

Report on Bachelor / Master Thesis

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

Student:	Daniel Bartušek
Advisor:	doc. Zuzana Havránková
Title of the thesis:	The Effect of Temperature on Suicide: A Meta-Analysis

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

Short summary

My report is short because Daniel Bartušek consulted his progress with me regularly. When I had objections to or comments on his approach, he reacted swiftly. In consequence I have little additional to say to the final outcome, which in my opinion is superb and could be easily submitted as a master's thesis. In fact, if this was a master's thesis, I would still recommend an A and would ask the committee to consider granting this excellent thesis an award.

Contribution

Daniel Bartušek presents an innovative meta-analysis of the effect of temperature on suicide rates, which is among the inputs of several models computing the social cost of carbon, and hence has direct, topical, and important economic implications. One survey has already been done on this statistical relationship, and Daniel Bartušek shows how misleading its results were: it focused on the mean reported effect and ignored publication bias and model uncertainty. Daniel shows that the corrected mean effect of temperature on suicide is close to zero. The finding is surprising, rigorously delivered, and important for both policy and future research – extremely rare for a bachelor's thesis.

Methods

Daniel Bartušek uses up-to-date techniques, none of which are taught at the IES at the BA level (or MA level, for that matter): the selection model of Andrews and Kasy, the weighted average of adequately powered technique by Ioannidis et al, the stem-based technique by Furukawa, the caliper test, and Bayesian model averaging. While R-codes for these techniques exist, it is not easy to apply them correctly. Daniel Bartušek manages to do so, and his thesis presents a logical, consistent, and rigorously backed flow of argument. As an aside, it is surprising (and rare in meta-analysis) to observe that in this literature there are no apparent sources of systematic heterogeneity.

Literature

This is a meta-analysis, which means that topic of the thesis is a careful coverage of the literature on the topic. Here it is executed well.

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Manuscript form

The thesis is beautifully typeset in LaTeX, competently structured, well formatted, and written in good English.

Overall evaluation and suggested questions for the discussion during the defense

In my view, the thesis fulfills the requirements for a bachelor thesis at IES, Faculty of Social Sciences, Charles University, I recommend it for the defense and suggest a grade A. Moreover, I think the committee should consider an award in this case. This superb bachelor's thesis would certainly be publishable in an international journal.

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

A question for thesis defense: the funnel plot suggests several outliers around the effect size of 0.2. This observation would be consistent with heterogeneity, though the author finds no evidence of systematic heterogeneity. So how could these outliers be explained?

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

CATEGORY	POINTS
Contribution (max. 30 points)	28
Methods (max. 30 points)	30
Literature (max. 20 points)	20
Manuscript Form (max. 20 points)	20
TOTAL POINTS (max. 100 points)	98
GRADE (A – B – C – D – E – F)	A

NAME OF THE REFEREE: doc. PhDr. Zuzana Havránková, Ph.D.

DATE OF EVALUATION: May 12, 2021

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