

**REPORT ON MASTER THESIS**  
**CENTER FOR ECONOMIC RESEARCH AND GRADUATE STUDIES**

<b>STUDENT:</b>	Jan Zemlicka
<b>ADVISOR:</b>	Ctirad Slavik
<b>TITLE OF THE THESIS:</b>	Macro-Epidemic Modelling: A Deep Learning Approach

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

This is a very high quality thesis. In my opinion, a slightly extended version of this thesis could well serve as one chapter in a dissertation.

*Please provide your assessment of each of the following categories, summary and suggested questions for the discussion. The minimum length of the report is 300 words.*

**CONTRIBUTION:**

The contribution of the thesis is threefold. (i) First, it uses novel computation methods to solve a macro-epidemiological model. This makes it possible to use solve more complicated versions of the model, namely a stochastic version. (ii) Second, the thesis formulates the model recursively, which is important, since it will allow analyzing other version of the model in the future (such as one in which the government cannot commit to the future path of policies). (iii) It calibrates the model to Czech data, which has not been done before.

**METHODS:**

The student uses up to date methods, well above the level of a master thesis.

**LITERATURE:**

The student is well acquainted with the literature and has identified the gaps that he is filling up with his thesis.

**MANUSCRIPT FORM:**

The thesis is, in general, well written, but indeed, some more polishing and sharper focus would be useful.

**SUMMARY AND SUGGESTED QUESTIONS FOR THE DISCUSSION DURING THE DEFENSE:**

In sum, this is a very high quality diploma thesis that goes well beyond an average diploma thesis in economics in that it provides novelty in terms of both modelling and solution techniques.

*Please indicate whether you recommend the Thesis for defense or not.*

**I recommend the thesis for defense.**

**TEXT ORIGINALITY CONTROL**

I confirm that I acquainted myself with the report on the originality of the text of the thesis from

Theses    Turnitin    Ouriginal (Urkund)

Comments on the reported results:

**SUMMARY OF POINTS AWARDED** (for details, please see the page 3)

<b>CATEGORY</b>	<b>POINTS</b>
Contribution (max. 30 points)	30
Methods (max. 30 points)	30
Literature (max. 20 points)	20
Manuscript Form (max. 20 points)	15
<b>TOTAL POINTS (max. 100 points)</b>	<b>95</b>
<b>GRADE (A – B – C – D – E – F)</b>	<b>A</b>

**NAME OF THE REFEREE:** Ctirad Slavik

**DATE OF EVALUATION:** August 31, 2021



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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.*

Strong            Average            Weak  
30                15                0

**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.*

Strong            Average            Weak  
30                15                0

**LITERATURE REVIEW:**

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

Strong            Average            Weak  
20                10                0

**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.*

Strong            Average            Weak  
20                10                0

**OVERALL GRADING:**

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