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XXIII Congreso de Ingeniería de Organización



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Engineering
in Industry 4.0**

BOOK OF ABSTRACTS

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**“13th International Conference on
Industrial Engineering and
Industrial Management” and
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RAFAEL ROSILLO CAMBLOR

BORJA PONTE BLANCO

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servipub@uniovi.es

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Relationships between transformation and exploration phases of absorptive capacity: Feedback loops in low technology sectors

Pérez, D¹, Sáiz-Bárcena, L², Manzanedo, MA², Pérez, A¹

Keywords: Absorptive Capacity, Feedback loops, Transformation, Exploration

1 Introduction

Human capital of the transformation phase will connect with the firm's function to explore external sources of knowledge and provide the needs of new information. So, these required data must contain a clear message that has to be interpreted properly. Thus, these connections between the organization's change activities are critical to complete the knowledge lacks, unknown in initial stages of absorption process. This represent new and important feedback loops in firms.

2 Objectives

The objectives can be specified as: "R&D activity explains the existence of new exploration activities in the firm"; and "What exploration activities can be related to the transformation phase of absorptive capacity in sectors of low technology?" Precisely, the hypothesis is: "The firm's transformation activities are significant and positively associated with new exploration activities of the organization".

3 Methods

Based on the Spanish manufactured companies that answered to the Survey of Business Strategies, a regression binomial logical model tests the relationships. The model was valued applying the econometric package SPSS 24 and the variables followed principally to Pérez-Miguel (2018) and Sáiz et al. (2018).

4 Results

With the purpose of contrasting the hypothesis, the results present a positive and strong significant influence of R&D activity on the firm's technological surveillance ($p. < 0.01$; Wald, 246,437). In addition, it shows a positive and significant influence of the R&D activity on the firm's scientific and science information ($p. < 0.01$; Wald, 99.627), in order to support the hypothesis.

5 Conclusion

This investigation finds that those organizations that maintain levels in R&D expenditures over time are more likely to continue the exploration activities and subsequently renew their knowledge base. It confirms that firms that transform more knowledge are more organized to explore their external sources of knowledge and it is the same for companies in the sectors of low technology.

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