

## **Saudi Arabian Aviation Construction Projects: Risks and Their Assessments**

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**Abstract :** Construction projects are unique and involve different level of complexity. Airports projects, among other construction projects, are considered to be very complex as they face a number of challenges which make them inevitably exposed to risks. However, in Saudi Arabia, the sector of aviation is considered an important sector owing to the fact that it is the first destination for Muslims on an annual basis. As a result the Saudi government has allocated a huge amount of their general budget to this sector through the General Authority of Civil Aviation (GACA). However, it has been found that the projects are still delivered with a significant number of time and cost overruns. These consequences are typically generated from the risks involved in the projects. Thus, there is a need to identify the number of risks thought to cause such overruns in project times and costs, as well as to assess their significances in terms of their likelihoods of occurrence and their impacts. Accordingly, this paper aims to identify risks associated with aviation construction projects in Saudi Arabia, as well as to assess their likelihoods of occurrence and impacts on such projects. In total, forty four risks have been identified through a critical literature review of common risks in similar projects, as well as thirteen semi-structured interviews with expert project managers involved in GACA's projects. However, the assessment of the identified risks in term of their likelihoods of occurrence and impacts was obtained through the analysis of forty five questionnaires. Respondents of questionnaires include clients, contractors and consultants. The results show the risks of design changes by the client, labour issue, and setting a tight schedule by the client have the highest likelihoods of occurrence in GACA projects, while the risks of earthquakes, design constructability, and corruption have the greatest impacts.

**Keywords :** aviation construction projects, GACA, risks, risk assessment, Saudi Arabia

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