

Report on Master Thesis

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

Student:	Bc. Peter Kravec
Advisor:	Prof. PhDr. Tomáš Havránek, Ph.D.
Title of the thesis:	The effect of financial incentives on vaccination rates: Quasi-experimental evidence from Slovakia

OVERALL ASSESSMENT

Short summary

The thesis estimates the effect of the bonus of EUR 200 to EUR 300 for COVID-19 vaccination which was offered to the population who reached the age of 60 by the end of 2021 in Slovakia. The bonus was first announced on November 26, 2021. During the period observed the bonus was paid to 847 000 seniors.

The thesis applies regression discontinuity design model (RDD) and a Bass diffusion model on a unique Slovak dataset merged from multiple sources. Subsequently a cost-benefit analysis (CBA) is carried out to see whether the bonus was effective from the economic point of view.

The results suggest that financial motivation was effective across all three doses with the effect on the 2nd dose one being the strongest. The Bass model serves as a robustness check for the RDD first dose model confirming the RDD's results. Despite an increase in vaccination due to bonuses, a CBA suggests economic inefficiency with benefits not even equalizing the costs of bonuses, except for some effect for the first dose.

Contribution

Contribution of the thesis is enormous. Not only had only few similar analyses been carried out, but none had analysed this specific Slovakia setting which allows for a quasi-natural experiment. The thesis thus contributes both to theoretical and empirical literature.

Methods

The thesis applies three different models, (a) Regression discontinuity design, (b) Bass diffusion model and (c) the cost-benefit analysis

Bass model serves as a robustness check for the RDD first dose model.

Methodology goes above curricula of the master studies at the IES and the author proved independent way of learning it. The methodology is explained well, except for in section 5.2. on p 33 „To estimate coefficients of the Bass model, i.e. p, q and m “. No m was introduced until now. In the next section m is being calculated with. It is not clear here what m is. I would suggest including a subsequent footnote into the text.

The methods require a number of assumptions to be answered, the author discussed them well.

Literature

Literature is well worked with. The author cites relevant studies, applies them to support his reasoning and processes.

Manuscript form

In overall the thesis reads well. Sometimes the text gets too complicated and has to be read twice. But rather than the fault of the author, it is because of the complicated setup of the model. Considering the

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number of assumptions and the complicated setting, the author has made the text consistent and logical.

There are only minor issues:

Some structures are not easily comprehensible, such as p2-3

„In particular, it is about the following outpatient care that could be prevented by vaccination, which also including the costs of a long COVID“

p. 8 „abc“ missing citation 😊

P.12 „Andersen et al. (2022) about 346 individuals“... a missing word

P16 „abroad.“ Twice

P38 typo „nuot“

Overall evaluation and suggested questions for the discussion during the defense

The thesis is a very good scholarly work. A lot of independent work is obvious while reading it. It brings significant contribution both to the empirical and theoretical literature. The thesis also attempts for robustness of the results by using alternative methods. An overall picture of the problem is aimed at when the author considers also economic costs of the bonus by carrying out a CBA. Although the CBA is only a crude approximation of the overall economic efficiency of the measure, it still sheds light on interesting points.

Most of my doubts regarding the design of the model were carefully discussed and answered throughout the text My only remaining question is the following:

Question for the defense:

Even though partly explained in the text, I still do not understand the reasoning for estimating the effect (by RDD) of the bonus on the second and booster doses as I would assume that those who get the first dose have a motivation to finish the vaccination scheme from their own motivation. Explain at the defense more clearly why the effect is assumed to be exogenous also for the second and booster doses and how the intrinsic motivation of the person to finish the scheme is taken care of.

Note also, that for the CBA, a positive effect was proved only for the first dose which is consistent with my assumption.

In my view, the thesis fulfills the requirements for a master thesis at IES, Faculty of Social Sciences, Charles University, I recommend it for the defense and suggest a grade A.

The results of the Urkund/Turnitin analysis do not indicate significant text similarity with other available sources.

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

CATEGORY	POINTS
Contribution (max. 30 points)	30
Methods (max. 30 points)	30
Literature (max. 20 points)	20
Manuscript Form (max. 20 points)	19
TOTAL POINTS (max. 100 points)	99
GRADE (A – B – C – D – E – F)	A

NAME OF THE REFEREE: PhDr. Jana Votápková, Ph.D.

DATE OF EVALUATION: January 18, 2023

digitally signed (18.1.2023)
Jana Votápková

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