

# To Phase or Not to Phase: Quantifying the Effect of Phasing Construction Projects

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## **Abstract**

Phasing construction projects is an interesting possibility that has received only limited attention in the academic literature, especially the quantification of benefits from phasing and the effect phasing has on project risk have not been fully explored. This paper presents two approaches to analyze the effects of phasing in the context of construction projects: a simple fuzzy logic-based method for preliminary analyses and a system dynamic simulation-approach for deeper analysis with timing. Both approaches are illustrated with a numerical example case. The presented results are new in academic literature and of practical relevance to managers and investors working with construction projects.

**Keywords:** Real Estate, Real Option, Risk Management, Pay-Off Method, System Dynamic Modeling