

Report on Bachelor / Master Thesis

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

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| Student: | Kristýna Křížová |
| Advisor: | doc. PhDr. Ladislav Křišťoufek, Ph.D. |
| Title of the thesis: | Utilizing Online Data in Modelling Unemployment Rates in the Czech Republic |

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

The aim of this thesis is to examine the impact of online data on the quality of unemployment prediction and the prediction of movements in the unemployment rate. The thesis relies mainly on the practical application of autoregressive models. The abstract is very long and reminds the reader more of an introduction. The thesis contains 7 chapters, which seems unnecessary. The chapter 2 describing the theoretical background and 3 providing literature review could be merged. Same goes for chapters 4 and 5, which could form one chapter with data and methodology.

Contribution

Often the problem with bachelor and diploma theses lies in the the fact that the contribution is not highlighted enough. I see this being a problem in this particular case as well since the contribution to the literature in the field should be clearly stated and appropriately justified already in the introduction to give the reader a clear picture. Also, the literature review is overly dense and exhaustive but does not come to a clear literature gap which is filled by this thesis. After three chapters the reader is still not fully convinced about the usefulness of this work. However, the topic of the thesis is highly relevant and well chosen with a potential for future research. It is obvious that the author spent a considerable amount of time both studying relevant articles and writing the thesis itself. The work certainly has its place and I would recommend rewriting the thesis as a working paper in the future.

Methods

The fifth chapter presents methods starting with the ARMA model and moving to ARIMA model. The author uses the simple AR(1) process and dedicates a lot of space to the description of a well known and simple model and related topics of stationarity and the ADF and KPSS tests. I would focus more on the nowcasting and forecasting issue which is the interesting thing here. However, the chapter is clearly written and easy to follow. The chapter with results lacks a more detailed discussion and relies on tables with results that could be potentially moved to an appendix.

Literature

In the third chapter, the author provides a very long but relevant review of related literature. The review is satisfactory, presenting up-to-date research and logically organizing it. However, the gap in the literature is not clearly defined.

Manuscript form

The form of the manuscript is very good, I do not have any complaints here.

Summary and suggested questions for the discussion during the defense

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- How can you summarize your contribution to the field? Why do you think that this topic is important?
- Do you think that your results could be used in practice by policy makers in their pursue of stabilizing the labor market?
- Can you think of other methods that could be used besides autoregressive models?

Overall, I think that the thesis fulfills all formal requirements and I recommend it for the defense suggesting the grade B.

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

| CATEGORY | POINTS |
|---|---------------|
| <i>Contribution</i> (max. 30 points) | 25 |
| <i>Methods</i> (max. 30 points) | 25 |
| <i>Literature</i> (max. 20 points) | 18 |
| <i>Manuscript Form</i> (max. 20 points) | 20 |
| TOTAL POINTS (max. 100 points) | 88 |
| GRADE (A – B – C – D – E – F) | B |

NAME OF THE REFEREE: *Mgr. Vědunka Kopečná*

DATE OF EVALUATION: 30.5.2019

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.*

| | | |
|--------|---------|------|
| 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.*

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|--------|---------|------|
| 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.*

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|--------|---------|------|
| Strong | Average | Weak |
| 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 |