

Report on Bachelor Thesis

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

Student:	Michaela Preclíková
Advisor:	Milan Ščasný
Title of the thesis:	Factors influencing the transport mode decision: Case of the Czech Republic

OVERALL ASSESSMENT (provided in English, Czech, or Slovak):

The bachelor thesis written by Michaela Preclíková examines how individual's choice on transport modes to commute to work is associated with sociodemographic characteristics of this individual. The thesis begins with introducing the problem. Then, relevant literature is reviewed, paying attention to the determinants affecting transport mode choice (Section I). The review distinguishes several different types of factors, including socio-demographic and housing, transport infrastructure and characteristics of the modes, and subjective (attitudinal) measures. Then, it moves to econometric modelling approaches, covering all state-of-the-art methods to analyse modal split. Section II describes the data that comes from research of the supervisor, i.e. the EU funded project INHERIT. The choice was made to analyse the truncated sample – it excludes not commuters to work and multi-mode user, focusing merely on the single-mode users. Still, likelihood not-commute to work and using multi-mode is analysed by estimating (univariate) logit models (Appendix A). Section III introduces the theoretical model (Random Utility Model) and econometric model (MNL). Next section provides the estimation results, and the last one concludes.

Contribution

Although literature on modelling modal choice is rich, literature on this subject is almost not existent in the Czech Republic. The modal choice of single-mode users to commute to work is filling this gap.

Methods

The thesis models individual choice by estimating multinomial (polynomial) logit, when properties for using ordered vs. multinomial logit were properly tested. In contrast to other econometric models, the IIA assumption restricts usage of MNL – the IIA assumption has been properly tested, performing Hausman and Small-Hsiao tests.

Michaela has revealed her good knowledge on the econometrics, by discussing various econometric models and modelling approaches, such as nested logit, latent class logit, and hybrid choice model, that, in my opinion, require skills going beyond standard bachelor studies. During her research Michaela run nested logit, but due to limited time the model runs can not be finished and these results are not presented in the thesis (that is a pity).

Literature

The thesis demonstrates author's full understanding and command of recent literature. Michaela has reviewed the most important studies and literature relevant to the subject, including the key empirical papers and econometric ones, and relevant literature is quoted in a proper way. This part presents the strength of this thesis.

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Manuscript form

The thesis follows scientific writing, including its language, argumentation, formatting, and the result presentation. The thesis has a standard, logical structure. The text refers to tables and disposes with a complete bibliography. Any comments I had would be only minor.

Summary and suggested questions for the discussion during the defense

All in all, this thesis is written in high standard, using adequate style and formatting. All of my comments raised during her studies have been reflected in the final version of this thesis. I also do find this thesis corresponding academic standards for bachelor theses written at the Institute.

I am very pleased I can recommend the thesis of Michaela Preclíková to defense at the IES, and I recommend **"excellent"** („výborně“, 1).

Suggested questions:

- suggest econometric models to analyse your data if the IIA assumptions was not hold. Describe these models and discuss what is advantage of these models.
- how you would analyse the modal choice for the full sample, i.e. not truncated?
- Which key variables are missing in the used dataset? If you had them, which (the simplest) econometric model you would suggest to use and how this one would differ from MNL?

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

CATEGORY	POINTS
Contribution (max. 30 points)	28
Methods (max. 30 points)	28
Literature (max. 20 points)	20
Manuscript Form (max. 20 points)	20
TOTAL POINTS (max. 100 points)	96
GRADE (A – B – C – D – E – F)	A

NAME OF THE REFEREE: Milan Ščasný

DATE OF EVALUATION: May 12th, 2020



Referee Signature

