

Report on Bachelor / Master Thesis

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

Student:	Jan Malecha
Advisor:	Petr Pleticha
Title of the thesis:	Innovation Indicator Analysis in the European Union: A Machine Learning Approach

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

Contribution

Jan has decided to tackle an important topic of indices. Country index rankings covering characteristics from innovativeness to doing business often attract a lot of attention and are thus relevant for policymakers. Yet the procedure choosing the components for the indices and subsequent grouping of countries into several performance groups attracts only a fraction of such attention. Jan's attempt to use novel methods in very traditional practice is thus spot on.

Methods

The methods chosen in this thesis are beyond those taught at the bachelor's level. Jan thus deserves credit for delving into the unknown, exploring new and relevant techniques, and applying them originally on new problems. Naturally, the time pressure and novelty caused some opaqueness. For instance, VIF analysis is done only before the lasso, but not after it – with only the selected predictors. Yet Jan proceeded with care and is utmost clear about every single step he makes.

Literature

The paper provides satisfying and to the point literature review. One could elaborate more on critical literature on aggregate indices, but in general, the literature review meets the expectations one has from a bachelor's thesis.

Manuscript form

The paper has a clear structure. The language is sometimes too colloquial, sometimes very rigid. It would help the text tremendously if Jan used shorter, simpler sentences and given up on big words and unusual phrases.

Summary and suggested questions for the discussion during the defense

In summary, I believe it is a very good thesis deserving without reservations the second highest grade. The main issue I have with the text is the unclear interpretation of the results – not necessarily the immediate interpretation of regression tables, but rather their meaning for the Summary Innovation Index in particular and aggregate indices in general. If Jan is able to present the value added of his thesis persuasively, I would consider awarding his work with the highest grade.

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

CATEGORY	POINTS
Contribution (max. 30 points)	23
Methods (max. 30 points)	28
Literature (max. 20 points)	18
Manuscript Form (max. 20 points)	17
TOTAL POINTS (max. 100 points)	86
GRADE (A – B – C – D – E – F)	A

NAME OF THE REFEREE: Petr Pleticha

DATE OF EVALUATION: 5/15/2019



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.*

<i>Strong</i>	<i>Average</i>	<i>Weak</i>
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.*

<i>Strong</i>	<i>Average</i>	<i>Weak</i>
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.*

<i>Strong</i>	<i>Average</i>	<i>Weak</i>
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.*

<i>Strong</i>	<i>Average</i>	<i>Weak</i>
20	10	0

Overall grading:

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