

Report on Bachelor / Master Thesis

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

Student:	Bc. Luboš Hanus
Advisor:	Mgr. Lukáš Vácha, Ph.D.
Title of the thesis:	Wavelet analysis of business cycles in the Visegrad Four

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

The thesis studies stylised facts of macroeconomic time series of four CEE countries. To this end, the author uses a wavelet analysis to study the properties of monthly time series of both real and nominal variables and relationships among them during 1991-2013. In addition, a coherency analysis between the CEE countries and Germany, as a proxy for the euro area, is performed. The author finds that the properties of the time series are time-varying, which supports the relevancy of the wavelet analysis. Next, the author finds that after an initial coherent output movements across countries, this development was interrupted after 1995 due to policy divergence. Nevertheless, the synchronisation started again owing to the preparations for the EU entry.

The thesis is written very competently, has a clear structure and is balanced overall. One exception is Chapter 3, which presents the theory regarding the wavelet analysis. On the one hand, the author tries to present as many concepts regarding the wavelet analysis as possible, but on the other hand, he does not explain some concepts and intuition behind them, so it does not make much sense for a reader not acknowledged with the wavelet analysis to read the theoretical part (following its introduction, which is quite intuitive). Nevertheless, the topic is very advanced and the thorough exposition would require much longer scope, so these objections are not crucial.

The rest of the thesis is laid out very carefully, I appreciate partial summaries behind each subchapter in the empirical part and the formal side of the thesis. Apart from some typos and minor mistakes, there are only a few inaccuracies in the paper (for example, a note concerning hyperinflation in the Czech Republic (p. 8)).

What I miss in the thesis is stating some limitations of its approach:

- Some data are used since 1991. Can these time series, especially at the beginning of the sample, be truth worthy (e.g. with respect to the division of Czechoslovakia)? Would the results be robust if the beginning of the sample was omitted?
- Is the choice of Germany as a proxy for the euro area still relevant? With respect to trade linkages, the German economy definitely has the largest weight, but with respect to monetary policy aspects, Germany is not a very good choice as a representative country in the euro zone any more (it is rather an outlier these days).

Overall, I believe the thesis is a significant contribution to the literature on stylised facts in the CEE region, using state-of-the-art methods. I recommend a 1 (výborně) grade.

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

CATEGORY	POINTS
<i>Literature</i> (max. 20 points)	18
<i>Methods</i> (max. 30 points)	25
<i>Contribution</i> (max. 30 points)	25
<i>Manuscript Form</i> (max. 20 points)	20
TOTAL POINTS (max. 100 points)	88
GRADE (1 – 2 – 3 – 4)	1

NAME OF THE REFEREE: PhDr. Tomáš Adam

DATE OF EVALUATION: 15 June 2014

Referee Signature