

# Report on Bachelor/Master Thesis

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

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| <b>Student:</b>             | Peter Smolár   |
| <b>Advisor:</b>             | Mgr. Hana Hejlová  |
| <b>Title of the thesis:</b> | Regional Determinants of Housing Affordability in the Czech Republic |

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

Assessing evolution of housing affordability is one of the most common ways of house price sustainability assessment used by central banks and dedicated international institutions for financial stability purposes. However, such an assessment has been exclusively done by statistical means so far, e.g. by comparing the ratio of house prices to income to its long-term average or trend as determined by the Hodrick Prescott filter. Assessing housing affordability using its determinants is therefore a promising and uncharted way forward in the house price sustainability assessment. Understanding determinants of housing determinants in the regional perspective, which is the aim of the Peter's work, is then an important piece of research in this issue. With the aim to capture the mutually reinforcing powers between house prices and other economic and social variables in regional perspective, modelling housing affordability using aggregate (macro) regional data is the correct approach. This differs the Peter's work from some existing works which analyze micro data, aiming to model housing affordability using characteristics of individual households.

The thesis by Peter is well structured and written using a very good English. In the introduction, he clearly states the research questions. In the second part, he describes existing measures of housing affordability, suggesting ratio of house prices to income to be further analyzed. In part 3, he discusses possible determinants of house price, income and housing affordability, using a literature review. Part 4 presents the main part of the thesis, which is the empirical analysis. At its beginning, he analyzes the dynamics of housing affordability in the Czech Republic and its regions using statistical tools. Then, he presents four panel models of housing affordability across regions of the Czech Republic (extended and restricted one, each of them including and excluding Prague), which are then estimated using pooled OLS. This part of work is very detailed and demonstrates a solid understanding of econometrics and ability to deal with real data, as well as a very responsible approach of the author to the modelling. For example, he discusses different sources of house price data with regards to its ability to capture changes in quality of housing in the Czech Republic. Importantly, he also discusses potential drawbacks of the obtained results with regards to the model assumptions. As a result, Peter discusses suggested determinants of housing affordability from the regional perspective. Finally, he compares these results to the results obtained by Hlaváček and Komárek (2009): "*Housing price bubbles and their determinants in the Czech Republic and its regions*", who deal with regional determinants of house prices and represent the most related piece of existing research in the Czech Republic. Also, he presents the difference between the observed values of the house prices to income ratio from its fitted values (averaged across regions), which may serve as an important input for the house price sustainability assessment.

Suggested question for the defense is:

- Are the observed values of the house prices to income ratio in Prague currently higher or lower than its fitted values as estimated by the models and how does the size of this difference compare to the results for other regions of the Czech Republic? What do you think may be other, "hardly measurable" determinants of house prices which may lead to different equilibrium levels of house prices to income than estimated by the proposed models?

In the case of successful defense, I recommend "**výborně**" (excellent, 1).

## **SUMMARY OF POINTS AWARDED:**

| <b>CATEGORY</b>             | <b>POINTS</b> |
|-----------------------------|---------------|
| Literature (max. 20 points) | 18            |

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|------------------------|--------------------------|-----------|
| <i>Methods</i>         | <i>(max. 30 points)</i>  | 27        |
| <i>Contribution</i>    | <i>(max. 30 points)</i>  | 27        |
| <i>Manuscript Form</i> | <i>(max. 20 points)</i>  | 16        |
| <b>TOTAL POINTS</b>    | <i>(max. 100 points)</i> | <b>88</b> |
| <b>GRADE</b>           | <b>(1 – 2 – 3 – 4)</b>   | <b>1</b>  |

**REFEREE'S NAME:** Hana Hejlová

**DATE:** 27. 8. 2016

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**REFEREE'S SIGNATURE**