## Renminbi misaligned - Results from meta-regressions<sup>1</sup>

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## Abstract

In this paper we assess the degree of potential misalignment of the Chinese currency, the renminbi, vis-à-vis its equilibrium value. We analyze the issue with the help of meta-analysis. The possible undervaluation of the Chinese currency and the resulting trade surplus have evoked considerable attention in the recent years, and as the Chinese exports have continued to increase, the discussion has become more heated. In 2008 China's trade surplus was \$296bn, or approximately seven per cent of GDP. At the same time, the US has experienced record-high current account deficits, which has led to calls for political action against China, while some commentators claim China is "unfairly manipulating" its real exchange rate.

In our meta-analysis we use data from 29 research papers estimating the extent of real exchange rate misalignment. These papers give us 97 different estimates of the misalignment; although it should be mentioned that most of the papers present only one estimate, while some give several. We take this difference into account in our empirical analysis. We use the well-known techniques associated with meta-analysis, namely relating the reported misalignment (in percent) to the attributes of the paper and author(s) in question. These attributes range from the underlying theoretical framework and data frequency to authors' affiliations. Practically all the papers report undervaluation of the renminbi at the end of the data period, but we are also able to ascertain that several attributes of the papers themselves do influence the results. It seems clear that studies using the USD-based exchange rate - instead of the real effective exchange rate - tend to report more pronounced undervaluation. The affiliation of authors also has an effect. If one of the writers works in an investment bank or similar institution, the paper is more likely to report smaller undervaluation. Journals tend to publish papers with larger reported misalignments, indicating a possible publication bias. Reporting these effects is one of the main contributions of this paper.

**Key words**: equilibrium exchange rate, exchange rate misalignment, meta-analysis, China **JEL codes**: C82, F31

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