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SIMULATING THE CLASH OF EFFECTUAL AND CAUSAL PROCESSES: INVESTIGATING CONDITIONS & BOUNDARIES FOR MARKET SUCCESS (SUMMARY)

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SUMMARY

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Principal Topic

Since Sarasvathy's seminal publication (2001), research on the effectuation theory has proceeded to detailing elements, differentiation from extant theories, and lately first empirical investigations (e.g., Sarasvathy & Dew, 2008). Initial studies linking effectuation to performance in specific environments such as new ventures or business angel investments have shown empirical evidence of a positive performance impact (e.g., Wiltbank et al., 2008; Read et al., 2009). However, limited progress has been made in comprehensively investigating the critical question under what circumstances which strategy provides particular advantages and disadvantages (Sarasvathy, 2001), leaving requirements and boundaries for normative superiority still largely unknown (Chandler et al., 2009). In order to investigate this issue, we examine a set of conditions and success factors for effectual vs. causal artifact creation by employing agent-based simulation experiments.

This study examines effectual and causal processes in the formal environment of computer simulation. We model the strategies and an environment including performance measures and uncertainty elements and assess performance for different uncertainty levels. More specifically, we seek to formally investigate specific boundaries of the "effectual problem space" (Sarasvathy, 2001) for an artifact creation task (Sarasvathy & Dew, 2005) and a pay-off landscape driven by fit with market preferences.

Method

We employ agent-based simulation experiments to assess model properties and behavior. The processes and questions investigated match typical requirements for promising simulation research, including theory at a relatively basic stage and complex intertwined processes hard to observe empirically (Davis et al., 2007).

We implemented the model in Repast Symphony, a java-based simulation environment (North et al., 2007). Since realizations of the processes are subject to stochastic variability, repeated simulation runs using the same parameter configurations and initial conditions were used to determine the distribution of outcomes.

Results and Implications

Our results indicate that effectual strategies can be superior under conditions of risk or ambiguity, not necessarily requiring Knightian uncertainty or reliance on commitments. Performance is also impacted by target market concentration and fragmentation. We sketch how our results support decisions in contexts of different uncertainty levels and thereby underline the notion of a contingent and conscious choice between effectuation and causation.

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