

The impact of fixed and variable cost on automobile demand: Evidence from Denmark - DTU Orbit (08/11/2017)

The impact of fixed and variable cost on automobile demand: Evidence from Denmark

Many car characteristics, for instance cabin space and engine power, have a positive impact on fixed and variable costs. We extend the hedonic model, that considers only one type of cost, to the situation in which fixed as well as variable costs depend on the characteristics of the durable and derive an expression for the full willingness to pay for characteristics that takes into account the impact on fixed as well as variable costs. We apply the model to the demand for automobiles using rich Danish register data. Estimation reveals considerable heterogeneity and a non-negligible contribution of the variable costs in total willingness to pay. Next we show that under suitable assumptions a structural interpretation of our estimates is possible. We show that the willingness to pay per kilometer driven can be interpreted as a parameter of the utility function and study how it is related to household characteristics. Finally, we illustrate the model by computing how consumers change car quality in response to an increase in the fuel price.

General information

State: Published

Organisations: Danish Transport Research Institute, Department of Transport, Transport policy and behaviour, Vrije Universiteit Amsterdam

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Pages: 227-240

Publication date: 2015

Main Research Area: Technical/natural sciences

Publication information

Journal: Economics of Transportation

Volume: 4

Issue number: 4

ISSN (Print): 2212-0122

Ratings:

BFI (2017): BFI-level 1

BFI (2016): BFI-level 1

Scopus rating (2016): SJR 1.152 SNIP 1.102 CiteScore 1.44

BFI (2015): BFI-level 1

Scopus rating (2015): SJR 1.065 SNIP 1.272 CiteScore 1.57

Web of Science (2015): Indexed yes

BFI (2014): BFI-level 1

Scopus rating (2014): SJR 1.025 SNIP 1.634 CiteScore 1.74

BFI (2013): BFI-level 1

Scopus rating (2013): SJR 1.103 SNIP 4.071 CiteScore 2

ISI indexed (2013): ISI indexed no

BFI (2012): BFI-level 1

ISI indexed (2012): ISI indexed no

Original language: English

Durable goods, Willingness to pay, Hedonic analysis, Nonparametrics, Car market

DOIs:

10.1016/j.ecotra.2015.08.004

Source: FindIt

Source-ID: 2281843383

Publication: Research - peer-review › Journal article – Annual report year: 2015