1.1 Background of the research

Over the years, in the past, a significant portion of construction research literature has been written focused on construction claims and disputes. Many researchers have studied the causation, presentation and resolution of construction claims and disputes.

Claims seem to be an integral part of the building process (Levin 1998). Barrie and Paulson (1992) highlighted that the construction industry has experienced an increase in claims liability exposures and it is difficult to reach a reasonable settlement of claims in an effective, economical, and timely manner. Uncertainties and changes in high-value and long-duration construction projects made construction disputes inevitable (Hellard 1987, Langford et al. 1992, Smith 1992, Cheung and Yiu 2006).

A dispute can be defined as an argument resulting from a debate over the difference in the understanding of a situation between two or more contacting parties’ understanding of a situation (Vorster 1993). Disputes may cause project delays and lead to claims, requiring litigation proceedings for its resolution and destroying the popularity of the company and its business relationships. It is therefore crucial to manage disputes proactively to ensure early settlement. Any stakeholders, including clients, architects, engineers, surveyors or contractors, can generate disputes. The more complex a construction project, the higher the probability of a dispute cropping up. In the United Kingdom, Newey (1992) provided invaluable data illustrating the increasing number of construction disputes. He advocated that, “prevention is better than cure”. Dispute prevention can be achieved through a better understanding of the basic characteristics and occurrence likelihood of construction disputes. Fenn (2002) also suggested that the best solution for avoiding disputes is to predict the occurrence likelihood of disputes.

1.2 Research objectives

Construction disputes often affect project performance, although it is
difficult to avoid disputes in construction projects. The settlement of disputes is often costly and time consuming. Many construction disputes remain unresolved until the completion of the project. Despite construction dispute resolution being akin to the widely studied conflict resolution that has been widely studied, construction dispute itself is seldom defined. This study aims to provide a framework for conceptualizing construction disputes to identifying the manifestation of disputes for dispute management. Fuzzy Fault Tree Analysis (FFTA) is employed to determine the occurrence likelihood of construction disputes. From the FFTA model, logic gates present the interrelationship between the artifacts of construction disputes manifestation. In addition, a web-based evaluation system was developed for data collection. The industrial relevance of this study would be informative for dispute management.

**Final text**

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