Opponent's Report on Dissertation Thesis

Institute of Economic Studies, Faculty of Social Sciences, Charles University in Prague
Opletalova 26, 110 00 Praha 1, Czech Republic
Phone: +420 222 112 330, Fax: +420 222 112 304

Author:	**Zuzana Havránková**
Advisor:	Prof. Ing. Oldřich Dědek, CSc.
Title of the Thesis:	Six Essays on Meta-Regression Analysis
Type of Defense:	**DEFENSE**
Date of Pre-Defense:	December 3, 2014
Opponent:	**Dr., PhDr. Jan Babecký, Ph.D.**

Address the following questions in your report, please:

a) Can you recognize an original contribution of the author?
b) Is the thesis based on relevant references?
c) Is the thesis defendable at your home institution?
d) Do the results of the thesis allow their publication in a respected economic journal?
e) Are there any additional major comments on what should be improved?
f) Were your comments raised at the pre-defense, addressed in the dissertation submitted to the regular defense? (The pre-defense report is enclosed below)
g) What is your overall assessment of the thesis? (a) I recommend the thesis to be defended without major changes; (b) The thesis is not defendable.

(Note: The report should be at least 2 pages long.)

Content of the Report:

The submitted dissertation thesis represents an original contribution to literature on meta-regression analysis, is well written and is based on relevant references. This is supported by the fact that out of the six essays, three essays have been already published in the refereed journals, the remaining essays being submitted for publication and/or are under review.

The six essays have in common the application of meta-regression techniques to various empirical issues, such as the assessment of the effect of international borders on trade (1st essay), the intra-industry productivity spillovers from FDI (2nd essay), the price elasticity of gasoline demand (3rd essay), spillovers from FDI to local firms (4th essay), cross-country heterogeneity in intertemporal substitution (5th essay) and social costs of carbon emission (6th essay).

Each essay is well written and well structured, reflecting the standards of an academic publication. Comparing the earliest and the latest essays one could notice a progress in the development of meta-regression analysis. A summary of each essay is provided in the Introduction to the dissertation.

Given the high quality of each of the essays and relevance of the topics, I recommend the thesis for defense without substantial changes.

In the pre-defense version of the report, my only minor comments concerned the overall assessment of the six essays in the thesis. In my view, the reader would have benefited from a synthesis of what has been learned from the six essays in terms of meta-regression methods, and I suggested the author to summarize the lessons learned.

Such a summary – e.g. a couple of pages – could be placed at the end of Introduction or as a separate concluding section and present the author's view on the following points, for example:

- *Selection of primary studies.* Based on the six essays, what would be the author's recommendation regarding the selection of primary studies? (E.g. shall a researcher collect all studies or only published studies?)
- *Test for publication bias.* In the thesis, the variety of tests have been employed, including the tests proposed by Card and Crueger (1995), Stanley (2005; 2008), Doucouliagos and Stanley (2013). Which tests shall be preferably used by the researchers and why?
- *Selection of explanatory variables* in the meta-analysis regression. The fist and the fifth essays employ Bayesian Model Averaging (BMA) for the selection of variables, while the remaining four essays use classical methods. What are the pros/cons of each of the approaches and how comparable are the results? Shall the researchers use BMA, or under certain circumstances classical methods are still preferable? What shall the reader take out of this thesis, which method for variables selection is the most appropriate and when?
- *Robustness checks.* If the BMA is used, how does the choice of alternative priors affect the results? What are the pros and cons of using weighted vs. unweighted estimates in the meta-regression analysis?
- What would be eventual recommendations for the '*best practice*' meta-regression analysis?

Following these suggestions, in the final version of the dissertation the author elaborated on the main lessons from the six essays. These details are provided in the section at the end of Introduction. I have no more comments.

The dissertation represents an excellent piece of work and I recommend the thesis for defense.

Date:	7th April 2015
Opponent's Signature:	
Opponent's Affiliation:	Dr., PhDr. Jan Babecký, Ph.D. ČNB