

Report on Master Thesis

Institute of Economic Studies, Faculty of Social Sciences, Charles University

Student:	Dimitra Spyropoulou
Advisor:	Milan Ščasný
Title of the thesis:	Households' adoption of energy-efficient technologies in Greece: Independently or Jointly?

OVERALL ASSESSMENT

Short summary

The thesis written by Dimitra Spyropoulou aims to elicit preferences of Greeks for buying a/another passenger vehicle when four different technologies are offered with or without a complementing technology that is photovoltaic system. The data are collected through an original questionnaire survey which was prepared by Dimitra. Preferences are elicited through the stated preference discrete choice experiments. The data are analysed utilising the state-of-the-art econometric models, conditional logit and mixed logit (random parameter logit), paying special attention to observed and unobserved preference heterogeneity.

Contribution

The discrete choice experiments (DCE) has been applied to elicit consumers preferences over passenger vehicle technologies in several dozens studies. However, there are a few studies which elicited preferences for vehicles alongside with preference for PV. This is no doubt great contribution of this master thesis.

Second, most of the DCE studies on passenger vehicles have been applied in the USA, Asia and Western Europe (including three studies in Czechia and Poland). As far as I know this is the first DCE study which has been applied in this area in Greece.

Third, a pre-survey, the instrument design and the data collection were done solely by Dimitra (under my supervision and collaboration).

Methods

The DCE is the state-of-the-art approach to elicit consumers preferences for goods which do not exist at the market yet or which penetration has been low so far. This is just the case of plug-in hybrid and in particular battery electric passenger vehicles in Greece. For that reason this approach has been properly chosen and used.

The research design, including the DCE design, were properly pretested to ensure all survey components are comprehensively understood. The design has also reflected the findings and recommendations from other similar studies. The D-efficient bayesian design was prepared using NGENE software – this design has been recommended as the golden standard, following several guides on stated preference studies.

The data are econometrically analysed employing several econometric models, including Conditional logit, Mixed logit, Mixed logit with fixed interaction terms, and Mixed logit with fully correlated factors (i.e. estimating full variance-covariance matrix). The last two models are typically standard for a PhD studies and these are also typically used in studies published in decent (at least Q2) journals.

The data were gathered through the original questionnaire survey which was prepared and properly pre-tested by Dimitra. The data were collected in February 2024 (with the pilot in December 2023) using a professional company ThreeSixtyOne from Greece (being a member of ICC/ESOMAR). The total sample size is 1,367, sampled from an adult population of Greece (excluding islands) who intend to buy a /another passenger vehicle within the next three years. The costs of data collection were covered by Dimitra, from resources she partly earned as a research assistant of the Environment Center.

Literature

Relevant literature has been reviewed and in my opinion all materials that were needed have been also used and well referenced. This thesis demonstrates author's excellent understanding and command of recent literature. The literature is quoted in a proper way.

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Manuscript form

The thesis follows a logical structure. The text is very clear and the thesis is written in very good English. Exposition of the results is clear and nicely readable. Tables (Results section) follow a professional style, as it should appear in a manuscript submitted to a top journals.

Overall evaluation and suggested questions for the discussion during the defense

This is an exceptional master thesis, having quality typically required on a PhD student and from a doctoral thesis. Dimitra has worked hard and she has made great progress for two years during we worked together on this research. Dimitra conducted the pre-survey, when all relevant papers were reviewed and a draft of the survey instrument was properly tested and revised accordingly; she then collaborated to program the instrument to be ready to collect the data on-line, including several randomisations and the research design which varied across the choice tasks and across the respondents. She coordinated the data collection and communicating with the professional company to control the quota. Last but not least, she analysed econometrically the data, addressing properly observed and unobserved preference heterogeneity, including performing robustness checks. I really appreciated working with Dimitra. And I am happy she has been accepted to the PhD program, preparing her doctoral thesis which follows up her research at the master level.

Questions:

All my questions being raised during last two years have been answered and incorporated in this master thesis. I do not have any further questions.

In my view, the thesis fulfills the requirements for a master's thesis at IES, Faculty of Social Sciences, Charles University, I recommend it for the defense and suggest a **grade A**.

Considering great effort Dimistra has done on this research I suggest considering this thesis for **the Faculty Dean award**.

The results of the Urkund analysis do not indicate significant text similarity with other available sources.

SUMMARY OF POINTS AWARDED (for details, see below):

CATEGORY	POINTS
<i>Contribution</i> (max. 30 points)	30
<i>Methods</i> (max. 30 points)	30
<i>Literature</i> (max. 20 points)	20
<i>Manuscript Form</i> (max. 20 points)	20
TOTAL POINTS (max. 100 points)	100
GRADE (A – B – C – D – E – F)	A

NAME OF THE REFEREE: *Milan Ščasný*

DATE OF EVALUATION: *3 June 2024*

Referee Signature

EXPLANATION OF CATEGORIES AND SCALE:

CONTRIBUTION: *The author presents original ideas on the topic demonstrating critical thinking and ability to draw conclusions based on the knowledge of relevant theory and empirics. There is a distinct value added of the thesis.*

METHODS: *The tools used are relevant to the research question being investigated, and adequate to the author's level of studies. The thesis topic is comprehensively analyzed.*

LITERATURE REVIEW: *The thesis demonstrates author's full understanding and command of recent literature. The author quotes relevant literature in a proper way.*

MANUSCRIPT FORM: *The thesis is well structured. The student uses appropriate language and style, including academic format for graphs and tables. The text effectively refers to graphs and tables and disposes with a complete bibliography.*

Overall grading:

TOTAL	GRADE
91 – 100	A
81 - 90	B
71 - 80	C
61 – 70	D
51 – 60	E
0 – 50	F