Strategic Ambidexterity in Innovation: An Indispensable Capability in the Face of Change

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Abstract

The extant literature suggests firms that successfully achieve strategic ambidexterity in exploration of radical innovation and exploitation of incremental innovation have greater firm performance than firms entrenched in either extreme (cf, Tushman and O'Reilly 1996). More recently, researchers suggest that ambidexterity enables firms to adapt over time, consequently aiding survival in dynamic environments (O'Reilly and Tushman 2008). However, simultaneous pursuit of both exploration and exploitation is not effortless. Firms must overcome the natural inclination for inertia and path-dependence by hosting multiple processes, structures, and cultures that often conflict (Tushman and O'Reilly 1996).

Despite the importance and challenges of strategic ambidexterity, there have been very few empirical attempts to test conceptual arguments of industry leaders and academicians on strategic ambidexterity and implications for sustainable competitive advantage (Raisch and Birkenshaw 2008), especially in dynamic environments. Prior research, albeit limited, has focused on the influences of organizational structure and culture on ambidexterity (e.g., Duncan 1976; Gibson and Birkenshaw 2004), leaving a severe dearth of research addressing the impacts of business processes on ambidexterity. This perilous lack of research and the continuing decline of some incumbents while others prosper suggest that both academicians and practitioners alike would benefit from further empirical inquiry into process impacts on ambidexterity and the implications for success.

This study’s purpose is to develop a fuller understanding of business process influences on the ability of firms to achieve ambidexterity in innovation exploration and exploitation and to understand the ultimate performance impacts, especially in light of dynamic environmental conditions. Refer to Figure 1. In this study, the business processes of product development management (PDM), supply chain management (SCM), and customer relationship management (CRM) are analyzed as each of these processes is an explicit input into strategic choices and decisions (Srivastava et al. 1999). Specifically, this research seeks to answer to following questions:

Q1: How do opposing business processes influence strategic ambidexterity in innovation? Do particular processes play a more crucial role than others in ambidexterity attainment?

Q2: Can ambidexterity in innovation enable firms to better adapt to dynamic environments?

Preliminary Results

Cross-sectional survey research via self-administered questionnaire to top executives of US high technology manufacturers was chosen as the most appropriate avenue for this research; however secondary data were also collected for assessments of bias. The survey was developed using reliable and valid scales and was rigorously pretested. The American Electronics Association (AEA) was consulted as to the link between the definition of a high technology industry, that is, an industry that is a maker/creator of technology (Platzer et al. 2003), and the corresponding North American Industrial Classification System (NAICS) codes. This resulted in nine different high technology manufacturing industries sampled. Both public and private corporations for the sampling frame were drawn from CorpTech, Directory of Technology Companies, produced by infoUSA.
Two top executives each from 1000 manufacturers were contacted via a three-wave mailing (CEO/presidents, vice presidents, or directors). At the firm level, mailings to 86 firms were returned as undeliverable and 37 firms indicated that for various reasons they could or would not participate for a total of 123 firms. From the effective sampling frame of 877 firms, 246 firms responded for an effective firm response rate of 28%. Only 11 firms returned two completed surveys from both executives.

Once data was collected, a multi-step approach to data analysis was employed for this research. Standard procedures for pre-analysis data screening were followed, investigating and correcting for possible presence of missing data, outliers, non-normality, non-linearity, and heteroskedasticity in accordance with Mertler and Vanetta (2002). Both non-response bias and common method bias were assessed and were not considered an issue in this study.

Using partial least squares (PLS) for the hypothesized model analysis, preliminary results clearly supported hypothesized main affects of business processes to innovation strategies. Refer to Figure 1. Also, a supported positive interaction between exploration and exploitation on financial firm performance indicates that strategic ambidexterity results in positive firm performance. Furthermore, via cluster analysis strategically ambidextrous firms were shown to have multiple processes in place that impact both types of innovation strategies and that these firms implement these processes to a greater extent than those firms operating in the more extreme positions. Analysis will continue which will address strategic ambidexterity and the influences of a dynamic environment in terms of competitive intensity, market uncertainty and technological turbulence.

References


Figure 1: Business Process Influences on Strategic Ambidexterity in Innovation and Firm Performance Consequences (Preliminary Study)

- **Business Processes**
  - Product Development Management
    - Technology Monitoring
    - Technology Competence
  - Customer Relationship Management
    - Current Customer Knowledge Process
    - Lead User Collaboration
  - Supply Chain Management
    - Channel Bonding
    - Quality Process Management

- **Organizational Structure**

- **Innovation Strategies**
  - Exploration of Radical Innovation
  - Exploitation of Incremental Innovation

- **Firm Performance**

- Controls for preliminary study: Firm age/size, Environmental turbulence