

Report on Master Thesis

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

Student:	Kristýna Křížová
Advisor:	Ladislav Krištofuk
Title of the thesis:	Forecasting Electricity Pricing in Central and Eastern Europe

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

Short summary

The thesis develops a model for predicting daily and hourly electricity prices in Central and Eastern (CEE) markets using exogenous variables. Author finds some of the variables carry information about future prices of electricity.

Contribution

The focus of the thesis is on forecasting electricity prices. Author identifies variables that improve daily and intraday predictions of prices in the CEE markets and presents forecasting models. There is a slight confusion about the contribution. To me it seems that thesis focuses on forecasting electricity prices as a time series exercise, and finds improved predictions using the model proposed as well as exogenous variables. But reader gets different impression after reading title and abstract since one is confused about what author aims to forecast about electricity pricing (one could expect pricing behavior).

Methods

Author uses standard autoregressive (AR) time series and seemingly unrelated regression (SUR) estimation of the models. There is slight confusion in the model selection and motivation here too. Author motivates the choice of methods as VAR being inappropriate since the lags cannot be specified precisely. This motivation and choice of methodology is confusing for the reader from several reasons. Main one is that VAR uses lags of all variables in the system. Here author use only own lags and considers univariate exercise adding possible covariance structure with SUR. This is OK, but should be more clearly motivated.

As for the methods and their choice, author builds models properly and uses the statistical tools correctly.

Literature

Author works with all relevant literature properly, introduces the power and carbon markets nicely and discusses all relevant sources in sufficient detail.

Manuscript form

The text is well written, logical, explains problem in sufficient detail. Motivation as well as some results are presented in slightly confusing way to the reader as mentioned above hence the exposition is not perfect. Still, after some efforts, one finally learns how author contributes to the literature.

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Overall evaluation and suggested questions for the discussion during the defense

In conclusion, I believe the thesis is a solid piece of work that brings an empirical forecasting exercise of CEE electricity. I believe author could clarify the confusion on following during the defense:

1/ Author can explain in better detail motivation for SUR. Motivation is mixed with VAR where also lags of other countries would be considered for forecasts, but then SUR is contrasted to univariate AR only. While I can see the motivation as an econometrician, I believe general reader of the thesis will be quite confused.

2/ What is the main finding of the thesis that is interesting to an economist? The text is rather technical and focuses on the forecasts, but I believe there is more valuable results. Author should take the opportunity of the presentation and show them.

3/ In relation to previous question: How can the results be useful economically?

In conclusion, I believe that the thesis deserves to be defended without doubts. In case author is confident in presenting the details of the work during the defense, and mostly confident in the discussion and response to my questions, I suggest to award the work with grade "B".

Finally, the results of the Urkund analysis do not indicate significant text similarity with any other available sources.

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

CATEGORY	POINTS
<i>Contribution</i> (max. 30 points)	23
<i>Methods</i> (max. 30 points)	24
<i>Literature</i> (max. 20 points)	20
<i>Manuscript Form</i> (max. 20 points)	15
TOTAL POINTS (max. 100 points)	82
GRADE (A – B – C – D – E – F)	B

NAME OF THE REFEREE: Jozef Barunik

DATE OF EVALUATION: 20.5.2020

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