

Report on Bachelor / Master Thesis

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

Student:	Labunets Nazariy
Advisor:	Ing., Mgr. Miroslav Zajíček, MA, PhD
Title of the thesis:	Costs Benefit Analysis of Wind Power in Germany

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

The thesis is a medium-sized work on the analysis of the future costs and benefits of wind power production in Germany.

Chapter 1

- introduces the subject investigated

Chapter 2

- provides a nice description of feed-in tariffs designed for wind electricity producers
- the information in this Chapter is readable and sufficient for the reader to understand the concept and, apart from missing units in Figure 2.3, I have no comments here.

Chapter 3

- provides a nice and thorough description of the costs and benefits of wind power from a theoretical standpoint. The text is of very good quality and shows that the Student spent considerable time in analyzing the specifics of energy production.
- I have the following (non critical) remarks:
 - In 3.1.3 a quotation of Hoogwijk, et al (2007) states that wind power can be used as a part of base-load supply for the country's energy needs. Knowing the distribution of Czech wind power production, I personally doubt this. As Germany has a more diversified wind energy production sector compared to Czech republic, I would appreciate a chart showing the aggregate power produced German by wind farms over the period taken as historical in this work. This would enable the reader to form their own opinion on this.
 - In a similar vein, I would appreciate a chart showing the evolution of energy spot prices or even better futures prices. Taking into account the two-years-back evolution of the CAL futures, I would like to see more backing to the premise that spot prices are going to rise to nearly 50 EUR/MWh in the foreseeable future (currently the average foreseen price of energy for 2015/2016 is around 36 EUR/MWh).
 - The list of costs is missing one point - with an increasing volatility of system imbalance (aggregate supply - aggregate demand), the payments for backup facilities must go up, which in turn drives up the imbalance costs transferred to energy dealers. This could be further reinforced by the currently low prices of energy at which some plants consider shutdown to prevent financial losses.

Chapter 4, Chapter 5

- provides a clear description of the empirical methods used
- for a master thesis, especially one with this level of detail in the theoretical part, I would expect more sophistication in the empirical part, Regarding econometrics, the estimation of Weibull distribution parameters is the only econometric technique used.

Chapter 6

- summarizes the empirical result of the thesis and provides several stress scenarios
- I have not comments here

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Overall, I appreciate the detailed theoretical overview of the wind energy production features, which are not commonly discussed at our institute. The thesis is written in excellent language with a clear aim of each paragraph, the separation into chapters is logical. The empirical part works correctly with all components of C/B analysis. However, as mentioned previously, I lack more sophistication in the practical part of the thesis. For example, taking the evolution of installed capacity (Eq. 4.2) without any disturbance term is rather uncommon to see in a diploma thesis. Adding a disturbance term to this equation would force the Student to use MC simulations, which would add a layer of complexity to the empirical part.

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

CATEGORY	POINTS
<i>Literature</i> (max. 20 points)	20
<i>Methods</i> (max. 30 points)	18
<i>Contribution</i> (max. 30 points)	30
<i>Manuscript Form</i> (max. 20 points)	20
TOTAL POINTS (max. 100 points)	88
GRADE (1 – 2 – 3 – 4)	1

NAME OF THE REFEREE: Mgr. Daniel Benčík

DATE OF EVALUATION: 19.01.2014



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

