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INTERACTIVE PAPER SESSION

OPPORTUNITY RECOGNITION AND INNOVATION: HOW TECHNOLOGY ENTREPRENEURS USE PRIOR KNOWLEDGE TO CONSTRUCT RADICAL INNOVATIONS

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Principal Topic

A number of studies suggest prior knowledge provides the means to unlock the mystery of why some recognize opportunities and not others (e.g., Ronstadt, 1988; Shane, 2000). Another challenge within opportunity research relates to the way opportunities are measured and empirically tested. Given the central importance of innovation to entrepreneurship (e.g., Covin & Miles, 1999), scholars have called for measures of innovativeness in opportunity research (Fiet, 2002; Morris & Kuratko, 2002). The purpose of this paper is to address these twin challenges—increasing our understanding of the role of prior knowledge during opportunity recognition and linking opportunity recognition to innovation outcomes. A constructivist view of Shane’s (2000) prior knowledge framework is used and includes markets, customer problems, ways to serve markets, and technology. The research provides a deeper understanding of the types of knowledge that facilitate opportunity recognition and their affect on subsequent innovation outcomes using a continuum of incremental and radical innovation.

Method

A survey instrument was developed to assess technology entrepreneurs’ prior knowledge at the time they first perceived their opportunity and the radicalness of their succeeding product or service offering. Prior knowledge items use Likert-type scales across two dimensions including the amount of their perceived knowledge and the perceived importance of that knowledge to recognize the opportunity. To measure the radicalness of innovation outcomes a scale was developed from the innovation literature (e.g., Hage, 1980; Leifer, McDermott, O’Connor, Peters, Rice & Veryzer, 2000). The data was collected from founders of technology-based ventures less than five years old in university incubators across the Midwest (N=100).

Results and Implications

Results indicate a significant relationship between prior knowledge and the innovation scale (p<.05). Findings indicate prior knowledge of technology is positively associated with innovation radicalness while prior knowledge of ways to serve markets is negatively associated with innovation radicalness. This suggests a somewhat counterintuitive conclusion: the less one knows about ways to serve a particular market, the better the chance of using technology to create breakthrough innovations within it. The study provides insights of the knowledge resources that enable radical versus incremental innovation.

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