Predicting the Potential Market for Electric Vehicles - DTU Orbit (18/12/2018)

Predicting the Potential Market for Electric Vehicles

Forecasting the potential demand for electric vehicles is a challenging task. Because most studies for new technologies rely on stated preference (SP) data, market share predictions will reflect shares in the SP data and not in the real market. Moreover, typical disaggregate demand models are suitable to forecast demand in relatively stable markets, but show limitations in the case of innovations. When predicting the market for new products it is crucial to account for the role played by innovation and how it penetrates the new market over time through a diffusion process. However, typical diffusion models in marketing research use fairly simple demand models. In this paper we discuss the problem of predicting market shares for new products and suggest a method that combines advanced choice models with a diffusion model to take into account that new products often need time to gain a significant market share. We have the advantage of a relatively unique databank where respondents were submitted to the same stated choice experiment before and after experiencing an electric vehicle. Results show that typical choice models forecast a demand that is too restrictive in the long period. Accounting for the diffusion effect, instead allows predicting the usual slow penetration of a new product in the initial years after product launch and a faster market share increase after diffusion takes place.

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Contributors: Jensen, A. F., Cherchi, E., Mabit, S. L., Ortúzar, J. D. D.
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