Cleaner Production and Environmental Management as a Sustainable Product Innovation Antecedents: A Survey in Brazilian Industries


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Abstract

Cleaner production (CP) methods and environmental management practices are tools that strive for production process efficiency, the use of its input and the generation of industrial waste. These tools can significantly contribute to sustainable product innovation, due to the rational use of natural resources and the minimization of generated wastes. This study aims to measure the relations between the conditions for sustainable product innovation, considering the constructs of CP and environmental management. It also examines the relationship between sustainable conditions and product innovation and financial performance as well as the size of the moderating effect of the companies on the relationship between the constructs. In this context, a Survey in 762 companies of different sizes was carried out in the metal-mechanic sector in Brazil. Structural Equation Modeling methods were used for results analysis. The results show that the constructs of CP and environmental management are important antecedents for sustainable product innovation, and relevant mediator of financial performance. Accordingly, the way for companies to produce new environmentally sustainable products is through the presence of cleaner production and environmental management practices. For the academic field, the make-up of a framework for the analysis of the relations of the categories constitutes the main contribution, as well as providing management information to decide on the implementation of sustainability programs, resulting in higher financial gains through product innovations sustainable.

Keywords: Cleaner production. Environmental management. Innovation sustainable product. Financial performance. Brazilian Industry.