# Article information:

Exploring the Relationship between Complexity and Risk in Megaconstruction Projects | Journal of Construction Engineering and Management | Vol 146, No 12
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# Article summary:

1. Megaconstruction projects are inherently complex and risky, but current risk management approaches do not adequately incorporate complexity-based thinking.

2. The relationship between complexity and risk in megaconstruction projects is explored through a mixed-methods research approach, revealing causal links between the two factors.

3. An integrated risk assessment process (IRAP) is proposed to better manage complexity and risk in megaconstruction projects, improving project performance and outcomes.

# Article rating:

May be slightly imbalanced: The article presents the information in a generally reliable way, but there are minor points of consideration that could be explored further or claims that are not fully backed by appropriate evidence. Some perspectives may also be omitted, and you are encouraged to use the research topics section to explore the topic further.

# Article analysis:

The article "Exploring the Relationship between Complexity and Risk in Megaconstruction Projects" aims to propose an integrated risk assessment approach by exploring the relationship between complexity and risk in detail. The authors argue that prevailing risk management practices fail to incorporate complexity-based thinking into risk management, leading to unrealistic project risk assessments and imperfect management strategies.

The article provides a comprehensive literature review on complexity and risk, highlighting the importance of managing risks in construction projects, especially megaconstruction projects. The authors also discuss the deficiencies in current risk management practices and argue that a disintegrated approach for RM may be one of the bottlenecks in practice.

The research methodology adopted by the authors is a mixed-methods approach, which includes collecting data via semi-structured interviews and survey questions from 11 megaconstruction projects carried out by Turkish contractors. The quantitative findings serve to verify the relationship between complexity and risk in numerical terms, whereas qualitative findings were utilized to develop a framework that explains the nature of this relationship.

The conceptual framework represents the links between complexity and risk in megaconstruction projects, together with uncertainty and management strategies. The existence of causal relations between these concepts may constitute a significant challenge during the risk assessment. Therefore, an integrated risk assessment process (IRAP) was proposed so that megaproject practitioners could develop better risk management plans.

Overall, the article provides valuable insights into how project complexity can be incorporated into RM models and practices for megaprojects. However, there are some potential biases and limitations to consider. Firstly, the study only focuses on Turkish contractors' experiences with megaconstruction projects; therefore, it may not be generalizable to other contexts or countries. Secondly, while the authors provide a comprehensive literature review on complexity and risk, they do not explore counterarguments or present both sides equally.

Additionally, while the authors highlight deficiencies in current RM practices, they do not provide evidence for their claims or explore potential reasons for these deficiencies thoroughly. The article also lacks a discussion of possible risks associated with the proposed IRAP approach, which may limit its applicability in practice.

In conclusion, the article provides valuable insights into the relationship between complexity and risk in megaconstruction projects and proposes an integrated risk assessment approach. However, it is essential to consider potential biases and limitations when interpreting the findings and applying them in practice.

# Topics for further research:

* Criticisms of current risk management practices in construction projects
* Case studies of successful risk management in megaconstruction projects
* The impact of project complexity on project management
* Best practices for risk assessment in large-scale construction projects
* The role of uncertainty in project risk management
* The relationship between project complexity and project success in construction projects

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