

# Report on Bachelor Thesis

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

<b>Student:</b>	<b>Vojtěch Mišák</b>
<b>Advisor:</b>	<b>doc. Bc. Roman Horváth, M.A., Ph.D.</b>
<b>Title of the thesis:</b>	<b>Central Bank Independence and Its International Dimension</b>

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

The spatial analysis of central banks independence, presented in the thesis, represents a novelty combination of an interesting research question and a suitable method. The research question is original, with important policy implications, and the contribution potential of the presented results is consequently very high. However, the discussion of the results is very limited in the thesis, which significantly decreases the final added value of the thesis.

In the thesis, the author has shown that he is able to identify an interesting research question, gather related literature and use relevant data and methods to answer the question. The methods are advanced; both the spatial panel model and related spatial tests require knowledge significantly exceeding the econometric techniques covered at the author's level of studies. The estimation includes relevant tests of a validity of used methods and an extensive sensitivity testing (pages 37-38), which proves excellent econometric abilities of the author.

The usage of sources is sufficient. The author has shown that he is able to utilize findings from related literature, although in some sections, the references could be broader. The position of the thesis in the literature is well explained. The list of references should be sorted alphabetically.

The overall quality of the thesis is significantly decreased by several drawbacks. The thesis requires proof-reading, the English should be revised (especially the word ordering), there are multiple sentences with missing words (e.g. last sentence on the page 7).

Furthermore, the thesis includes multiple problems related to its content and/or structure:

- 1) The abstract states two different findings to be the most important (importance of a distance vs. estimates of other variables: Rule of Law, Growth of GDP, OECD/WTO membership). Consequently, it is not clear what the author considers to be the core finding.
- 2) The introduction includes too much general information about the "background", which should be partially postponed into the subsequent section. Instead, the introduction should be more informative about the presented thesis. It should include at least basic information about the position of the presented research in the literature, methods, data (at least the countries of interest) and the structure (explicitly).
- 3) Abbreviations are used without defining them at the place of the first usage of the particular term.
- 4) Figure 1 has incorrect reference in the text, and moreover, the reference to Figure 2 is placed first.
- 5) Structure of the thesis includes too many sub-sections, which are too short. The third level of numbering is unnecessary and should be omitted. Moreover, some of the

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pages are ended in their half, although the same chapter (of level 1 or 2) continues by a common text on the next page (pp. 18, 22, 24, 25). It seems as if the length of the thesis was artificially extended by such practice. Furthermore, subsection 4.4 is missing.

- 6) I miss an explanation of the rationale beyond the choice of independent variables. Most importantly, there should be better described, why the GDP growth (a cyclical variable) is used to explain the central bank independence (a structural variable). Instead, variables reflecting overall wealth of a country, GDP per capita for instance, could be considered. The OECD 0/1 dummy variable might be unable to fully reflect this aspect.
- 7) The independent variables are described insufficiently (especially the indices). Since CBI index is the most important variable in the thesis, it should be explained, how the factors (described on the page 10) are numerically evaluated and weighted, what is the range for the index etc. (similar holds also for the other indices).
- 8) First sentence of section 2.2.2 does not make sense. Why to use CBI index for transparency?
- 9) Since there are both graphical (in the Appendix) and numerical (Table 1) representations of linkages among the variables, these should be also briefly discussed in the text (section 2).
- 10) The description of the methodology is sufficient in terms of mathematical expression of basic formulas, as taken directly from the source (Millo and Gianfranco, 2012). However, as an outsider to the spatial modelling, I miss an explanation of the methodology as a whole. What is the overall nature of the spatial model, why it is used? Are there any other competitive methodologies able to answer the research question?
- 11) Similarly, the relationship among particular methodological elements should be better explained. What is the relation of the spatial error model and the spatial lag model, especially in the context of the estimation procedure? How the spatial estimation procedure differs from the usual panel regression? On the other hand, reader gets some further ideas about the nature of the methods in the section 4. Consequently, most of the section 4 (the results) should be methodologically explained in the section 3 (including the tests), with only actual results to be left for the section 4. For instance, section 3 (p. 25-26) describes maximum likelihood, but the model is estimated using feasible GLS (p. 36 in sect. 4). This is somehow confusing.
- 12) Defining Kronecker product in the text is unnecessary, since it is a standard mathematical operator. If needs to be included into the thesis, it should be moved into the Appendix.
- 13) Although inflation targeting proxy is not significant (the Table 3), it is closely related to the CB transparency (the Table 1). The author states (p. 38), that after omitting the variable, the model becomes more trustworthy, since the central bank transparency is more significant. However, it leads to an omitted variable bias instead, so the discussion offered by the author is strongly misleading.

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14) Finally, the interpretation of the results is highly insufficient. This represents the main weakness of the thesis. The economic interpretation of the spatial effect (the lambda parameter) appears only in the conclusion. It should be, instead, broadly discussed in the subsection 4.3. How its value translates into the effect of the central banks on each other? Similarly, the surprising results for the Rule of Law should be more elaborated on.

To conclude, I highly appreciate the effort of the author to use an advanced estimation method. After a significant fine-tuning and extending the discussion of the results, the results could be even published. On the other hand, the insufficient discussion as well as the other drawbacks mentioned above decrease the overall evaluation of the thesis.

Suggested question(s) for the defense is:

*“The non-standard monetary policy actions introduced since the Lehman Brother crisis can be a signal of a drop of the central bank independence. Does the independence index reflect them? If yes, how? If not, what are possible negative consequences for your results (the period 2008-2010 represents a significant part of the period included in the analysis)?”*

In the case of a successful defense, I recommend the **grade 2** (“**velmi dobře**”, **good**).

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

CATEGORY	POINTS
Contribution (max. 30 points)	15
Methods (max. 30 points)	30
Literature (max. 20 points)	15
Manuscript Form (max. 20 points)	8
<b>TOTAL POINTS</b> (max. 100 points)	<b>68</b>
<b>GRADE</b> (1 – 2 – 3 – 4)	<b>2</b>

**NAME OF THE REFEREE:** Adam Kučera

**DATE OF EVALUATION:** 5. 6. 2017



**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