

Hybrid and Diesel Vehicle Introduction: Status within the Technology Adoption Life Cycle

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ABSTRACT

The positions of the diesel and hybrid light duty passenger vehicles in the “technology adoption life cycle” are examined with a mid-2004 stated preference study of 1036 households. Implications of the technology life cycle for historical consumer preference estimates obtained for use in prior models of market share are briefly discussed. The hypothetical life cycle segments addressed in this paper are “early adopters, early buyers, and majority buyers.” Survey respondents are segmented into subgroups, or markets, in light of hypothesized attributes of consumers within the product life cycle. Emphasis is placed on delineating the preferences of new, rather than used vehicle buyer segments. These categories are compared to the five categories in the high tech technology adoption life cycle paradigm of G. Moore. One purpose of the analysis is to use the survey as a test of the reasonableness of the three categories used here. The implications of the survey for use of the “rational buyer” model of consumer trade-offs of incremental new vehicle capital cost (of a diesel or hybrid) against reduced fuel cost are addressed. Competition of desires for fuel efficiency, acceleration and towing are also addressed, as are the effects of gender, income, education, and age.

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