

# Institut ekonomických studií

## Fakulta sociálních věd, Universita Karlova Praha

### Referee report on the Rigorous Thesis submitted to Rigorous Exam

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|--------------------------------|--|
| <b>Student Name:</b>           | <b>Mgr. Tomáš Havránek</b>                               |
| <b>Thesis Supervisor Name:</b> | <b>Doc. ing. Tomáš Cahlík, CSc.</b>                      |
| <b>Thesis Title:</b>           | <b>Subsidy competition for spillovers for inward FDI</b> |

#### Overall Evaluation:

The rigorous thesis provides an exemplary analysis of FDI and policies for their support. The thesis comprises of three papers, which are loosely interconnected. It uses a whole series of modern econometric instruments for testing hypotheses outlined by economic considerations, even though only the second paper was explaining them within a strict axiomatic background. The topics analysed are highly important for the assessment of policy-making and the studies point to the existence of pre-conceived ideological expectations in the outcome of policies that are not supported by empirical evidence. The thesis is properly structured and underpinned with an amazing number of literature sources. It is written in very good English, reflecting the fact that all three papers were already published.

Therefore, I recommend the thesis for the defense and suggest the highest grade of excellence, i.e. A\* ("výborně").

#### Comments to individual chapters

Chapter 2 "Meta-analysis of intra-industry FDI spillovers - updated evidence" is definitely a highly successful entry based on the following grounds:

It is an original Czech contribution that addresses the world-wide research and contributes with new insights to the assessment of the literature on FDI spillovers. The paper reveals one deep contradiction in the econometric (statistical) approach to the world: its belief that "in average" the high numbers reveal objectively "the truth" predicted by theories, independently of the instruments used for their analysis. Maybe this is true in the world where measurements are really based on universal laws of science and where the only negative influence on their outcomes is the error term, whose distribution can be estimated. In the real life, however, the studies can lead to such a degree of ambiguities in their results that we are not able to be certain about the universal empirical validity of our theories. The importance of "Popper's razor" embodied in meta-analyses could be thus a condition that might challenge more theoretical foundations than was until now admitted. This paper of the author has crucial importance for assessing the meaning of economic research, both in its methodological foundations and its ability to interpret the reality.

The study is also innovative technically (e.g. by including the robust analysis or probit regression) and it offers new approaches to assess the so-called publication bias. Indeed, it is essential in our assessment of various analyses if the authors of papers do not "calibre" their research in order to confirm positive results or results found previously by some celebrities in the research. Quite surprisingly, the author's tests have rejected the existence of publication bias in the FDI spillovers literature.

The author looks at the set of approximately 100 different econometric estimations that assess the significance of seemingly the same phenomenon: the intra-industry spillovers of FDI. If we lived in a perfect world ruled by a universal law, all such observations would lead to a universally unified conclusion saying something like "situations A, in contrast to situations B, lead unconditionally to outcomes C". However, empirical research very often leads to contradictory statements that could have most varied inconsistent causes: the studied object

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behaves in an uncertain (random) way; or we are not (yet) able to figure out the real causes; or some of the methods are grossly flawed; or there is a bias of data selection; or there is a bias in publication selection. This paper discusses and quantifies, step-by-step, how such highly heterogeneous conditionalities could influence the results.

Even though the final conclusion of the author that "there is no general persuasive empirical evidence on the intra-industry spillovers" is a bit surprising, his diligent and systematic work with the literature is admirable and the arguments are quite transparent.

Chapter 3 "On the determinants of the FDI incentives" addresses the problem why there are in the world so many schemes for the attraction of FDI and which factors could be ranked as dominant in building such schemes. Thus the author's concern is not whether the incentives are efficient vis-a-vis the subsequent spillovers but rather how they attract the attention of the investors. The massive theoretical outline of the used method of testing (chap. 3.2.2 - 3.2.4) was taken generally from Haufler and Wooton, 1999, with certain original author's modifications. The model tests the hypothetical competition for incentives among Czechia, Poland, Slovakia and Hungary and the factors influencing the incentives (or profit) parity among them (e.g. by varying the market size or corporate income tax). The model leads to an optimising problem in Cournot and Stackelberg setting with game-theoretic features. In contrast to empirically dominated chapter 2, this chapter pointed to author's skills in dealing with pure theories and their simulation by means of stylised facts.

In chapter 4 the author deals with the question about what motivates the governments to offer FDI subsidies (i.e. incentives) and whether the competition among them is strong or weak. It is a follow-up of the paper in chapter 3, whose theoretical conclusions are now tested empirically. The hypotheses for testing are modelled according to 5 theoretically derived scenarios (and its variations). One must admire the extent of data that the author was able to gather for his estimations. The set of proliferated exogenous variables has been constructed quite intuitively, which, of course, can be a source of controversy. Nevertheless, there were some concrete results, whose significance could motivate the readers to ponder about the functioning of FDI incentives. Nicméně, ani to není tak snadné, protože autor uvádí výsledky čtyř metod odhadů, čímž věcný (ekonomický) problém spíše konvertoval na problém techniky odhadu a ekonomické závěry se nějak vytrácejí na této složité cestě.

Závěr: Pan Havránek je bezesporu talent. Zvládá jak náročnou teorii, tak sofistikované techniky odhadu a navíc má fantazii k tvorbě hypotéz. Mám však dojem, že jeho snažení naráží na jeden problém, který jednou uvedl Einstein: "A perfection of means, and confusion of aims, seems to be our main problem." Jeho tři studie mohou mít následující filozofickou interpretaci:

- Bud' popperovsky vyvracejí, že by ekonomie mohla aspirovat na to být vědou.
- Nebo sociální svět se vyvíjí na základě chaosu, modelovatelném například metodou random walk, a naší jedinou jistotou je jen technické instrumentarium, které ale pak musí ústít ve vědu pro vědu.

Rád bych proto slyšel jeho komentář k této mé poznámce na okraj.

All the methodological problems of this thesis notwithstanding, **I recommend to grade this thesis by A with honours.**

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#### SUMMARY OF POINTS AWARDED

| <b>CATEGORY</b>            | <b>POINTS</b> |
|----------------------------|---------------|
| Quality of Research        | 29            |
| Clarity and Readability    | 9             |
| Content/Quality of Ideas   | 39            |
| Organization & Development | 15            |
| Manuscript Form            | 5             |
|                            |               |
| <b>TOTAL POINTS</b>        | <b>97</b>     |
|                            |               |
| <b>LETTER GRADE</b>        | <b>A *</b>    |

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**(Signature – Defense Opponent)**

**Doc. ing. Vladimír Benáček, CSc.**

**Evaluated on: <11.10.2009>**