Front end of innovation: a disaggregated view

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Abstract

This research focuses on openness, and on a disaggregated view of the front end. A knowledge-based view of innovation is adopted to propose a framework that considers the front end as an open learning process leading to an informed decision on the development or termination of a new product idea. Building on Khurana and Rosenthal (1997, 1998), we focus on three knowledge outcomes or explicit forms of knowledge: a creative idea, a product definition, and a project definition. As organizational knowledge creation is predominantly an interactive process, we also focus on three collaborative competences as inputs. One of them, cross-functional collaboration competence, is internal to the company; and the other two stem from an open innovation approach: cross-industry networks competence, and customer integration competence. Lastly, senior management involvement is included as it is representative of company support and management of the whole front-end process. The framework, therefore, links four inputs (i.e., senior management involvement and three collaborative competences) and three front-end outcomes.

Using a sample of 190 innovative companies that conducted radical new product innovations, one size is revealed not to fit all. Cross-industry network competence matters for ideation and product definition, the former effect being linear and the latter curvilinear, but has no effect on project definition. Customer integration competence matters for the three outcomes. Cross-functional collaboration competence affects only project definition. Both senior management involvement and customer integration competence are crucial along the whole front-end learning process, customer integration proving to be particularly salient for product definition. Overall, this research depicts an open front-end process, although cross-industry openness matters less as successive knowledge outcomes are reached.