

With N. Roberts. (2012) "Leveraging IT Infrastructure to Facilitate Firm's Customer Agility and Competitive Activity: An Empirical Investigation," *Journal of Management Information Systems (JMIS)*, Vol. 28(4), 231-270.

This paper investigates how information technology (IT) facilitates a firm's customer agility and, in turn, competitive activity. Customer agility captures the extent to which a firm is able to sense and respond quickly to customer-based opportunities for innovation and competitive action. Drawing from the dynamic capability and IT business value research streams, we propose that IT plays an important role in facilitating a "knowledge creating" synergy derived from the interaction between a firm's Web-based customer infrastructure and its analytical ability. This will enhance the firm's ability to sense customer-based opportunities. IT also plays an important role in "process enhancing" synergy obtained from the interaction between a firm's coordination efforts and its level of information systems integration, which facilitates the firm's ability to respond to those opportunities. We also leverage the competitive dynamics and strategic alignment literature to propose that the alignment between customer-sensing capability and customer-responding capability will impact the firm's competitive activity. We test our model with a two-stage research design in which we survey marketing executives of high-tech firms. Our results show that a Web-based customer infrastructure facilitates a firm's customer-sensing capability; furthermore, analytical ability positively moderates this relationship. We also find that internal systems integration positively moderates the relationship between interfunctional coordination and a firm's customer-responding capability. Finally, our results show that agility alignment affects the efficacy of a firm's competitive actions. In particular, action efficacy is higher when sensing and responding capabilities are both high.