

MISQ Archivist

Innovation Outcomes of Digitally Enabled Collaborative Problemistic Search Capability

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Abstract

A firm's use of boundary-spanning information systems (BSIS) can be beneficial for innovation by providing access to market-facing information. At the same time, BSIS use can give rise to information overload, making it difficult for firms to leverage the most pertinent information for innovation. Although there has been progress in developing our understanding of the role of IS in innovation, it is unclear what capabilities firms need to develop to facilitate innovation in the presence of information overload from BSIS use (IO-BSIS). We maintain that firms today are increasingly experiencing IO-BSIS and, therefore, a thorough investigation of firm-level capabilities to facilitate innovation while coping with IO-BSIS is needed. To address this key gap, we broaden the theory of problemistic search for innovation by proposing a digitally enabled collaborative problemistic search (CPS) capability. We propose that a cross-stream CPS effect—interaction of CPS with customers (CPS-C) and CPS with suppliers (CPS-S)—enables a firm to reinvigorate its internal knowledge for innovation by engaging customers and suppliers in filtering and interpreting market-facing information. Further, we theorize that the presence or absence of IO-BSIS is a contingency that affects whether the cross-stream CPS effect is likely to be beneficial or detrimental to innovation. Based on the analysis of data collected from 227 firms, we found that the cross-stream CPS effect is beneficial for innovation when firms face IO-BSIS and detrimental to innovation when firms do not experience IO-BSIS. We thus open the black box of the digitally enabled innovation activity by shedding light on specific collaborative activities that advance innovation by enabling firms to cope with information overload.

Keywords: Collaborative problemistic search, boundary-spanning information systems, big data, information overload, collaborative innovation; digital innovation