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Disrupting the Business of Producing Automobiles: Technologies for Cleaner Production

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Abstract

The concept of innovation has been used in a wide range of contexts and the theoretical development has proven to be extremely valuable to provide important insights into intra-market competition and strategy. The automotive industry offers a fertile terrain for the progress of the uncompleted theory building process of innovation, especially with the introduction of alternative fuels and alternative powertrain technologies. The application of these concepts is fundamental for the sustainability of the entire industry.

This paper will look at the concept of innovation in the context of the modern automotive industry focusing on the notion of regulatory innovation of alternative fuels and alternative powertrain. For the purpose of analysing this issue, special attention will be given to the concepts of radical and incremental innovation, which will be applied to existing alternative fuels and alternative powertrain technologies, including hybrids, biofuels and hydrogen power. The article will explore these three categories looking at representative case studies: the Brazilian ethanol experience with biofuels, the development of the Toyota hybrid vehicle and the technological development of hydrogen fuel cells.

Keywords: *Automotive Industry, Alternative Technologies, Innovation, Biofuels, Hybrids, Hydrogen Fuel Cells.*
