Demand for alternative-fuel vehicles when registration taxes are high

This paper investigates the potential futures for alternative-fuel vehicles in Denmark, where the vehicle registration tax is very high and large tax rebates can be given. A large stated choice dataset has been collected concerning vehicle choice among conventional, hydrogen, hybrid, bio-diesel, and electric vehicles. We estimate a mixed logit model that improves on previous contributions by controlling for reference dependence and allowing for correlation of random effects. Both improvements are found to be important. An application of the model shows that alternative-fuel vehicles with present technology could obtain fairly high market shares given tax regulations possible in the present high-tax vehicle market.