Report on **Master Thesis**

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

Student:	**Matěj Kouřílek**
Advisor:	**Jozef Baruník**
Title of the thesis:	**The Impact of German Renewable Electricity on Czech Electricity Spot Prices**

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

Contribution

The thesis investigates the impact of German wind and solar energy on the dynamics of the Czech electricity spot prices and contributes to quite active area of research trying to understand the behavior of electricity markets. Author finds negative merit order effect of German wind and solar energy, and links additional power production to reduction of prices and increased uncertainty in the Czech markets. Further, author finds that Czech and German households bear costs of subsidized renewable energy while they do not profit on the merit order effect in contrast to spot market participants. I would like to highlight that author works with hourly data which is not common in the literature, and description of these markets is itself interesting and should be considered as a contribution.

Methods

Author uses interesting hourly data and provides thorough statistical analysis of the data including obvious seasonality that we should expect. Since the market operates on 24 auctions for different delivery hours during the day, author treated the data as panel, and built pooled panel GARCH models to capture the dynamics of volatility. The methodology is adequate, author uses proper statistical tests, and the empirical analysis is sound. The analysis is done rigorously and conclusions are supported by the data.

Literature

The thesis nicely describes European Energy Markets, its liberalization, structure and provides good overwide of the literature. Author understands the market structure well, and worked with most of the available sources in the literature. Author also discusses nicely the differences obtained by other studies.

Manuscript form

The text is logical, well written, and reads well. Matej worked consistently to obtain the results, and we have discussed the results and text on regular basis. Formally, manuscript meets all requirements, the only shortage is few minor typos and errors.

Summary and suggested questions for the discussion during the defense

In conclusion, I believe that during the work Matej proved himself to be an independent researcher, he obtained interesting original results, mastered advanced econometric techniques, and finally was able to use all the skills to deliver sound and economically relevant work. Hence the thesis deserves to be defended.

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Thesis focuses on data and infers impact of German energy on Czech electricity prices from data. _Author should elaborate more on economic drivers behind these measurements, i.e. are there any institutional links that may create the link measured in data, etc._ During the defence, author should focus on general understanding of the results obtained.

In case Matej will be confident in presenting the details of the work during the defense, and especially present economic motivation connected to the question above, I suggest to award the work with grade "A".

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

CATEGORY		POINTS
Contribution	_(max. 30 points)_	27
Methods	_(max. 30 points)_	29
Literature	_(max. 20 points)_	20
Manuscript Form	_(max. 20 points)_	16
TOTAL POINTS	_(max. 100 points)_	**92**
GRADE	**(A – B – C – D – E – F)**	**A**

**NAME OF THE REFEREE: Jozef Barunik**

**DATE OF EVALUATION:** _**June 10, 2019**_

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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