

**A FRAMEWORK FOR ENCOURAGING IMITATION AS A
PIONEERING STRATEGY**

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ABSTRACT

Extensive research has been conducted to demonstrate the advantages of pioneering products, technologies and markets (Lieberman & Montgomery, 1988; Makadok, 1998;

Robinson & Min, 2002). Some studies have highlighted the costs and benefits of imitation (Shankar, Carpenter & Krishnamurthi, 1999; Boulding & Christen, 2003) while others have studies have found mixed results on pioneering advantages (Boulding & Christen, 2008; Kopel & Loffler, 2008; Lee, Smith, Grimm & Schomburg, 2000). Pioneering involves efforts by the first firm to bring to market new products, technologies and internal and external processes. The main focus of this paper is on new products and technological innovations that often involve considerable investment in R & D accompanied by associated risks. Conventional theories hold that investment in R & D leads to sustainable competitive advantage (Teece, 1986; Helfat, 1997; 2000); organizational learning through a deep absorptive capacity (Cohen & Levinthal, 1991); alignment and adaptation to dynamic market conditions and first-mover advantage, among other strategic benefits. R & D is an essential component of most given strategies; more so for firms competing in knowledge economies and high technology.

Evidence is beginning to emerge that while some firms are competitive, they do not have formalized R & D strategies. Cohen, Levin, and Mowery's (1987) study of large U.S. firms reported that 24 percent of the firms did not invest in formal R&D. Some studies have shown a negative correlation between R & D expenditures and basic measures of firm performance such as profitability. Studies have found that some firms are able to maintain competitiveness, even in the absence of formal R & D programs. Bound *et al.*'s (1984) showed that 40 percent of U.S. firms did not report positive R&D expenditures; while Galende and Suarez's (1999) analysis revealed that 71 percent of companies did not undertake formal R&D. These findings suggest that there is an alternative way of achieving innovation, adaptation to externalities and consequent competitiveness without necessarily investing in R & D.

A firm may decide to choose a conventional form of innovation through R & D or opt for less risky alternatives such as strategic alliances and acquisitions. Alternatively, the firm may opt for a contested strategy of imitation. Performance results due to imitation are rather surprising. Mansfield, Schwartz, and Wagner (1981) found that 60 percent of patented innovations are imitated within four years from introduction. Schnaars (1994) documents the prevalence of firms choosing an imitation path in several industries (e.g., beverages, fashion, pharmaceuticals, software) as a deliberate competitive strategy. Indeed, Mansfield, Schwartz, and Wagner (1981) find that, on average, imitation costs are 35% lower than innovation costs.

The positive data from imitation accrue against a backdrop of risk and mixed returns from R & D investments. An evaluation of R & D investments among fortune 500 companies shows that R & D investments have, on average doubled over the past ten years. Why would firms continue to increase R & D investments given the benefits of imitation? While imitation as strategy has known deleterious effects on pioneering firms and overall society, imitation may in fact be *beneficial* to first mover firms. This implies that under certain conditions, the lack of imitation may be disadvantageous to the pioneering firm. This paper describes conditions that cause imitation to benefit pioneering firms, and develops a contingency framework that demonstrates when first movers and product pioneers are likely to benefit from imitation strategies and are better off encouraging such imitation.