Report on Bachelor Thesis

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

Student:	**Ondřej Hájek**
Advisor:	**Prof. Luboš Komárek**
Title of the thesis:	**The BEER Formula: Analysis of Equilibrium Exchange Rate of Czech Koruna**

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

Short summary

The chosen topic of the Bachelor's thesis, i.e. the analysis of equilibrium exchange rate is very interesting and relevant, especially for the central bank of an EU Member State that still has its own independent monetary policy with a future commitment to adopt the euro. The importance of equilibrium exchange rate estimates for the central bank is following: (i) they provide the additional knowledge needed to effectively conduct independent monetary policy, (ii) they allow monitoring and enter into the calculation of the exchange rate component of real monetary conditions, (iii) they provide information on the evolution of the price competitiveness of the economy, in which the exchange rate plays a decisive role and (iv) they provide the necessary knowledge of possible exchange rate misalignment in the process of joining the monetary union (euro area), i.e. the determination of the central parity before ERM II entry, or the conversion rate before euro area entry.

The thesis is divided into six parts. After a short introduction, the author summarises the relevant literature in detail, including a description of alternative approaches to ERER (i.e. especially BEER, FEER and NATREX model). The third chapter presents the data description and empirical methodology including Cointegration, Autoregressive Distributed Lag Model and Error Correction Model. The fourth chapter presents the empirical results, which the following chapter further discusses from a broader context. The last chapter concludes and summarizes.

Contribution

The added value of the thesis is seen in the analysis of the real interest rate differential, which was confirmed as an important variable influencing the real exchange rate. This is not the case in all specifications of the BEER model. I also see the contribution of the paper in the discussion of the use of different price indices in the construction of the real exchange rate.

Methods

In the opinion of the opponent, the student chose appropriate empirical methods (single-equation approach to estimating the behavioural equilibrium exchange rate using an error correction model) to obtain an estimate of the equilibrium exchange rate of the koruna to the euro, or the degree of its misalignment. The referee appreciates: (i) application of several unit root tests, thus ADF (Augmented Dickey-Fuller), PP (Phillips-Perron) and KPSS (Kwiatkowski-Phillips-Schmidt-Shin) unit root tests. The referee considers the choice of tests to be appropriate, as they complement each other well (they have different null hypotheses, underlying methodology and the way the results are interpreted); (ii) and also appreciates the use of both the Hodrick-Prescott (HP) filter and the Hamilton Regression Filter (HRF).

Literature

The literature review is above a standard level, i.e. includes both original sources of literature and current applied studies oriented on analysed countries. The author quotes relevant literature in a proper way.

Manuscript form

The manuscript is overall very well formatted, logically structured, easy to navigate and properly referenced.

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Overall evaluation and suggested questions for the discussion during the defense

Overall, this bachelor thesis is well balanced; it consists interesting empirical parts with interesting results, relatively rich literature survey and appropriate techniques for empirical analysis. Questions and comments, which may be answered during the defence:

1) What would be the advantages of estimating the equilibrium exchange rate using the FEER model and NATREX model compared to the BEER model?

2) How does the author assess the results of the BEER model for the period of the so-called exchange rate commitment (between November 2013 and April 2017)?

In my view, the thesis fulfils the requirements for a bachelor thesis at IES, Faculty of Social Sciences, Charles University, **I recommend it for defence and suggest a grade A**.

The results of the Turnitin analysis do not indicate significant text similarity with other available sources.

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

CATEGORY		**POINTS**
Contribution	*(max. 30 points)*	28
Methods	*(max. 30 points)*	28
Literature	*(max. 20 points)*	18
Manuscript Form	*(max. 20 points)*	20
TOTAL POINTS	*(max. 100 points)*	**94**
GRADE	**(A – B – C – D – E – F)**	**A**

NAME OF THE REFEREE: prof. Luboš Komárek

DATE OF EVALUATION: 15.05.2025

Digitálně podepsáno (15.05.2025)
Luboš Komárek

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Referee Signature