Opponent's Report on Dissertation Thesis

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Title of the Thesis:	Essays on the Impact of Technological Change on Economic
	Structure
Type of Defense:	DEFENSE
Date of Pre-Defense	December 14, 2022
Opponent:	prof. Ing. Martin Lábaj PhD. (Ekonomická univerzita v Bratislave)

Address the following questions in your report, please:

- a) Can you recognize an original contribution of the author?
- b) Is the thesis based on relevant references?
- c) Is the thesis defendable at your home institution or another respected institution where you gave lectures?
- d) Do the results of the thesis allow their publication in a respected economic journal?
- e) Are there any additional major comments on what should be improved?
- f) What is your overall assessment of the thesis? (a) I recommend the thesis for defense without substantial changes, (b) the thesis can be defended after revision indicated in my comments, (c) not-defendable in this form.

(Note: The report should be at least 2 pages long.)

I had the opportunity to review the PhD. thesis in a "pre-defense" phase. Therefore I will start my review summarizing the main comments that hold for this final version and defense of the dissertation thesis elaborated by Petr Pleticha.

The thesis is composed of three papers that investigate direct and indirect returns to RnD, links between global value chains participation and sectoral productivity, and the effects of RnD and FDI on the benefits provided by global value chains participation. Introduction to these papers summarizes the main results and provides a comprehensive links between their partial results.

First, I highly appreciate this form of a dissertation thesis. Namely that it is based on research papers submitted (ready for a submission) to international journals. Moreover, all three papers are closely related and explore various aspects of RnD, FDI and GVC participation and their links to productivity. As this is not always the case. So, it has been rather straightforward to put the results together and present them as a rather broad study on these issues.

Thus, as two out of three papers are already published in international journals (to my best knowledge) they proved to contribute to our understanding of the explored issued. In particular, the publication in *Structural Change and Economic Dynamics* is a great achievement in this

stage of research career. If not yet published, the third paper presents original research study and provides new empirical findings that could be published in recognized international journal.

The thesis is based on relevant and up-to-date literature. Literature review in all chapters provides well elaborated currents state of the research in particular fields of research. The thesis would be defendable at my home university, University of Economics in Bratislava, and as far as I can foresee it would be defendable at other recognized institutions such as WU Wien or Faculty of Economics at the University of Coimbra with which I do have some experiences.

I had few suggestions in the pre-defense report and I review how they have been addressed by the author of dissertation thesis.

First, I suggested to pay attention to the distinction between functional specialization in terms of industrial structure and functional specialization in terms of tasks. Rather sharp jump was made in the introduction from one concept to the other one without any explanation. I would suggest to make this difference explicit. The author revised the introduction sufficiently to take this comment into account.

I suggested to elaborate on the novelty of the results in Chapter 2. This has been revised and it is more explicit and straightforward in the final version of dissertation thesis.

The novelty in Chapter 3 has not been made explicit either. In particular, the third paragraph in 3.1 stated that "This paper contributes to this line of research by exploring the heterogeneity of GVC effects in a novel and more detailed way." It was followed by description of data used in empirical analysis and by the main results of the paper, but I missed more direct link to literature to which it contributes new empirical results. How the rather qualitative papers motivate/drive your empirical exploration? What has been missing in empirical works by Stroellinger (2021), Timmer et al. (2019) and/or Baldwin et al. (2014)? Similarly, in conclusions, contribution of the paper could be related more explicitly to particular papers.

The value added of the analysis in Chapter 3 has been made more explicit in revised version of the dissertation thesis. The description has been expanded and some valuable changes has been made both in introduction and in conclusions. The author took this comment into account in the final version of PhD, thesis.

Overall, the author addressed all comments from pre-defense version properly and I do not further comments or suggestions. The thesis provides new empirical results on the interplay between private and public RnD spending, GVC participation, FDI and sectoral productivity growth. It is focused on issues that are highly important for an economic development and especially for an economic development of CEE countries. The results provide rigorous understanding of enquired relations and meet high scientific standards from an international perspective. Moreover, they provide useful insights for policy makers, especially for those responsible for industrial policy, structural changes and economic development. From the perspective of a growing importance of well-designed industrial policies over the last decade (and calls for an "industrial renaissance" from European and national policy-makers and stakeholders) are the results even more relevant.

I recommend the thesis for defense without substantial changes.

Date:	25.9.2023
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