Report on **Bachelor Thesis**

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

Student:	**Jan Zítek**
Advisor:	**doc. PhDr. Ladislav Krištoufek, Ph.D.**
Title of the thesis:	**Capturing the effects of renewable resources on electricity prices: Evidence from the Czech Republic**

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

Please provide your assessment of each of the following four categories, summary and suggested questions for the discussion. The minimum length of the report is 300 words.

Contribution

The author intends to broaden the existing discussion on level and volatility of the electricity prices linked with the intermittent renewable energy sources in the Czech Republic. By exploration of 2015-2019 data, the research follows the paper of Luňáčková et al. (2017) who have analysed the data for the Czech electricity spot market from 2010 to 2015. Apart from the different time period of interest, the author equally distinguishes his contribution by usage of different modelling methods which are similar (and even extended in comparison) to those used on the global scale, for instance Ketterer (2012) and Kyritsis et al. (2017) on German data. Finally, the topic itself and further extension of the existing research is justified by the obligation of the EU Member States to subsequently increase the share of so-called clean energy in the total gross energy consumption by 2030.

Methods

The selection of methods used corresponds to the topic and possibly even exceeds the expected level of a bachelor thesis – employing the univariate GARCH-class models (the standard and exponential, in particular) which are further augmented by additional explanatory variables in the form of total load, solar, and wind power generations. One can also appreciate a copybook-example formation of the hypotheses which are directly and distinctly defined, and correspondingly tested.

Literature

Overall, the literature review seems to be thorough – emphasizing selected papers which adequately represent the core and the major trends of the existing literature. Although the author acknowledges that there is a lot more relevant research which is not directly reviewed by the thesis, it would be better to at least quantify the number of individual case studies available.

Regarding citation, the author should consider quoting the below listed article published in an impacted journal instead of the working paper of the Centre for Applied Macroeconomic Analysis:

Luňáčková, P., Průša, J., & Janda, K. (2017): *"The merit order effect of Czech photovoltaic plants."* Energy Policy, 106: pp. 138-147.

Although these two papers have a slightly different title, the content is virtually the same. Even more importantly, the author should elaborate in a greater detail on actual differences between his research and the given paper, and comment on divergence in some of the findings (i.e., a *(dis)*proved merit order effect in the case of solar energy).

Manuscript form

The thesis is written in LaTeX and the text is coherent. The level of English is high with only a limited number of typos – e.g., missing publication year within the references to Krištoufek and Luňáčková

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(2013) on page 7, and Woo et al. (2011) on page 9. The figures and tables are thoroughly described, and the bibliography is well arranged.

Summary and suggested questions for the discussion during the defence

The author has submitted a very fine example of a national case study on capturing the effects of renewable resources on electricity prices at the level of bachelor thesis. Based on the awarded points, I propose to award the thesis with the highest grade (see the score below). Should the author elaborate on the contribution of the thesis, prepare a shorter version, and submit it to the IES Working Papers series, I believe the research could be eligible for publication in an international journal.

Questions for the final defence:

i) Can you elaborate in greater detail on your contribution and compare it to the existing literature – the paper by Luňáčková et al. (2017), in particular?

ii) Why have you employed only the data from 2015-2019 period? Have you considered using an extended dataset, for instance from 2010 onwards?

iii) What do you consider to be the rationale of the discrepancy between the selected findings of your research and those of Luňáčková et al. (2017) – i.e., a *(dis)*proved merit order effect?

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

CATEGORY		POINTS
Contribution	*(max. 30 points)*	25
Methods	*(max. 30 points)*	30
Literature	*(max. 20 points)*	16
Manuscript Form	*(max. 20 points)*	20
TOTAL POINTS	*(max. 100 points)*	**91**
GRADE	**(A – B – C – D – E – F)**	**A**

NAME OF THE REFEREE: Dominik Herman

DATE OF EVALUATION: May 31, 2020

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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.*

Strong	Average	Weak
30	15	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

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

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