USING AHP AND ANP TO EVALUATE THE RELATION BETWEEN REVERSE LOGISTICS AND CORPORATE PERFORMANCE IN BRAZILIAN AUTOMOTIVE INDUSTRY

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ABSTRACT

Reverse Logistics (RL) activities are practiced by most Brazilian industries, including the automotive one. However, a relevant problem is to identify how different RL programs can affect corporate performance indicators. Analytic Hierarchy Process (AHP) is one of the analytical tools, which can be used to handle a multi-criteria decision-making problem and the Analytic Network Process (ANP) is a similar technique, but can capture the interdependencies between the criteria under consideration. Both approaches were adopted here to study the influence of RL practices in automotive corporate performance. Preliminary results indicated that both methods can be used, being AHP the most efficient, because it requires a smaller number of judgment, and ANP the most reliable, because it considers element dependencies, which is more compatible to the reality of the Brazilian automotive sector.

Keywords: Analytic Hierarchy Process (AHP), Analytic Network Process (ANP), Reverse Logistics, Brazilian Automotive Industry