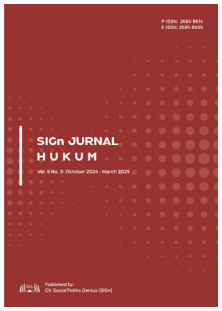

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Article Title

Concurrent Delay and Price Adjustment in Multi-Year Contracts: An Indonesian Construction Law Perspective

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ABSTRACT

This research examines the legal implications of concurrent delay in price adjustments in multi-year contracts within Indonesian construction projects. The absence of specific regulations concerning concurrent delay in Law Number 2 of 2017 and its implementing regulations creates legal uncertainty and has the potential to trigger disputes. This research aims to comprehensively analyze the legal and empirical aspects of concurrent delay and price adjustments. Employing a normative juridical approach and case studies of construction projects experiencing concurrent delay, this research analyzes relevant legislation, contract clauses, and dispute resolution practices. The results show that concurrent delay introduces complexities in allocating responsibility and calculating compensation, especially concerning overhead claims and price adjustments. The case studies reveal that the success of claims is highly dependent on the completeness of documentation and the strength of legal argumentation. Furthermore, this research emphasizes the importance of drafting anticipatory multi-year contracts and implementing effective risk management to mitigate the risks of concurrent delay. This research recommends the development of more comprehensive regulations on concurrent delay and encourages parties to prioritize dispute resolution through negotiation and mediation.

Keywords: *Concurrent Delay; Cost Claims; Multi-Year Contracts; Price Adjustment.*

INTRODUCTION

The construction sector is strategically important in Indonesia's infrastructure development and economic growth (Yanuar et al., 2025). The success of construction projects, especially large-scale ones, heavily relies on meeting the time, cost, and quality targets agreed upon in the contract. However, the dynamic nature of on-site conditions often presents complex challenges, one of which is the phenomenon of project delays. Construction project delays result in financial losses and can trigger protracted legal disputes between the involved parties, namely the project owner and the contractor (Sebastian et al., 2025).

In the context of construction contracts, delays can be caused by several factors, whether originating from the negligence of the contractor, the project owner, or external factors beyond the parties' control. Generally, delays can be categorized as either singular delays or concurrent delays. A singular delay occurs when there is only one event causing the delay, for example, a delay caused solely by the contractor's negligence in mobilizing the workforce (Therik & Gultom, 2023). Conversely, a concurrent delay is a situation where two or more delaying events co-occur and overlap, and each of these events is caused by different parties to the contract. For instance, a delay may occur due to the coinciding negligence of the contractor and the project owner (Irsan et al., 2024). The complexity of concurrent delay issues is further amplified in projects utilizing multi-year contracts (Pitaloka & Wardani, 2023). Multi-year contracts, commonly used for infrastructure projects with an implementation period exceeding one fiscal year, possess unique characteristics, such as involving multiple stakeholders, employing complex technologies, and having an extended

execution timeline. These conditions increase the risk of concurrent delays, which undoubtedly have implications for legal aspects and construction dispute resolution.

The occurrence of concurrent delays in multi-year contracts raises significant legal problems, particularly concerning determining the responsible party and its implications for price adjustments. Price adjustment clauses are generally incorporated into multi-year contracts to anticipate fluctuations in material prices, labor wages, and economic conditions during the contract period (Indahwati et al., 2025). When a concurrent delay occurs, disagreements often arise between the project owner and the contractor regarding how the delay affects the price adjustment calculation. The contractor may argue that delays caused by the project owner prevented them from completing the work on schedule, thus entitling them to compensation through the price adjustment mechanism. Conversely, the project owner might reject the claim because the delay was also caused by the contractor's negligence. This difference in interpretation in allocating responsibility for concurrent delays triggers prolonged disputes and frequently hinders project completion (Tambunan et al., 2021).

As stipulated in Law Number 2 of 2017 and its implementing regulations, Indonesian construction law does not explicitly regulate concurrent delays and their impact on price adjustments in multi-year contracts. This lack of comprehensive regulation creates legal uncertainty and allows for multiple interpretations in practice. Consequently, the resolution of concurrent delay disputes often depends on case-by-case interpretations, limited jurisprudence, and general legal principles that sometimes fail to provide concrete solutions. This situation calls for an in-depth academic study to formulate a more transparent and more applicable legal framework to anticipate and resolve concurrent delay issues in multi-year contracts in Indonesia.

Based on this background, this research focuses on a comprehensive analysis of concurrent delays and their implications for price adjustments in multi-year contracts from an Indonesian construction law perspective. *First*, this research examines the identification and allocation of responsibility for concurrent delays in multi-year contracts based on Indonesian construction service regulations, examining best practices, the rights and obligations of the parties, and the compensation that may arise. *Second*, this research analyzes the management of concurrent delays in construction contracts, including prevention, mitigation, and claim administration, such as calculating the delay period and compensation for project schedule delays, such as overhead claims. *Third*, this research examines the regulation and practice of unit price adjustments in multi-year construction work contracts under Indonesian construction law. *Fourth*, this research formulates effective and efficient dispute-resolution methods to address the issues of concurrent delays and price adjustments in multi-year contracts. The scope of this research is limited to a normative juridical analysis of legislation, jurisprudence, and legal principles related to concurrent

delays and price adjustments in multi-year contracts, supported by a case study of a construction project experiencing concurrent delays and its contractual implications.

This research aims to provide a holistic and in-depth understanding of concurrent delays and their implications for price adjustments in multi-year contracts for construction projects in Indonesia based on an analysis of applicable construction law. This research is expected to contribute to the development of contract law and construction law in Indonesia, particularly concerning the conceptual and normative underpinnings of concurrent delay and price adjustment issues, while also providing applicable recommendations for stakeholders in the construction industry. These recommendations encompass strategies for managing concurrent delays, calculating delay periods, processing cost claims, and resolving disputes. Thus, the results of this research can assist the parties in formulating more anticipatory multi-year contract clauses, minimizing the potential for disputes, and developing effective and efficient dispute resolution strategies. Furthermore, this research can serve as a consideration for the government in formulating more comprehensive and applicable policies and regulations in the field of construction law, specifically regarding the regulation of concurrent delays and price adjustments in multi-year contracts to support a more conducive investment and infrastructure development climate in Indonesia.

METHOD

This research employs a combination of normative juridical and case study approaches to comprehensively examine the phenomenon of concurrent delay and its implications for price adjustments in multi-year contracts within the perspective of Indonesian construction law. The normative juridical approach is the primary foundation for analyzing and interpreting legislation, jurisprudence, and legal principles relevant to the research issue (Sampara & Husen, 2016). Through this approach, this research will examine how Indonesian construction law regulates concurrent delay, the rights and obligations of the parties in multi-year contracts, and the mechanism for price adjustments. The case study incorporated in this research aims to complement and enrich the normative analysis by providing an empirical overview of the application of these legal concepts in Indonesian construction practices.

The primary data source in this research is secondary data consisting of primary and secondary legal materials (Irwansyah, 2021). Primary legal materials include Law Number 2 of 2017 and its implementing regulations, standard multi-year construction contract documents, and court or arbitration decisions related to concurrent delay and price adjustments. This research also examines secondary legal materials such as textbooks, law journals, scholarly articles, research results, and other publications relevant to the research topic. Secondary data is collected through literature study

techniques by manually searching the literature and utilizing online legal journal databases to ensure data comprehensiveness and recency.

To strengthen the normative juridical analysis, this research uses case studies of several construction projects in Indonesia that have experienced concurrent delays and raised contractual implications, particularly related to claims and price adjustments. These cases were selected purposively, with the main criteria being projects that use multi-year contracts and experienced significant concurrent delays that led to disputes or claims related to price adjustments. Case data is obtained and analyzed in depth through the analysis of authentic project documents, which include contracts and their addenda, periodic progress reports, correspondence between the parties, claim documents, and minutes of meetings. This case study will identify how clauses related to concurrent delay and price adjustment are formulated and applied in the contract, how claims are submitted, negotiated, and resolved, and the factors that influence the success or failure of these claims while maintaining the confidentiality of the identity of the project and the parties involved.

This research applies qualitative data analysis techniques to all collected data, both secondary data and data from case studies (Qamar & Rezah, 2020). Secondary data is analyzed using legal interpretation methods, including grammatical, systematic, historical, and teleological interpretations and legal construction, to understand the substance and meaning of legislation, jurisprudence, and legal literature. Data from case studies are analyzed by identifying patterns, comparing and contrasting between cases, and drawing relevant conclusions related to the research problem and objectives. The results of the normative analysis and case studies are then synthesized to produce a holistic and comprehensive understanding of concurrent delay and its implications for price adjustments in multi-year contracts. This research is descriptive-analytical and prescriptive, in which the researcher describes and analyzes in-depth and critically concurrent delay and price adjustment in multi-year contracts based on Indonesian construction law and prevailing practices, as well as formulates concrete recommendations addressed to stakeholders, namely contractors, project owners, legal consultants, and arbitrators, including providing constructive input for the government in drafting better regulations. Thus, this research is expected to provide an academic contribution to the development of contract law and construction law and practical benefits in minimizing and resolving construction disputes in Indonesia.

RESULTS AND DISCUSSION

This section presents the research results and a comprehensive analysis of concurrent delay and its implications for price adjustments in multi-year contracts within Indonesian construction projects. Based on a normative juridical approach and case studies, this section elaborates on the findings obtained from the literature review,

analysis of legislation, and case studies of construction projects that experienced concurrent delays. The discussion is structured into six interrelated parts, beginning with an exposition of the normative basis related to cost claims, project delays, and price adjustments, followed by a discussion on concurrent delay risk management, a case study analysis, the cost claim mechanism, empirical aspects of overhead claims, and concluding with an analysis of price adjustments in concurrent delay situations. A systematic and structured presentation is expected to achieve a holistic and in-depth understanding of the research problem, which will serve as a basis for providing constructive conclusions and recommendations.

A. Normative Basis for Cost Claims, Project Delays, and Price Adjustments in Indonesian Construction Contracts

The implementation of construction services in Indonesia, particularly projects with multi-year contract schemes, is inseparable from dynamics that have the potential to cause disputes between the parties. Project delays, cost claims, and price adjustments are crucial issues that often trigger conflicts (Wijaya, 2022; Sihombing et al., 2023; Rahmiko et al., 2025), especially in complex concurrent delay situations. A comprehensive and applicable normative foundation is needed to guide construction service actors in formulating and executing construction contracts to mitigate risks and provide legal certainty. A juridical analysis of relevant legislation is a fundamental step in understanding the parties' rights and obligations and examining the effectiveness of regulations in anticipating and resolving disputes that arise (Junaedi et al., 2025).

Law Number 2 of 2017, as the lex generalis, is the primary legal umbrella governing the construction service industry in Indonesia. This law lays down the basic principles of construction service implementation, including freedom of contract, the equal position of the parties, and a balance between rights and obligations. Article 47 of Law Number 2 of 2017 provides an essential legal corridor in the context of delays, cost claims, and price adjustments. This article regulates the minimum substance that must be included in a Construction Work Contract, covering the scope of work, contract price, unit prices, lump sum prices, timeframes for completion, warranty periods, payment methods, events of default, force majeure events, dispute resolution and choice of construction dispute resolution forum.

Article 47 of Law Number 2 of 2017 provides a strong legal basis for the parties to regulate their rights and obligations in more detail within the contract. Although it does not explicitly mention the term "concurrent delay," the clauses in this article, especially regarding events of default, force majeure, and dispute resolution, can be interpreted as a legal basis for submitting cost claims, time

extensions, and price adjustments in complex delay situations. Thus, Article 47 of Law Number 2 of 2017 emphasizes the importance of comprehensive provisions in the contract to anticipate several risks, including concurrent delay and provides a legal basis for dispute resolution.

As an implementing regulation of Law Number 2 of 2017, Article 82 of Government Regulation Number 22 of 2020 is relevant to the issue of changes in the scope of work, as it regulates the system for calculating the work results. More specifically, this article stipulates that in the event of a change in the scope of work based on an agreement between the Service User and the Service Provider, the lump sum price can be changed according to the agreed value of the work. The norm in Government Regulation Number 22 of 2020 provides practical guidance for the parties in managing and resolving claims, particularly those arising from changes in the scope of work.

Presidential Regulation Number 16 of 2018 applies to government procurement of goods/services, including construction projects financed by the State Budget/Regional Budget. Relevant to the regulation of multi-year contracts, Article 37 of Presidential Regulation Number 16 of 2018 regulates the requirements and procedures for calculating price adjustments applied to multi-year contracts. This article provides more specific guidance on price adjustments in multi-year contract schemes, often involving projects with high complexity and more significant risks.

Furthermore, Article 54 of Presidential Regulation Number 16 of 2018 regulates Contract Amendments, including changes to the schedule for the execution of work. Article 54 also affirms that changes that increase the contract value shall not exceed 10% (ten percent) of the price stated in the initial Contract. This limitation indicates an effort to maintain certainty and accountability in managing the state budget while providing a clear corridor for the parties to make contract changes. However, applying these two articles in concurrent delay requires a comprehensive interpretation, especially in determining causality and allocating responsibility for the delay.

Minister of Finance Regulation Number 60/PMK.02/2018 also has relevance in regulating multi-year contracts. This regulation governs the procedure for applying for approval of multi-year contracts, including applications for time extensions and/or additional costs. Articles 6 and 7 of Minister of Finance Regulation Number 60/PMK.02/2018 require a force majeure event or a change that provides more benefits to the construction project as the basis for applying for an extension of time and/or additional costs/budget. This regulation emphasizes the importance of careful analysis and substantial evidence in submitting claims,

primarily related to proving force majeure events and justifying more beneficial changes.

At the technical level, the Minister of Public Works and Housing Regulation Number 14 of 2020 provides operational guidelines for procuring construction services. Article 35 of Minister of Public Works and Housing Regulation Number 14 of 2020 regulates the preparation of draft Contracts for Limited Tenders or Tenders/Selections, which consist of the agreement letter, general contract conditions, and special contract conditions. The draft Contract is selected from standard Contracts, considering the work's characteristics.

Furthermore, Article 35 of Minister of Public Works and Housing Regulation Number 14 of 2020 mandates that the characteristics of the work, which at a minimum include the difficulty and risk of the work, the execution period, provisions for price adjustments, the amount of fines, and the involvement of subcontractors, and the choice of Contract dispute resolution, must be included in the special conditions of the Contract. Including these work characteristics, which are closely related to delay, claims, and price adjustments, shows the importance of detailed and comprehensive regulation in construction contracts. With clear and firm arrangements in the contract, it is hoped that the risk of disputes, including those caused by concurrent delays, can be minimized (El-Hoteiby et al., 2017). Finally, the established draft Contract becomes part of the Procurement Document and can only be changed with the approval of the Commitment Making Officer (Pejabat Pembuat Komitmen - PPK) (Mahardhika, 2021); this further emphasizes the position of the contract as a legal instrument that binds the parties and must be adhered to in its implementation.

B. Risk Management of Concurrent Delay in Multi-Year Contracts

Construction projects with multi-year contract schemes have high complexity and a long execution timeframe, increasing the risk of concurrent delays. Concurrent delay refers to a situation where two or more delay events are caused by the responsibility of different parties, co-occur, and overlap. The impact of concurrent delays on project schedules and costs can be significant and trigger complex disputes, especially regarding allocating responsibility and determining compensation. Therefore, comprehensive and structured concurrent delay risk management from the project initiation stage is crucial to ensure the smooth running and success of multi-year construction projects.

Effective concurrent delay risk management rests on two main pillars: contractual aspects and managerial aspects. From a contractual standpoint, drafting a meticulous and anticipatory multi-year contract is a fundamental

preventive measure. The clauses in the contract must explicitly and clearly define concurrent delay, regulate the mechanism for its identification, and determine the allocation of risks and responsibilities of the parties, including the right to submit claims for an extension of time and/or cost compensation. Force majeure and variation (change) clauses must also be carefully formulated to mitigate the risk of concurrent delays arising due to events beyond the parties' control or changes in the scope of work. Clarity and firmness of contractual arrangements will provide legal certainty and minimize the potential for differences in interpretation that could lead to disputes.

In addition to contractual aspects, concurrent delay risk management requires effective project planning and control from a managerial perspective. Realistic project scheduling that considers potential delay risks is a crucial initial step. The application of scheduling methods such as the Critical Path Method (CPM) and Program Evaluation and Review Technique (PERT) allows for the identification of the project's critical path and dependencies between activities to anticipate potential concurrent delays early (Mishra, 2020; Grzeszczyk et al., 2023). Good scheduling should also provide adequate float or time buffers to absorb delays, including those caused by concurrent delays. Thus, careful and measured planning contributes significantly to mitigating the risk of delays and their impact on the project schedule.

Intensive, transparent, and well-documented communication between the project owner, contractor, and subcontractors is key to managing the risk of concurrent delay. An effective communication mechanism must be established to exchange accurate and timely information regarding work progress, potential obstacles, and delay events (Utama & Sutrisno, 2023). Regular and well-documented reporting is important for identifying and monitoring concurrent delays in real time (Rakasatutya et al., 2023). With a solid communication system, the parties can proactively coordinate to take necessary mitigation measures, minimize the impact of delays, and prevent escalating problems that could exacerbate the concurrent delay situation.

Furthermore, in this digital era, the adoption of information technology and project management software can increase the effectiveness of concurrent delay risk management. Microsoft Project and Primavera P6 offer advanced features for progress monitoring, critical path analysis, and delay impact simulation (Sepasgozar et al., 2019; Rizal et al., 2022). This technology allows for early identification of potential concurrent delays and more accurately evaluating several mitigation scenarios. Thus, integrating information technology in managing multi-year construction projects contributes to more timely and targeted decision-making in managing the risk of concurrent delay, thereby minimizing the potential for

losses and disputes. Overall, the synergy between solid contractual aspects and effective project management, supported by good communication and technology, will form a comprehensive framework for managing the risk of concurrent delay in multi-year construction projects.

C. Case Study Analysis of Delay Periods in Concurrent Delay Situations

In construction projects, delays in work completion can be caused by several internal and external factors. Delays become more complex when two or more events causing the delay co-occur, known as concurrent delay. A systematic and data-driven approach is required to analyze concurrent delay and its implications for project completion time. This analysis becomes crucial in determining the allocation of responsibility among the parties, time extensions, and potential financial compensation. The following is a case study analysis of construction projects that experienced concurrent delay, emphasizing the steps of delay analysis.

1. Development of Activity List, Determination of Critical Path, and Identification of Dependencies Between Activities

The first step in analyzing delays, including those caused by concurrent delays, is to compile a complete list of all project activities, identify dependencies between activities, and determine the critical path. In one of the case studies examined, a multi-story office building project in an urban area, the main activities identified included excavation and foundation work, piling, steel structure erection, floor casting, and MEP (Mechanical, Electrical, and Plumbing) installation. Based on the agreed multi-year contract, the duration of each activity was estimated; for example, excavation and foundation work required 30 days, piling 25 days, steel structure erection 60 days, and floor casting 45 days. The CPM analysis applied to the data identified that the sequence of foundation work, steel structure erection, and floor casting formed the project's critical path. A delay in these activities would directly impact the overall project completion date. Understanding this critical path is crucial in allocating responsibility and calculating compensation in concurrent delay situations.

2. Determination of Planned Completion Date

The Planned Completion Date (PCD) is important in construction contracts, indicating the parties' commitment to the project completion target. In the case study, the contract stipulated a PCD of 31 July 2025, with a project start date of 1 January 2024. Thus, the total planned duration for completing the office building project was 577 calendar days. This PCD serves

as a reference point in calculating delays and as a basis for evaluating the contractor's performance. However, in practice, the PCD often shifts due to several factors, including concurrent delay, which requires further analysis to determine its contractual impact.

3. Identification and Documentation of Delay Causes

A crucial stage in concurrent delay analysis is carefully identifying and documenting the events causing the delays. In the case of the office building construction, two main events were identified as contributing to the concurrent delay. *First*, the contractor experienced a 14-day delay in delivering steel structure materials due to the supplier's negligence. The delivery of these materials began on 1 November 2024 and was only fully received on 14 November 2024. *Second*, there was severe weather in the form of high-intensity rain for 10 days, from 5 November 2024 to 14 November 2024, which significantly hampered work on site, mainly structural and finishing works. Although originating from different sources - supplier negligence and a natural phenomenon - these two events occurred concurrently and impacted the progress of steel structure erection, which was on the critical path. All these delay events, including dates, duration, and impact on project activities, were documented in detail in project progress reports and correspondence between the parties, which became important evidence in the legal analysis.

4. Calculation of Delay Duration

Calculating the delay duration in the context of concurrent delay requires careful analysis to determine the impact of each delay event on the overall project schedule. In this case, the 14-day delay in steel structure material delivery and the 10-day severe weather, which occurred concurrently from 5 November 2024 to 14 November 2024, caused a delay in the steel structure erection activity, which was on the critical path. Although the two events overlapped, an analysis of the project data showed that the delay in steel structure material delivery had a more dominant impact on the delay of the steel structure erection activity. Therefore, the calculation of the delay duration in this case focused on the material delivery delay, which was 14 days. Based on the dominant delay analysis, this calculation method is commonly used in construction practice when concurrent delays occur.

5. Revised Completion Date

After calculating the delay duration, the next step is determining the Revised Completion Date (RCD) to protect the new completion date. In the

case of this office building construction, considering the 14-day concurrent delay, the RCD is calculated by adding the delay duration to the initial PCD (31 July 2025). Thus, the project's RCD shifted to 14 August 2025. This shift in the RCD provides a more realistic picture of the project completion time and serves as a basis for claiming an extension of time and/or cost compensation.

6. Delay Analysis and Legal Responsibility

This stage involves a legal analysis to determine the allocation of responsibility for the concurrent delay and its implications for the rights and obligations of the parties based on the contract and applicable regulations. Referring to the force majeure clause in the contract and the provisions in Law Number 2 of 2017 and Government Regulation Number 22 of 2020, extreme weather can be categorized as an event beyond the contractor's control. Meanwhile, the delay in steel structure material delivery caused by the supplier's negligence, based on the principles of contract law, is the responsibility of the contractor. Thus, the contractor, in this case, has the potential to claim an extension of time due to bad weather but not for the delay in material delivery. This analysis must be supported by substantial evidence and solid legal arguments to convince the project owner and, if necessary, the arbitrator in the dispute resolution process.

7. Dispute Resolution and Claims

In cases of concurrent delay, differences in the interpretation of contract clauses and the allocation of responsibility often trigger disputes between the project owner and the contractor. Based on the case study findings, the contractor submitted a claim for a 10-day extension of time due to bad weather and a claim for cost compensation for the 14-day delay caused by the late delivery of materials and bad weather. The claim was based on the delay analysis described above, supported by evidence such as weather reports, revised schedules, and calculations of additional costs. However, the project owner rejected the cost compensation claim, arguing that the delay was also caused by other concurrent factors that were the contractor's responsibility. This case demonstrates the complexity of dispute resolution in concurrent delay situations and the importance of in-depth analysis and comprehensive evidence in supporting claims. The dispute resolution in this case was ultimately submitted to arbitration, where the arbitral tribunal will assess the evidence and legal arguments presented by the parties and then issue a binding award (Wisatrioda et al., 2025).

8. Documentation and Reporting

The findings of this case study underscore the importance of complete and accurate documentation at every stage of a construction project, especially in situations of concurrent delay. Project progress reports, correspondence between the parties, minutes of meetings, photos, and video documentation, as well as weather data, are examples of crucial documentation to support delay analysis and claims. In this case, the contractor periodically prepared delay reports that included details of the concurrent delay events, an analysis of their impact on the schedule, and the RCD calculation. These reports were submitted to the project owner and supervising consultant as a form of accountability and transparency. This good documentation not only serves as evidence in the claims and dispute resolution process but also provides valuable lessons learned for improving project management in the future. Through a comprehensive analysis of this case study, it is hoped that best practices, challenges, and practical strategies in managing concurrent delay in multi-year construction projects in Indonesia can be identified, thus increasing the efficiency and effectiveness of construction service implementation.

D. Mechanism for Cost Claims Due to Construction Project Delays

Delays in work completion often result in significant financial consequences in construction contracts, both for the project owner and the contractor. When delays occur, the cost claim mechanism becomes an important legal instrument for rebalancing the rights and obligations of the parties. Provisions regarding these cost claims are generally included in contract clauses and supported by applicable regulations, which aim to provide legal certainty and prevent prolonged disputes. From a juridical perspective, a comprehensive analysis of this cost claim mechanism is essential to understanding how financial compensation for project delays is negotiated and resolved.

The primary basis for submitting cost claims due to construction project delays stems from the principles of contract law and related regulations. Law Number 2 of 2017 and Government Regulation Number 22 of 2020, as the legal umbrella for the implementation of construction services in Indonesia, provide a normative corridor regarding the rights and obligations of the parties in the event of delays. Although they do not explicitly regulate the mechanism for cost claims, clauses related to breach of contract, changes in the scope of work, extensions of time, and dispute resolution in these regulations can be interpreted as a legal basis for submitting claims. In addition, specific clauses in construction contracts, formulated based on the principle of freedom of contract, become the primary

reference in determining the procedures, requirements, and amount of cost claims that can be submitted. Therefore, a deep understanding of the substance of the contract and related regulations is a prerequisite for the successful submission of claims.

In practice, the success of submitting a cost claim due to delay depends heavily on the ability of the claiming party to prove four main elements. *First*, it must be proven that there has been a delay in project completion. *Second*, the claiming party must be able to identify and classify the type of delay, whether it falls into the excusable or non-excusable delay category. *Third*, there must be an accurate and accountable calculation of the loss or additional costs incurred due to the delay. *Fourth*, the claiming party must demonstrate a clear causal relationship between the delay event and the claimed loss. These four elements are interrelated and must be cumulatively met to support the validity of the cost claim.

The classification of delay into excusable delay and non-excusable delay is a determining factor in defining the rights and obligations of the parties regarding cost claims. Excusable delay, generally caused by events beyond the contractor's control and not reasonably foreseeable (Livengood, 2017), such as force majeure events, changes in government policy, or concurrent delays caused by the project owner, entitles the contractor to claim an extension of time without penalty. Under certain conditions, the contractor may also be able to claim cost compensation for losses incurred, such as extended overhead costs or other costs that can be proven to be directly caused by the excusable delay. Conversely, a non-excusable delay arising from the contractor's negligence or fault (Handayani, 2016), such as poor project management or delays in material procurement, does not entitle the contractor to claim an extension of time or cost compensation. Instead, in the case of non-excusable delay, the contractor may be subject to liquidated damages or held liable for losses suffered by the project owner.

Thus, a clear distinction, supported by substantial evidence, between excusable delay and non-excusable delay becomes crucial in submitting and resolving cost claims due to delay. The parties to a construction contract must carefully document each delay event, identify its causes, and analyze its impact on the project schedule and cost. Good documentation, supported by comprehensive analysis and solid legal arguments, will strengthen the parties' position in negotiations and, if necessary, resolve disputes through mechanisms agreed upon in the contract, such as arbitration. Ultimately, an effective and efficient cost claim mechanism contributes to the fair completion of construction projects by the applicable principles of contract law.

E. Empirical Aspects of Overhead Claims in the Perspective of Concurrent Delay

In construction contract law, compensation for indirect costs, better known as overhead, is crucial in resolving disputes arising from project delays (Hurulean & Maskur, 2024). Overhead claims become increasingly complex and challenging when the delays are concurrent, where two or more delay events caused by different parties overlap. An analysis of the empirical aspects of overhead claims in the context of concurrent delay is important to understand how these claims are formulated, proven, and resolved in construction practice in Indonesia. By examining case studies of projects experiencing concurrent delays, this research will examine the factors that influence the success of overhead claims and identify best practices in their management while adhering to the principles of contract law and applicable regulations.

Overhead in construction projects can generally be categorized into general overhead (also known as home office overhead) and project-specific overhead. General overhead refers to the overall operational costs of the contractor's company that cannot be directly attributed to a specific project but are still necessary to support the continuity of the contractor's business (Wibowo & Santoso, 2024). These costs include, but are not limited to, central management salaries, head office rent, head office utilities, company insurance, and marketing costs. Meanwhile, project-specific overhead is indirect costs that can be identified and explicitly allocated to a particular project (Wicaksono & Triasari, 2024), such as project manager salaries, field office rental and operational costs, and communication and transportation costs directly related to the project. A clear distinction between these two types of overhead is fundamental in preparing and analyzing overhead claims.

In the context of concurrent delay, a contractor may submit an overhead claim to seek compensation for overhead costs that still had to be incurred during the delay period, even though the delay was caused by events beyond its control (e.g., excusable delay caused by the project owner). Theoretically, general overhead claims in concurrent delay situations are more challenging because the contractor must convincingly demonstrate that the delay prevented the contractor from obtaining new projects that could absorb these general overhead costs. In addition, the contractor must be able to proportionally and fairly allocate the claimed general overhead costs to the project experiencing the concurrent delay. Several calculation methods, such as the Eichleay Formula (Davis & Ibbs, 2016), are often used, but their application in the context of concurrent delay is still debated and requires case-by-case analysis.

Unlike general overhead, claims for project-specific overhead in concurrent delay situations are generally easier to justify. The contractor can argue that project staff salaries and field office operational costs still had to be incurred during the concurrent delay period, even though the contractor was not entirely responsible. Nevertheless, proving project-specific overhead claims still requires complete and accurate documentation of these expenses. The contractor must also demonstrate that these costs were reasonable, necessary, and unavoidable during the concurrent delay period. In practice, debates often arise regarding the proportion of project-specific overhead that can be claimed, given the contribution of delays from the contractor itself in concurrent delay situations.

Findings from case studies on concurrent delay in Indonesia show that the success of overhead claims depends heavily on the strength of the evidence, the accuracy of the calculations, and the legal arguments constructed. Contractors who systematically document delay events, identify their causes, and administer overhead costs in detail have a greater chance of succeeding in their claims. The ability to demonstrate a causal relationship between the concurrent delay and the unavoidable increase in overhead costs is key. Furthermore, dispute resolution through negotiation, mediation, or arbitration is a standard mechanism used to reach an agreement on the amount of overhead compensation that is fair and reasonable for the parties. This empirical analysis provides valuable insights for construction industry players, academics, and policymakers in developing more effective claim management and dispute resolution strategies, especially in dealing with the complexities of concurrent delay in multi-year construction projects.

F. Price Adjustment in Multi-Year Contracts in Concurrent Delay Situations

In construction contracts, especially those with long durations (multi-year), cost fluctuations are a risk that is almost impossible to avoid. To anticipate this, price adjustment (or escalation) clauses are commonly used contractual instruments. These clauses provide a legal corridor for the parties, especially the contractor, to adjust the agreed contract value in response to changes in external conditions that affect the cost of executing the work. In principle, price adjustments aim to balance the parties' rights and obligations and prevent unjust enrichment due to factors beyond their control. However, in the context of concurrent delay, the application of these clauses presents its complexities, especially in calculating the amount of adjustment and allocating responsibility among the parties contributing to the delay.

1. Factors Affecting Price Adjustment

From a contract law perspective, price adjustments in multi-year contracts must be based on factors that substantially affect the cost of work

execution and could not be reasonably anticipated at the time of contract signing. Law Number 2 of 2017 and Government Regulation Number 22 of 2020, although not regulating price adjustments in detail, provide a normative basis regarding contract changes and the principle of good faith, which can serve as a legal basis for making price adjustments. In practice, the factors commonly considered include: *First*, significant and unexpected fluctuations in the prices of construction materials, such as steel, cement, and asphalt, can cause contractors to bear cost burdens far exceeding their estimates. *Second*, increases in labor wages, triggered by inflation, changes in minimum wage policies, or shortages of skilled labor, can trigger price adjustments. *Third*, unforeseen changes in project site conditions, such as geotechnical conditions differing from initial investigation results or the discovery of archaeological sites, can result in changes in work methods, additional execution time, and significant cost increases.

Fourth, changes in government policies that directly impact construction costs, such as changes in tax rates, import duties, or regulations related to material imports, can also be a basis for requesting price adjustments. *Fifth*, project delays classified as excusable, including force majeure or concurrent delays caused by the project owner, can also entitle the contractor to claim price adjustments. It is based on the principle that the contractor should not bear additional cost burdens arising from events beyond its control or due to the negligence of the project owner. In all these conditions, the price adjustment clause in the multi-year contract must clearly and explicitly regulate the factors that can be considered, the claim submission procedure, and the calculation method that will be used to determine the amount of the price adjustment.

2. Methods for Calculating Price Adjustments

The determination of the amount of the price adjustment in construction contracts is generally carried out through calculation methods agreed upon and stated in the contract. One method often used is the Price Index Method (Cagl, 2019). In this method, the amount of the price adjustment is linked to fluctuations in relevant and objective price indices, such as the Wholesale Price Index (WPI) for construction materials or the construction labor wage index published by the Central Bureau of Statistics (BPS). The calculation formula using the price index method usually includes the cost components that can be adjusted, the weight of each component, and the base price index used as a reference.

For example, if the price of cement used in the project increases by 10% based on the WPI published by BPS, and the price of cement is a component that

weighs 40% of the unit price of concrete work, then the unit price of concrete work can be adjusted. If the initial unit price of concrete work is IDR 100,000, the price adjustment can be calculated as follows: Adjustment = IDR 100,000 x 40% x 10% = IDR 4,000. Thus, the new unit price of concrete work becomes IDR 104,000. Using standardized and widely recognized price indices provides objectivity and transparency in calculating price adjustments and minimizes the potential for disputes regarding the adjustment amount.

Another method that can be applied is the Cost-Plus Method (Markay & Ramadhan, 2021). Unlike the price index method, this method calculates the price adjustment based on the sum of direct costs that are proven to have increased, such as material costs and labor wages, plus a previously agreed-upon profit margin. Applying this method requires the contractor to present evidence of accurate, well-documented, and verifiable expenses. This method provides a more realistic picture of the cost increases experienced by the contractor but requires stricter administration and bookkeeping. In addition, the Direct Compensation Method can also be used, especially to calculate price adjustments due to changes in specific conditions that have been regulated in the contract (Yamali, 2017), such as design changes or unforeseen field condition changes. In this method, the contractor submits a claim for additional costs directly caused by these changes, along with supporting evidence of expenses and detailed calculations.

In the context of concurrent delay, the calculation of price adjustments becomes more complex because the overlapping delay factors and the allocation of responsibility among the parties must be considered. The contract must regulate how the price adjustment is calculated in a concurrent delay situation, whether by dividing the proportion of responsibility based on the duration of each party's delay or by using a dominant delay approach, which focuses on the most dominant cause of the delay. Furthermore, an analysis of case studies on concurrent delay in Indonesia shows that resolving disputes related to price adjustments often involves a complex negotiation process and sometimes ends in arbitration. These empirical findings underscore the importance of comprehensive and anticipatory price adjustment clause arrangements in multi-year contracts, supported by the good faith and professionalism of the parties in managing and resolving claims. Ultimately, clarity and firmness in regulating price adjustments in construction contracts contribute to legal certainty, minimize the potential for disputes, and support a healthy investment climate in the construction service sector.

CONCLUSIONS AND SUGGESTIONS

Based on the results and discussion outlined above, it can be concluded that handling concurrent delay and its implications for price adjustments in multi-year contracts in Indonesia is a complex issue and requires a comprehensive analysis, both from a juridical and empirical perspective. As stipulated in Law Number 2 of 2017 and its implementing regulations, Indonesian construction law does not explicitly regulate concurrent delay. However, clauses related to breach of contract, force majeure, changes in the scope of work, and dispute resolution in these regulations, especially Article 47 of Law Number 2 of 2017, as well as generally applicable contract law principles, can be used as a legal basis for claiming extensions of time and cost compensation, including in situations of concurrent delay. In practice, drafting meticulous and anticipatory multi-year contracts with clauses that clearly and explicitly regulate concurrent delay, risk allocation, and price adjustment mechanisms becomes crucial to minimize the potential for disputes and provide legal certainty for the parties.

Effective concurrent delay risk management in multi-year contracts requires synergy between contractual and managerial aspects. In addition to drafting comprehensive contracts, the parties, especially the contractor, must implement careful project planning and control through realistic scheduling using methods such as CPM and PERT and providing adequate float. Well-documented and effective communication between the parties is a key factor in proactively identifying and responding to concurrent delays. Adopting information technology and project management software, such as Microsoft Project and Primavera P6, also contributes to more effective early identification and mitigation of concurrent delay risks.

Analysis of case studies of multi-year construction projects experiencing concurrent delay shows that applying delay analysis methods, such as dominant delay analysis, is important for determining the allocation of responsibility and calculating compensation. The findings of these case studies also underscore the importance of complete and accurate documentation, including project progress reports, correspondence, weather data, and evidence of expenses, as evidence in the claims process and dispute resolution. Furthermore, these case studies illustrate the complexity of proving and calculating cost claims, particularly those related to general and project-specific overhead claims, in concurrent delay situations. The success of these overhead claims depends heavily on the contractor's ability to demonstrate a causal link between the concurrent delay and the unavoidable increase in overhead costs, supported by detailed cost administration and documentation.

In concurrent delay situations, price adjustments in multi-year contracts present challenges, especially in determining the adjustment amount and allocating

responsibility. Although contracts can regulate price adjustments based on the price index method, cost-plus method, or direct compensation method, applying these methods in the context of concurrent delay requires careful analysis of the factors causing the delay and the contribution of each party. The absence of specific regulations regarding concurrent delays in existing regulations opens room for differences in interpretation and disputes, often resolved through complex negotiations or arbitration. Ultimately, clear and firm regulation of price adjustments in multi-year contracts, supported by the good faith and professionalism of the parties, contributes to legal certainty and a healthy investment climate in the Indonesian construction service sector.

Based on the above conclusions, it is recommended that stakeholders in the construction service industry in Indonesia, especially those involved in multi-year projects, strengthen contractual and managerial aspects to mitigate the risk of concurrent delay and minimize the potential for disputes. *First*, the parties, especially the project owner and the contractor, must draft multi-year contracts with clauses that clearly and explicitly regulate the definition, identification, risk allocation, and handling mechanisms for concurrent delay. The contract should contain detailed procedures for submitting claims for time and cost compensation extensions, including documentation and evidentiary requirements that the claiming party must meet. *Second*, construction service actors must increase their capacity and capability in applying up-to-date scheduling methods, such as CPM and PERT, and conducting comprehensive delay analyses, including analyses of dominant impact in concurrent delay situations. A deep understanding of the concepts of float, critical path, and delay analysis methods is crucial for managing concurrent delay risk effectively.

Furthermore, it is recommended that contractors implement a complete, accurate, and real-time documentation and reporting system. It is not only limited to recording the project's physical progress but also includes documentation of delay events, correspondence between the parties, weather data, and evidence of expenses, including overhead costs. Good documentation will be essential in submitting claims, negotiations, and dispute resolution. In addition, project owners are advised to apply the principles of prudence and good faith in responding to claims submitted by contractors by carrying out objective verification and evaluation of the evidence presented. Dispute resolution through negotiation and mediation should be prioritized before arbitration or litigation to achieve a win-win solution and maintain good relations between the parties.

Furthermore, to strengthen the legal basis and provide better legal certainty, it is recommended that the Government, in this case, the Ministry of Public Works and Housing, draft more specific and comprehensive regulations regarding concurrent

delays in construction contracts. These regulations are expected to provide a clear definition of concurrent delay, regulate the mechanism for its identification and proof, allocate the risks and responsibilities of the parties, and provide guidelines regarding the calculation of extensions of time and cost compensation, including overhead claims and price adjustments. Drafting these regulations needs to involve input from practitioners, academics, and professional associations in the construction service sector to ensure that the resulting regulations are applicable and by needs in the field. Finally, it is recommended that researchers and academics conduct further studies and research on concurrent delay in the context of Indonesian construction law, especially those related to multi-year contracts. Future research can focus on developing effective and efficient dispute resolution models, formulating more anticipatory contract clauses, and analyzing jurisprudence related to concurrent delays to contribute more significantly to developing contract law and construction law in Indonesia.

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