

Causes of Disputes in Construction Projects

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Abstract

Disputes are common in construction projects due to their complex nature. However, disputes are costly and it requires more money, time, and resources to find resolutions. By identifying the causes of disputes, project leaders can find measures to prevent or mitigate such possible disputes in construction projects. Therefore, the objective of this study was to identify the major causes of disputes in construction projects. Secondary data from the studies done from 2019 to 2023 were used for this study and the results revealed 50 causes of disputes in construction projects. Further, these causes were categorized into four categories that are client related, consultant related, contractor related, and other causes of disputes. The results of this study show that among the 50 common causes of disputes, 36% is consultant related, and 34% is client related issues. Other than that, 51% of causes of disputes emerge during the pre-contract phase. This study also identified the research gaps and areas that need future studies.

Keywords: Causes of Construction Disputes, Construction Disputes, Construction contracts, Disputes in Construction.

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Causes of Disputes in Construction Projects

Disputes are a risk for the successful completion of a construction project where project leaders need to spend most of their resources to find resolutions. Disputes require resources such as time, money, and effort to find a resolution that parties to a dispute can agree on. Therefore, disputes are a potential risk for the successful delivery of a construction project within the initially established time frame and the cost targets. However, due to the nature of construction projects, disputes are inevitable. A construction project is a team effort where many parties such as developers, consultants, architects, contractors, and subcontracts work together to achieve a common goal. This complex team environment creates ground for disputes which need the attention of the project team in every stage of a project. Therefore, managing disputes effectively is important for any construction project to complete successfully.

Effective dispute management requires prevention, mitigation, and finding resolutions for potential disputes. Project leaders need to pay attention to possible disputes in every stage of a construction project from inception stage to project completion stage. This helps in finding ways to prevent disputes.

Therefore, the knowledge of the causes of disputes helps project leaders to effectively manage disputes before it arises and even after arise.

In the past years, there are several studies done on topics related to construction disputes. According to Lee *et al.*, (2021), most construction disputes are due to contractual issues. Therefore contract matters create grounds for disputes where parties to a contract need to spend time and money to find resolutions. On the other hand, disagreement between the parties to a contract creates potential grounds for disputes (El-Sayegh *et al.*, 2020).

While there are different causes for disputes, Surahyo (2018) categorized these as technical-related, duration related, financial-related, and quality-related. After all, disputes are identified as one of the major factors that can lead a project to be unsuccessful. Construction disputes can negatively impact the relationship of the parties involved in a contract (Durand, 2019). Therefore, it is beneficial for project leaders to understand the nature of disputes, causes, and dispute management techniques to manage their project performance effectively.

The nature of construction disputes can be varied. Among the factors that prevent the successful completion of a construction project, disputes appear as one of the major factors (Duchaussoy, 2019). Other than unsuccessful project completion, disputes can also impact the relationship of the parties involved. In most cases, finding a resolution for disputes requires more effort, time, and money (Durand, 2019). Dispute resolution is expensive and if the parties decide to find a resolution through litigation, it can be expensive and time-consuming compared to other alternative dispute resolution techniques such as negotiation, arbitration, mediation, adjudication, and dispute review boards involvement. Considering all these facts, identifying the major causes of disputes is beneficial for project leaders to find preventive and mitigating measures to lead the project successfully.

Therefore, this paper examines the causes of disputes that can impact construction project performance negatively.

Purpose

The purpose of this study is to emphasize the importance of dispute management for the successful completion of a construction project. By identifying the major causes of disputes, project leaders can find ways to effectively manage disputes by appropriate strategies including prevention, mitigation, and finding resolution. Therefore, the author expects this research on major causes of disputes will help the construction project leaders to manage their projects effectively until successful completion. Thus, below are the research objectives of this study.

- To identify the major causes of disputes in construction projects.
- To identify the project parties that has most influence on major causes of disputes.
- To identify the project stages where most causes of disputes occur.

Research Hypothesis

Based on the research objectives, the below hypothesis are tested in this study.

- There are no major disputant causes that impact the success completion of a construction project.
- All the parties to a contract are equally responsible for causes of disputes.
- There is no connection between the causes of disputes and project stage of a construction project.

However, this study doesn't focus on a specific geographical region or a sector of the construction industry. It is assumed that major construction disputes are common in every country regardless of the factors such as geographical regions, culture, and economy.

METHODOLOGY

This study was done using secondary data by referring to recent publications in journals. Existing literature was analyzed to identify the major causes of construction disputes that impact project performance negatively. According to Brendel *et al.*, (2020), the literature review method is a great way to identify the research gap in a topic. Further, the literature review process helps in better understanding the existing knowledge on a topic that helps in identifying further research requirements (Graulich *et al.*, 2021). According to Paré & Kitsiou (2017), the literature review method provides a solid starting point for studying a new research topic by minimizing the requirement for the need for primary data.

Further, considering the fact that a literature review is a broader and more general approach to reviewing existing literature on a particular topic, systematic review approach was used to collect data for this study. A systematic review is a specific and highly structured method of literature review. It follows a predefined protocol and systematic search strategy to identify and select studies that meet strict inclusion and exclusion criteria (Rathnayake *et al.*, 2022).

Considering these facts and the availability of previous studies on construction disputes, this study followed the systematic review method and used secondary data to identify the major causes of construction disputes among the many causes. **Figure 1** illustrates the data collection process for a systematic review.

Article selection and Data Sampling

Google Scholar and ProQuest Central databases were used to study the previously published research data that focuses on the causes of construction disputes. Further, a criterion was established for selecting existing literature.

This study did not use all papers that are written on topics related to construction project disputes. Instead, existing literature published in English in peer-reviewed scientific journals from 2019 to 2023 was studied to obtain the latest secondary data. Other than that, studies that are mainly focused on the causes of construction disputes were selected to obtain relevant data. Further, this study used papers that are published in open-access journals. If any paper needs a membership fee or access fee, those were not considered for this study. For this study, only 8 papers were shortlisted to identify the major causes of disputes in construction projects. Search keywords used for this secondary data sourcing are 'causes of construction disputes', 'construction disputes' and 'causes of disputes in construction industry'. **Figure 2** shows the article selection and screening process to obtain secondary data.

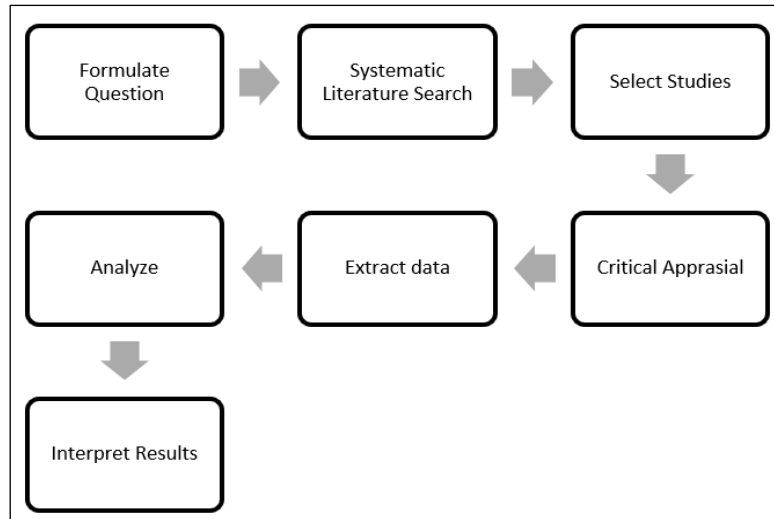


Figure 1: Main Steps of Systematic Review Process

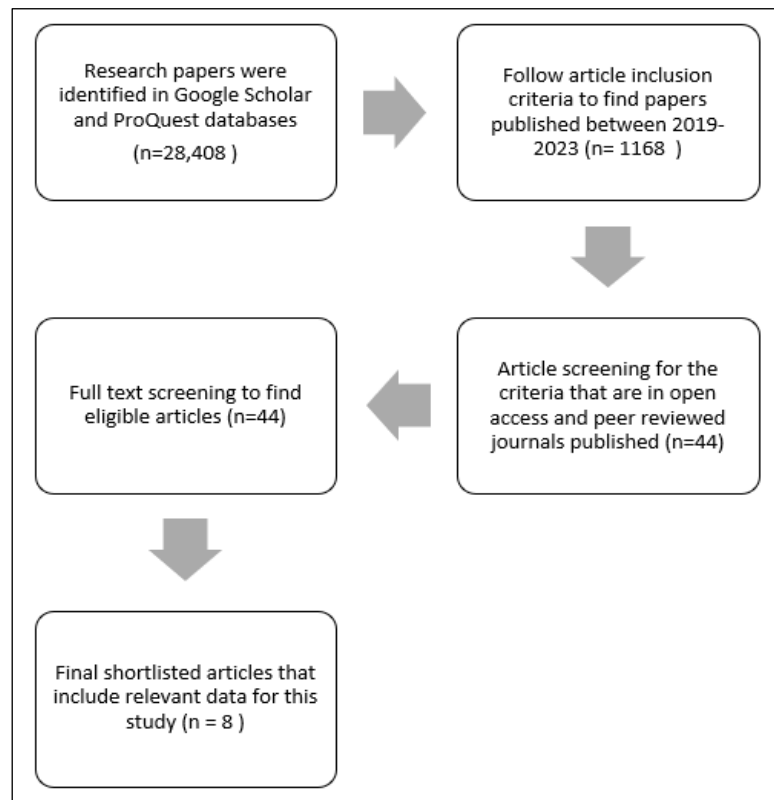


Figure 2: Main Steps of Article Selection Process

RESULTS & DISCUSSION

According to the studies done by Hansen (2019), contract matters are identified as one of the major causes of disputes related to contracts. The disputant reasons include the quality of contract content, unrealistic expectations of the customer, non-serviceable contract and information. Further, untimely payments create grounds for disputes too (Hansen, 2019).

Fadhlullah *et al.*, (2019) too identified payment delay as one of the common causes of disputes. They further indicated that delay in payments for

subcontractor can result in slow performance of progress. Inefficiencies in cooperation between the designer, contractor, and the owner are another cause of construction disputes (Fadhlullah *et al.*, 2019).

The studies done by Nguyen *et al.*, (2020) indicate that construction speed, scarcity of capital resources, errors in initial cost estimations, omissions, and changes in the conditions as possible grounds for disputes. Further, Nguyen *et al.*, (2020) identified 25 causes of disputes and categorized them into six groups that are cooperation related, technology related,

economics related, productivity related, information related, and behavior related.

According to Naji *et al.*, (2021), unclear risk allocation, type of contract, tender pricing, client's lack of knowledge, poor communication, and unrealistic estimations create grounds for disputes. Errors in design data and design documents can cause disputes. Other than that, the slow response of clients is a cause for disputes (Naji *et al.*, 2021). Further, scarcity of capital resources, stakeholder reactions, construction speed, Project schedule, and errors in initial estimates are common causes of disputes (Nguyen & Nguyen, 2020).

Studies done from a Norwegian perspective by Sabri & Torp (2022) identified that lack of confidence between the contractor and the employer as a major cause for construction project disputes. According to this study, other causes of construction disputes include Project award criteria, contracts, and uneven responsibilities and obligations towards the project completion (Sabri & Torp, 2022).

According to Yussof & Zaini (2022), contract issues, unforeseen reasons between stakeholders related to contract conditions, and people issues are identified as major construction dispute causes. Poor contract administration, incomplete claims with poor substantiation, poorly drafted claims, incomplete designs and errors in contract documents, and failure in complying with contractual obligations are major causes of disputes (Yussof & Zaini, 2022).

According to the studies done based on the Nigerian Construction Industry by Anumudu & Uchendu (2023), the major cause of disputes is undefined communication channels. Further, this study revealed other causes of disputes including differences in interests, concerns, and training of individuals, diversity in the expertise of project participants, discrepancies in Bills of Quantities, client's requirements misinterpretation, and complexity of contract documents. Other than that design errors and changes to the scope of work, the project manager's authority level, and unforeseen site conditions create grounds for disputes (Anumudu & Uchendu, 2023).

Further, previous studies done by the author revealed that effective communication between parties to a construction project is a factor to minimize project disputes. The same study identified communication issues between team members as one of the major causes of disputes (Gamage, 2022).

This study identifies several factors that cause disputes in construction projects. By analyzing these common causes of disputes, it is obvious that each party to a project has the responsibility to minimize disputes by mitigating or preventing these disputes. The author classified these disputant causes into four categories considering the controllable party for such causes. The categories are client-related causes, contractor-related causes, consultant-related causes and other causes. It is found that some of the causes of disputes fall under more than one category making it related to different parties to the contract. These four categories are shown in Table 1.

Table 1: Major Categories of Causes of Disputes in Construction Projects

Cause Category	Causes
Client Related Causes	Unrealistic expectations of the customer, Untimely payments, Delay in payments, Inefficiencies in cooperation between designer, contractor and the owner, Omissions and changes in the conditions, Stakeholder reactions, Client's lack of knowledge, Poor communication, Slow response of client, Lack of confidence between the contractor and the employer, Failure in complying contractual obligations, Changes to scope of work, Project manager's authority level, Diversity in expertise of project participants, Difference in interests, concerns and training of individuals, Undefined communication channels, People issues
Contractor Related	Inefficiencies in cooperation between designer, contractor and the owner, Construction speed, Tender pricing, Errors in initial cost estimations, Poor communication, Lack of confidence between the contractor and the employer, Incomplete claims with poor substantiation, Poorly drafted claims, Failure in complying contractual obligations, Diversity in expertise of project participants Difference in interests, concerns and training of individuals, Unclear risk allocation, People issues
Consultant Related	Contract matters, Quality of contract content, Errors in contract documents, Non-serviceable contract and information, Type of contract, Unrealistic estimations, Errors in design data and design documents, Project award criteria, Incomplete designs, Design errors, Uneven responsibilities and obligations towards the project completion, Project schedule and errors in initial estimates, Unclear risk allocation, Unforeseen reasons between stakeholders related to contract conditions, Poor contract administration, Discrepancies in bills of quantities, Client's requirements misinterpretation, Complexity of contract documents
Other Causes	Scarcity of capital resources, Unforeseen site conditions create grounds for disputes

Note. Tabulation is done by the author

By analyzing these causes of disputes, it is obvious that all parties to a contract cause disputant issues. **Figure 3** shows a chart that indicates the number of causes of disputes created by each identified major cause category. According to this pie chart, the most

disputant causes are due to consultant-related issues and then client-related issues. The third portion of disputant causes is related to the contractor. The remaining is related to other causes which are beyond the control of the client, consultant, or contractor.

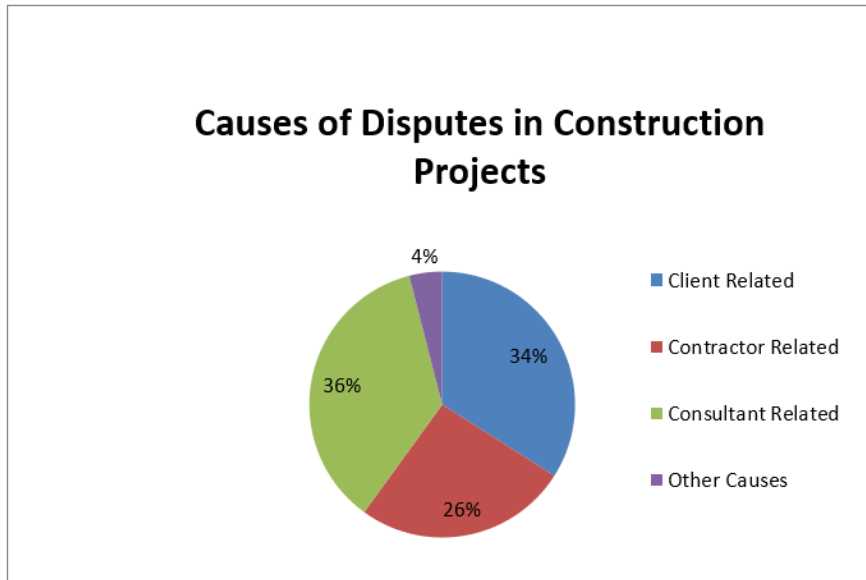


Figure 3: Causes of Disputes in Construction Projects

After a comparison of the causes of disputes related to each category, the same disputes were categorized according to their occurring stage. Therefore pre-contract stage and post-contract stage causes of

disputes were identified. **Figure 4** is a comparison of these causes of disputes according to their occurring stage.

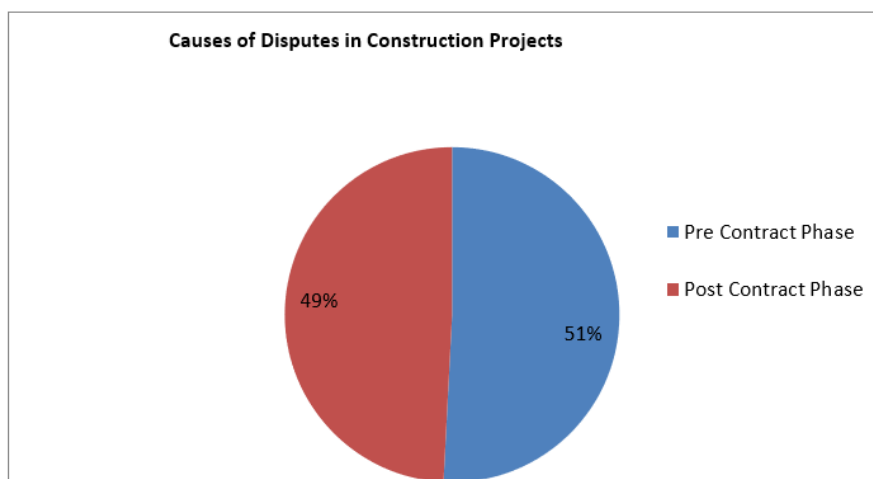


Figure 4: Pre Contract Phase and Post Contract Phase Causes of Disputes in Construction Projects

According to Figure 3, most of the causes of disputes are related to the consultant and then to the client. This shows that clients can influence minimizing disputes in construction projects by minimizing client-related causes and by influencing to minimize consultant-related disputes. On the other hand, during the construction stage, the contractor has the responsibility for minimizing most of the causes of disputes as he is responsible for 26% of identified major causes of disputes. According to Figure 4, 51% of causes of

disputes occur during the pre-contract stage whereas 49% of disputant causes occur during the post-contract stage. The hypothesis testing resulted as below.

- There are major disputant causes that impact the successful completion of a construction project.
- The majority of causes are due to client and consultant. Therefore, the client has more influence in minimizing the causes of disputes.
- Most disputant causes emerge in pre-contract phase. Therefore, this stage is more important

for minimizing possible disputes and related risks.

Therefore, during the pre-contract stage, the consultant team can work together with the client to mitigate possible disputes that can occur during the construction stage. Consultant team can mitigate or prevent disputes by minimizing errors in documents, design, and estimations. On the other hand, there are many causes of disputes that occur during the post-contract stage. Therefore, every team has a responsibility to minimize these causes to minimize disputes in construction projects.

Limitations and research gap

There are research limitations in this study. Firstly it used secondary data published in recent five years. However, it is identified that there were not many recent studies done on the causes of disputes. Therefore, further studies on this topic using primary data are important to identify the causes of disputes that are relevant to current project methodologies and technologies.

Other than that, the secondary data used were from studies done in different locations around the world. It doesn't focus on any special demographic location or country. To address this, future research should narrow its scope to particular regions or countries to consider cultural, legal, and industry-specific factors influencing disputes.

Notably, the study did not identify recent research on construction disputes in Singapore, revealing a critical research gap. Future endeavors should focus on Singapore, employing primary data collection methods to uncover the unique causes of disputes within the country. Furthermore, the study primarily relies on academic literature, potentially overlooking industry stakeholder perspectives. Incorporating interviews, surveys, or focus groups in future studies would offer a more comprehensive understanding of disputes from diverse industry viewpoints. Finally, the dynamic nature of construction methodologies and technologies suggests the need for ongoing research to keep pace with industry evolution.

This study acknowledges limitations in relying on secondary data and identifies a critical research gap regarding construction disputes in Singapore. To address this, future research must employ primary data collection methods specifically tailored to the Singapore construction context. Focusing on Singapore will yield insights into region-specific causes, enhancing the relevance of dispute management strategies for the country's construction industry. This strategic shift aims to fill the identified gap in empirical evidence, ensuring a more comprehensive understanding of construction dispute causes and contributing valuable insights for

practitioners and policymakers in Singapore's construction sector.

CONCLUSION

The objective of this study was to identify the major causes of disputes in the construction industry using secondary data. Disputes are unavoidable in construction projects due to their complex nature which include many parties. However, another objective of this study was to highlight the importance of identifying the dispute triggers. By identifying these dispute triggers, the project team can find ways to mitigate or prevent disputes to deliver a successful project within its goals.

The identification of 50 causes revealed a prevalence of client-related and consultant-related triggers, urging a collaborative effort for mitigation. Notably, 51% of disputes arise during the pre-contract phase, emphasizing the critical role of early intervention. By fostering awareness and offering targeted training on dispute causes and prevention, construction project leaders can proactively minimize disputes, ultimately contributing to the successful and cost-effective completion of projects. Continued research on dispute triggers, coupled with heightened awareness, presents a pathway for industry leaders to navigate and mitigate the challenges posed by construction disputes.

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