

# Report on Master Thesis

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

Student:	Bc. Radek Janhuba
Advisor:	doc. Roman Horváth, Ph.D
Title of the thesis:	Volatility Spillovers in New Member States: A Bayesian Model

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

The author uses Bayesian-econometrical tools to study volatility spill-overs and mechanisms of shock transmission between markets in the Central European region, namely Czech Republic, Poland and Hungary.

This topic is definitely on the edge of current research and I believe that the results of the author might be of interest to people working in this field. The author clearly illustrates his understanding of Bayesian methods and application to data, together with rather advanced programming in standard computational software such as Matlab. The author managed to address all questions posed in the thesis proposal.

However, as a reader skilled in mathematics and operations research, I was dissatisfied by the low level of formalism and confusing notation even from the very first chapters of the thesis. I am convinced that title of Chapter 3 - Brief Intro to Bayesian Econometrics – is rather misleading for both reader that has little knowledge of Bayesian methods as well to an expert. Not to bore the committee members with long list of all my objections, it should suffice to mention the very confusing notation of random variables by A, B etc. whereas it is a long lasting convention to use X, Y etc and reserve A, B etc for denoting events. Also, I find it extremely irritating to use the symbol  $p(\cdot)$  in the text „universal“, sometimes as probability, as likelihood function or as density, in some cases even in the same sentence (see page 7). Also, „Illustrative model“ (Section 3.2) contains mistakes in the formulas (e.g. equation (3.10)). Also, I would advice to restrain further from using formulations such as „integrate out“ and „rules of probability“ which do not belong to proper mathematical terminology.

Nevertheless, the author compensates rather speculative readability of Chapter 3 by the remainder of the thesis. Though, in my opinion he heavily uses remarks and comments of other authors (well cited, of course) about presented methods and quite often without further elaboration, which, I think, quite lowers the depth of the comment.

I suggest the committee to ask the following questions during the defense:

- 1) Please, could you explain in detail the novelty of your approach and achieved results in comparison to those from Koop & Korobilis (2009, 2010) (cf the list of references of the thesis)?
- 2) What type of factors and future development in inspected countries and over which time horizon do you think could significantly change the character of your reported results?

For the reasons presented above I recommend grade 2, in case of a successful defense even grade 1. I do not recommend the thesis to be nominated for the dean's distinction.

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

CATEGORY	POINTS
Literature (max. 20 points)	20
Methods (max. 30 points)	25
Contribution (max. 30 points)	25
Manuscript Form (max. 20 points)	10
<b>TOTAL POINTS</b> (max. 100 points)	<b>80</b>
<b>GRADE</b> (1 – 2 – 3 – 4)	<b>2</b>

**NAME OF THE REFEREE:** RNDr. Michal Červinka, Ph.D.

**DATE OF EVALUATION:** 21.6.2012



Referee Signature