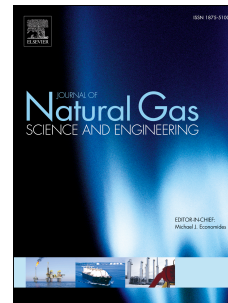


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Investigation into the performance of oil and gas projects

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Abstract

Many oil and gas projects experienced significant cost overruns, which is a major concern for the industry. The objective of this study is to investigate the cost performance of oil and gas projects by analyzing the data of approximately 200 public oil and gas projects. The average cost overrun of the projects is 18% with a standard deviation of 29%. The results also indicate that the error of underestimation is more frequent and greater than that of the overestimation. The projects' cost performance is also examined in terms of project size, type, region, joint venture information, and Final Investment Decision (FID) year. All effects of each factor are tested with statistical methods, and various drivers for cost performances are suggested to explain the differences in cost performance. The findings of this research will provide some guidance and references for future improvement in project performance.

Key words: oil and gas project; project performance; cost performance; project management; project economics

1. Introduction and background

Average annual global oil & gas (O&G) project capital project investment is about US\$1 trillion per year between 2011 and 2035 (IEA, 2011). However, the performances of the O&G projects did not get any attention until the recent oil price crashes. There are many metrics to evaluate project performance (e.g., cost, schedule, operability, and production). Cost performance is the key metric for determining whether a project is successful as cost is the aggregated outcome of all project scopes. Therefore, investigating the cost performance is a great approach for understanding the projects' performance. Few

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