

Report on Master Thesis

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

Student:	Karolína Dláskova
Advisor:	Milan Ščasný, PhD.
Title of the thesis:	Comparison of coherent demand systems: The case of meat demand in the Czech Republic

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

This thesis analysis demand of the Czech households for several types of meat using three demand systems and the household-level data. The thesis consists of two interlinked parts. First part reviews several coherent demand models for estimation of consumer demand, including Linear and Quadratic Expenditure Systems, Rotterdam demand system, Translog system, Almost Ideal Demand System, its linear form and quadratic form, and An Implicit Direct Additive Demand System. Methods for comparing these systems follow and a review of empirical literature on consumer meat demand closes this part. In the following part, own empirical work is presented. Three demand systems are adequately selected, and LES, Translog system, and QUAIDS are estimated for a system of five types of meat (beef, pork, poultry, fish, and other meat). Zero consumption is properly treated by Shonkwiler and Yen (1999) procedure.

The presented thesis makes a nice bridge with the research previously performed at IES; it follows on the bachelor thesis of the author (in that meat demand was estimated by using a single equation demand model) and also refers to another master thesis of Šarlota Smutná (2016) (who was comparing several methods for treating zeros in demand system estimation). Contrary to the research of Smutná (2016) and Jánský (2014), Karolína uses the implicit prices (i.e. the ratio of reported expenditures and reported quantities) rather than CPI in the demand models. This decision was motivated by the fact that the implicit prices provide much rich information, as modelling may utilize the household-specific prices. This decision has its costs, however. Using the implicit prices implies that such price captures not only goods price itself, but also quality of the commodity. This fact is clearly noted in the thesis.

Despite the fact that demand has been already analysed for the Czech households by estimating one of the coherent demand systems, including estimation of meat demand, in a couple of studies, the LES and the Translog system have been estimated for the Czech case for the first time. Comparing performance of these two demand models with more often used (Q)AID system, and also with the results from the single equation demand model (Dláskova 2014), presents extremely valuable work. It is only a pity that due to limited time, statistical inference of the parameter estimates could not be presented.

During this research, a special attention was paid how the demand systems might be properly compared. As noted by author, using a standard approach based on Monte Carlo simulation would require to simulate three different datasets for given values of elasticities, since the functional forms and underlying assumptions of the three demand systems differ. If observed data are used however, the elasticity estimates from the three demand models differ either and hence it would be difficult to decide which of them should serve to be the closest to the (unobserved) real value of the elasticity to

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be taken to simulate the dataset(s). I therefore consider using AIC and SBC measures adequate.

The thesis is very well structured. It consists of seven chapters. Chapter 1 introduces to the subject. Chapter 2 review extensively several demand systems, including a review of empirical work on meat demand estimation in the Czech Republic. Next chapter describes the data – household-level annual data gathered from Household Budget Survey, covering the period 2010-2015. Chapter 4 describes then methodology, specific models and zero treatment. The following chapter presents the key results, including estimation of Probit (i.e. for treatment of zeros) and the key parameters of demand (income, own price and cross price elasticities). Performance of these three demand models are then compared in next chapter, and last chapter concludes.

Overall, this thesis is written in medium standard, as there are some limitations in using adequate style and formating --- I am therefore providing a bit lower grade for Manuscript Form. Most of my comments have been reflected in the final version of this thesis, however.

In the case of successful defence, I recommend „výborně“ (excellent, 1).

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

CATEGORY	POINTS
Literature (max. 20 points)	20
Methods (max. 30 points)	29
Contribution (max. 30 points)	30
Manuscript Form (max. 20 points)	13
TOTAL POINTS (max. 100 points)	92
GRADE (1 – 2 – 3 – 4)	1

NAME OF THE REFEREE: Milan Ščasný

DATE OF EVALUATION: February 4, 2017



Referee Signature

EXPLANATION OF CATEGORIES AND SCALE:

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

Strong Average Weak
20 10 0

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.*

Strong Average Weak
30 15 0

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.*

Strong Average Weak
30 15 0

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.*

Strong Average Weak
20 10 0

Overall grading:

TOTAL	GRADE		
81 – 100	1	= excellent	= výborně
61 – 80	2	= good	= velmi dobře
41 – 60	3	= satisfactory	= dobře
0 – 40	4	= fail	= nedoporučuji k