Factors Influencing Large-Scale Infrastructure Project Abandonment: Lessons from the Melaka Gateway Project

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Abstract
Considered significant within Malaysia, funds linked to the Belt and Road Initiative (BRI) have been allocated for infrastructural development, primarily focusing on ports and railways. Notably, the Melaka Gateway and the Kuantan Port Expansion projects, situated on the eastern and western coasts of Peninsular Malaysia respectively, are emblematic of these efforts. Both projects, established as joint ventures involving Chinese state-owned enterprises and regional companies, commenced simultaneously. Despite their shared origins, the paths taken by these initiatives have diverged significantly. The Melaka Gateway project has encountered delays and controversies, in stark contrast to the smooth progression of the Kuantan Port Expansion. In response to this disparity, this study adopts a qualitative approach, utilizing content analysis to explore the challenges leading to the abandonment of the Melaka Gateway project. Our findings reveal three primary obstacles: the failure to submit an Environmental Assessment Report (EIA), inadequate planning by the developer, and strained relations with the state government. Furthermore, we discuss the ramifications of project abandonment. This research furnishes empirical insights that can guide governmental bodies and development agencies in mitigating the challenges inherent in project development, thereby enhancing the likelihood of project success.

Keywords: Project, Abandonment, Melaka Gateway, Planning, EIA

Introduction
Many construction projects face significant challenges primarily due to prolonged project delivery delays. This issue is particularly prevalent in developing nations such as Malaysia Yap et al (2019), where over 80% of traditionally procured projects experience time overruns (Shenu et al., 2015). Cost overruns and schedule delays often stem from similar causes (Yap
et al., 2019; Shenu et al., 2015). Regardless of the country, these delays severely disrupt production planning and control in construction projects Egwim et al (2023); Al Musawi et al (2023); Vile et al (2020), leading to increased construction costs, reduced productivity, legal disputes, and contract terminations (Yap et al., 2019). Contractors suffer from decreased output and revenue due to lost opportunity costs (Alsuliman, 16). Time and cost overruns emerge as the most common consequences of delays Durdyev & Hosseini (2020); Shah, (2016); Yap et al (2021), resulting in extensions of time, disputes, lost revenues, and compromised work quality due to rushed project completion (Yap et al., 2021). Consequently, schedule pressures contribute to disordered work, substandard quality, and diminished employee motivation, further exacerbating losses in output and project quality (Yap et al., 2020).

In Malaysia, during the period spanning from the 13th to the 17th century, Melaka emerged as the most prosperous international port in Asia, drawing vessels from Europe, China, India, and Saudi Arabia. This status positioned the city as a pivotal trade hub and a nexus of Eastern and Western cultures. In 2014, former Malaysian prime minister Datuk Seri Najib Bin Tun Abdul Razak commenced the Melaka Gateway Project in light of this rationale. This initiative seeks to increase employment and tourism in Malacca. An estimated 2.5 million tourists will visit Malacca, generating between 40,000 and 45,000 new employments. Datuk Lim Ban Hong, chairman of the Melaka Transport, Project Rehabilitation, and International Trade Committee stated that the state's transport development master plan is designed to attract travellers' interest to the maritime route leading to Malacca (The Star, 2016). The potential consequences of Melaka Gateway's construction extend beyond Malacca and its inhabitants, as the Malacca State economy undergoes a transition from a weekend-based system to a 24-hour economy. As illustrated in Figure 1, it functions as an industry-driven expansion strategy that is favourable to investors and advances interests such as lifestyle, tourism, smart city initiatives, trade and business growth, a deep-sea port, and a maritime industrial park.
Sources: BRI Monitor 1 Impression of Melaka Gateway.

Figure 1: Map representation of Melaka Gateway’s four islands.

With its strategic location in the Straits of Melaka and its proximity to Kuala Lumpur and Singapore, Melaka Gateway possesses the capacity to develop into a prominent commercial hub. Khoo Poay Tiong, a member of parliament from Kota Melaka, demanded that the project be halted pending an examination of the EIA report’s condition. Subsequently, in 2020, the state government declared the project cancelled because the land reclamation work for the Melaka Gateway project had not been finalised within the agreed-upon three-year timeframe (Hassan, 2020).

In view of the above, it is crucial for organizations to address issues on project delays, project cancellations and project abandonment as it allows them to mitigate costs, uphold client satisfaction, safeguard their reputation, refine risk management practices, boost operational efficiency, foster continuous learning and improvement, and attain a competitive advantage in the market. This paper will therefore provide a summative analysis of the factors that contributed to the Melaka Gateway Project’s delay, cancellation and eventual abandonment.

Consequences of Melaka Gateway’s Abandonment

In 2014, the Maritime Silk Road initiated the Melaka Gateway, an endeavour involving land reclamation valued at US$10 billion. In 2016, the Pulau Melaka East (PME-3) development commenced its formal inauguration, and by 2021, the Melaka Gateway Port is anticipated to be completely operational (Yusof, 2016). The original completion date for the project was 2025 (Hazlin, 2020). However, in November 2020, the Melaka government made the decision to cancel the endeavour. Three man-made islands and the enlargement of the natural island of Pulau Panjang are in the works. The gateway’s construction has exhibited significant delays, exceeding its initial schedule by five years (Hutchinson, 2019).
As the project is scrutinised more closely, several inquiries arise, encompassing the significance of its location, the capability of its local partners to secure the requisite financing through their extensive networks, and the project’s viability. The endeavour has resulted in substantial environmental damage to the coastline surrounding Melaka. The Duyong and Bandar Hilir fishery communities have been severely impacted by the undertaking. Furthermore, it has influenced the cultural heritage of the unique Kristang community residing in the Portuguese settlement. In addition, the frequency of sudden floods has increased due to this and other coastal projects, which have also caused erosion and interruptions in irrigation systems.

Constant issues with time and budget overruns, hazardous working conditions, lack of safety, and low productivity and quality plague the construction industry, resulting in projects being shelved, abandoned, or cancelled. The Implementation Coordination Unit (ICU) reported that inadequate project management during the design and implementation stages caused 61 government projects to experience delays in 2018, with 87% of those projects experiencing delays during the construction phase (Nor Aida, Syuhaida & Faizal, 2019). Success in project management is characterised by the project’s successful culmination, which satisfies the stakeholders’ expectations and adheres to the project’s budget, timelines, operations, mission, and desired objectives (El-sokhn & Othman, 2014). Within this particular framework, the Melaka Gateway undertaking failed to satisfy these stipulations, leading to a project schedule setback and repercussions on both the project’s internal and external environments.

Overall, the result of this enormous undertaking was extremely disheartening, as the developer was compelled to abandon the endeavour due to the innumerable complications and issues that arose, causing numerous delays. They had made a commitment to finalise the project by 2025; however, they only achieved 40% completion, leading to setbacks from stakeholders and a loss of confidence from the state government. These outcomes were precipitated by their inadequate time and cost management, as well as planning deficiencies.

**Determinants of the Melaka Gateway Project’s Abandonment**

**Report on Environmental Assessment (EIA)**

In accordance with the Environmental Quality (Environmental Impact Assessment) Order 2015 and Section 34A of the Environmental Quality Act 2021, the Melaka Gateway Project has neglected to submit an EIA report. EIA is a tool utilised to evaluate the environmental, economic, and social impacts of an undertaking, both positive and negative. Pre-planning environmental impacts of a project are anticipated using this method. Thus, measures to mitigate the negative effects can be implemented. Hafiz (2021) asserts that the developer of the Melaka Gateway coastal project, which is valued at several billion dollars, neglected to petition the state government for judicial review of the cancellation of the three-year undertaking.

**Deficient Planning on the Part of the Developer**

The private corporation KAJ Development Sdn. Bhd. has been designated as the developer of the Melaka Gateway Project. The anticipated completion date for the project is 2025. Regrettably, the developer is unable to achieve the objective due to insufficient planning and scheduling. The project’s timeline has been significantly impacted due to inadequate project planning and scheduling executed by KAJ Development Sdn. Bhd. This is as a result of Power
China, an investor, withdrawing their support in September 2019 citing the underperformance of the company. Licencing revocations for KAJ Development Sdn Bhd. twice in 2018 and 2020 have harmed not only the company's reputation, but also its responsibility as the principal developer. The project's failure will incur financial losses for the company and may ultimately result in insolvency, given that a business with a history of numerous unsuccessful project developments is doomed to fail over time. Moreover, a business with a reputation for producing substandard work might struggle to acquire new clients or secure contracts.

**Inadequate Rapport with the State Government**

The full completion of the undertaking was anticipated by 2025. Nevertheless, the state government was compelled to terminate the land reclamation contract due to the developer's failure to meet the deadline for the completion of one of its subprojects. Construction disputes, similar to those in other industries, arise when one or more parties fail to fulfil their contractual responsibilities (Gibson & Paralika, 2020). The Melaka Gateway development had reached a mere 40% completion at the time of the two-year protracted conflict between the opposing factions. According to Rezuan (2019), in the event of a disagreement between two parties, it invariably results in deliberations, mediation, or mitigation, as well as a petition for a contract amendment that incorporates revised budgets and schedules. Elevated administrative expenses for contractors augment the likelihood that they will incur budgetary constraints or surpass the allotted amount, thereby impeding the successful completion of the project. The relationship with the stakeholders, particularly the host government, is critical to the success of the initiative, according to (Gong, 2019).

This dispute between the state government and the developer, which centred on whether to proceed with the project or find a new developer, required nearly two years to resolve. In February 2021, judicial review of the state government's decision to suspend the three-year-old land reclamation project was denied in an effort by the developer to do so (Hafiz Yatim, 2021). The developer subsequently filed a timely appeal with the Court of Appeals against the judge's ruling. The state government awarded KAJ Development Sdn Bhd control of the coastal reclamation project following a definitive resolution of the dispute in March 2022.

**Significant Environmental Harm**

Ecology will be negatively impacted by the Melaka Gateway project's conclusion. The Kristang community has been significantly impacted by the Melaka Gateway Project's initiatives to resolve various interconnected environmental concerns. In close proximity to the Portuguese settlement is the development. Residents are extremely concerned about Melaka Gateway's inability to construct a 750-meter waterway segregating the construction site from the beachfront of the community. Furthermore, the mere 200 metres in length of this river contributes to the accumulation of sediment and mud along the settlement's shoreline. In addition, despite the fact that sand is an essential element in spatial and urban processes, its effects on social structures and the urban environment are seldom analysed from a broader standpoint than the mere description of sand movements within a global urbanisation system (Kuklina et al., 2023). Sand drives hostilities and violent reclamation in Malacca. MP Khoo Paoy Tiong of Kota Melaka asserts that the Melaka Gateway Project has not only fallen short of its objectives but has also inflicted significant ecological harm along the Melaka coast. Furthermore, similar to other coastal developments, the aforementioned project has caused
erosion and irrigation system disruptions, thereby exacerbating the occurrence of flash floods in Melaka (Yeo, 2021).

Final Remarks
In the context of the construction industry in Malaysia, research findings on project delays hold particular significance. These insights offer invaluable guidance for academics and construction practitioners alike, informing future research directions and guiding project management strategies. By understanding the critical factors contributing to schedule delays, stakeholders can work towards reducing their frequency and implementing effective solutions to enhance project schedule performance.

Construction professionals must be equipped with the knowledge and skills to identify and address the managerial competencies driving project delays. Incorporating key findings into education and training programs enables practitioners to enhance their capacity to navigate challenges effectively and deliver projects successfully. Ultimately, by prioritizing the study of project delays and integrating key learnings into practice, organizations can achieve sustainable growth, client satisfaction, and industry leadership.

The construction sector is widely recognised as a significant driver of a country's economic vitality. Nonetheless, contractors frequently encounter substantial obstacles in the form of disputes and disrupted relationships with investors or clients as a result of construction project delays. The aforementioned delays are the result of an extensive array of internal and external factors that introduce unpredictability into the construction process. Such incidents are frequently observed, especially in the context of extensive undertakings referred to as megaprojects, as demonstrated by the Melaka Gateway construction project in Malaysia. The significant effects on stakeholders, both internal and external to the project, are highlighted by the delays encountered in this endeavour. The primary objective of this research is to stimulate additional inquiry into project management methodologies that take into consideration the wide range of factors that impact the probability of project failure.

References
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