Abstract: Firm-Level Technology Adoption Processes—A Qualitative Investigation

Kenneth W. Graham and Robert S. Moore

Abstract The firm's ability to develop innovative products has been shown to be an important factor in developing strategic advantage (Webster 1969; Hult and Ketchen 2001); however, not all firms have the resources or capabilities to innovate new products. Thus, to remain competitive, firms must adopt innovations from sources external to the firm—often in the form of technological innovations. To gain competitive advantage, a firm may adopt "transformational" technology—technology that enables a fundamental change to the firm's business model, a new value proposition or a new way to manufacture, distribute, and/or market an offering (Aaker 2011). However, not all technology adoption decisions are successful, which places firm performance and customer relationships at risk. Abrahamson (1991) argues that innovation research focuses too much on what drives adoption decisions and too little on what drives firms to adopt inferior innovations and reject superior ones. The tendency of researchers to "ignore the study of ignorance about innovations" (Rogers 1995; p. 100) has resulted in a significant gap in the adoption of innovation research. Using diffusion of innovation theory as a lens, this research examines how an adopting entity's perceptions of an innovation's relative advantage, complexity, and compatibility influence the decision to adopt the new technology (Rogers 1962; O'Neal et al. 1973; Davis 1989). Because unrealistic expectations for the performance of a technology can negatively influence attitudes and perceptions of adoption success (Oliver 1980), it is important to understand how the firm's perceptions of a technology are informed.

Therefore, to examine how performance expectations of a transformational technology develop, this research explores from a resource perspective how a firm's dynamic capabilities regarding organizational learning, knowledge-based resources and internal micro-politics influence perceptions of new technology. To gain this insight, we conducted ten semi-structured depth interviews with key informants from a variety of industries, including: higher education, healthcare services, financial

K.W. Graham (✉)
University of Wisconsin—La Crosse, La Crosse, WI, USA
e-mail: kgraham2@uwlax.edu

R.S. Moore
Mississippi State University, Starkville, MS, USA
e-mail: rsmoore@business.msstate.edu

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services and manufacturing. Participants were asked to recall a recent technology adoption decision and to describe in detail the adoption decision process. Questions covered areas related to knowledge acquisition and utilization, internal communications and evaluation processes related to the technology adoption decisions. Analysis of the textual data resulted in four major themes emerging as important to firm-level technology adoption decision processes: knowledge-seeking capabilities, knowledge-utilization capabilities, organization characteristics, and technology characteristics. The textual data suggests that the absorptive capacity of a firm to acquire and deploy knowledge resources plays a key role in informing perceptions of a new technology, especially with regard to the technology's relative advantages, perceived compatibility and perceived complexity. The textual data also provided strong support for the role of micro-political strategies, including coalition building and framing, as influencers of the perceptions of a technology. The study offers a theoretic framework and research propositions resulting from the textual data analyses and the supporting literature review.

References Available Upon Request.