

Report on Bachelor / Master Thesis

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

Student:	Lucia Sihelská
Advisor:	Doc. PhDr. Zuzana Havránková, Ph.D.
Title of the thesis:	The case of coal: A meta-analysis of demand and substitution

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

Short summary

This is an outstanding bachelor's thesis on an important topic: interfuel substitution. The corresponding elasticities are crucial for the calibration of economic models of climate change, mitigation, and adaptation. The elasticities reported in the literature vary widely, which complicates the calibration task. Lucia Sihelská delivers a comprehensive meta-analysis of the literature with a focus on coal; if published, the paper would become highly cited as an indispensable source for other researchers in environmental and energy economics. Since the author has carefully implemented all of my comments, I have no objections. I believe that the thesis would pass not only as a master's thesis but also as a dissertation chapter. The author should consider pursuing PhD study in the future.

Contribution

The value added is clear for three reasons: 1) no meta-analysis of interfuel substitution has so far used advanced methods for publication bias correction and treatment of heterogeneity, 2) there is no meta-study that would analyze the own price elasticity of coal, and 3) there is no meta-study that would be focused on the asymmetric cross-price elasticities (also, the previous meta-analyses recalculated the originally reported elasticities to a common metrics which made it impossible to tackle the problem of publication bias). Thus, Lucia presents an original dataset and an original analysis, she did the work from scratch. She applies the latest techniques and demonstrates that she understands them well. In consequence, a paper based on this BA thesis is publishable in a solid journal such as Energy Economics.

Methods

Examples of advanced methods used: the selection model due to Andrews and Kasy (AER, 2019), stem-based method by Furukawa (MIT dissertation, 2021), WAAP (Ioannidis et al., Economic Journal, 2017), frequentist model averaging, Bayesian model averaging with a dilution prior. I must emphasize that this is a bachelor thesis and the techniques listed are often difficult to comprehend even for the master students. Thus, I am delighted that all is applied well. The author provides as many robustness checks as feasible and what is less important is left for appendices.

Literature

The literature is covered perfectly. There are few mistakes in bibliography entries that should have been avoided but there are also 7 pages of entries.

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Manuscript form

The thesis is typeset beautifully in LaTeX, well-structured, and written in competent English.

Overall evaluation and suggested questions for the discussion during the defense

This meta-analysis presents not one but 7 individual sub-studies of elasticities. The analysis is extensive but not overwhelming, the reader gets a clear picture of implications without getting lost or bored. Lucia tackles the thesis with grace.

Her thesis should be awarded for the following reasons: i) it presents significant scientific contribution, ii) the methods used are well above anything taught at the BA (and MA) level, iii) after revisions, the thesis is publishable in a journal such as Energy Economics, iv) the thesis approaches the quality of a typical dissertation chapter.

In my view, the thesis fulfills the requirements for a bachelor thesis at IES, Faculty of Social Sciences, Charles University, **I recommend it for the defense and suggest grade A with distinction.** 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
Contribution (max. 30 points)	28
Methods (max. 30 points)	29
Literature (max. 20 points)	19
Manuscript Form (max. 20 points)	19
TOTAL POINTS (max. 100 points)	95
GRADE (A – B – C – D – E – F)	A (excellent)

NAME OF THE REFEREE: doc. PhDr. Zuzana Havránková, Ph.D.

DATE OF EVALUATION: May 29, 2022

digitally signed
Zuzana Havránková

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