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# Strategic actions in information technology investment based on real option theory

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### Abstract

The rapid growth of information technology (IT) investments has imposed pressure on management to take into account risks and payoffs promised by the investment in their decision-making. Comprehensive but easily understandable methodologies are needed to solve the complicated evaluation problems resulting from the complexity of new technologies. This paper develops a framework of strategic actions based on real option theory. The paper identifies the basic components of IT values and strategic actions and provides the basis for valuing IT investment in terms of economic and real option value. It also provides IT managers with an easy-to-understand framework to assist in evaluating and justifying IT investments.



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## Keywords

Information technology (IT) investment; Strategic action; Real option theory; Interaction effect; Competitor reaction

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