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## RESOURCE COMPLEMENTARITIES, TRADE-OFFS, AND UNDERCAPITALIZATION IN TECHNOLOGY-BASED VENTURES: AN EMPIRICAL ANALYSIS (SUMMARY)

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## SUMMARY

### RESOURCE COMPLEMENTARITIES, TRADE-OFFS, AND UNDERCAPITALIZATION IN TECHNOLOGY-BASED VENTURES: AN EMPIRICAL ANALYSIS

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#### Principal Topic

Undercapitalization in early-stage ventures is one of the most challenging obstacles to success facing entrepreneurial startups (Holtz-Eakin, Joulfaian, & Rosen, 1994). Limited research has probed this area and it is often *atheoretical* with key concepts not rigorously defined (Thornhill & Amit, 2004). In this study we propose a definition of undercapitalization as the failure of young ventures to procure enough capital to fund the organization's strategic priorities, and theoretically ground the definition by extending recent work on the payments perspective in resource-based theory (e.g., Lippman and Rumelt, 2003). According to this perspective, the relative capitalization of an organization reflects the value of its underlying resources (Lippman & Rumelt, 2003). As such, we suggest that the amount of capital raised by these ventures relative to the intended strategies the firm seeks to implement, reflects the underlying value of the firm's resource base. Therefore, undercapitalization may be reflective of weaknesses and/or trade-offs in a firm's core set of resources (e.g., Zingales, 2000).

#### Methods

To test the research model, we developed a database of technology-based ventures from the archival records of a state-wide agency organized to assist technology ventures in navigating the start-up process. Based on the availability of certain critical data and the specific measurement strategies for key variables, our final sample consisted of 79 ventures started between 1994 and 2006, and spanned 39 unique 6-digit NAICS sectors. Hypotheses were tested using hierarchical log-normal survival analysis and two-limit tobit regression.

#### Results and Implications

Based on these analyses, three specific contributions are made to resource-based theory and the early-stage capitalization literature: First, both a theoretical rationale for and a measure of undercapitalization are developed, and the significant, inverse relationship between undercapitalization and firm survival is confirmed; Second, this study demonstrates how trade-offs among key resources increase a firm's risk of undercapitalization; Three, these results (particularly on the importance of trade-offs) illustrate the importance of considering the effects of individual resources embedded in a system of resources (e.g., payments perspective). This is in contrast to the heterogeneous resource approach in resource-based theory of attributing firm-level performance outcomes to the effects of individual resources (e.g., Barney, 1991; Peteraf, 1993).

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