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## The Impact of Open Innovation on new Product Development Performance with Emphasis on Knowledge Acquisition Capacity

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### Abstract

The main purpose of this study was to investigate the impact of open innovation on new product development performance with emphasis on the moderating role of knowledge acquisition capacity in knowledge-based companies in Tehran province. After reviewing the literature on open innovation and new product development performance, the conceptual modeling capacity and research hypotheses were formulated. The present study is of applied purpose and descriptive-correlational in terms of data collection. A questionnaire was designed and distributed to measure the dimensions of open innovation and the success of new product development and knowledge acquisition capacity. The community comprised 121 members of the science and technology parks of Tehran University of Science and Technology, who were represented in the sample by 92 individuals. Confirmatory factor analysis and structural model were used for data analysis. Data were analyzed using SPSS and Smart PLS software. The results of the data analysis show that open innovation has a significant impact on new product development performance and moderates the capacity for knowledge acquisition, the relationship between open innovation and new product development performance

### Introduction

In recent years, the innovation space has evolved, and the process of innovation collaboration has intensified beyond the organizational boundaries. Companies

have no choice but to pursue a more open approach to innovation and blend in with open and transparent business models to increase their chances of success in the innovation campaign (Bagheri & Shavardi, 2011). In open innovation, organizations explore the environment for technology and knowledge and are not solely dependent on their own internal research and development (Hashemi, 2014). Open innovation confirms that organizations need to expand their partnerships with external partners in order to ensure their success in new product development, in addition to internal research and development. In fact, collaboration, coordination, and deep relationships between organizations and their partner partners have a positive impact on performance outcomes (Schreiner et al, 2009). Companies with the open innovation process have the opportunity to access specialized knowledge they did not previously possess. Provide newer, higher quality products and services and reduce costs and risks associated with product development by acquiring complementary technology and skills (Kostopoulos et al, 2011).

#### **Methodology**

This research is applied in terms of purpose and descriptive-correlational in terms of data collection. Questionnaires were used to collect the required information and to evaluate the research variables, research hypotheses and research questions. The statistical population of this study was managers of knowledge companies in the Science and Technology Park of Tehran University with 121 participants. The sample size was 92 people who were selected through Morgan table and were selected by simple random sampling. Data were collected by a questionnaire. Questionnaire questions were designed based on a five-point Likert scale ranging from strongly disagree (1) to strongly agree (5). A 21-item questionnaire was used to measure open innovation.

#### **Research findings**

The results of using Structural Equation Modeling technique showed that in the first hypothesis, the path coefficient between open innovation and new product development performance and the second hypothesis were moderated and confirmed by the capacity moderator role.

#### **Discussion and conclusion**

The results of the analysis show that open innovation has a significant impact on new product development performance and it can be confirmed that knowledge acquisition capacity moderates the relationship between open innovation and new product development performance. The results of this study are consistent with those of Mazzola et al (2012) study, which confirmed the relationship between open innovation functions (including intra-border, cross-border and hybrid functions) and new product development performance.

**Keywords:** Open innovation, new product development performance, knowledge acquisition capacity, structural equation modeling