

# Report on Bachelor / Master Thesis

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

<b>Student:</b>	Provazník Jan
<b>Advisor:</b>	doc. Ing. Cahlík Tomáš, CSc.
<b>Title of the thesis:</b>	Analysis of Unemployment in Russia: Spatial Analysis on Russian Regions

## **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**

In the thesis, the author computes Okun's law coefficient for Russia as well as he investigates Okun's convergence for Russian Regions. Regional data for years 1997 to 2016 provided by Russian official statistics are used. Due to the limited amount of data the author researches Okun's convergence not for each region over time but for each time period over the cross-section of regions instead. In this method, newly developed for this thesis, the Okun's convergence is identified with the gradual unification of the regional labor markets along the regression line. If this unification occurs, the R-squared of the regression increases. Thus a statistically significant increasing trend in the obtained time series of R-squared's would be a sign of regional Okun's convergence.

Besides few papers which study spatial correlations for Russian regions, to the best of author's knowledge there is no literature studying regional convergence by observing time series of R-squared.

### **Methods**

There are four models used in the work:

1. A static linear model
2. An Autoregressive Distributed Lag model
3. A Spatial Lag model
4. A Spatial and Temporal Lag model

As all models are based on gap version of Okun's law the author applies Hodrick-Prescott filter to compute the cyclical elements of unemployment and regional product.

For the purposes of spatial models, the author constructed six different spatial weight matrices:

1. An adjacency of order 1 matrix
2. An adjacency of order 2 matrix
3. A matrix of 8 nearest neighbors
4. A distance bound matrix
5. An inverse distance matrix
6. An inverse square distance matrix

### **Literature**

The author uses multiple sources to construct his thesis work. The literature used in the article is relevant to the topic. Despite well structured literature review, there are some drawbacks regarding this:

The literature review was not self explanatory. To understand the concept I had to refer to original sources. e.g. on the page 6 the author explains The Autoregressive Distributed Lag model where he uses variables which are not declared in the thesis work. In order to understand the model fully one needs to check the source itself.

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I suggest the author not to use such strong statement as „As there is no literature examining the Okun's law for Russian regions...“, it is better to use hedging instead, like „to the best of my knowledge there is no literature on this study“.

## Manuscript form

Despite the fact that the student uses formal language for his work, I believe this is the weakest part of the thesis as there are few serious concerns regarding structure.

- I would suggest the student not to flip names of authors while citing a paper in the project since I believe the ordering is important. e.g. instead of the original version „Guriev, S., & Vakulenko, E.“ the author cites the article by „Vakulenko and Guriev (2012)“.
- The student cites a paper while it is missing in the bibliography section. e.g. „Jim Lee (2000)“
- There are some discrepancies between bibliography and citations. e.g. „ADANU, Kwami. (2002)“ while it is cited as „Adanu (2005)“.
- The student misspells the last names of the authors in the citation. e.g. instead of original name „Prescott“, he uses „Prescottt“.
- There are some articles listed in the bibliography which are not used in the thesis work. e.g. „PERRET, Jens K. (2011). „A Proposal for an Alternative Spatial Weight Matrix under Consideration of the Distribution of Economic Activity.“
- There are some typos in the paper: „Tre results showed“ instead of „The results showed“
- Graphical chart axis are not labeled. Moreover, in equation (3) instead of  $\beta_1 \text{gapY}_t$ , I assume there should be  $\beta_2 \text{gapY}_t$ .

## Summary and suggested questions for the discussion during the defense

It is clear that the student put a good effort into his thesis. He clearly demonstrates the knowledge required to accomplish this project. The author builds on multiple sources to construct and deliver his ideas. Investigation of Russian regions convergence based on trending time series of R-squared of OLC seems an innovative idea. The thesis describes four models where for each model six different spatial weights matrices are applied in order to catch a time trend. Based on the result, it appears there is no trending time series of R-squared.

Despite some of the drawbacks associated with the structure, the project describes original idea. The tools used are relevant to the research question. The thesis demonstrates author's full understanding and command of recent literature. Therefore, I grade the thesis with the highest mark - A.

Few suggested questions for further discussion:

- Considering a current political situation in Russia, is the data reliable?
- Why do you discuss only linear models in the thesis?
- What does 100 corresponds to in equation (10)?
- If we applied other spatial weight matrices would this affect on the final result?
- Based on 1997-2016 time period are we able to conclude that there are no trending time series of R-squared and therefore there are no regional convergence or there is longer time period needed to find convergence?

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

<b>CATEGORY</b>	<b>POINTS</b>
<i>Contribution</i> (max. 30 points)	30
<i>Methods</i> (max. 30 points)	30
<i>Literature</i> (max. 20 points)	17
<i>Manuscript Form</i> (max. 20 points)	14
<b>TOTAL POINTS</b> (max. 100 points)	<b>91</b>
<b>GRADE</b> (A – B – C – D – E – F)	<b>A</b>

**NAME OF THE REFEREE:** *Levan Bezhanishvili*

**DATE OF EVALUATION:** 30.05.2019

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**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