Output Gaps and Inflation in Mainland China

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Summary

This paper studies the relationship between inflation and the output gap in Mainland China by fitting Phillips-curve models for the period 1982-2003. A number of time-series techniques are employed to estimate potential output and to construct measures of the output gap. These are strikingly similar, and movements in them appear associated with swings of inflation. They are also broadly similar to estimates in the literature that make use of a production function approach.

We then turn to the question whether the determination of inflation in the Mainland can be understood using a Phillips-curve framework. The estimates suggest that a simple application of the Phillips curve does not fit data well and that this may reflect an omission of some important variables. Given the tremendous structural change and policy shifts in the Mainland in the estimation period, this hypothesis appears plausible. In particular, price deregulation, trade liberalisation and changes in the exchange-rate regime over time have likely impacted on inflation. Since it is difficult to capture or measure the influence of these forces empirically, we model them as an unobserved variable. The results suggest that once a serially correlated omitted variable is allowed for, the model fits the data much better. Thus, movements in inflation are at least partially due to movements in aggregate demand as captured by the output gap. The introduction of the omitted variable also explains what at first glance appear to be surprising features of the simple Phillips-curve estimates.