

The Impact of External Technology Acquisition and Exploitation on Firms' Process Innovation Performance

Authors : Thammanoon Charmjuree, Yuosre F. Badir, Umar Safdar

Abstract : There is a consensus among innovation scholars that knowledge is a vital antecedent for firm's innovation; e.g., process innovation. Recently, there has been an increasing amount of attention to more open approaches to innovation. This open model emphasizes the use of purposive flows of knowledge across the organization boundaries. Firms adopt open innovation strategy to improve their innovation performance by bringing knowledge into the organization (inbound open innovation) to accelerate internal innovation or transferring knowledge outside (outbound open innovation) to expand the markets for external use of innovation. Reviewing open innovation research reveals the following. First, the majority of existing studies have focused on inbound open innovation and less on outbound open innovation. Second, limited research has considered the possible interaction between both and how this interaction may impact the firm's innovation performance. Third, scholars have focused mainly on the impact of open innovation strategy on product innovation and less on process innovation. Therefore, our knowledge of the relationship between firms' inbound and outbound open innovation and how these two impact process innovation is still limited. This study focuses on the firm's external technology acquisition (ETA) and external technology exploitation (ETE) and the firm's process innovation performance. The ETA represents inbound openness in which firms rely on the acquisition and absorption of external technologies to complement their technology portfolios. The ETE, on the other hand, refers to commercializing technology assets exclusively or in addition to their internal application. This study hypothesized that both ETA and ETE have a positive relationship with process innovation performance and that ETE fully mediates the relationship between ETA and process innovation performance, i.e., ETA has a positive impact on ETE, and turn, ETE has a positive impact on process innovation performance. This study empirically explored these hypotheses in software development firms in Thailand. These firms were randomly selected from a list of Software firms registered with the Department of Business Development, Ministry of Commerce of Thailand. The questionnaires were sent to 1689 firms. After follow-ups and periodic reminders, we obtained 329 (19.48%) completed usable questionnaires. The structure question modeling (SEM) has been used to analyze the data. An analysis of the outcome of 329 firms provides support for our three hypotheses: First, the firm's ETA has a positive impact on its process innovation performance. Second, the firm's ETA has a positive impact its ETE. Third, the firm's ETE fully mediates the relationship between the firm's ETA and its process innovation performance. This study fills up the gap in open innovation literature by examining the relationship between inbound (ETA) and outbound (ETE) open innovation and suggest that in order to benefits from the promises of openness, firms must engage in both. The study went one step further by explaining the mechanism through which ETA influence process innovation performance.

Keywords : process innovation performance, external technology acquisition, external technology exploitation, open innovation

Conference Title : ICEBM 2018 : International Conference on Entrepreneurship and Business Management

Conference Location : Rome, Italy

Conference Dates : September 17-18, 2018