

# Report on Bachelor / Master Thesis

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

<b>Student:</b>	<b>Premysl Horacek</b>
<b>Advisor:</b>	<b>Tomas Havranek</b>
<b>Title of the thesis:</b>	<b>Impacts of Ethanol Policy on Corn Prices: A Meta-Analysis</b>

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

*Please provide your assessment of each of the following four categories. The minimum length of the report is 300 words.*

This is a report of referee, provided by Karel Janda.

### **Contribution**

Firstly I apologize for very sloppy cut-and-paste citation style I am using in this report. My sloppiness is particularly bad given that I complain a lot about the work with references done by Mr. Horacek. I admit that I reserve D or F for my cut-and-paste references culture in this report.

This Diploma Thesis is a well done meta analysis dealing with change in corn price as a function of volume of ethanol production. The thesis is well written, it is dealing with a very policy relevant and important subject and as far as meta analysis topics are concerned, it covers a difficult topic both to understand and to analyse. Mr. Horacek did an excellent and time demanding job in conducting and reporting this meta analysis.

Mr. Horacek uses in his Diploma Thesis a well established approach: to take already published meta-analysis study, to update it with more recent primary studies and to do it better (mainly accounting for publication selectivity plus some other concerns). This time, the updated and methodologically improved study was Condon, N., H. Klemick, & A. Wolverson (2015): "Impact of ethanol policy on corn prices: a review and meta-analysis of recent evidence." Food Policy Volume 51, February 2015, Pages 63–73.

This Diploma Thesis is conceptually close to Havranek, T., Z. Irsova, K. Janda, & D. Zilberman (2015): "Selective reporting and the social cost of carbon." Energy Economics 51: pp. 394-406. This is so because similarly to Havranek et al. (2015) Mr. Horacek does not use as his primary source studies econometric papers with standard error of confidence interval reports, but he uses the reported results of structural (most often general or partial equilibrium) models. Therefore approximate standard errors derived by Mr. Horacek are subject to the same criticism as it was for Havranek et al. (2015) paper.

Given the focus of Mr. Horacek on corn ethanol, I wonder whether the general title and generally formulated results are really so general or whether this Diploma Thesis actually estimates just the effect of U.S. ethanol policies on corn prices (the key word is U.S.). Given the U.S. corn importance, the descriptive section 3 should be maybe more specifically U.S. focused. I understand that it is quite demanding for European non-agricultural economics student to understand and present such complex policy issues as U.S. corn and ethanol policies.

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Given that a lot of ethanol is produced from different sources than corn (sugarcane, wheat, ...), it would be good to clarify whether impact of total ethanol production on corn prices is evaluated or whether only corn (in particular U.S.) corn is considered. Maybe dummy variable distinguishing between ethanol production considered in different primary studies could be important and it could be policy relevant variable.

According to my opinion the diploma thesis of Mr. Horacek has a potential to lead to a journal article publishable at least in the same journal (Food Policy) as the source paper of this article (Condon et al. (2015)). My evaluation, that the diploma thesis of Mr. Horacek could lead to the publication in Food Policy is quite a high one. Food Policy is a well respected agricultural economics journal. While it is mechanically ranked as number 1 in agricultural economics both according to impact factor and article influence score, in the perception of agricultural economics community it is considered as belonging to second tier among top five ag. econ. journals (American Journal of Agricultural Economics being 1<sup>st</sup> tier, while Food Policy, Journal of Agricultural Economics, European Review of Agric. Econ., Agric. Econ. being 2<sup>nd</sup> tier).

## Methods

Page 1: it could also mentioned that there was not only increase of agricultural commodity prices after 2005, but that there was a general sizeable increase in other commodity prices as well (fossil fuels, minerals, etc.)

Figure 1.1 on page 2: it would be nice to specify which prices (which exact traded commodity, for example like Corn, Bloomberg ticker C 1 Comdty 1st month futures, CBOT) were used and whether nominal prices or some deflated prices are used.

P. 13: Given the exclusive focus of this Diploma Thesis on ethanol, the data on biodiesel and the related commentary is not relevant here. Instead, some more detailed descriptive data on US ethanol could be provided there.

P.15 When discussing RED and its possible development after 2020 in a section 3.3 of this Diploma Thesis, it should be mentioned there that on 30 November 2016, the European Commission published a proposal for a revised Renewable Energy Directive to ensure that the target of at least 27% renewables in the final energy consumption in the EU by 2030 is met. The 2030 target year is related to EU document A Policy Framework for Climate and Energy in the Period from 2020 to 2030 [COM(2014) 15].

Chapter 4: Data set

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While Mr. Horacek states that he just took primary sources from Condon (2015), it would be nice to provide some description according to which the primary sources were selected. This description would help the reader to understand what is actually covered by this meta analysis, which types of articles (which primary studies of impact of ethanol production on corn prices) are considered. Given that Mr. Horacek added more recent studies (2015-2017), he had to replicate the primary studies search done by Condon (2015) anyway.

It is quite demanding to find almost all relevant article. I am slightly worried that given that there are no recent working papers included, some papers (future articles) may be missing. Why there may be some argument why older working papers are not considered, the recent working papers (future articles in preparation) should be included. Also from the older literature, maybe the following article may be relevant. Environmental and Resource Economics September 2015, Volume 62, Issue 1, pp 35–57 The Price and Welfare Effects of Biofuel Mandates and Subsidies Jun Jie Wu and Christian Langpap. Another possible article to include as primary source may be Gal Hochman, Deepak Rajagopal, Govinda Timilsinac, David Zilbermand, Biomass and Bioenergy Volume 68, September 2014, Pages 106–114 Quantifying the causes of the global food commodity price crisis

And I suppose that some more articles, which may be used as sources for this meta analysis, may be missing.

P. 30: Citation variable should take account of the age of the paper being cited. (Older article naturally has more citations than article published just this year or a year ago.) So the citation variable should be normalized with respect to the age of the paper.

## Literature

Page 2: actually when writing about policy concerns of high food prices and biofuels, it is better to start first with international organizations, not with government. (FAO or World Bank are much more concerned with high food prices than U.S. government). The standard reference to this topic is Mitchell, D. (2008, July). A note on rising food prices. World Bank Policy Research Working Paper 4682, World Bank Development Economics Group. Nice discussion (and the story about the emergence of Mitchel (2008) paper) is provided by de Gorter, H., D. Drabik, & D. R. Just (2015): The Economics of Biofuel Policies. Impacts on Price Volatility in Grain and Oilseed Markets. Palgrave Studies in Agricultural Economics and Food Policy. New York: Palgrave Macmillan. This books is most likely the best comprehensive recent reading about biofuels prices.

Especially in the meta-analysis thesis, the work with literature should be much more careful. There is no excuse for not properly reporting the single key literature reference of this thesis

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Condon, N., H. Klemick, & A. Wolverton (2015): "Impact of ethanol policy on corn prices: a review and meta-analysis of recent evidence." Food Policy 51. (There is missing information on pages for this Volume 51, February 2015, Pages 63–73 article.)

This is not the only omission, similar omissions are noticeable for some other references too, for example:

De Gorter, H., D. Drabik, & D. R. Just (2013): Biofuel policies and food grain commodity prices 2006-2012: all boom and no bust?" .

Enciso, S. R. A., T. Fellman, I. P. Dominiguez, & F. Santini (2016): Abolishing biofuel policies: Possible impacts on agricultural price levels, price variability and global food security." Food Policy . (missing information about Volume 61, May 2016, Pages 9–26)

Hochman, G., D. Rajagopal, & G. Timilisina (2010): Are biofuels the culprit?" OPEC, food, and fuel. American Economic Review 100: pp. 183-187 (While this whole publication record is not properly cited, the main mistake is wrong name of the 3<sup>rd</sup> author: instead of Timilisina should be Zilberman. In addition, there is no G. Timilisina around the biofuels literature, the relevant person would be G. Timilsina.)

Roberts, M. J. & W. Schlenkera (2013): Identifying supply and demand elasticities of agricultural commodities: Implications for the us ethanol mandate. The American Economic Review 103(6): pp. 2265-2295. (Should be Schlenker, not Schlenkera)

Important articles like

Knittel, C. & A. Smith (2012): Ethanol production and gasoline prices: a spurious correlation." MIT CEEPR .

Carter, C., G. Rausser, & A. Smith (2012): The effect of the us ethanol mandate on corn prices." Ourenergypolicy.org. [Non capitalized US is just one of example of typos in this thesis, but more fundamental point is that the more recent article version of this paper was published as Commodity storage and the market effects of biofuel policies CA Carter, GC Rausser, A Smith - American Journal of Agricultural Economics, 2016]

are not updated to their more recent journal publications versions. I consider this more serious deficiency for meta-analysis thesis than it would be for any other type of thesis.

Some other papers dealing with meta-analysis relevant to biofuels should be also mentioned.

In particular Corn ethanol and us biofuel policy ten years later: A systematic review and meta-analysis G Hochman, D Zilberman - 2016 Annual Meeting, July, 2016 - ageconsearch.umn.edu is definitely missing in this thesis. This is very important and relevant paper for this thesis.

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And there may be some other possibly relevant meta-analysis papers like

The biofuel-development nexus: A meta-analysis J Choumert, PC Motel, CG Djimeli - 2017 - halshs.archives-ouvertes.fr

Also a book chapter The Impact of Biofuel Demand on Agricultural Commodity Prices: A Systematic Review U. Martin Persson (Institutionen för energi och miljö, Fysisk resursteori) Advances in Bioenergy: The Sustainability Challenge p. 465-482. (2015) should be mentioned.

## Manuscript form

The Czech and English versions of abstract should be closer to one another. In particular, compare significantly different last sentences of both versions of the abstract. It not just about wording, but there are different key numerical results. Also 0.11% is very different from 0.11 or from 11%.

Page 2: "leading exporter" (and similarly throughout the thesis) wrong quotation marks are used (Latex has its own way how to write quotation marks properly).

List of references: Mr. Horacek consistently does not take care of proper capitalization by using {} in bibtex. Simple look at the list of references reveals that there is something wrong systematically (all those eu and us instead of EU or US). In general, the list of references clearly was not carefully enough checked for typos and missing information.

I recommend the thesis for defense.

In the case of successful defense, I recommend the grade „excellent“ (grade 1).

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

<b>CATEGORY</b>	<b>POINTS</b>
<i>Contribution</i> (max. 30 points)	25
<i>Methods</i> (max. 30 points)	30
<i>Literature</i> (max. 20 points)	15
<i>Manuscript Form</i> (max. 20 points)	15
<b>TOTAL POINTS</b> (max. 100 points)	<b>85</b>
<b>GRADE</b> (1 – 2 – 3 – 4)	<b>1</b>

**NAME OF THE REFEREE:** Karel Janda

**DATE OF EVALUATION:** May 24, 2017

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**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	<b>1</b>	= excellent	= výborně
61 – 80	<b>2</b>	= good	= velmi dobře
41 – 60	<b>3</b>	= satisfactory	= dobře
0 – 40	<b>4</b>	= fail	= nedoporučuji k obhajobě