## Report on Bachelor / Master Thesis

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

Student:	Marina Gorobetchi	
Advisor:	Mgr Pavel Ryska, MPhil	
Title of the thesis:	Deflation and its Implications for Macroeconomic Stability in Europe	

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

The first three sections of the thesis cover 40 out of 70 pages of the text. The introduction to the topic in the section 2 is quite lengthy description; it provides a lot of details but does not effectively represent a comprehensive account. The standard sequence of the text is altered as data section preceeds the one introducing the model. However, the detailed description of variables is provided in section 4 together with the model, and not in section 3 (Data). Comparison of monetary policies in the US, EU and Japan might better fit in the section summarizing the state of knowledge. Methodology employed consist of estimating versions of panel data models, with accounting for outliers in form of severe inflations.

The main topic of the thesis is "to determine whether deflation is linked with recession" (p.15) and does not fully corresponds with the title of the thesis that evokes concern with macroeconomic stability, which is a broader concept than recession alone. Further, the real GDP growth is chosen as "the most important characteristic when we speak about macroenomic stability" (p.30). It is rather unfortunate to use a single variable (GDP growth rate) for the analysis as it alone does not represent fully the concept of macroeconomic stability. Rather, a set of suitable indicators should be employed to cover more complex concept of macroeconomic stability.

It is argued (p.45) that in number of the EU contries the decline of inflation is paired with economic growth. The argument is backed by the coincidence of the two effects. The interpretation should be more cautions, though. Coincidence of two events does not mean causality. And no test for causality is performed.

GDP growth rate is used as dependent variable and FDI growth is used as independent variable in the key specification (p.53); FDI variable is defined as a ration of FDI net inflows to GDP. Growth rate of any variable x can be written as  $(x_t-x_{t-1})/x_{t-1}$ ; this can be further re-written as  $[(x_t/x_{t-1})-1]$ . We can label  $(gdp_t/gdp_{t-1})$  as A, and  $(FDI_t/FDI_{t-1})$  as B. It can be shown that GDP growth is (A-1), and FDI growth is (B/A-1). Hence, A is present in both dependent and independent variables, but not treatment of this is offered.

Other independent variable is inflation rate. There are two issues. First, it is claimed that  ${}_{n}\Delta\pi_{it}$  stands for inflation/deflation measured as consumer prices" (pp. 41,53). Usually,  $\pi$  denotes inflation (rate) and  $\Delta\pi_{it}$  would thus represent the change in inflation. I hope this is not the case. Second, aggregate "output is measured as real gross domestic product of the country (GDP)" (p.31). Since, real GDP growth is nominal GDP growth minus inflation, then similarly to the point above, inflation is present on both sides of the specification. The author should be aware of the fact that use of transformed variables described in both above points might impact results and potentially lead to less than correct conclusions.

The results provide limited evidence on the link between deflation and eonomic growth, which is fine. However, some conjectures presented in the section 5 go beyond what can be supported by the econometric results.

#### Other comments:

- Argentina and Zimbabwe (p.17) are not exactly best examples of countries that solved deflation.
- Same results are repeated in several tables. I understand that this is done for the purpose of comparing coefficients, but better arrangement might be designed.

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- It is claimed (p.65) that "the paper has identified the main macroeconomic determinants of GDP growth". This is incorrect. Author have simply chosen the variables but did not identified them with the help of a suitable model, statistical test or both.
- Citations of the literature/references are provided in various formats and some unification would be a good step to improve a formal part of the thesis.
- Dissertation was not adequately proofred as it contains many cases of inaccurate sentence structure, gramatical errors, and typos.

Sugested question for the defense is:

"What might be an alternative way of analyzing effect of inflation/deflation on macroeconomic stability? Discuss both economic and econometrics aspects."

In the case of successful defense, I recommend the grade "velmi dobře" (good, 2).

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

CATEGORY		POINTS
Literature	(max. 20 points)	18
Methods	(max. 30 points)	19
Contribution	(max. 30 points)	16
Manuscript Form	(max. 20 points)	12
TOTAL POINTS	(max. 100 points)	65
GRADE	(1-2-3-4)	2

NAME OF THE REFEREE: Evžen Kočenda

DATE OF EVALUATION: June 3, 2015

Referee Signature