

**IN THE COMPANY OF NICHE FIRMS: EXAMINING HOW INCUMBENT
FIRMS CAN PROSPER IN HIGH TECHNOLOGY REGIMES**

By

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ABSTRACT

This dissertation investigates the phenomenon of incumbent firms' responses to technological change via alliances with niche firms. The primary concern herein is to identify and elucidate how different niche strategies employed by incumbent firms through their specialized partners (*alliance niche*) can enhance the focal firm's competitive advantage. Two crucial levels of alliance niche strategies are identified as having significant implications for the incumbent's performance: *population niche in alliance* and *fundamental niche (subsidiary niche and private niche firms) in alliance*. Hypothetical statements that clarify the conceptual relationships between these constructs are developed and empirically explored in the context of incumbent firms alliances in the United States semiconductor industry. As hypothesized, this study finds that a population view of niche firms in alliance is consistently and positively related to the incumbent's competitive advantage. In addition, this study reveals a negative association between the number of fundamental niche firms and the incumbent's short-run performance.

Also critical to these alliances with high technology niche firms are the *relational* and *structuring* conditions of the alliance. This dissertation delineates the relational contingencies that affect the outcomes of incumbents' alliances with fundamental niche firms in terms of *alliance embeddedness* and *rivalrousness*. The results of this analysis confirm that embedded alliance relationships positively moderate the influence of fundamental niche firms on the incumbent's performance. Furthermore, the value of intended alliance purpose, as defined by the alliance structuring, are examined and clarified. These structuring conditions, which involve the development of *niche competence* rest upon two key dimensions: *the degree of market niche specialization* and

the *degree of technology niche specialization*. While the main effects of these dimensions of niche competence were only partly supported, post-hoc analysis of interaction effects showed some significant performance implications from the interactions between the number of private niche firms and these dimensions of niche competence.

Several implications emerge from the analysis of this industrial organization phenomenon. The theoretical arguments attempt to extend understanding of niche and alliance network theories in high technology organizational settings; by providing a more refined but unified view for the value of networked, niche assets to the performance of incumbent firms. From a practical perspective, this study argues that incumbent firms' alliances can yield several performance benefits through an explicit account for the *fundamental* as well as the *population* identities of niche firm partners. While a population niche identity in alliance entails a focus on complementary resources of niche partners, fundamental niche considerations in alliance formation implies a focus on trustful relationships with niche firms as distinct sources of competitive advantage.