

The Role of Knowledge Management in Innovation: Spanish Evidence

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Abstract : In the knowledge-based economy, innovation is considered essential in order to achieve survival and growth in organizations. On the other hand, knowledge management is currently understood as one of the keys to innovation process. Both factors are generally admitted as generators of competitive advantage in organizations. Specifically, activities on R&D&I and those that generate internal knowledge have a positive influence in innovation results. This paper examines this effect and if it is similar or not is what we aimed to quantify in this paper. We focus on the impact that proportion of knowledge workers, the R&D&I investment, the amounts destined for ICTs and training for innovation have on the variation of tangible and intangibles returns for the sector of high and medium technology in Spain. To do this, we have performed an empirical analysis on the results of questionnaires about innovation in enterprises in Spain, collected by the National Statistics Institute. First, using clusters methodology, the behavior of these enterprises regarding knowledge management is identified. Then, using SEM methodology, we performed, for each cluster, the study about cause-effect relationships among constructs defined through variables, setting its type and quantification. The cluster analysis results in four groups in which cluster number 1 and 3 presents the best performance in innovation with differentiating nuances among them, while clusters 2 and 4 obtained divergent results to a similar innovative effort. However, the results of SEM analysis for each cluster show that, in all cases, knowledge workers are those that affect innovation performance most, regardless of the level of investment, and that there is a strong correlation between knowledge workers and investment in knowledge generation. The main findings reached is that Spanish high and medium technology companies improve their innovation performance investing in internal knowledge generation measures, specially, in terms of R&D activities, and underinvest in external ones. This, and the strong correlation between knowledge workers and the set of activities that promote the knowledge generation, should be taken into account by managers of companies, when making decisions about their investments for innovation, since they are key for improving their opportunities in the global market.

Keywords : high and medium technology sector, innovation, knowledge management, Spanish companies

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