Report on Bachelor Thesis

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

Student:	Hana Hejlová
Advisor:	PhDr. Michal Hlaváček, Ph.D.
Title of the thesis:	Efficiency of Regulation on Spanish Housing Market

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

The bachelor thesis is about regulation of hausing market in Spain and is written in English, but not written in LaTex, which shows to be a source of some problems. Thesis corresponds to the scope and type of education that should be obtained at IES in undergraduate courses and its complexity and demandingness seems to be appropriate for a bachelor thesis.I have several comments and suggestions:

1) In the thesis submission, „loan looses" is used instead of „loan losses".
2) On page 4, there is written „should by adopted" instead of „should be adopted".
3) On page 5, there is „consider extend of the impacts" insted of „consider extent of the impacts".
4) On page 6, there should be „are probable to explain most part of it" instead of „are probable to explain most part it".
5) On page 7, there should be „budget constraint" instead of „budget constrain".
6) On page 8, there is again „extend" instead of „extent".
7) On page 8, I would rather use „sensitivity" insted of „sensitiveness" as it is more common in the economic literature.
8) On page 11, there is again used „extend"instead of „extent".
9) Two different graphs are denoted graph 2 (that is a direct consecvence of not using LaTex). Moreover the second graph 2 is not well formated.
10) On page 12, there should be „as can be seen" instead of „as can seen".
11) On page 14, under the graph 4, there is „autor" instead of „author".
12) On page 15, there is two times subsequently „the underlying".
13) On page 15, there is „price of the underlying property were possibly overvalued…", but there should be „price of the underlying property was possibly overvalued…".
14) In what currency is measured the price in graph 5 on page 18? There is written „pointt" instead of „points" in the legend of graph 5.
15) On page 18, graph 6, there is again written „autor" instead of „author". How are the doubtfull loans in described in graph 6 defined?
16) On page 19, under graph 7, there is again used „autor" instead of „author".
17) On page 24, there is again used „extend" instead of „extent".
18) On page 24, there is written „…, if might seem that" instead of „…, it might seem that".
19) On page 33, there is a title „Sense of the variable see" and I am not sure, if there shouldn't be rather „Meaning of the variable sea". On page 34, there is the same title again. I would also like to know, what is the exact definition of this variable.
20) On page 34, there is again use „extend" instead of „extent". Extend is a verb, while extent is a noun.
21) On page 34, there is „we attempted to involving lagged …", while my sense of English suggests me to use „we attempted to involve lagged …".
22) The OLS regression results on page 65, I would like to see, what normality test was used and whether it is test on residuals. Moreover I strongly miss the checks for overfitting. If I understand the setting well, there is something like 52 observations and 8 explanatory variables. I would also like to see (except the tests for homskedasticity) tests for autocorrelations and lagged variables. Besides the R squared I would rather like to see Akaike and Bayes criteria. R squared is very dangerous in assessing the performance of the model. Also, some robustness and outliers, or laverage points discussion would be nice.
23) On page 35 is again used „see" instead of „sea".
24) I would be vary careful with the explanation of the results, mainly in stating, that some variable has not shown to be explanatory unless the author checked the correlation matrix of predictors, which I did not find. For testing the explanatory power of all the predictors, it is convenient to use regression trees or to simply compute the information value or GINI

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univariately for each predictor. The fact, that some variable is not included in the model does not have to mean, it is not explanatory, but some other variable or their combination can overcome its influence. Than it is just a philosophical question of causality what remains.

25) I would also suggest for the OLS regression to use some selection method to include variables in the model. It can be mainly stepwise, backward or forward selection methods.

26) On page 36 I would like to see the units, in which each of the variables contained in the equation is measured.

27) Maybe I have missed it, but I have not seen the exact definition and description of the target variable as opposed to the explanatory variables which were described extensively.

28) I do not know, for what variable is constructed the confidential interval on page 36. Is it for the target variable?

29) On page 36, we can read" „Unexplained stays the negative estimate of coefficient for unemployment.", but I do not see any negative estimate of coefficient for unemployment. Can the author explain it?

30) On page 39, there is „patters" instead of „patterns".

31) On page 43, where the model for deriving expectations is formally introduced, I would like to have better description of the variables entering the model equation. For example, in what units the variables are measured? The P_{rent} I assume stands for the price of a single unit of the size (measured in meters squared or something else?). I am also not sure about the meaning of the variable capital pi, as the description states"… is the expected level of rents expressed in prices of year t", but I assume it is rather an expected price level (i.e. something close to one). Is it so?

32) On page 49, should there be really „an aversion to lost" or „an aversion to loss"?

33) The conclusion and summary is sufficient, although I would welcome some more specific results, which author sometimes neglects with reference to further research that needs to be done. I am not fully persuaded that the results can directly be used for practical purposes (for example for predictions of real estate prices) as they are now. For me, who is familiar with predictive modelling in real life problems, I would insist on further more exact model documentation and author would have to persuade me, the model is not in fact far more complicated, than is necessary. I would also like to see its performance on some out-of-sample data in terms of both-stability and predictive power. Theoretical results are great, but I can hardly verify them.

My personal feeling is, that author sometimes expresses ideas in very unstructured form and very loosely. A good example of this is the Czech translation of the abstract. Moreover I don't like the way of treating figures and tables and I would strongly suggest to use LaTex in the master thesis (it would at least avoid having several figures with the same number). However all these feelings might be given by my way of thinking and my relationship to LaTex. Sometimes I was not able to understand the text, but it might also be my fault. The original author's figures in the first part of the text brought no explanation to me. They rather made me more confused. Especially the figures with Graphs 1, 2, 8, 9 and 10. I couldn't figure out, why they look exactly the way they look, what is the difference between square and ellipse object and what the lines are exactly representing and why some of them are continuous and some are dotted.

I like the part with vector error correction model, although it has been fully assumed from other source. The work, compared to some of the other IES „production" that I have seen, is very good and promising. Shows fully the author's ability to produce economic texts that go far beyond the simple newspaper articles which I have also experienced when reporting on bachelor theses at IES. Author should however focus more on the formal description and should note, that p-values are not directly about the probability of zero hypothesis being true. They only express the conditional probability of the test statistics being far from its expected value when the zero hypothesis is true. Author is, by my opinion, able to think about a given economic problem and describe it formally, although she is not yet

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perfectly familiar with the methodology used. I think, this thesis would be easily defendable as a master thesis as well, but author should also note, it is still far from being perfect. I would welcome the text to be shorter and better structured.

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

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

CATEGORY		POINTS
Literature	*(max. 20 points)*	20
Methods	*(max. 30 points)*	22
Contribution	*(max. 30 points)*	28
Manuscript Form	*(max. 20 points)*	12
TOTAL POINTS	*(max. 100 points)*	**82**
GRADE	**(1 – 2 – 3 – 4)**	**1**

NAME OF THE REFEREE: Pavel Doležel

DATE OF EVALUATION: 6.6.2011

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Referee Signature