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Research Paper

Claims in the Construction Contract of the 150 KV Sumatera-Bangka Submarine Cable During the COVID-19 Pandemic

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Abstract: The construction of the 150 kV Sumatra–Bangka interconnection utilizes a submarine cable as the primary transmission route to transfer power from Sumatra to Bangka, which operates as an isolated system. This initiative entails building a 150 kV transmission network originating from the Sumatra area, commencing at the Tanjung Api-Api Substation (GI Tj. Api-Api) to the Tanjung Carat arrival site. From the Tanjung Carat landing site, the network connects to the 150 kV Sumatra-Bangka underwater cable, and from the Muntok landing site to the Muntok Substation (GI Muntok). The implementation of the 150 kV submarine cable construction contract took place during the Covid-19 pandemic. This situation posed significant challenges for the contractor in executing the work, leading to the submission of claims for the encountered difficulties. This study examines the challenges faced by the contractor, the claims submitted, and the contractual basis outlined in the agreement. The findings of this study indicate that the contractor's claims are justified, as the challenges arose due to the Covid-19 pandemic, and the contract includes clauses that support the claims.

Keywords: Claims, Construction Contracts, Contractual Clauses, Infrastructure Projects, Legal Challenges.

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1. Introduction

Indonesia is a maritime country, consisting of numerous islands separated by the sea, including the Bangka Belitung Archipelago. Currently, the electricity system in the Bangka Belitung region is divided between its two major islands, Bangka and Belitung. The electricity system on Bangka Island is supplied by PLN-owned power plants as well as rented facilities. The geographical layout of Bangka Belitung, with its two major islands separated by the sea, results in an isolated electricity system. Muhlis & Valdiansyah [1] addressing issues in construction projects, such as isolation, requires a thorough understanding of the contributing factors and tailored strategies to overcome them, ensuring alignment with regional infrastructure and economic development goals.

To address this, a 150 kV submarine cable interconnection project between Sumatra and Bangka is essential. This project includes the construction of a 150 kV transmission network from the Sumatra side, starting at the Tanjung Api-Api Substation (GI Tj. Api-Api) to the Tanjung Carat landing point. From the Tanjung Carat landing point, the network extends to the 150 kV Sumatra-Bangka submarine cable, and from the Muntok landing point to the Muntok Substation (GI Muntok). The interconnection involves the development of a 150 kV submarine cable line spanning 36 kilometers, making it the longest submarine cable line in Indonesia [2]. As highlighted by Umar & Ochigbo [3], effective infrastructure planning, particularly in challenging geographies like Indonesia, demands not only technical precision but also robust contract management and stakeholder collaboration to address potential claims and disruptions.

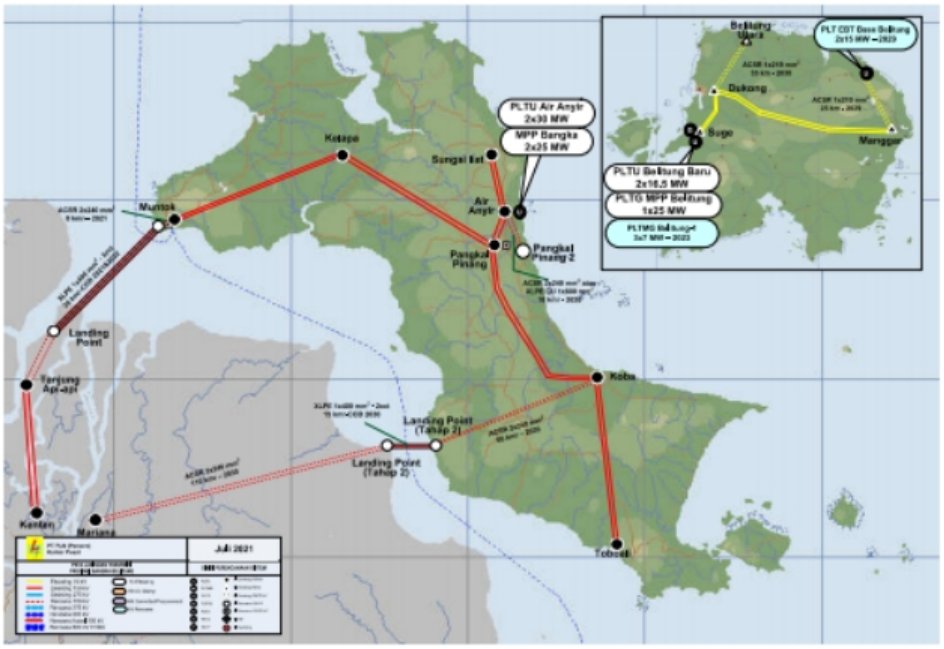

Figure 1 Map of the Sumatra - Bangka Interconnection

The Construction Contract for the 150 kV Sumatra–Bangka Submarine Cable Installation is highly dynamic, with the contract price subject to changes over time due to adjustments in volume or modifications in execution methods. These changes may result from instructions issued by the service user through a Variation Order (VO) or from work that must be undertaken without explicit instruction to ensure project completion, known as a Constructive Change Order (CCO) [4].

This research provides a novel perspective by focusing on the impact of extraordinary global events, such as the COVID-19 pandemic, on large-scale infrastructure projects, particularly through the lens of contract management and dispute resolution. Unlike prior studies, which often emphasize technical challenges or project delays in isolation, this study uniquely integrates the implications of regulatory changes, force majeure events, and contractual claims. The findings aim to contribute to the development of adaptive contract management frameworks and robust dispute resolution mechanisms that address the complexities introduced by global disruptions in maritime infrastructure

projects. By emphasizing the critical intersection of legal and operational dynamics, this study offers actionable insights for practitioners and policymakers navigating the evolving challenges of construction contracts during crises.

2. Literature Review

The challenges faced by the contractor began with the mobilization of personnel and equipment and extended to the project preparation process. These challenges notably impacted the preparation of the cable-laying vessel prior to its departure to the cable factory in Japan and the subsequent cable loading process in Japan. Nevertheless, the contractor made extra efforts to maximize the preparation of the vessel and the cable loading operations. This was achieved despite the growing spread of the COVID-19 pandemic, which brought about regulatory changes resulting in restrictions on activities and travel.

From a theoretical perspective, the "General Theory of Obligations and Contracts" provides a foundational framework for understanding the rights and obligations arising in contractual relationships. According to this theory, a contract is a legally binding agreement that creates enforceable rights and obligations for the parties involved. This principle underpins the legal mechanisms for claims in construction contracts, where breaches, delays, or unforeseen circumstances like the COVID-19 pandemic are assessed against the agreed contractual terms. The theory highlights that every obligation must align with legal, moral, and good faith principles to ensure fairness and equity between parties. Such a framework is pivotal in analyzing the contractor's claims, as it justifies their requests for additional costs and time extensions under the force majeure clauses stipulated in the agreement.

Additionally, other challenges arose due to discrepancies between the burial specifications and submarine cable routes outlined in the contract and the permit documents issued by the Directorate General of Sea Transportation at the Ministry of Transportation of the Republic of Indonesia ("Directorate General of Sea Transportation"). This led to changes in the seabed depth contours, necessitating additional equipment to address the emerging obstacles. This situation also required a decision on the specific cable burial depth to meet both contract requirements and applicable regulations. At the time when all equipment was ready for cable-laying and burial operations, the burial depth specifications had not yet been finalized, causing the vessels to remain idle, awaiting further instructions.

As Matseke & Khatleli [5] emphasize, claims are inevitable in large-scale projects, often resulting from ambiguous contract documents, scope changes, and delays. Without effective management strategies, these issues can escalate into disputes, consuming significant resources and delaying project completion.

As highlighted in recent studies, construction projects frequently face delays and additional costs due to conflicts and disputes arising from insufficient contract understanding, misaligned expectations, and external disruptions such as regulatory or site condition changes. Effective contract management and dispute resolution mechanisms, including the use of advanced technologies like blockchain and BIM, have been proposed as potential solutions to these issues [6].

As highlighted by Nugroho and Hardjomuljadi, the inefficiencies caused by the COVID-19 pandemic—such as delays in procurement, mobilization, and material distribution—created significant disruptions in the construction sector, leading to increased project costs and delays. These challenges necessitate robust claim management systems to address the contractual and operational impacts of such unprecedented disruptions [7]

Due to these challenges, the Contractor submitted a claim. Claims can be categorized into three main categories: external factors, owner-related factors, and planning consultant-related factors [8]. Previous research highlights that construction claims, particularly those involving payment delays, contract ambiguities, and differing site conditions, are recurrent issues in the industry. These claims not only extend project timelines but also escalate costs and strain relationships among stakeholders [9].

According to Harjomuljadi, a claim is defined as follows [10]:

1) General Definition
   A demand for a right along with a request for redress related to the violation of that right.
2) Legal Definition
   A claim statement is the first request by a plaintiff in a civil lawsuit, initiated by issuing an order. This applies to the defendant as of the date the order becomes effective or within 14

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days of the defendant entering the jurisdiction of the claim. A claim statement sets out the causes of the lawsuit and supports it with material facts of the case. The legal definition typically comprises three parts:

1. Descriptions and aspects of the case,
2. Causes of the lawsuit, and
3. Relief sought.

The purpose is to allow the defendant to respond to the claim directed against them. If the claim does not present reasonable grounds, the defendant may request its dismissal [10].

Construction claims, on the other hand, are defined as claims arising from or related to the execution of construction service work between the Service User and the Service Provider, or between the main Service Provider and subcontractors or suppliers, or between external parties and the Service User/Provider. These claims typically concern requests for additional time, costs, or other compensation [11].

According to Galih & Sarwono, construction claims arise due to differences in contract interpretation or changes in the agreed-upon substance, which can originate from one of the parties to the contract, a third party, or unforeseen events (force majeure). The primary causes of claims often stem from the desire to seek justice or to capitalize on certain opportunities provided by the contract system [12].

3. Methodology

Challenges Faced by the Contractor in the 150 kV Sumatera-Bangka Submarine Cable Project. This research aims to analyze the factors causing construction claims by examining a case study of the 150 kV Sumatera-Bangka Submarine Cable Project during the COVID-19 pandemic. Data analysis was conducted through a literature review to explore the causes of construction claims in the contract for the 150 kV Sumatera-Bangka submarine cable construction. The research object is the construction service contract. The literature reviewed will focus on identifying factors contributing to construction claims project.

4. Findings and Discussion

4.1. Claim for Additional Costs Due to Changes in Cable Route

There is a discrepancy between the contracted cable route data and the permit issued by the Directorate General of Sea Transportation (Dirjen Hubla). As a result of the changes in the subsea cable route, some areas were discovered to have a sea depth of less than 3 meters (shallow areas). Initially, based on the contract, nearly all areas were accessible to the main vessel (with a sea depth of more than 4.5 meters). However, based on the coordinates from the issued permit, the sea depth in some areas was found to be less than 3 meters, making it impossible for the main vessel to operate in those shallow areas. Consequently, an additional vessel/platform was required to conduct subsea cable installation operations in these shallow areas.

For the subsea cable installation, the contractor deployed an additional auxiliary vessel to perform transpooling and cable installation operations in the shallow areas. This led to the operation of two vessels for the Sumatra-Bangka subsea cable laying and burial, the main vessel and the auxiliary vessel. Due to the deployment of this additional vessel, the contractor filed a compensation claim for the associated costs. The design changes between the contracted route and the permitted route resulted in additional works, which typically affect the project's cost and timeline [13].

4.2. Compensation for Costs Due to Regulatory Changes Related to COVID-19

The contractor faced several challenges during the project execution, particularly in vessel preparation and cable loading, due to the widespread COVID-19 pandemic and subsequent regulatory changes, including restrictions on activities and travel. The COVID-19 pandemic is a global factor impacting tools, materials, and labor. The implementation of activity restriction policies, such as Work from Home (WFH), Work from Office (WFO), and lockdowns, has significantly affected project execution in the field, prompting contractors to submit construction claims [14]. Under Indonesian construction contract law, COVID-19 may qualify as force majeure if explicitly stated in the contract's force majeure clause. If not explicitly mentioned, it may still be considered force majeure under the Ministry of Public Works and Housing (PUPR) Instruction No. 02/2020 [15].

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1) Vessel Preparation Process at Shipyard

The Vessel Preparation process at the Batam Shipyard is conducted prior to the cable loading work, as outlined in the initial execution schedule. According to the initial schedule, the Vessel Preparation process begins with the Naval Architect & Class Approval stage. This process commenced in early December 2020 with an estimated duration of 14 days. However, numerous challenges were encountered during its execution. These challenges include the following:

1. The spread of the COVID-19 pandemic and restrictions on activities and mobilization.
2. A notification letter from the Naval Architect vendor stating that their workforce and experts were exposed to COVID-19, requiring a 14-day quarantine period. As a result, the Naval Architect faced difficulties mobilizing engineers to Batam to conduct a survey of the actual conditions used as the basis for the vessel preparation design process.
3. The Class Approval process for the vessel's structural modification design required experts to be brought in from Germany. Due to the COVID-19 situation in both Germany and Indonesia, these experts were unable to travel to Indonesia.

This is in line with what Adonia stated, that external factors, such as new regulations and extraordinary events, including the COVID-19 pandemic, can be categorized as force majeure in construction contracts. The pandemic triggered significant policy changes, such as restrictions on mobility and activities, which directly affected the smooth execution of projects and the completion of construction works [16].

As a result of the challenges mentioned above, the completion of the Naval Architect & Class Approval could only be finalized at the end of January 2021. The main vessel docked at a shipyard in Batam at the end of January 2021 to begin preparations for the installation of equipment before departing to Japan for the cable loading process. During the preparation of the main vessel, several issues arose due to the Covid-19 pandemic, including the following:

1. The contractor was unable to conduct an equipment carousel survey at the Drammen Yard due to the lockdown situation in Norway.
2. The shipment of the carousel from Drammen Yard in Norway to Indonesia was delayed because of Covid-19, causing setbacks.
3. Technicians from Drammen Yard could not be present in Batam due to lockdown conditions in both Norway and Indonesia.

According to the work method planned by the contractor, the departure of the main vessel to Japan requires transportation using a Submersible Vessel (SV). The availability of SVs globally is very limited, and each has its own sailing schedule. A contract with the SV had been established with the original schedule of arrival in Batam set for mid-February 2021. However, due to challenges during the preparation of the main vessel, the SV's arrival in Batam had to be rescheduled.

Nevertheless, the SV owner stated that the vessel could only be delayed until the end of March 2021, otherwise, the SV owner would cancel the contract. Furthermore, the SV would only be able to perform a one-way trip (from Batam to Japan) and would not be available to return the main vessel to Indonesia after cable loading is completed. To minimize further delays, the contractor agreed to reschedule the SV's arrival to the end of March 2021.

Due to the unfinished preparation process of the main vessel, the Contractor received a warning from the SV owner, emphasizing that the SV must depart promptly as it had been on standby in Batam since mid-March 2021.

Additionally, in the initial plan, the main ship crew was to be sent to Japan using air transportation. However, due to the impact of the emergency state enforced in Japan, which prohibits foreign nationals from entering the country, the main ship crew could not be dispatched to Japan. The contractor sought alternative solutions to ensure the cable loading process could proceed, including:

1. Contacting the Japanese embassy in Indonesia to arrange departure permits for the ship crew.
2. Negotiating with the owner of the SV to allow the main ship crew to join the voyage to Japan.

Ultimately, the Contractor arrived at the best solution, which was to allow a portion of the main vessel's crew, as permitted by the SV owner, to travel to Japan along with the main vessel and the SV. However, the SV owner only allowed 6 crew members out of the minimum required 12. The remaining crew needed for the cable loading process would be sourced locally in Japan. This decision was made while considering the following challenges:

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1. The SV's departure was scheduled no later than early April 2021.
2. The preparation of the main vessel was completed solely for the cable loading process, with the cable-laying equipment not yet installed.
3. The negotiation outcomes with the SV owner regarding the departure of the main vessel's crew.

Therefore, to avoid further delays in cable loading in Japan, the Contractor decided to dispatch the main vessel in early April 2021.

2) Cable Loading Process

The main vessel departed from Batam in early April 2021 and arrived at the Japanese territorial waters at the end of April 2021. According to information from the main vessel's agent in Japan, there was a change in the application manner required by the Japan Coast Guard (JCG), which mandated the availability of a support vessel (SV) to obtain entry and exit permits to and from Japan after cable loading was completed (float-off and float-on permits). Due to this application system and the one-trip nature of the SV, administrative permitting issues arose in Japan. As a result, the contractor made efforts to find an SV to transport the main vessel from Japan to Indonesia after cable loading was completed. However, due to the limited availability of SVs globally, additional time was required to secure an SV with a schedule that aligned with the completion of cable loading.

Furthermore, the arrival of the main vessel coincided with the start of Japan's national holiday (Golden Week) from April 29, 2021, to May 5, 2021. This situation caused the main vessel's float-off permits to only be processed after the Golden Week period, resulting in the float-off permits being obtained after the Golden Week. This led to the SV and the main vessel having to standby for two weeks outside Japanese waters. Another challenge encountered was the limited availability of main vessel crew members who could be deployed to Japan, requiring additional time to acquire supplementary crew from the local Japanese workforce. According to information from the agent in Japan, the additional crew, based on the latest schedule for cable loading, could only be arranged by the end of May 2021.

The above conditions caused the permit from JCG for cable loading to be obtained only in early June 2021, and the cable loading process could only commence in mid-June 2021. In early July 2021, the main vessel arrived in Indonesia (Cilegon) and proceeded with the customs clearance and float-off process from the SV vessel. Subsequently, the main vessel carried out the installation process for cable laying and burial equipment, which had been previously delayed.

3) Installation of Cable Laying and Burial Equipment

The main vessel arrived in Cilegon in early July 2021 to proceed with the installation of cable laying and burial equipment. This installation work was initially scheduled to be completed before the main vessel departed for Japan. However, due to several challenges as outlined in the explanation above, the work could only be carried out after the vessel returned from Japan. During the equipment installation process at the Cilegon shipyard, several obstacles were encountered, including:

1. Implementation of PPKM (Community Activity Restrictions) in Java and Bali (Cilegon fell under levels 3 and 4).
2. A shortage of oxygen, which is essential for welding processes.

Thus, the installation of equipment for laying and burying the new cable could be completed by the end of August 2021, and subsequently, the main vessel proceeded to the laying location at the end of August 2021.

4.3. Cost Claim for Vessel Idling Related to Changes in Burial Depth

In early September 2021, the contractor was prepared to carry out the laying and burial of cables in the designated deployment area, as stated in the contractor's daily report to the project owner. However, the contractor was unable to commence the cable laying and burial due to awaiting a decision from the project owner regarding the cable burial depth. This delay was caused by discrepancies between the specifications for submarine cable burial and the submarine cable route outlined in the 150 kV Submarine Cable Project Contract and the permits issued by the Directorate General of Sea Transportation at the Ministry of Transportation of the Republic of Indonesia (Dirjen Hubla).

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In mid-September 2021, the contractor sent a notification to the project owner to initiate the transpooling, laying, and burial process of the submarine cable. The decision regarding the cable burial depth was made during a meeting between the Ministry of Transportation's Directorate General of Sea Transportation (Hubla), the project owner, and the contractor in mid-October 2021, concluding that the burial depth would comply with the permits issued by Hubla.

From the explanations above, it is evident that claims arise due to external factors such as central/local government policies issued after the contract signing, which affect project objectives (cost, quality, and time), as well as force majeure [17]. This aligns with previous research conducted by Vivi Ariani et al. [18].

4.4. The Legal Basis of Contractual Claims

Contractually, the legal basis for the claim is stipulated in the contract under the section:

1) General Terms and Conditions of the Contract (SSUK), Compensation Clause:
   Compensation may be granted to the Goods/Services Provider in the following circumstances:
   1. The Goods/Services User modifies or changes the schedule in a way that affects the work of the Goods/Services Provider.
   2. The Goods/Services User instructs the Goods/Services Provider to conduct additional testing, and the testing subsequently reveals no damage, failure, or deviation.

2) General Terms of Contract (SSUK), Force Majeure Clause:
   1. Definition of Force Majeure: Force Majeure refers to a situation beyond the control of the parties that renders the obligations stipulated in the agreement/contract impossible to fulfill.
   2. Events Classified as Force Majeure: Events that may be categorized as Force Majeure include war, riots, revolution, natural disasters, earthquakes, strikes, fires, governmental actions in monetary/financial matters, shutdowns, or other industrial disruptions, acts of enemies, war, blockades, rebellions, epidemics, landslides, storms, lightning, floods, civil disturbances, explosions, and other causes beyond the control of either party and which cannot be mitigated despite exercising due diligence.
   3. Exclusion of Fault or Negligence: Force Majeure does not include detrimental circumstances caused by the actions or negligence of the parties.
   4. Exemption from Penalties: Delays in the execution of work due to the occurrence of Force Majeure shall not incur penalties.
   5. Loss Allocation: Responsibility for losses arising from Force Majeure shall be subject to the agreement of the parties.
   6. Mitigating Actions: Actions taken to address Force Majeure situations shall be determined based on mutual agreement between the parties.

   In the event of a Force Majeure declared by the competent authority, the Goods/Services Provider shall notify the Goods/Services User no later than 14 (fourteen) calendar days. The Goods/Services User may modify or amend the schedule to accommodate the impact of the Force Majeure.

3) General Terms of Contract (GTC) - Claim Clause
   a. A claim is a request from either party based on the clauses stipulated in the Agreement/Contract if there are unmet obligations.
   b. Claims may arise from:
      1. Disagreements regarding the interpretation of the clauses in the Agreement/ Contract.
      2. Disputes over what is included in the price of the Agreement/Contract.
      3. Breaches of the Agreement/Contract.
   c. Claims may be submitted by the Employer or the Goods/Services Provider and must be made in writing, including the following:
      1. A detailed explanation of the issue.
      2. The clause of the Agreement/Contract governing the claim.
      3. Claims will only be entertained if submitted by a Goods/Services Provider with a direct Agreement/Contract with the Employer. Claims from subcontractors or

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subvendors addressed directly to the Employer will be rejected, as there is no direct Agreement/Contract with the Employer.
4. The Second/Final Handover of Works cannot be carried out until all claims are resolved.
5. The Agreement/Contract cannot be closed until all claims are resolved.

Based on the above explanation, it is evident that the type of claim in the implementation of the 150 kV Sumatera–Bangka Submarine Cable Construction Contract is a claim submitted by the service provider (consultant/contractor) to the service user (owner). This claim arises due to design changes caused by external factors, such as policies issued by central or regional governments and force majeure [19].

The contractor's claim submission has been logically structured and meets the following requirements [20]:
1. At the beginning, the parties involved, the date of the incident, and relevant information are detailed comprehensively;
2. An explanation of the events causing the claim and their consequences;
3. Analysis of the factual conditions at the site that form the basis of the claim, accompanied by references and contractual clauses;
4. Cost impact calculations based on detailed actual direct and indirect costs;
5. Determination of claims demanding additional time based on an analysis of critical and non-critical path timelines.

Additionally, research indicates that the success of construction claims depends on factors such as the contractor's knowledge, organizational support, and the alignment of insurance policies with project risks. These factors are often complicated by administrative constraints and government policies during the pandemic, which have significantly impacted the cost, time, and quality of projects [21].

5. Conclusion

The construction of the 150 kV Sumatra–Bangka submarine cable during the COVID-19 pandemic exemplifies the intricate challenges encountered in executing large-scale infrastructure projects under extraordinary conditions. The multifaceted nature of these challenges, including regulatory adjustments, unforeseen design modifications, and pandemic-induced constraints, significantly influenced project timelines, cost structures, and resource management. The contractor's compensation claims were warranted based on the force majeure provisions and contractual clauses, addressing external factors such as government-imposed restrictions, global health crises, and logistical disruptions.

This case study highlights the necessity of incorporating comprehensive force majeure clauses in construction contracts, particularly to address pandemic-related disruptions, ensuring equitable risk allocation. It also demonstrates the critical role of adaptive project strategies, such as collaborative stakeholder communication and the effective utilization of alternative logistical solutions, in mitigating delays and optimizing project outcomes. Furthermore, the delays and cost escalations underscore the importance of proactive risk management frameworks, which should encompass scenario analysis, advanced technological integration, and capacity building to enhance resilience against disruptions.

The findings emphasize the broader implications for the construction industry, advocating for enhanced contract management practices, policy reforms to streamline regulatory processes, and the adoption of advanced digital tools for coordination and compliance. Collectively, these strategies can significantly strengthen the ability of contractors and project owners to navigate complex challenges, ensuring project completion within the established scope and quality standards.

There are some recommendations:
1) Contractual Provisions for Force Majeure: Future contracts should incorporate comprehensive clauses for handling force majeure events, including specific guidelines for pandemic-related disruptions. Clear definitions and mechanisms for dispute resolution can reduce ambiguities and foster smoother claim settlements.

2) Proactive Risk Management: Construction stakeholders should adopt advanced risk assessment frameworks to identify potential disruptions early. Scenario planning and simulation models can enhance preparedness for events like regulatory changes or logistical bottlenecks.
3) Technological Integration: Leveraging digital tools such as Building Information Modeling (BIM) and project management software can streamline coordination and decision-making, particularly in addressing design changes and regulatory compliance.
4) Stakeholder Collaboration: Strengthening collaboration between contractors, regulatory bodies, and project owners is essential for addressing discrepancies in specifications and permits. Establishing a joint task force for real-time issue resolution could improve project outcomes.
5) Enhanced Logistical Strategies: Given the global supply chain disruptions experienced during the pandemic, localizing supply chains where feasible and securing backup resources can minimize delays.
6) Capacity Building: Training project teams on adaptive strategies and effective claim management can improve their ability to respond to complex challenges. Workshops and knowledge-sharing platforms can also foster best practices in construction claim resolution.
7) Policy Reforms: Governments and regulatory authorities should refine policies to support infrastructure projects during crises, including streamlined permitting processes and fiscal support mechanisms.

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