

Individuální studijní plán studentů doktorského studia na IES
(Vyplňte elektronicky, podepsaný formulář odevzdejte na sekretariát IES,
soubor uložte na Vaši webovou stránku)

Kontaktní údaje

Jméno a příjmení	Jana Procházková
Školní rok nástupu studia	2010
Forma studia	Prezenční
Školitel	PhDr. Martin Gregor PhD
Téma doktorské práce	Three Essays on Economics of Health Care

Předpokládaný harmonogram zkoušek (kód/název/semestr)

2010/2011
ETPM/Economic Theory of Political Markets/ZS
ETPM/Economic Theory of Political Markets/LS
2011/2012
ETPM/Economic Theory of Political Markets/ZS
ETPM/Economic Theory of Political Markets/LS
2012/2013
ETPM/Economic Theory of Political Markets/ZS
ETPM/Economic Theory of Political Markets/LS
State Doctoral Exam/SS
2013/2014
ETPM/Economic Theory of Political Markets/WS
Pre-defense/WS
Defense/SS

Předpokládaný harmonogram výuky (kód/název/semestr)

2010/2011
Winter Semester:
JEM003 Advanced Microeconomics

Summer Semester - Preferences:
JEM111 - International Macroeconomics (1)
JEM012 – European Economic Policies (2)
JEM069 – Vnitřní trh Evropské Unie (3)

2011/2012
Winter Semester – Preferences:
JEM003 Advanced Microeconomics
JEM031 Public Economics
JEM027 - Monetary Economics A

Summer Semester – Preferences
JEM111 - International Macroeconomics (1)
JEM012 – European Economic Policies (2)
JEM069 – Vnitřní trh Evropské Unie (3)

2012/2013
Winter Semester – Preferences
JEM003 Advanced Microeconomics
JEM031 Public Economics
JEM027 - Monetary Economics A

Summer Semester – Preferences
JEM111 - International Macroeconomics (1)
JEM012 – European Economic Policies (2)
JEM069 – Vnitřní trh Evropské Unie (3)

2013/2014
Winter Semester – Preferences
JEM003 Advanced Microeconomics
JEM031 Public Economics
JEM027 - Monetary Economics A

Summer Semester – Preferences
JEM111 - International Macroeconomics (1)
JEM012 – European Economic Policies (2)
JEM069 – Vnitřní trh Evropské Unie (3)

Práce na disertaci

Synopse (1- 2 strany)

My Dissertation Thesis will have two parts. The first two essays will continue with the research started previously in my Master Thesis which dealt with measuring efficiency of hospitals in the Czech Republic. The third essay will analyze spa and balneological care in the Czech Republic as a luxurious segment of health care.

The line of research is motivated by the ongoing pressures on public finances. Firstly, increasing efficiency of publicly owned institutions is perceived as one of the ways to combat public debt. Secondly, the fact that demand for self-paid balneological and spa care has been increasing steadily supports the claim that the people tend to be more interested in their health status and are also willing to pay for increasing it. Private participation at health care costs may thus further help the public health care budget. This luxurious segment of health care is traded in the market; the third paper will thus aim to construct a model of attendance for spa and balneological centers based on regional characteristics.

Hospital efficiency measurements have been dealt with in a number of studies from abroad which serve as a source of background information but also emphasize the necessity to deal with the problem into a considerable depth. Efficiency of hospitals in the Czech Republic has been touched only in Dlouhý, Jablonský & Novosádková (2007) so far who measured efficiency of 22 hospitals using the DEA methodology. However, an extensive analysis of hospital efficiency using different parametric and non-parametric methods as alternatives, as well as identifying sources of inefficiency, is missing in the Czech Republic. My Dissertation Thesis should thus contribute to this field of research.

Having identified cost efficiency and its determinants for a panel of 99 hospitals in the Czech Republic in the period 2001-2008 using the Data Envelopment Analysis (DEA) and Stochastic Frontier Analysis (SFA) methodology in my master thesis, I aim to exploit the topic further.

Firstly, I will explore other potential determinants of inefficiency which are characteristic for big and teaching hospitals in particular, as efficiency scores of these two groups proved considerably different than the rest of the sample. Furthermore, a separate analysis of a group of big hospitals, i.e. those treating more than 20,000 patients a year, and a group of small and medium-size hospitals, i.e. those treating up to 20,000 patients a year, will serve as a robustness check for the results.

Secondly, I will redo the non-parametric analysis from the master thesis more rigorously. In this context, I will also employ the Malmquist Productivity Index, the primary advantage of which is that it can split the change in the overall productivity into technological change and a change in efficiency. Hospitals which experienced a considerable change in productivity (either as a result of technological change or a change in efficiency) can thus be identified.

Thirdly, I may also try to employ other efficiency measurement techniques, such as Fixed-Effects Regression (FER) which is based on different assumption than the SFA. The motivation for it comes from various conclusions reached in the literature when results of the two methods were compared (Krumbhakar et al. 2000, Bauer, et al. 1994).

Fourthly, since 99 hospitals is not an exhaustive sample of Czech hospitals, a similar analysis for hospitals aggregated into regions may also be helpful.

As far as the spa and balneological centers are concerned, I am to construct a model of attendance based on regional characteristics, both for regions and municipalities where major center are situated. The final form of the analysis and the schedule of work are still to be clarified.

Základní literatura

Battese, G. E. & Coelli, T. J. (1995): A Model for Technical Inefficiency Effects in a Stochastic Frontier Production Function for Panel Data. *Empirical Economics*, vol. 20, pp. 325-32.

Battese, G. & T. J. Coelli (1992): Frontier production Functions, Technical Efficiency and Panel Data: With Application to Paddy Farmers in India." *The Journal of Productivity Analysis* 3, pp. 153-169.

Bauer, P. & A. Berger & D. Humphrey (1994): Efficiency and Productivity Growth in US Banking. In: *The Measurement of Productive Efficiency*, Fried H, Lovell C, Schmidt S (eds). Oxford University Press: New York, pp. 386-413.

Charnes, A., W. W. Cooper, & E. Rhodes (1978): Measuring Efficiency of Decision Making Units." *European Journal of Operational Research* 2, pp. 429-444.

Dlouhý, M., J. Jablonský, & I. Novosádová (2007): Využití analýzy obalu dat pro hodnocení efektivnosti českých nemocnic. *Politická ekonomie* 1, pp. 60-71

Greene, W. (2002): *Alternative Panel Data Estimators for Stochastic Frontier Models*.

Krumbhakar, S. & C. Lovell (2000): *Stochastic Frontier Analysis*. Cambridge: Cambridge University Press.

Maniadakis, N., Thanassoulis, E. (2004): A Cost Malmquist Productivity Index. *European Journal of Operational Research* 154, pp. 396-409.

Zuckerman, S., J. Hadley, & L. Iezzoni (1994): Measuring Hospital Efficiency with Frontier Cost Functions." *Journal of Health Economics* 13: pp. 255-280.

Harmonogram prací

2010/2011

- Work on the first paper called „Efficiency of hospitals in the Czech Republic“ using the Stochastic Frontier Analysis.
- Publication of the first results as IES Working Paper.
- Start working on the second paper called „Efficiency of hospitals – a non-parametric approach“
- Submission of the application for a two-year grant to the competition of the Grant Agency of Charles University (GAUK) with planned topic „Efficiency of hospitals in the Czech Republic“

2011/2012

- Solving GAUK grant, if not successful in the first year, resubmission.
- Work on the second paper - „Efficiency of hospitals – a non-parametric approach“
- Testing other alternative approaches to efficiency measurements
- Publication of results of the second paper

2012/2013

- Work on the third paper called „Analysis of Spa and Balneological Care in the Czech Republic“
- New GAUK application called „Analysis of Spa and Balneological Care in the Czech Republic“

2013/2014

- Solving GAUK grant
- Publication of results of the third paper
- Finalization of the results so that the dissertation can be defended
- Pre-defense
- Defense

Předpokládaná publikace výsledků

2010/2011

- First paper „Efficiency of hospitals in the Czech Republic“ using the Stochastic Frontier Analysis will be sent to IES WP

2011/2012

- After revisions, the first paper will be sent to a SCOPUS Journal.
Preferences: Applied Health Economics and Health Policy
European Journal of Health Economics
International Journal of Health Care Finance and Economics
- Second paper „Efficiency of hospitals – a non-parametric approach“ will be sent to IES WP

2012/2013

- Second paper will be sent to a SCOPUS Journal
Preferences: Applied Health Economics and Health Policy
European Journal of Health Economics
International Journal of Health Care Finance and Economics

2013/2014

- Results of the third paper will be sent to IES WP
- After revisions the third paper will be sent to a SCOPUS Journal
Preferences: Applied Health Economics and Health Policy
Journal of Applied Economics
Journal of Economic Geography

Konkretizace studijního plánu pro 1. rok studia

Výuka

Účast na doktorských seminářích

Začátek práce na disertaci

Předpokládané zkoušky

Další aktivity

Teaching 2010/2011

Winter Semester:

JEM003 Advanced Microeconomics

Summer Semester - Preferences:

JEM111 - International Macroeconomics (1)

JEM012 – European Economic Policies (2)

JEM069 – Vnitřní trh Evropské Unie (3)

Work on the Dissertation

- Work on the first paper „Efficiency of hospitals in the Czech Republic“ using the Stochastic Frontier Analysis
- Sending the results to IES WP
- Gathering the data for the analysis in the third paper (Spa and Balneological Care)
- GAUK application

Other Activities

WS, SS: Participation at Defenses (at least 50 %)

Vyjádření školitele

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podpis školitele

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podpis studenta