

Cooperation in R & D and eco-innovations: the role on the socioeconomic performance of companies

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ABSTRACT:

Companies with aspirations of longevity now must compete according the principles of sustainable development, modernizing their productive parks and management systems as of eco-innovation and cooperation drivers. In this view, an original model was validated with 99% reliability ($p < 0.01$) in this study, confirming that cooperation in R & D and the introduction of eco-innovations satisfactorily explained 51.3% of the socioeconomic performance of a sample of 221 manufacturers of electrical and electronic products. The companies were surveyed in Brazil in 2017 and the data were processed via SmartPLS[®] 3, using the Structural Equation Modeling technique. The confirmed hypotheses evidenced that the cooperation in R & D with technological partners has not positively influenced the socioeconomic performance of the companies. The cooperation in R & D with technological partners has positively influenced the introduction of product, process and organizational eco-innovations. The introduction of product and organizational eco-innovations has positively influenced the socioeconomic performance of the companies. One not confirmed hypothesis evidenced that the introduction of process eco-innovations has not positively influenced the socioeconomic performance of the companies. The model demonstrates that cooperation in R & D, mediated by the introduction of eco-innovations, satisfactorily explain the socioeconomic performance of industrial companies. This suggests that the Triple Bottom Line paradigm, which considers the balance between the environmental, social and economic dimensions, has viable basis for the third millennium industry. The model indicates that social and economic performance passes through the environmental concern of eco-innovations introduction, what reverse the logic that the companies must first have leftover profits to then invest in environmental sustainability. In general, there is the predominance of an environmentally sustainable technological route in the companies, which is a visible competitive edge. However, three attributes of product eco-innovation were not validated - the packaging simplification, the construction simplification and the energy efficiency - which may suggest some technological backwardness of the electrical and electronic products. Future studies may investigate topics relate to eco-innovation and industrial biomimetics, eco-innovation systems, social eco-innovation, marketing eco-innovation and eco-innovation in the Industry 4.0.

Keywords: Cooperation; Eco-innovation; Research and Development; Socioeconomic Performance; Triple Bottom Line.