

Report on Master Thesis

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

Student:	Bc. Veronika Vraná
Advisor:	Jan Zápal
Title of the thesis:	The Efficiency of Public Expenditure, Evidence from the Czech Republic

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

The Master thesis of Veronika Vraná is a very well thought out and written piece of work.

The ultimate goal of the thesis is to be able to measure and discuss efficiency of public expenditure in the Czech republic.

The thesis first discusses theoretical background of efficiency analysis; different efficiency measures (technical, allocative, economic); different perspectives (input and output) and the relationship between these measures (Chapter 2). Ultimately, the thesis focuses on technical efficiency, which for public sector, that is, in the absence of input and most importantly output prices, seems to be the only viable choice. Technical efficiency, in the definition the thesis uses, measures the distance between the inputs/outputs chosen by a decision-making unit from a theoretical production possibility frontier.

Following two chapters introduce and discuss different data-based methods the literature uses to measure (technical) efficiency, splitting those into non-parametric ones (Chapter 3) and parametric ones (Chapter 4). The two chapters also extensively discuss advantages and disadvantages of the introduced methods.

The remaining two chapters consist of an application of the methods from the earlier chapters to public-sector (government) data from the Czech Republic (Chapter 5 data description; Chapter 6 result description). The data consist of annual observations from the 2003-2014 period and cover all 14 regions (kraj). The analysis focuses on a single-input single-output model. The input variable consists of regional expenditure (see Section 5.2 for a full description). The output variable consists of an output index composed of a list of variables measuring services provided by the regions (and under their control) (see Section 5.3 for a full description).

Analysis of the data (Chapter 6) is split into two parts. First, the thesis estimates the efficiency of regional expenditure (see Section 6.1.4 for concise summary of the main results) and the robustness of the main results (Section 6.2). Second, the thesis estimates the effect of several variables on the estimated efficiency scores (see Table 6.2 for concise summary of the results).

I believe the thesis deserves the best of possible marks for several reasons. First, the chapters discussing the (non-)parametric efficiency measurement methods show a clear understanding of the methods involved, including the recent/advanced ones, and their possible benefits and limitations. None of the discussed methods are part of the standard curriculum of the master program and their grasp is a result of an independent study by the thesis author. I have learned a lot from Veronika while discussing this aspect of her thesis.

Second, the application of the methods to the Czech data is equally competent. The thesis shows a thorough grasp of the available data and the extensive results, including the robustness checks, reveal fluency in data handling and analysis. Discussion of the results also shows that the thesis author is aware of various econometric issues involved. I feel I have learned from the results the thesis reaches and believe any reader will.

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Third, the thesis is a result of very independent work. Veronika consulted with me often, but always came prepared with specific questions and own opinion as to what the answer is to be. Those conjectures were very often correct and insightful. At the end, I feel I have contributed little to the thesis, for the sole reason that I had little to contribute on top what Veronika found out independently.

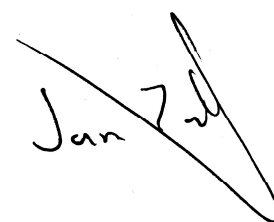
Finally, the final version of the thesis is very clean, carefully edited and proofread. As such, the thesis is not only an interesting piece of work, but it is also pleasure to read. It keeps the exposition of, often advanced and technically involved, issues at an appropriate level necessary for understanding, without straying into unnecessary details.

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

CATEGORY	POINTS
<i>Literature</i> (max. 20 points)	17
<i>Methods</i> (max. 30 points)	27
<i>Contribution</i> (max. 30 points)	27
<i>Manuscript Form</i> (max. 20 points)	17
TOTAL POINTS (max. 100 points)	88
GRADE (1 – 2 – 3 – 4)	1

NAME OF THE REFEREE: *Jan Zápál*

DATE OF EVALUATION: 2016



Referee Signature