

Report on Bachelor Thesis

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

Student:	Vojtěch Nedvěd
Advisor:	Mgr. Michal Paulus
Title of the thesis:	What Are the Elements with Strongest Impact on Life Expectancy? A Study Focused on the United Mexican States During Recent Years

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

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

Contribution

The author intends to broaden the discussion on various determinants (namely the health care expenditures, unemployment, and school enrolment) of life expectancy at birth using a Mexican panel data from last two decades (in particular, 1994-2014). Regarding the three main hypotheses, the only one that proved to be statistically significant was concerned with a positive effect of health care expenditures. Nonetheless, even this finding does not remain to be robust after further testing. The present discussion of the result is not really compelling, but a revision of methods and especially model specifications may enhance the research substantially.

Methods

The selection of methods used corresponds both to the topic and expected level of a bachelor thesis. The author correctly attempts to employ as comprehensive data set as available, a panel data in this case, while testing for the most appropriate type of econometric model (pooled OLS, fixed-effect, and random-effect). Nonetheless, the selection of variables, i. e., the model specification, is somewhat doubtful. With this kept in mind, an inference as the one with comparison of cost of a minute of lifespan expressed as health care expenditure on one hand and cigarette price on the other (page 41) represents an engaging exercise, but leads to a very arguable conclusion. Any value-specific conclusions should be based strictly on well-founded model specifications.

Variance Inflation Factors method is employed in order to detect any serious multicollinearity issue which is highly probable to emerge due to the nature of the initial full set of explanatory variables. Nonetheless, the control for multicollinearity would be more convincing if the author further commented on the selected threshold or better conducted some kind of a sensitivity analysis of individual model specifications.

Furthermore, Principal Component Analysis (PCA) is performed in order to reduce a set of variables while retaining most of the information available. The actual application of PCA is rather cumbersome as the author admits himself. I would propose to change the general approach for the next time and employ the Bayesian Model Averaging, for instance.

Literature

Overall, the literature review seems to be thorough. Nevertheless, I have three substantial remarks. First, the major findings of existing literature are not always sufficiently explained, but only introduced. At least a basic rationale of the findings should be presented in order to provide a reader with an adequate insight. Second, it would be more transparent to explicitly indicate whether Mexico is included in the individual international studies (international with respect to data sets) or not. Third, it is peculiar to state the hypotheses of this research within the chapter of Literature.

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Manuscript form

The thesis is written in LaTeX and is generally easy to read. The level of English is good with only a limited number of typos in the text. Unfortunately, there are two typos in the Czech version of abstract (missing gaps at the beginning of the second sentence and second paragraph) and there is a duplicity of a single paragraph on pages 38-39. The tables should be better described (only stars standing for significance are explained in a very minimalistic way) and if there are some citations linked with references (in the pdf version of the document), it should be so in all cases.

Summary and suggested questions for the discussion during the defense

The author has submitted a fine example of analysis of the life expectancy determinants at the level of bachelor thesis. Although no ground-breaking results have been drawn, as this case study is conducted on recent Mexican panel data which has not been examined widely until now a contribution of the thesis is still promising. I suggest the author to revise the methods and models, prepare a shorter version, and submit it to the IES Working Papers series at first and potentially an international journal later.

Questions for the final defense:

(i) Which of the explanatory variables employed had you suspected to be mutually correlated beforehand and how have you controlled for it? Comment, in particular, on (a) possible explanations of GDP per capita insignificance and (b) the following pair of variable: literacy and primary school enrolment.

(ii) Which other three explanatory variables would you select to add to your models if available for entire time span of your panel data? Explain why you perceive them as potentially the most important.

(iii) Have you considered any alternatives to the Principal Component Analysis? If yes, which of them have you considered and why did you hold by the PCA?

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

CATEGORY	POINTS
<i>Contribution</i> (max. 30 points)	15
<i>Methods</i> (max. 30 points)	22
<i>Literature</i> (max. 20 points)	16
<i>Manuscript Form</i> (max. 20 points)	18
TOTAL POINTS (max. 100 points)	71
GRADE (A – B – C – D – E – F)	C

NAME OF THE REFEREE: Dominik Herman

DATE OF EVALUATION: August 26, 2018

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