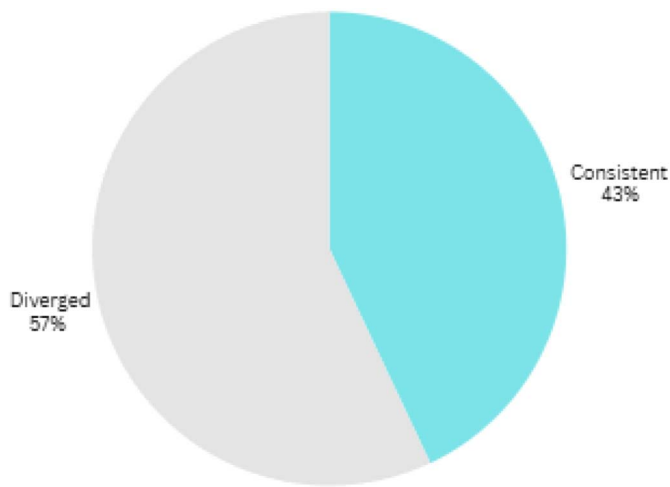
### Implementation Effectiveness

Table 1 presents the analysis of each case based on implementation effectiveness, focusing on consistency in legal interpretation, cash flow outcomes, reduction of reliance on arbitration, and accessibility for international contractors.

Fig. 1 shows the degree of consistency in legal interpretation across the cases. Of the seven (7) CIPAA cases reviewed, outcomes indicate that alignment at initial stages does not always hold. Four cases (57%) diverged from adjudicators' decisions due to reversals at appellate levels or contradictions at the High Court, while the

**Table 1.** Case analysis based on implementation effectiveness

Case	Consistency in legal application	Accessibility involved intl. contractors	Cash flow outcome	Reduction of arbitration dependency
<i>Anas v. JKP</i>	Federal Court overruled adjudicator's reliance on unpleaded clauses, resolving inconsistency with PWD Clause 36.5.	N/A	Award set aside. Claim amount, RM855k were 1.26% of the contract value.	Low. Award was set aside by the Federal Court; quantum remains unresolved, requiring arbitration or litigation for payment recovery.
<i>Jack-In Pile v. Bauer</i>	Federal Court clarified prospectivity—CIPAA applies only to contracts entered after April 15, 2014. The ruling removed earlier inconsistency on retrospective application.	N/A	Award set aside. Claim amount, RM906k were 49% of the contract value.	Low. Adjudication was rendered inapplicable due to the Federal Court's clarification on prospective operation, necessitating arbitration for final resolution.
<i>ASM v. Econpile</i>	Federal Court clarified postenforcement rule—once an adjudication decision is enforced under Section 28, a stay under Section 16 is unavailable, ensuring finality of enforcement.	N/A	Award upheld. Claim amount, RM74.8 mil was 26.7% of the contract value. Adjudicated amount were RM59.7 million.	High. Adjudication remained effective despite concurrent arbitration, showing limited need for further dispute resolution once enforcement was completed.
<i>Zedelta v. Mayland</i>	Consistent with Section 30 (direct payment); liability correctly imposed on principal for adjudicated amount.	N/A	Award upheld. Adjudicated amount was RM2.52 mil.	High. Adjudication was fully enforced via direct payment; arbitration was unnecessary.
<i>Vigour v. KPF</i>	Award set aside for fraud, consistent with Section 15(a) safeguarding adjudication integrity.	N/A	Award set aside. Claim amount, RM2.17 mil was 49.2% of the contract value.	Low. Fraud nullified award; claimant must rely on new proceedings for recovery.
<i>Khairi v. GJ Runding</i>	Consistent with Section 35, which invalidates conditional payment clauses in consultancy agreements.	N/A	No adjudication awards. Claim amount, RM839k were 2.3% of the contract value.	Not applicable. Dispute resolved through litigation; CIPAA served a regulatory rather than adjudicative function.
<i>Samsung JV v. GWM</i>	Consistent dismissal of challenges; adjudication and enforcement upheld under Sections 28 and 30.	Accessible to international participants via standard enforcement.	Award upheld. Adjudicated amount of RM37.49 million has a significant impact on GWM's cash flow due to its financial standing.	Moderate. Adjudication upheld despite parallel arbitration, showing CIPAA's enforcement resilience.

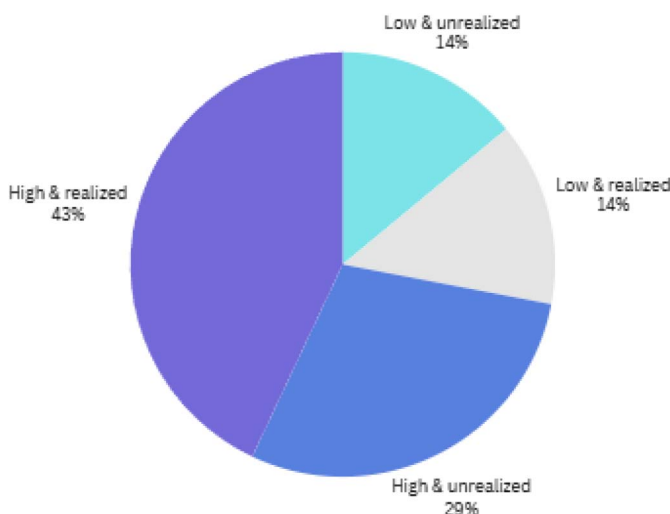


**Fig. 1.** Consistency in legal application.

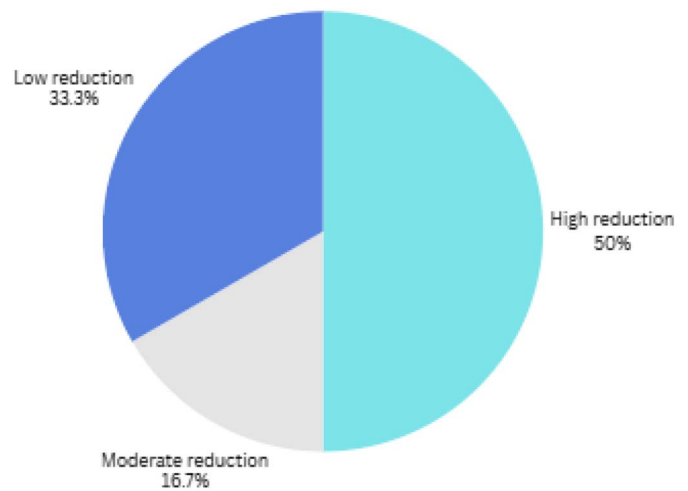
remaining three cases (43%) remained consistent, with adjudicators' findings upheld and not challenged beyond the High Court. However, later appellate clarification has reduced such inconsistencies, strengthening doctrinal certainty regarding CIPAA's temporal scope and the enforceability of adjudication awards.

While some cases proceeded through all appellate tiers, others concluded at the High Court without further challenge. Vertical consistency is therefore assessed either by comparing the Federal Court's final position or, where adjudicator decisions were tested only in the High Court, by examining whether the court upheld the adjudicator's decision (AD). Upholding the AD indicates consistency with CIPAA's legislative intent, while reversal reflects doctrinal divergence. Overall, subsequent Federal Court rulings have improved vertical alignment and reduced interpretive ambiguity, supporting greater predictability for industry users.

In terms of financial impact, Fig. 2 summarizes cash-flow outcomes based on the size of the adjudicated amount and whether the award was enforced (realized) or set aside (unrealized). Of the cases reviewed, reviewed, 43% fell into the high and realized category, 29% were high and unrealized, while 14% each were low and realized and low and unrealized. This breakdown shows that even large awards do not guarantee financial recovery unless they are



**Fig. 2.** Cash flow outcome.



**Fig. 3.** Reduction of arbitration dependency.

successfully enforced. The trend also reflects that once an adjudication decision is enforced under Section 28, it is no longer subject to a stay under Section 16, reinforcing finality and improving certainty in payment recovery.

Fig. 3 shows the extent to which adjudication under CIPAA reduces reliance on arbitration. High reduction refers to cases where adjudication fully resolved the dispute, removing the need for arbitration. Moderate reduction applies where adjudication provided partial relief but arbitration was still pursued to settle remaining issues. Low reduction covers cases where adjudication was unsuccessful or set aside, requiring full resolution through arbitration. Among the cases reviewed, 50% achieved high reduction, 33.3% low reduction, and 16.7% moderate reduction. These results indicate that while CIPAA often lessens the need for arbitration, it does not always eliminate it. Nonetheless, improved interpretive consistency and clarified procedural boundaries have enhanced the mechanism's reliability as a first-tier dispute resolution process.

### **Efficiency of the Adjudication Mechanism**

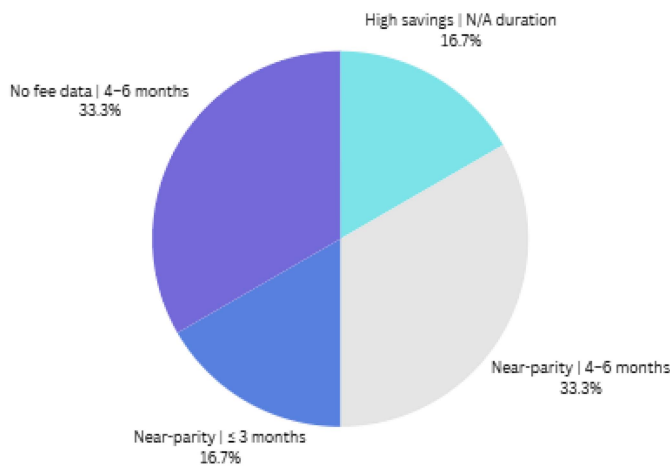
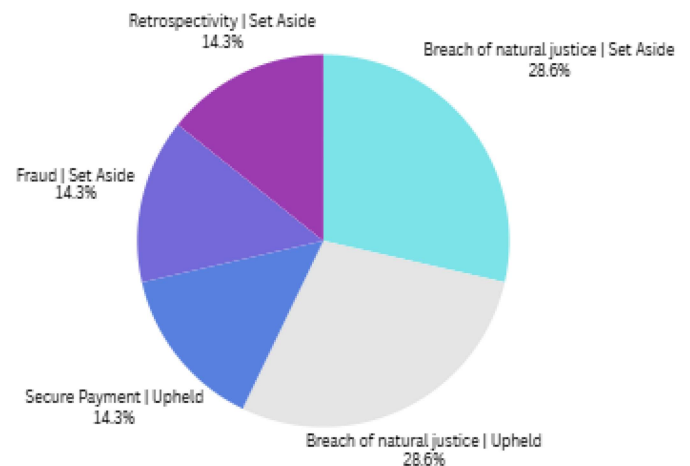
Table 2 analyses each case in terms of adjudication efficiency, focusing on cost and duration; and grounds for court intervention.

Fig. 4 summarizes adjudication efficiency by comparing duration and cost. High savings refers to cases resolved at minimal cost (no duration data); Near-parity covers disputes where adjudication costs were comparable to litigation, with durations of either  $\leq 3$  months or 4–6 months; No fee data includes cases with recorded timelines but without cost information. Results show 33.3% of cases in the Near-parity | 4–6 months category, another 33.3% in No fee data | 4–6 months, and 16.7% each in high savings and Near-parity |  $\leq 3$  months. Most adjudication fees were below 1.5% of the disputed amount, demonstrating relative affordability. However, subsequent enforcement or set-aside proceedings often matched or exceeded adjudication costs, reducing overall efficiency gains.

Fig. 5 outlines the grounds for court intervention. The analysis categories include breach of natural justice, secure-payment enforcement, fraud and prospectivity. Of the cases reviewed, 28.6% involved breaches of natural justice resulting in set-aside, while another 28.6% upheld awards despite similar claims, highlighting variable judicial outcomes. Secure-payment, fraud and prospectivity cases, each accounted for 14.3%, with results depending on evidential strength and statutory interpretation.

**Table 2.** Case analysis based on efficiency of adjudication mechanism

Case	Cost and duration	Grounds for court intervention and resulting overheads
<i>Anas v. JKP</i>	Adjudicator fee RM11 660 (1.4% of claim); 6-month cycle from claim to decision.	Jurisdictional excess and breach of natural justice (use of unpleaded PWD Clause 36.6 and failure to provide fair hearing). Award fully set aside after court intervention.
<i>Jack-In Pile v. Bauer</i>	No adjudication cost mentioned. Decision in 5 months	Jurisdictional challenge; award set aside as CIPAA applies prospectively only. Section 35's "pay-when-paid" invalidation does not operate retrospectively.
<i>ASM v. Econpile</i>	Adjudication fees RM203,924.40 were 0.34% of the claim amount but 136% of litigation costs, showing CIPAA did not provide substantial cost savings over court proceedings in this case. Decision in 4 months.	Stay under Section 16 was unavailable after enforcement under Section 28. Natural-justice issues considered but award upheld, affirming that postenforcement finality applies.
<i>Zedelta v. Mayland</i>	Adjudication fees were 1.47% of the adjudicated amount but 99% of litigation costs, showing CIPAA did not provide substantial cost savings over court proceedings in this case. Decision in 3 months.	Liability for direct payment under Section 30 (CIPAA); adjudicated amount successfully recovered, excluding adjudication fees.
<i>Vigour v. KPF</i>	Adjudication fees were 0.66% of the claim amount but 95.7% of litigation costs, showing CIPAA did not provide substantial cost savings over court proceedings in this case. Decision in 4 months	Fraud under Section 15(a) including nonregistration with CIDB, concealment of evidence, and misrepresentation of works; award fully set aside.
<i>Khairi v. GJ Runding</i>	N/A. No adjudication held.	Conditional-payment clause voided under Section 35; court confirmed applicability of CIPAA to consultancy contracts.
<i>Samsung JV v. GWM</i>	Adjudication fees were only 0.15% of the adjudicated amount and 22.3% of litigation costs, demonstrating that CIPAA adjudication was significantly more cost-efficient than court proceedings). No detailed adjudication timeframe mentioned.	Natural-justice considerations including GWM's financial position, alleged defective payment claim and new claims in expert report; stay dismissed and award enforced with partial deduction.

**Fig. 4.** Cost and duration performance.**Fig. 5.** Common grounds for court intervention and resulting overheads.

Overall, intervention remains case-specific, and no uniform pattern exists in how Malaysian courts determine whether to set aside or uphold adjudication awards.

### Challenges and Limitations

Table 3 analyses each case in relation to challenges and limitations of adjudication, focusing on the temporary binding nature of decisions and judicial escalation following adjudication.

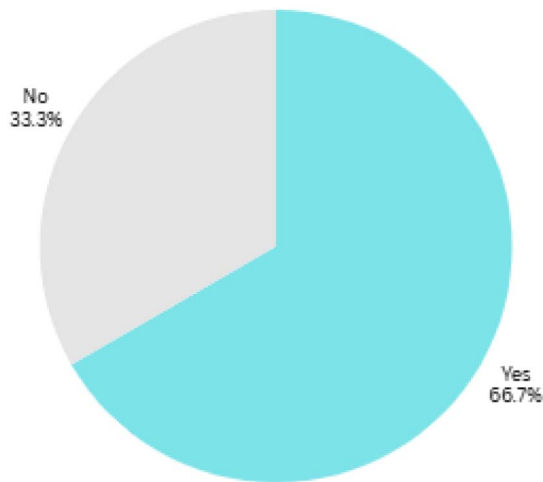
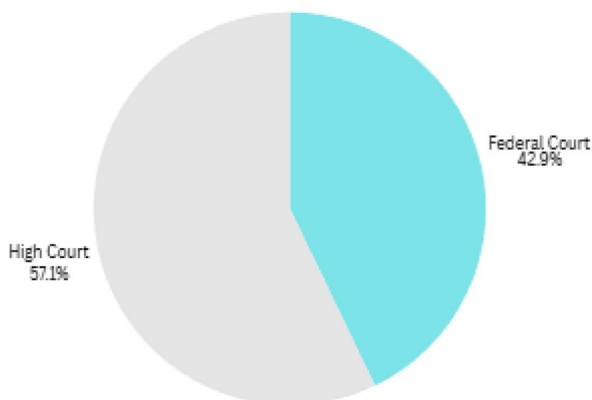
Fig. 6 illustrates the implications of CIPAA's temporary binding nature. While adjudication provides swift interim relief, certain awards remain open to challenge, creating postadjudication uncertainty. For example, in 62.5% of the cases, enforcement outcomes

depended on further judicial affirmation, such as appeals to the High Court or Federal Court, highlighting that initial adjudicator decisions may not always provide finality.

Fig. 7 presents judicial escalation levels following adjudication. Of the cases reviewed, 57.1% were resolved at the High Court, while 42.9% proceeded to the Federal Court for final determination. This distribution demonstrates that a significant proportion of adjudication outcomes are subject to further judicial scrutiny. While High Court resolution allows faster closure, Federal Court escalation confirms that certain decisions, especially those involving doctrinal or statutory interpretation issues, like *Jack-In Pile v. Bauer* or *ASM v. Econpile*, require apex court intervention to achieve legal certainty.

**Table 3.** Case analysis based on challenges and limitations on adjudication process

Case	Temporary binding nature creates postadjudication uncertainty	Judicial escalation levels following adjudication
<i>Anas v. JKP</i>	Yes—award overturned after 3 years, demonstrating postadjudication uncertainty.	Escalated to Federal Court. Finalized by Federal Court
<i>Jack-In Pile v. Bauer</i>	Yes—award nullified because CIPAA applies prospectively; Section 35 cannot be applied retrospectively.	Escalated to Federal Court. Finalized by Federal Court
<i>ASM v. Econpile</i>	Yes—stay pending arbitration; Section 16 stay unavailable once enforcement under Section 28 obtained, ensuring finality postenforcement.	Escalated to Federal Court. Finalized by Federal Court
<i>Zedelta v. Mayland</i>	No—award enforced via Section 30 (direct payment), with no postadjudication uncertainty.	Judicial review at High Court and no further escalation.
<i>Vigour v. KPF</i>	Yes—award set aside due to fraud, creating postadjudication uncertainty.	Judicial review at High Court and no further escalation.
<i>Khairi v. GJ Runding</i>	N/A—no adjudication held; resolved through litigation.	Judicial review at High Court and no further escalation.
<i>Samsung JV v. GWM</i>	No—award enforced despite challenges; adjudication provided certainty.	Judicial review at High Court and no further escalation.

**Fig. 6.** Temporary binding nature creates post adjudication uncertainty.**Fig. 7.** Judicial escalation levels.

### Doctrinal Influences

Table 4 presents the doctrinal influences observed across the selected cases, showing how statutory silence and clause interpretation have shaped CIPAA's practical operation. The findings reveal

recurring disputes over overlapping contractual provisions, most notably in *Anas v. JKP*, where reliance on unpleaded PWD Clause 36.6 created jurisdictional tension against Clause 36.5.

In *Jack-In Pile v. Bauer*, the Federal Court clarified that CIPAA's prohibition on pay-when-paid clauses under Section 35 applies only to contracts entered after April 15, 2014, confirming that the Act does not operate retrospectively and removing earlier doctrinal uncertainty. Similarly, *ASM v. Econpile* confirmed that once an adjudication decision is enforced under Section 28, a stay under Section 16 is not available, reinforcing the finality of enforced awards and removing ambiguity previously suggested in case law. Collectively, these outcomes show that courts, rather than the statute itself, provide the doctrinal clarity needed to resolve interpretive doctrinal/statutory issues.

The results also demonstrate that in certain areas, statutory language offered clearer guidance, limiting doctrinal uncertainty. In *Zedelta v. Mayland*, direct payment orders under Section 30(5) were enforced despite privity concerns, while *Khairi v. GJ Runding* upheld the invalidity of conditional payment clauses in consultancy agreements. Nonetheless, unresolved procedural issues remain, particularly under Section 6. *Samsung JV v. GWM* revealed how unclear requirements on payment responses and set-offs led to procedural disqualification, showing continued interpretive gaps. Fraud allegations in *Vigour v. KPF* further underscored the role of evidentiary strength in shaping judicial outcomes. Overall, the results confirm that while courts have progressively addressed doctrinal ambiguities, adjudication under CIPAA remains partly defined by evolving case law rather than statutory certainty.

### Discussion

The findings of this study demonstrate that CIPAA has been moderately effective in fulfilling its legislative intent of providing a quick, cost-efficient mechanism to resolve payment disputes in Malaysia over the ten years since its inception. In practice, the Act has delivered meaningful interim relief in straightforward disputes, though its effectiveness is constrained in cases complicated by ambiguous contractual clauses, procedural irregularities, or jurisdictional challenges (Tay and Kong 2018). This reflects early experiences in jurisdictions with established Security of Payment frameworks, such as the UK's Construction Act 1996 and Singapore's Building and Construction Industry Security of Payment Act,

**Table 4.** Case analysis based on doctrinal influences

Case	Doctrinal/statutory issue	Court clarification/outcome
<i>Anas v. JKP</i>	Use of unpleaded PWD Clause 36.6 conflicting with Clause 36.5	Federal Court overruled adjudication; clarified jurisdictional limits and natural justice requirements.
<i>Jack-In Pile v. Bauer</i>	Pay-when-paid clauses; Section 35 applicability	Federal Court confirmed Section 35 applies prospectively only (contracts post-15 April 2014). Award set aside; resolves previous uncertainty about retrospective application.
<i>ASM v. Econpile</i>	Postenforcement stays; Section 16 versus Section 28	Federal Court confirmed once adjudication is enforced under Section 28, stay under Section 16 is unavailable; reinforces finality of enforced awards.
<i>Zedelta v. Mayland</i>	Direct payment enforcement; privity concerns	High Court enforced Section 30(5) orders; award successfully realized.
<i>Vigour v. KPF</i>	Fraud allegations; evidentiary requirements	High Court set aside award due to fraud (nonregistration, misrepresentation); demonstrates importance of evidence strength.
<i>Khairi v. GJ Runding</i>	Conditional payment clauses; Section 35	High Court confirmed invalidity of conditional payment clauses; no adjudication award.
<i>Samsung JV v. GWM</i>	Payment responses and set-offs; procedural compliance	Court upheld adjudication despite procedural issues; clarified requirements for valid claims.

where statutory adjudication initially faced consistency challenges but gradually matured into a reliable dispute resolution mechanism (Gould and Linneman 2008).

A key theme emerging from the results is the role of doctrinal influences in shaping CIPAA's effectiveness. Statutory silence, overlapping provisions, and procedural uncertainties have invited judicial discretion, producing divergent interpretations. For instance, some awards were set aside due to CIPAA's prospective limitation (*Jack-In Pile v. Bauer*), and postenforcement stays under Section 16 are unavailable once awards are enforced under Section 28, reinforcing finality (*ASM v. Econpile*). While this doctrinal evolution contributes to the legal development of statutory adjudication, it also introduces uncertainty for industry users, undermining the very speed and predictability CIPAA seeks to provide. The persistence of gray areas under Section 6, particularly concerning payment responses (*Samsung JV v. GWM*), reinforces that CIPAA's outcomes are often contingent not only on statutory provisions but also on judicial philosophy and the interpretive stance of the courts. This highlights that the Act, in its current form, depends heavily on continuous judicial clarification rather than offering parties clear statutory certainty.

Cases such as *Zedelta v. Mayland* and *Khairi v. GJ Runding* demonstrate that where statutory language is unambiguous, CIPAA provides strong and consistent enforcement aligned with legislative intent. Conversely, in situations where ambiguity persists, parties may exploit procedural and doctrinal gaps, resulting in protracted litigation that undermines efficiency. This is consistent with the findings in Tables 1–3, which show that enforcement, cash flow recovery, and arbitration dependency vary depending on case complexity, procedural compliance, and judicial scrutiny. Accordingly, CIPAA is most effective in simple, well-documented disputes, while its utility diminishes in complex cases involving intricate contract drafting, statutory interpretation or where evidence-intensive issues dominate.

To address such complex disputes and enhance the effectiveness of statutory adjudication under CIPAA, independent expert determination can serve as a complementary mechanism. Engaging impartial experts throughout the project lifecycle allows parties to obtain informed, technically sound decisions efficiently, resolving matters that may exceed the expertise of adjudicators and reducing delays caused by procedural or evidentiary complexities

(Abdul Wahab and Ishak 2020). Understanding the scope of independent expert involvement is also critical, as quasi-judicial protections cover experts appointed by courts or tribunals, jointly appointed independent experts may not enjoy the same immunity, highlighting the need for clear engagement protocols in contract (Abdul-Malak and Tabbara 2023). Integrating independent expert determination alongside CIPAA could streamline adjudication, minimize procedural bottlenecks, and enhance enforceability, effectively complementing statutory adjudication while maintaining speed, transparency, and cost-efficiency.

Another point to note in the practical implementation of statutory adjudication is the potential integration of smart contracts, which are digitally coded agreements that automatically execute predefined obligations once contractual conditions are verified. In the construction industry, smart contracts leverage blockchain and building information modeling (BIM) technologies to automate progress verification and payment release, enhancing transparency and reducing administrative burdens that often trigger valuation disputes (Kamel et al. 2023). Hamledari and Fischer (2020) highlight that blockchain-based smart contracts enable reliable, autonomous conditioning of cash flow on verified progress, creating an auditable single source of truth and supporting timely payment. Similarly, Kumtepe (2025) demonstrates that smart contracts can automate dispute resolution processes, enforce performance-based payments, and incorporate escrow mechanisms to minimize conflicts, thereby complementing statutory adjudication objectives under CIPAA. Boranbay et al. (2025) further note that legal adaptation is required to ensure these automated payment triggers align with procedural safeguards, contractual validity, and natural justice principles. From a statutory adjudication perspective, adopting smart contracts could reduce reliance on human interpretation, streamline interim payment verification, and potentially curb the number of disputes escalating to adjudication or litigation (Rathnayake et al. 2022).

In terms of CIPAA's sustainability as a dispute resolution mechanism, the study highlights a fundamental limitation, namely the lack of finality in adjudication outcomes. Interim awards are frequently challenged, stayed, or set aside, creating instability in cash flow and eroding industry confidence. This uncertainty discourages reliance on adjudication as a primary payment enforcement tool and pushes stakeholders back toward litigation or arbitration. Nevertheless, the Malaysian experience reflects a

transitional phase rather than a systemic failure. Jurisdictions such as the UK and Singapore faced similar challenges and over time, judicial consistency, legislative reform, and industry adaptation helped entrench adjudication as a reliable and accepted practice.

Overall, CIPAA has achieved partial success in meeting its aims, particularly in enhancing access to justice and expediting interim relief. However, its long-term effectiveness depends on reducing reliance on judicial discretion by clarifying statutory ambiguities, improving adjudicator quality, and strengthening enforcement mechanisms. The findings suggest that with sustained reform, training, and stakeholder engagement, CIPAA can evolve into a robust and trusted system, but at present since its inception in 2014, its performance remains uneven and contingent on the resolution of doctrinal uncertainties.

This study presents a novel contribution to the understanding of statutory adjudication under CIPAA within Malaysia's construction industry. By conducting a doctrinal and case-based analysis of adjudication outcomes, the research moves beyond general commentary to offer a systematic evaluation of CIPAA's usage and effectiveness. It identifies specific procedural and legal factors such as jurisdictional errors, judicial inconsistency, and contract ambiguity that influence the sustainability of adjudication awards in the construction sector.

The novelty of this research lies in its dual focus on doctrinal influences and enforcement outcomes. This study addresses that gap by providing a doctrinally grounded, case-based analysis that dissects how procedural integrity, judicial philosophies, and dispute complexity directly impact the sustainability of adjudication awards. It offers a structured evaluative framework that connects law in theory with law in practice, specific to the construction contracts. In doing so, it not only contributes to the knowledge of dispute resolution but also generates actionable recommendations for legislators, practitioners and industry stakeholders seeking to strengthen the efficacy of statutory adjudication in Malaysia and the region.

## Conclusion

The case-study analysis confirms that Malaysia's CIPAA has influence and improve payment dispute resolution in the construction sector, while also revealing important limitations. On its strengths, adjudication has provided fast and binding interim decisions that secure cash flow through mechanisms such as direct payment under Section 30 and the invalidation of unlawful clauses. Higher courts have increasingly aligned their interpretations with CIPAA's pro-payment intent, creating greater security for industry stakeholders. Notably, in cases such as *Zedelta and Samsung JV*, contractors obtained prompt relief without resorting to costly and protracted arbitration or litigation. The speed and relative affordability of CIPAA adjudication, with awards issued in a matter of months, mark a decisive improvement over traditional dispute resolution method.

The study also highlights some limitations. Many adjudication awards remain vulnerable, particularly in complex disputes where novel legal issues or jurisdictional errors lead to awards being set aside, as seen in *Anas and Vigour*. The provisional nature of decisions means that even successful parties often face continued litigation or arbitration, diluting CIPAA's intended efficiency. *Jack-In Pile*, involving a contract predating CIPAA, illustrates the statutory limitation on prospective application. Enforcement practices have generally been robust, as the Federal Court's rulings, like in the *ASM v. Econpile*, ensure that postenforcement stays under Section 16 are not permitted, thereby preserving the intended speed and finality of adjudication awards. Doctrinally, CIPAA has eliminated certain abusive practices, such as pay-when-paid clauses

for contracts postdating April 15, 2014, but has simultaneously exposed new gray areas, particularly regarding payment responses, set-offs, and procedural compliance, which continue to generate interpretive challenges and appeals.

The findings point to several reforms necessary to enhance CIPAA's effectiveness. Statutory clarifications are needed to reduce doctrinal ambiguities, particularly concerning the finality of awards; the relationship between Sections 16 and 28 on stays; and the statute's temporal scope. Professionalizing adjudication through enhanced training, accreditation, and judicial education would reduce technical challenges and improve the quality of decisions. Stronger enforcement mechanisms, whether by streamlining court processes or imposing stricter consequences for nonpayment, would ensure that adjudication delivers real financial outcomes. At the industry level, greater awareness and improved contract administration practices are essential for maximizing CIPAA's protections. These reforms would allow CIPAA to better fulfill its promise of ensuring timely and fair payment in Malaysia's construction sector. With this study, it is hopeful that greater awareness and improved contract administration practices, especially in resolving payment issues can be seen with CIPAA's protections. Beyond Malaysia, the study contributes to the broader field of ADR in the construction sector and provides insights for enhancing statutory adjudication practices in other jurisdictions with similar legal and contractual frameworks.

## Data Availability Statement

Some or all data, models, or code that support the findings of this study are available from the corresponding author upon reasonable request. All data, models, and code generated or used during the study appear in the published article.

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Sim Nee Ting: Conceptualization; Data curation; Formal analysis; Funding acquisition; Methodology; Project administration; Supervision; Writing – original draft; Writing – review and editing. Kai Hii Chen: Formal analysis; Investigation; Methodology; Writing – original draft. Yee Yong Lee: Conceptualization; Data curation; Validation; Writing – review and editing. Hun Chuen Gui: Investigation; Resources; Writing – review and editing. Chee Khoon Ng: Conceptualization; Validation; Writing – review and editing.

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