

## Chapter 29

# The New Product Development Process as a Communication Web, Part II: Analysis of Spanish Firms

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### ABSTRACT

*In the previous chapter (Part I), we proposed a model relating the composition and external communication activities of NPD teams to the performance of NPD programmes. In this chapter (Part II), through the use of structural equations analysis, we compare the model to a sample of 136 managers from different functional areas at 121 innovative Spanish firms. The results indicate that the impact of explanatory variables on new product programme performance differs according to the measure of performance considered. The cross-functional nature of NPD teams, the presence of product champions in NPD teams and the gathering of information by all NPD team members were all shown to positively influence new product performance. Firms should be aware of the importance of the aforementioned variables.*

## INTRODUCTION

In Part I of this chapter we suggested considering New Product Development (NPD) as a communication web, contributing towards the innovation activities of companies and providing them with a sustainable competitive advantage. The external communication activities and cross-functional nature of NPD teams positively influences new product programme performance and provides companies with attributes that competitors find difficult to emulate.

The aim of this chapter is to compare the proposed model and examine whether or not new product programme performance is influenced by: (1) the cross-functional nature of NPD teams; (2) the presence of product champions in the NPD process; (3) the presence of gatekeepers in the NPD process; and (4) NPD lead users.

We tested the aforementioned model using a sample of 136 managers from different functional areas at innovative Spanish firms. The results obtained from a structural equations analysis indicated that the impact of explanatory variables on new product programme performance differs according to the measure of performance considered.

Our study contributes towards existing NPD literature as, unlike other studies on the communication web approach, it takes a development programme of three years as its unit of analysis and examines explanatory variables whose effects on performance have not yet been studied together, in firms that belong to different sectors and can provide data from cross-functional sources.

The chapter is structured as follows: firstly, we recapitulated the hypotheses proposed in Part I. Secondly, we described the method used, tested the model and commented on the main findings. We subsequently identified the implications of the findings for NPD managers and, finally, discussed the chapter's limitations, as well as possible future lines of research.

## HYPOTHESES

Based on previous evidence (Clark & Fujimoto, 1990, 1991; Katz & Tushman, 1981; Markham & Griffin, 1998; Von Hippel, 1986), we propose that new product programme performance will be influenced by the cross-functional nature of NPD teams and their external communication activities. Specifically, we hypothesise the following:

- H1:** *The cross-functional nature of NPD teams, which is measured by the number of departments participating in the NPD process, will positively influence new product programme performance.*
- H2a:** *The presence of information gatekeepers will positively influence new product programme performance.*
- H2b:** *The impact on new product programme performance will be greater with the presence of information gatekeepers than when all members of the NPD project team are in charge of gathering external information.*
- H3:** *The presence of innovation champions will positively influence new product programme performance.*
- H4:** *The participation of lead users in NPD will positively influence new product programme performance.*

## RESEARCH METHODOLOGY

### Sample

The sample was selected from the innovative firms database of the Centre for Technological Development of Industries (CDTI): an organisation that promotes the innovation and technological development of Spanish firms. In order to form part of the sample firms had to meet two requirements: belong to one of the industries shown in Table 1<sup>1</sup> and have two or more people dedicated to R&D tasks. These conditions were met by 600 of the firms.

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