Report on Bachelor / Master Thesis

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

Student:	Alexander Mačejovský
Advisor:	Jiří Kukačka
Title of the thesis:	Multi-country ABM perspective on business cycles and deleveraging crises

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

Please provide a short summary of the thesis, your assessment of each of the four key categories, and an overall evaluation and suggested questions for the discussion. The minimum length of the report is 300 words.

Short Summary

This thesis extends the agent-based macro model by Seppecher and Salle (Applied Economics, 2015) to open economies. The original paper showed that higher wage flexibility makes recoveries after financial crises slower and the recessions more severe. The thesis aims to investigate whether this result holds in the open economy model or not since the conventional wisdom is that the country that decreases real wages can potentially export out of the recession. However, it is shown that the simulation results are at odds with the conventional wisdom, and the results derived for the closed economy are also valid in the open economy.

Contribution

The contribution is clearly defined in the introduction and other parts of the thesis. Bringing an already complex macroeconomic model into an open economy is a non-trivial task, and I find there's an interesting value added to the existing research. However, the results confirm the previous results derived from the closed economy. Moreover, the results lead to similar implications as Gali-Monacelli (AER, 2015).

Methods

The thesis relies on the framework of agent-based models in macroeconomics. Thus, the methodology goes beyond the methods covered during the MA studies at the IES. The methodology seems to be well implemented. The model is reasonably described as well. Perhaps, I would appreciate a graphical summary of the flows in the model that would demonstrate that the model is complete.

The extension for the open economy carefully distinguishes the cases of two similar economies and two economies that differ in terms of their size. The extension is based on introducing an exchange rate and international trade. The second extension seems somewhat arbitrary and not entirely realistic: It is defined that each period a pre-defined ratio of firms is allowed to deliver some fixed amount of good *i* to the second country. I would expect that the number of firms seeking opportunities in external markets would increase following internal devaluations (=lower nominal wages), so the amount of exporting firms shall not be exogenous or fixed. Therefore, I was wondering whether this particular implementation drives the paper's main result.

Literature

Only minor issues. The Czech edition of Keynes' General Theory is used as the primary reference, which is not in line with the conventions. The original text shall be used and quoted.

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Introduction: It is stated that the agent-based models are developed to provide an alternative to the DSGE models. However, the profession is gradually moving from the representative-agent framework of DSGE models to the Heterogenous Agent New-Keynesian models (HANK models). As far as I can assess, the agent-based modeling is closer to the HANK models since those are able to retain unequal income distribution within the model.

Manuscript form

Generally fine. Minor comment towards introduction where I missed intuitive reasoning why the role of wage flexibility can be ambiguous and why it actually may appear negative. These reasons appear in the proposal, then in the Literature review, but the motivation shall be clear from the introduction.

Overall evaluation and suggested questions for the discussion during the defense

Overall, Alexander delivered an excellent thesis with a very advanced methodology, which is well implemented. I greatly appreciate the effort behind the thesis, and my remarks and comments are meant as hints to improve the text for potential publication.

Also, the results of the Urkund analysis do not indicate significant text similarity with other available sources. Therefore, I recommend the thesis for the defense and suggest grade A.

Suggested questions:

Your results imply that the country cannot export out of the recession via internal devaluation, and the two-country model leads to synchronized recessions. This result seems at odds with the experience of multiple EC countries from the 1980s (Denmark, Ireland), where exchange rate devaluation leading to lower wages helped to restart economic growth. Also, the German experience with the internal devaluation of the 2000s seems inconsistent with the results presented in this thesis - although your results are compatible with Gali-Monacelli's findings derived from the DSGE models. Why is it so? Is it because the two-country model is not enough to model the dynamics of international trade? Is it caused by how the export is modeled, i.e., each period, a number of firms is allowed to export their goods?

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

CATEGORY		POINTS
Contribution	*(max. 30 points)*	30
Methods	*(max. 30 points)*	29
Literature	*(max. 20 points)*	19
Manuscript Form	*(max. 20 points)*	19

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TOTAL POINTS	*(max. 100 points)*	**97**
GRADE	**(A – B – C – D – E – F)**	**A**

NAME OF THE REFEREE: ***Jaromír Baxa***

DATE OF EVALUATION: ***August 11, 2022***

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Referee Signature

EXPLANATION OF CATEGORIES AND SCALE:

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.*

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.*

LITERATURE REVIEW: *The thesis demonstrates author's full understanding and command of recent literature. The author quotes relevant literature in a proper way.*

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.*

Overall grading:

TOTAL	GRADE
91 – 100	A
81 - 90	B
71 - 80	C
61 – 70	D
51 – 60	E
0 – 50	F