Measuring economic slack in emerging Asian economies

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At a recent central bank chief economists workshop at the Bank of England, there was much discussion about inflation persistence, or why core inflation was quite stable during the Great Recession and did not drop as much as one would have thought despite the very large negative output gaps. Two main hypotheses were offered. First, potential output, which is unobservable, was adversely affected by the international financial crisis. Second, inflation expectations were well anchored at the (implicit and explicit) medium-term inflation targets. So inflation persistence during the Great Recession was a hallmark of central banks' success in anchoring inflation expectations.

Both issues are obviously of relevance for our topic, the measurement of economic slack in emerging Asian economies. And while the empirical challenges in the measurement of slack are often formidable, the related theoretical issues are no less important. First, pertaining to inflation dynamics themselves, what are the determinants of inflation inertia? In models of the New Keynesian type, inflation inertia is limited, but empirical evidence suggests that there is substantial inertia in inflation, with inflation reacting to external shocks only in a gradual and sometimes delayed manner. Theoretically, backward-looking price setting behaviour is a plausible factor contributing to the gradual adjustment of prices, but may not explain all of the observed inflation inertia.

Second, what are the implications of flexible inflation targeting and how should we think of the flexible price output as a benchmark? In dynamic stochastic general equilibrium models, potential output is defined as the output level that would obtain if there were no nominal rigidities in the economy; in particular, wages and prices would be fully flexible. But potential output is affected by real shocks and is therefore not smooth over time, creating challenges for its empirical measurement.

This brings me to the third question: how should trends in output data, to the extent that they are used to capture potential output, be estimated? Should we use econometric methods to extract the trends, or should the computation of trends be model-based? If model-based methods remain robust to structural changes in the economy – something that is impossible to determine *ex ante* – those may be the preferred approach.

Of course, the accuracy of the measure of potential output directly affects the usefulness of output gaps for evaluating inflation pressures in the economy. But their usefulness is not only affected by difficulties in the measurement of potential output. Actual output data are often subject to large revisions, causing real-time output gap data sometimes to differ significantly from later estimates, with obvious implications for policymakers trying to obtain information about current economic conditions.

Finally, from an open economy perspective, how should we think of domestic and global output gaps? The underlying idea is that for open economies, global measures of economic slack are relevant for the determination of "true" capacity constraints and therefore possible inflation pressures. For the Asia-Pacific region in particular, given increased real and financial integration, global and regional output gaps may have become more important over time for domestic inflation determination. But given the challenges involved in measuring

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potential output for individual economies, the uncertainties inherent in regional or global measures of economic slack are even greater.

At the Hong Kong Monetary Authority, as I think is the case for most central banks, measures of the output gap serve as useful indicators of economic slack. But they have to be used together with other indicators, and the limitations and characteristics of the various measures need to be borne in mind when using them to obtain inference about possible inflation pressures. This is even more pressing for the case of emerging economies, where the growth rate of potential output may have experienced large fluctuations over time.

To address these and related issues this morning, we have two paper presentations. The first presentation will be given by Shaun Vahey, Professor at Australian National University. His talk will focus on the issue of probability forecasting, in particular how the probability of extreme events that may have large macroeconomic consequences needs to be taken into account at policy institutions when formulating forecasts. This could be especially significant for output gaps, where large shocks hitting the real economy could bring about a negative output gap and increase the probability of a deflationary spiral.

In the second presentation, Kenji Nishizaki from the Bank of Japan talks about “chronic deflation” in Japan, mentioning negative output gaps as one of the possible factors behind Japan’s deflation. In addition to presenting various estimates of potential output, his talk will discuss various channels through which the negative output gaps could have arisen in the Japanese context.