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## **Types of Disputes' causes in Saudi Construction Project**

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### **Abstract**

The construction industry is one of the most active and buoyant industries in the global sphere, and disputes contain within their nature risks and threats to the availability of technology, resources, expertise and his colleagues which potentially damages the development and expansion of the industry as a whole. It is becoming increasingly difficult and complicated for constructors to attend to multiple projects due to the need for adaptation to the numerous unforeseen adjustments with which a construction team must contend. Much research has been conducted to identify the factors which contribute to construction industry disputes and a number of key studies from various countries have been examined to facilitate understanding of the context in which disagreements arise.

**Keywords:** Construction Project; causes of disputes; type of disputes; KSA.

### **1. Introduction**

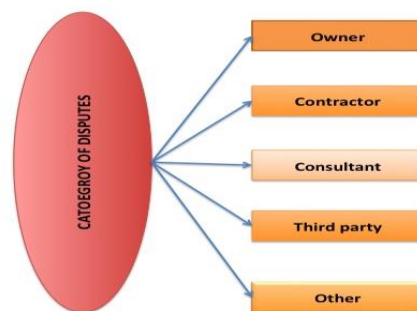
There has been a tendency in research to examine the causes of conflicts as well as the sources and to seek to place the diverse range into identifiable classification and types even though there is a large degree of commonality in causation [2]. It is therefore intended to describe the common causes and identify the seven broad categories of disputes based on the nature and mode of occurrence [2]. It is noted that Fenn [5,3]. has conducted comprehensive studies on previous research based on the cause of disputes in the construction industry, and his results are described in Table 1 below. simplify the number of dispute indicators by designating the causes of conflicts into 5 groups, as per the conflict initiator Fig 1.

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**Table 1:** Types of Disputes' causes (Source: Adapted from Fenn, 1997 and Fenn, 2006)

Authors	Types of Disputes' causes
Heath and his colleagues (1994)	Contract terms, payment, variation, time nomination, re-nomination and information.
Diekmann and his colleagues (1994)	People, processes and products.
Rhys Jones (1994)	Management, culture, communications, design, economics, tendering pressures, lay, unrealistic expectations, contracts and workmanship.
Bristow and Vasilopoulous(1995)	Unrealistic expectations, contract documents, communication lack of team spirit and change.
Molenaar and his colleagues (2000)	People issues, process issues and project issues.
Madden (2005)	Legal, technical and quantum disputes.
Edwin (2005)	Contractual, cultural and legal
Acharya (2006)	Other, owner, contractor, consultant and third party based disputes.
Helen (2007)	Structure, process, people, external and internal disputes.
Cakmak (2013)	Owner related disputes, contractor related disputes, design related disputes, contract related disputes, human behaviour related disputes, project related disputes and external factors
Mitkus (2013)	Other, owner, contractor, consultant and third party based disputes.
Elziny (2015)	Financial issues, Contract Management, Contract documents, Project related issues and Other Reasons.



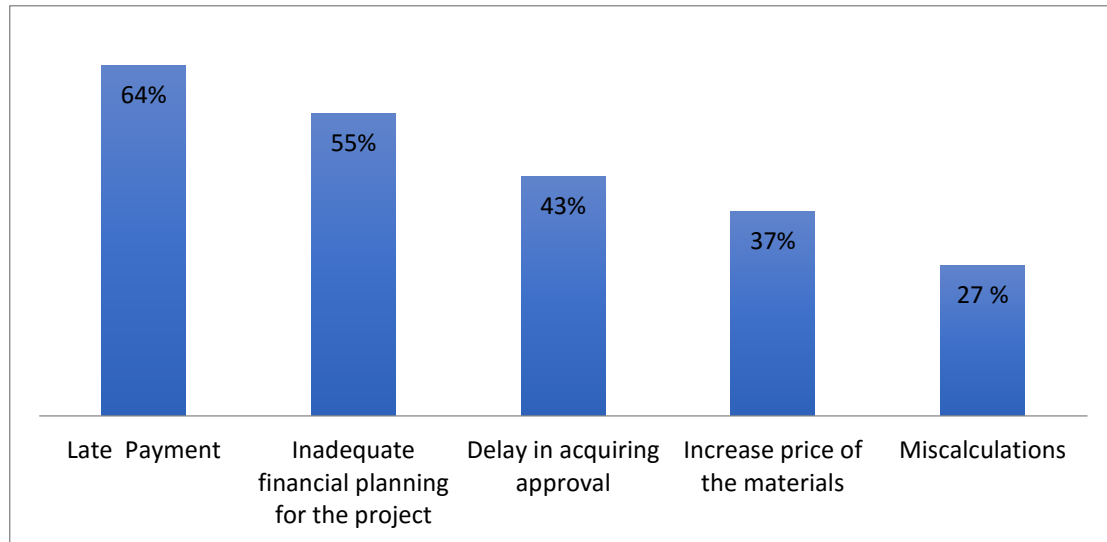
**Figure 1:** Types of Disputes' causes (Source: Acarya and Lee, 2006).

## 2. Types of Disputes' causes

The causes of disputes were classified as Financial, contractual, owner, design, and people's behaviour, contractor, project-related and external. Those who had not encountered any disputes were set aside, and those

who had encountered disputes cover over 90 % of the total compared to those who had not, which stood at only 10%.

### 3. Percentage of causes of disputes in Saudi construction projects (financial issues)



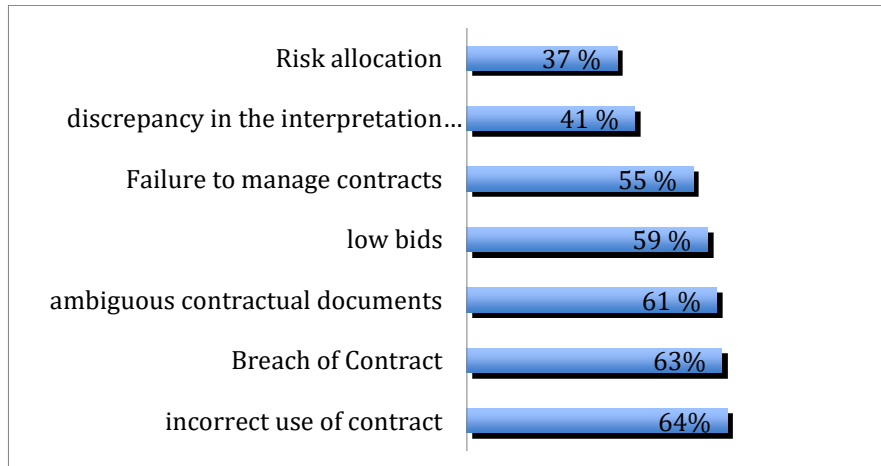
**Figure 2:** Percentage of causes of disputes in Saudi construction projects (financial issues)

Participants were questioned about the causes of financial disputes in Saudi construction projects and it became clear that the causes of financial disputes were in five categories, as follows: “Late payment”, “inadequate financial planning for the project”, “delay in acquiring approval”, “increased price of the materials” and “Miscalculations”. The most common cause of financial disputes was “late payment”, at 64 %. The lowest figure was for “Miscalculations” with a proportion of 27 %. Figure 2 illustrates that the most cause of financial disputes was “late payment” according to participants, standing at 64%. “Inadequate financial planning for the project”, came in second position with a figure of 55%. Next came “delay in acquiring approval” with a figure of 43%. Next was “increased price of materials” with a figure of 37%. Finally we see that the least common cause disputes according to participants was “Miscalculations” at 27%.

### 4. Percentage of causes of disputes (contractual issues)

The participants were questioned about the causes of disputes over contractual issues. It was found that the causes of disputes over contractual issues could be divided into seven categories as follows: ambiguous contractual documents, breach of contract, incorrect use of contract, low bids, failure to manage contracts, discrepancy in the interpretation of contracts and risk allocation. This is a large number of categories, compared with other causes of disputes. This shows that the proportions of different causes of disputes in contractual disputes, are similar. It becomes clear that the highest proportion for a cause of dispute in contractual issue belongs to “use of contracts incorrectly” at 64%, while “risk allocation”, had the lowest proportion at 37%. Figure 3 illustrates that the most common cause of disputes in contractual projects was “incorrect use of contracts”, at 64%. Next was “breach of contract” at 63%. This was followed by “the absence of the contract

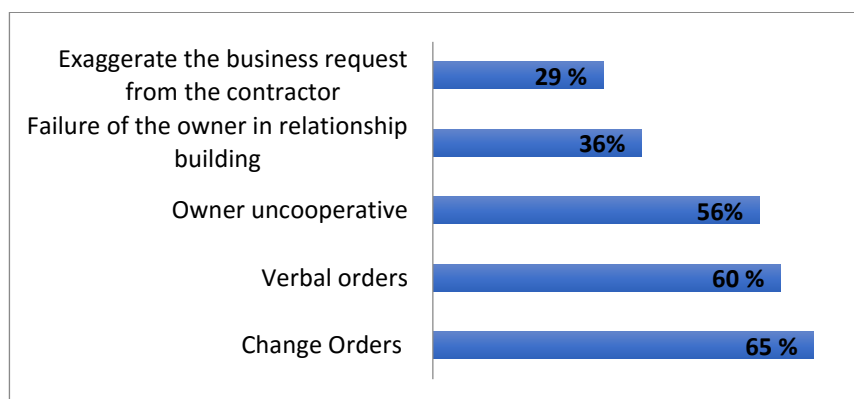
content” at 61%. The proportion of the following causes of disputes, gradually drop as follows: “Low bid”, 59% “failure to manage contracts”, 55%, “discrepancy in the interpretation of contracts”, 41% “risk allocation”, 37%. It can be seen that the smallest proportion belongs to the cause of dispute in contractual issue, which is termed “risk allocation” standing at 37%.



**Figure 3:** Percentage of causes of disputes (contractual issues)

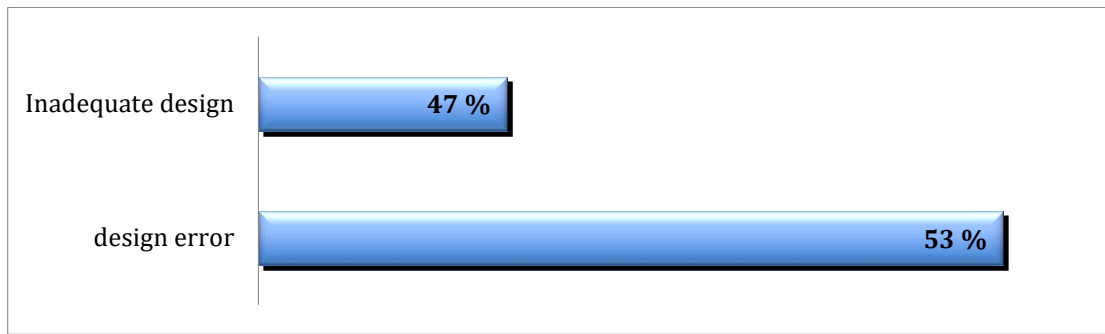
#### 5. Percentage of causes of disputes (owner)

Participants were asked about the “owner” being the cause of disputes and it was found that the causes of disputes in “owner” issues could be divided into 5 categories as follows: Change orders, verbal orders, owner uncooperative, failure of the owner in relationship building, and exaggerate the business request from the contractor. “Change Orders” was the most common cause of dispute in “owner &” issues, at 65%, while the least common being “exaggerate the business request from the contractor” at 29% proportion. Figure 4 illustrates that the common causes of dispute in “owner” were “change orders”, at 65%, “verbal orders”, at 60%, and “owner uncooperative”, at 56%. The cause of “owner” issue was given less than 40 % and even 30%, as follows: Failure of the owner in relationship building and exaggerate the business request from the contractor, which was 29%.



**Figure 4:** Percentage of causes of disputes (owner)

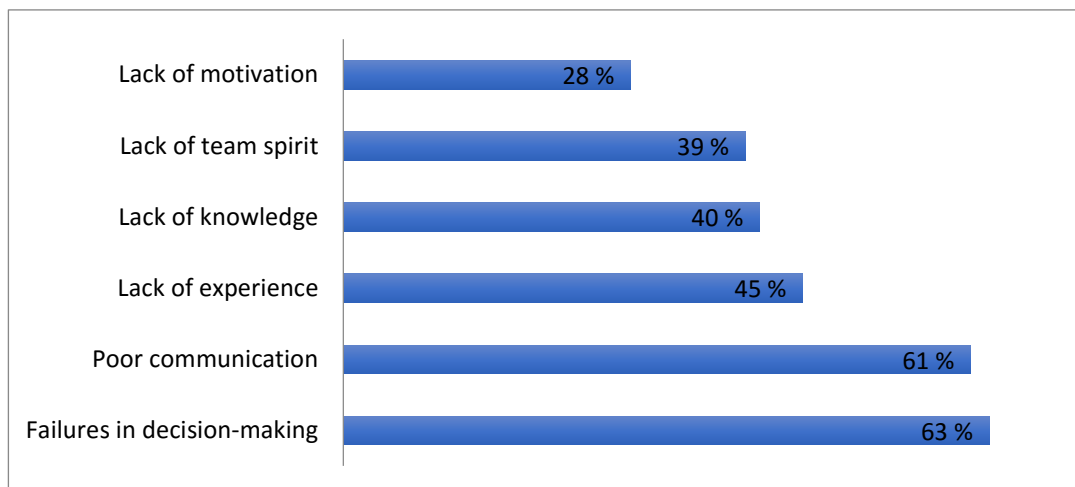
## 6. Percentage of Causes of disputes (Design)



**Figure 5:** Percentage of Causes of disputes (Design)

Participants were asked about the cause of “design” and it was found that the causes of disputes in “design” issues were divided into two categories: design error and inadequate design. The “design error” was the most common cause of dispute in “design” issues, at 53%, while the least common was “inadequate design” at 47%. Figure 5 illustrates that the most common cause of dispute in “design” was (design error) at 53%, and “inadequate design”, at 47%, with the two causes being similar in terms of commonness.

## 7. Percentage of causes of disputes in SCP (people behaviour)

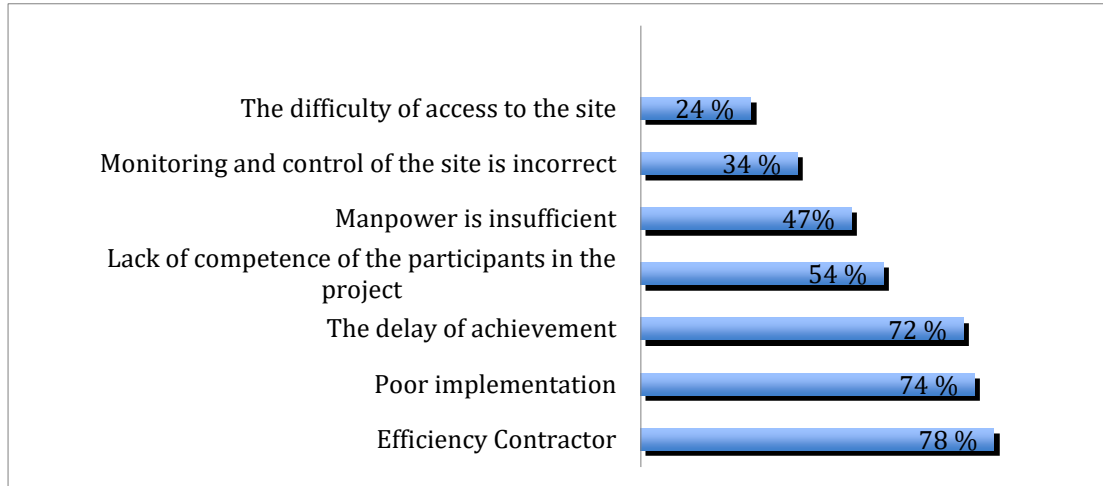


**Figure 6:** Percentage of causes of disputes in SCP (people behaviour)

Participants were asked about the cause of disputes “people behaviour” and it was found that disputes over “people behaviour” could be classified into six categories: Failures in decision-making, poor communication, lack of experience, lack of knowledge, lack of team spirit and lack of motivation. “Failures in decision-making” was the most common cause of disputes in “people behaviour” disputes, at 63%, while the least common was “lack of motivation”, at 28%. Figure 6 illustrates that the most important causes of dispute in people behaviour were three issues and the differences in proportions were about 10% as follows: Failures in decision-making, poor communication and lack of experience, and, whose figures were 63%, 61% and 45% respectively. Lack of

experience ranked just above lack of knowledge whose figure was 40%. Lack of team spirit was 39%. Lack of motivation was the least common, at 28%.

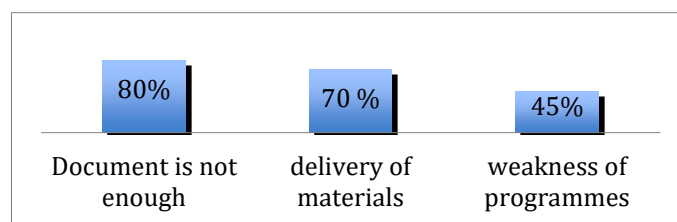
### 8. Percentage of Causes of disputes (Contractor)



**Figure 7:** Percentage of Causes of disputes (Contractor)

The participants were asked about the causes of contractor' disputes and it was found that the causes of contractors' disputes were in seven categories: Efficiency contractor, poor implementation, delay of achievement, lack of competence of the participants in the project, manpower is insufficient, monitoring and control of the site is incorrect and difficulty of access to the site. We conclude that based on the number of causes, "efficiency of contractor," had the highest figures of all, at 78%. Meanwhile, we conclude that "the difficulty of Access to the site" had the lowest figures, standing at 24%. Figure 7 illustrates that the causes of contractor's disputes are as follows. Three causes of disputes, "efficiency contractor" and "poor implementation," and the delay of achievement, had the highest figures among the other causes, being over 70%. They were 78%, 74% and 72% respectively. The causes of disputes with high proportions are those over 50%. Ranking lower than the first two causes were one other cause: lack of competence of the participants in the project 54%. We also conclude that the causes of contractors' disputes with causes as lower than 50%, which were less importance than the previous causes, were the following three: Manpower is insufficient, at 47%, monitoring and control of the site is incorrect, at 34%, and difficulty of access to the site, at 24%.

### 9. Percentage of Causes of disputes (Project related)

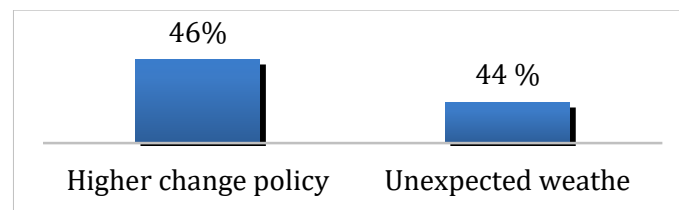


**Figure 8:** Percentage of Causes of disputes (Project related)

The causes of project related disputes consisted of causes of disputes unlike anything previously mentioned, and they vary depending on the origin of cause. Participants were asked about the highest proportion of general causes and it was concluded that the general causes could be classified into 3 different categories: (Document is not enough, delivery of materials, and weakness of programmes). The highest figure in financial disputes was “document is not enough”, at 80%. The lowest figure is for “weakness of programmes”, at 45%. Figure 8 illustrates that the highest cause of Project related disputes was “document is not enough” according to participants, with a figure of 80%, “Inadequate delivery of materials for the project”, stood in second position, at 70%. Finally we see that the least factor to cause disputes according to participants was “weakness of programmes”, at 45%

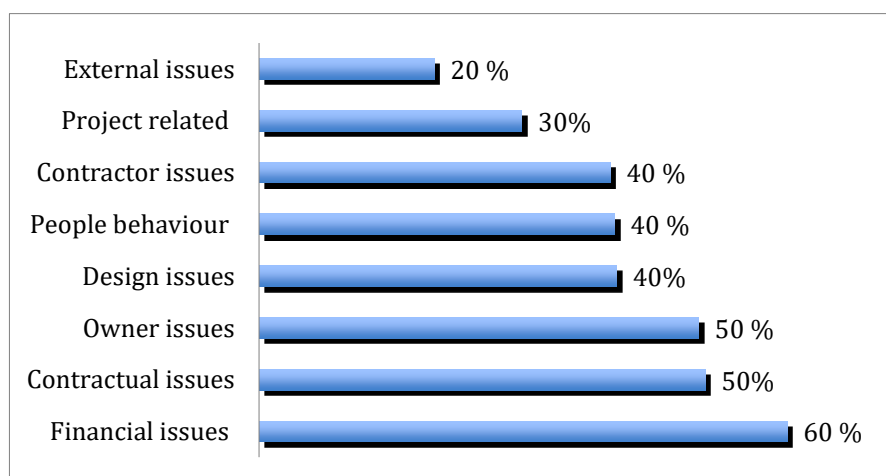
#### 10. Percentage of causes of disputes in saudi construction project (External)

Participants were asked about the causes of external disputes and it was found that the causes of disputes in "external" issues were in two categories: (Higher change policy and unexpected weather). The "Higher change policy" was the most common cause of dispute in "external" issues, at 46%, while the least common was "Unexpected weather", at 44%. Figure 9 illustrates that the most common cause of dispute in "external" was higher change policy, at 46%, and "unexpected weather", at 44%, where the percentage different was not big between the two causes.



**Figure 9:** Percentage of causes of disputes in saudi construction project (External)

#### 11. Ranking of the causes of disputes in Saudi Construction Project



**Figure 10:** Ranking of the causes of disputes in Saudi Construction Project

The participants were asked about the ranking of type causes of disputes in Saudi construction projects and it was found that the causes of disputes were in eight categories based on the previous chapter: Financial, contractual, owner, design, people's behaviour, contractor, project-related and external. They were asked to rank them by identifying the most important causes of disputes. Figure 10 has the most important categories, including "financial disputes," which had the highest value of all, at 60%. Meanwhile, "external disputes" was the least common type or cause of disputes, at 20%. Next came the less common types or causes of disputes, namely project-related disputes and external disputes, which did not exceed 30% with project related standing at 30% and external disputes at 20%.

## **12. Discussion**

The most effective cause of dispute in contractual projects is "use of contracts incorrectly", and its proportion is 64%. Next to that stands "breach of contracts" with a proportion of 63%. After this comes "the absence of the contract content", whose proportion is 61%. The proportion of the following causes of disputes gradually drops as follows: "low bid", 59%; "failure to manage contracts", 55%; "discrepancy in the interpretation of contracts", 41%; "risk allocation", 37%. We can see that the least proportion belongs to the cause of dispute in contractual issue, which is titled "risk allocation". Its proportion is 37%. As the literature indicates, regarding the situation in Hong Kong [6] tried to determine the reasons and differentiate the root causes from other factors. Some of the common root causes in the construction project sector claims include unfair risk distribution and inadequate contract paperwork.. Premature tender documents, definitions and use of the traditional procurement method are causes of disputes in Saudi Arabia [7]. The most common reason for delay is the lowest bid.

## **13. Conclusion**

Studies have proven that as the trend for heavy expenditure in the construction sector in Asia and the Middle East is likely to continue for years to come, the possibility of a high volume of disputes cannot be overruled investigated different types of disputes prevalent in KSA.

## **14. Recommendation**

Find a relationship between the types and causes of disputes with the methods of dispute resolution by using computer software to provide more valuable and useful results to researchers.

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