

# Report on Bachelor / Master Thesis

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

Student:	Bc. Andrea Kufnerová
Advisor:	PhDr. Tereza Fišerová
Title of the thesis:	Bank regulatory standards and supervision: The impact on the banks' efficiency

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

In her thesis, Andrea Kufnerová estimates the cost and efficiency scores of banks in the European Union and then proceeds to examine the relationship between these scores and variables associated with regulatory and supervision standards. She finds that several of these relationships are statistically significant (for example, the independence of the corresponding supervisory authority is related to bank efficiency). This is a solid piece of work that goes beyond what is typically taught at econometrics courses at the IES.

The first part of the thesis in particular is well executed. I share the author's preference for stochastic frontier analysis over data envelopment analysis when the focus is panel data and also welcome the detailed justification on pp. 23-27. I also like the author's careful approach to the selection of the most appropriate functional form in the SFA exercise. The output of the first part is a matrix of efficiency scores (cost and profit) for all European banks, and I trust that these scores are estimated competently.

In the second part the author regresses the efficiency scores estimated earlier on a vector of variables related to regulatory and supervisory standards. Because the latter variables are defined at the country level, it is necessary to cluster the corresponding standard errors at the country level as well, and I applaud the author for realizing this needs to be done (unfortunately this is still not the rule among our students; the importance of clustering for any applied work with panel data should be stressed more during MA courses on econometrics). In contrast, I don't applaud the use of random effects in the second stage. Fixed effects should be used to correctly control for unobservable bank-specific factors. Unfortunately, the author relies on the Hausman test to choose between fixed and random effects. This is another problem of standard econometrics courses: Hausman test works well in theory, but in good applied work in economics it is almost never used. The research question must drive the choice of the estimation method, and unless the researcher absolutely needs to include time-invariant variables, fixed effects are preferred by default (the orthogonality assumptions of random effects are rarely met in economics).

To her credit, the author of this thesis also justifies the use of random effects by the need to include time-invariant variables. But if this is really the case, she cannot conduct the Hausman test properly because the fixed-effects model cannot really be estimated in its full form comparable to random effects. Also, from the equation on p. 54 it seems that all the variables vary in time. Moreover, the author doesn't explain the specifics of the GLS estimation she uses. How should it help with endogeneity? (see p. 52). Furthermore, in the second stage the author essentially estimates an estimated-dependent-variable model. To achieve efficiency, she should weight the regression by the inverse of the variance of the estimates from the first

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stage. I am afraid that in the current state her estimates are both inconsistent (due to random effects) and inefficient (due to the lack of precision weighting). Therefore, the main results are not credible.

I also believe that the thesis should be written with more care. In particular, the author should learn how to use the definite article in English. For example, the current title is "Bank regulatory standards and supervision: The impact on the banks' efficiency." Even a non-native speaker suspects something is wrong there, and it should be "... the impact on banks' efficiency" or "... the impact on bank efficiency," because we don't know what specific banks the author is referring to. We all make mistakes here, but they shouldn't appear in every second sentence. Other examples from the abstract: "the bank efficiency and...", "of European Union," etc. The entire abstract (and, indeed, much of the text in the thesis) is hard to comprehend. The main results are discussed in terms of statistical significance, ignoring the actual economic importance of the phenomena.

For me this is a borderline case between 1 and 2, but I am a bit closer to 2 because of the several problems I outlined in the last two paragraphs. That said, a lot of work has been done on this thesis and the final grade should also reflect the quality of other theses being defended.

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

<b>CATEGORY</b>	<b>POINTS</b>
<i>Literature</i> (max. 20 points)	20
<i>Methods</i> (max. 30 points)	22
<i>Contribution</i> (max. 30 points)	25
<i>Manuscript Form</i> (max. 20 points)	12
<b>TOTAL POINTS</b> (max. 100 points)	<b>79</b>
<b>GRADE</b> (1 – 2 – 3 – 4)	<b>2</b>

**NAME OF THE REFEREE:** *PhDr. Zuzana Havránková, Ph.D.*

**DATE OF EVALUATION:** *Aug 10, 2016*

  
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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