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INVESTIGATION OF THE FACTORS INFLUENCING THE CONSTRUCTION DELAYS IN KLANG VALLEY MALAYSIA

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ABSTRACT

The Malaysian construction industry significantly contributes to the nation's economic growth and employment. However, project delays, a global issue, also plague this sector, impacting project completion. This study aims to identify delay factors and their effects on project completion, integrating the analysis of specific causes with specific effects, a novel approach compared to previous studies. Research methods include a literature review, a questionnaire survey on Malaysian construction projects, and interviews with project managers. The study also mines knowledge from a few projects through a single case-study approach. The research reveals some of the most critical causes of delays in Kuala Lumpur's construction projects. The causes and effects of delays may vary across countries, as indicated by semi-structured interviews conducted among major participant groups worldwide. The study suggests hiring quality contractors and replacing those causing delays with experienced workers. Regular team meetings, both on-site and in the office, are recommended to discuss delays, plan new dates for daily meetings, track project progress, and extend the closing date depending on EOT. The experience gained will enhance employee confidence and readiness to face future workforce challenges. Community engagement, contributing to social networking between the community, Malaysia, and the outside world, makes the industry's role more comprehensive and holistic.

Keywords:
Malaysian Construction Industry, Project Delays, Mitigation Strategies

INTRODUCTION

The history of the construction industry reveals the impact of construction on society and the creativity, ingenuity, and tenacity of the early master builders who achieved extraordinary feats of building science (Jackson, 2020). In the context of Malaysia, the construction industry plays a significant role in economic growth and employment. However, it is currently grappling with the serious issue of project delays, leading to time and cost overruns (A. Rahman, 2021). These delays, affecting every party involved in the construction project differently (Shehzad, 2019), are attributed to a variety of factors, including land acquisition, equipment breakdowns, poor site management, and low labour productivity (Santoso & Soeng, 2016). Contractors often struggle to identify and mitigate these causes during the construction process (Aziz & Abdel-Hakim, 2016), impacting not only project completion but also the industry's reputation and stakeholder satisfaction. This research aims to investigate these causes and effects within Malaysia's construction industry and propose effective delay mitigation strategies. The objectives include identifying key delay-contributing factors, analysing their impacts on project performance and stakeholder satisfaction, examining current delay management practices and challenges, proposing practical recommendations for improving time management and reducing delays, and validating these strategies through case studies and stakeholder feedback. This comprehensive approach hopes to contribute to the body of knowledge on construction delay management and provide valuable insights for practitioners and policymakers in the construction industry.

LITERATURE REVIEW

Construction sector is characterized by its project-focused nature, with firms being established to undertake projects. Each project is distinct and dynamic, undergoing a lifecycle that necessitates the collaboration of various groups and stakeholders to achieve completion (Fernández-Solís, 2009; Akintoye & Fitzgerald, 2000). The industry is perceived as a collection of industries due to the diverse groups involved in the construction process. The unique and dynamic characteristics of construction projects necessitate adaptability and flexibility within companies. The industry's fragmented nature can result in communication issues and inefficiencies, indicating a need for enhanced coordination and communication among the various stakeholders.

Despite the abundance of data, the construction industry often faces challenges in information management, leading to situations where practitioners need access to essential and relevant knowledge resources to address daily project-related issues (Kumar & Gupta, 2012; Egbu, 2004). This can impact performance, impede growth, and expose a company to the risk of failure. The data-rich but information-poor nature of the construction industry suggests a substantial opportunity for companies to enhance their decision-making processes by effectively managing and utilizing the wealth of knowledge generated from projects. Companies that fail to capitalize on this may find themselves at a competitive disadvantage.

The industry has been urged to adopt and implement suitable Information and Communication Technology (ICT) systems to enhance production, product quality, and delivery speed. However, the construction industry needs to be faster to adopt innovative technologies compared to other sectors, possibly due to scepticism about the benefits of using new technologies and insufficient data on return on investment (Dave & Koskela, 2009; Nitithamyong & Skibniewski, 2004 This slow adoption suggests a resistance to change and a need for more awareness about the potential benefits of these technologies, resulting in missed opportunities for improving efficiency and productivity. Therefore, there is a need for increased education and awareness about the benefits of ICT systems.

Organizational culture plays a significant role in successful companies such as Toyota and General Electric (Cameron & Quinn, 2011; Alvesson, 2012). The development of a corporate culture takes precedence over factors such as corporate strategy, market presence, and technological advantage by facilitating a standard interpretation system for organization members, creating continuity, binding organization members together, and energizing forward movement. The importance of organizational culture in successful companies suggests that companies must develop a solid corporate culture that aligns with their strategic objectives. Companies that do so may need help to achieve their goals and objectives. Finally, the knowledge, skills, and personal traits of project team members are not only crucial components of the overall organizational culture but also essential factors of the integrity and multi-functionality of the project team (Sumesh Sudheer Babu, 2017; Ali Mohammed Alashwal, 2017; Belassi & Tukel, 1996). The critical role of project team skills in project success implies that companies must invest in training and development to enhance these skills. Companies that pay attention to the importance of project team skills may need help with project execution and delivery. Therefore, there is a need for continuous skill development and learning among project team members.

In conclusion, the unique characteristics of the construction industry, knowledge management practices, adoption of ICT systems, organizational culture and project team skills all play crucial roles in the success of construction projects. Understanding and addressing these factors can lead to improved project outcomes.

METHODOLOGY

This study employs an array of interpretive techniques to decode, translate, and understand the meaning, rather than the frequency, of certain naturally occurring phenomena in the social world (Cooper & Schindler, 2011). It is viewed as an exploratory investigation which attempts to ascertain a phenomenon's existence (Dane, 1990).

The case study technique (Yin, 1994) is utilized to comprehend the comprehensive roles and responsibilities of the BOD and its relationship with management. This methodology, previously used in research to address "how" and "why" questions (Myers, 2009; Mouton, 2001), relies on the opinions expressed by participants during multiple interview sessions, as the researcher cannot control their attitudes and behaviours.

The qualitative approach, suitable for uniquely describing human experiences, encourages participants to collaborate with the researcher in interpreting the experiences under study (Dowling & Cooney, 2012). Qualitative researchers interested in studying human experiences from a field-focused, participant-centred, and process-oriented scientific perspective aim to explore social or human problems (Creswell, 2018). Therefore, in-depth interviewing was employed in this study, as it fosters a controlled situation (O'Hare et al., 2014), enabling the interviewer to elicit human experience effectively. This method facilitates the exploration of human experiences (Knight, 2002), supports the researcher in constructing a complex, holistic picture, and allows for the analysis of words, detailed views of respondents, and the conduction of the study in a natural setting.

In extracting raw data themes, the researcher grouped each section into commonalities or categories, establishing order and transitioning from specific to general (inductive). This process was deemed comprehensive when no additional meaningful groupings emerged. The study followed these steps, starting with clustering the quotes around underlying equivalence and considering emergent themes (Côté et al., 1995).

The methodology provides insight into the entire research process, which is crucial for achieving the research objectives. Given the qualitative nature of the research, a sample size of 8 was deemed most suitable. The chosen methodology guided the organization, structuring, and design of all the research procedures, including research design, population selection, sample selection, data gathering, and data analysis. The overall research method demonstrated the quality and originality of the research by maintaining trustworthiness, confidentiality, and credibility through field notes, interview recordings, and the preservation of participants' privacy.

RESULTS AND DISCUSSION

The primary objectives of this study were to examine the impact of construction delays and identify common issues plaguing numerous construction projects in the Klang Valley, Malaysia.

The research question led to an exploration of the challenges faced by the construction sector in the Klang Valley, as depicted in Figure 1.

Figure 1: Themes of problems encountered in the construction sector

Several management issues resulted in subpar performance, primarily due to lack of motivation, insufficient monitoring, and overwork. Consequently, clients still need to receive the expected output from the builders, leading to requests for revisions and further construction delays.

One participant highlighted the importance of having specific goals for each construction project, as different projects have unique objectives. For instance, the monsoon season in Malaysia often causes project delays and must be factored into the planning process.

The progress of payments is contingent on the timely completion of services. The work cost escalates if tasks need to be redone or take longer than expected. As a result, clients often need more time to make payments if the project is still in progress, leading to financial challenges for the construction companies.

A significant cause of accidents on construction sites is the lack of trained labour (Abdelhamid & Everett, 2000; Suraji et al., 2001). “Skilled labour” in the construction industry typically refers to individuals who have undergone extensive training and contribute highly specialized skills to construction projects. Many participants expressed concerns about the shortage of skilled labourers. This lack of skilled labour impacts the sustainability and efficiency of construction projects, leading to poor performance. As one participant noted:

> “Poor productivity arises from various issues, including sustainability and efficiency.”

Managerial issues related to labour often lead to poor performance. This subpar performance, unacceptable to clients, stems from factors such as lack of motivation, inadequate monitoring, and overwork. As a result, clients still need to receive the work as promised by the builder, leading to demands for revisions and further construction delays.

The term "shortage of material and funding" refers to a deficiency of resources compared to expectations, which may hinder the completion of the project. When clients request work revisions, it poses a significant challenge for the construction company, particularly in sourcing labour for the redo. Additionally, funding issues can lead to project delays.

Language barriers present another challenge, particularly for team leaders managing workers. In Malaysia, many individuals from different countries join construction companies as labourers. These workers often need help understanding the Malaysian language due to their diverse linguistic backgrounds, leading to miscommunications and subsequent workplace mistakes. Miscommunication, whether due to employee disputes or language barriers, can obscure the project goals for the workers, resulting in poor performance.

Ineffective communication can delay work as proper guidelines or instructions may not reach the workers due to miscommunication. One participant outlined this issue as follows:

> "There are instances where changes are made to drawings in the office, but these changes are not implemented on-site because the information is not delivered effectively"

The construction industry in Malaysia plays a pivotal role in the country's wealth generation, mainly through the development of socio-economic infrastructure and buildings. It provides employment opportunities to over a million people. According to one participant, sub-contractors often receive projects from the main contractor after going through 3-4 intermediaries. This process results in sub-contractors facing high risks for their work while receiving low returns. When both parties consent, a broker or a broker-sponsored sales representative negotiates the transaction between the buyer and the seller.

Each construction project should have a specific goal or objective, as articulated by one participant. Given the unique goals of different projects, each should be managed carefully. For instance, in Malaysia, the monsoon season often causes project delays and must be considered during planning.

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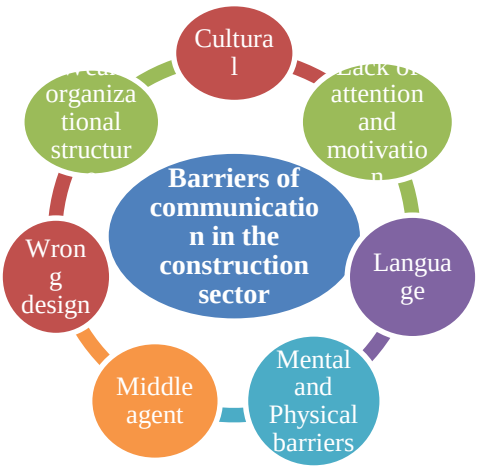

Figure 2: Barriers of Communication

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construction projects. Many participants expressed concerns about the shortage of skilled labourers. This lack of skilled labour impacts the project's performance.

Linguistic barriers are among the most common obstacles in communicating or delivering information to staff or workers. Construction projects often have large teams under one management, representing numerous nations and languages. This diversity can lead to difficulties in clear communication, especially for those from other countries adjusting to the Malaysian language. As a result, information cannot be effectively delivered. One participant noted that due to the volume of communications sent by many workers, the information could not be adequately received because of language barriers.

Global Data anticipates a 16.5% expansion in the Malaysian construction industry this year, supported by improving economic conditions. The government focuses on completing large infrastructure projects and increasing investment in industrial and energy projects. This study contributes significantly to understanding the construction sector, which plays a crucial role in the country's economy.

CONCLUSION

Successful project management is crucial for timely and budget-compliant completion, adhering to the project specifications. This study significantly contributes to understanding the construction industry's management of time. The findings provide managerial staff with a clear understanding of time management, enabling them to address these issues proactively.

This research has implications for our existing knowledge, particularly concerning the Malaysian construction industry's teaching-learning experience. It elucidates the impact of delays on the construction sector's elements in the Klang Valley. The implications of this study are discussed in two primary contexts: theoretical and practical.

The researcher examined the implications through the lens of two prominent theories used in this study: Kolb's experiential learning theory and situated learning theory. Kolb's experiential learning theory influenced the students' experience gained through learning using the construction approach in Malaysia. This theory emphasizes that learning must be a continuous process grounded in experience.

Furthermore, employees' experiences expand when they encounter new surroundings, whether planned or otherwise. The shift in the learning environment from the construction site to the surrounding community piques the interest of the construction company owners. It aligns with the situated learning theory by Lave and Wenger (1991), which states that learning should be specific to the situation or context in which the information is presented and applied.

In general, this research has clear implications, especially in broadening the application of both theories to explore employees' experiences through the teaching-learning approach. Unlike simple one-way instruction, a dynamic learning environment enhances the teaching-learning experience. It helps improve the understanding of the capabilities and values of the owners through networking with the construction industry community.

Undeniably, this research has identified the elements of construction delay formed through the company's active participation in this project. The construction process provides opportunities for employees and owners to gain experience while cooperating and serving their local community. Simultaneously, the researcher can engage in out-of-classroom activities that have a more significant impact than merely providing client guidelines. Projects must provide employees with clear guidelines about the owners' and workers' objectives and roles. This is because learning from the construction industry necessitates experts playing a crucial role as facilitators and assistants in guiding employees to complete their tasks.

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