McLeay and Tenreyro - “Optimal Inflation and the Identification of the Phillips Curve”

General Discussion

Valerie Ramey opened the general discussion by praising the paper as a good illustration of how theory and empirics can inform each other. In particular, identification strategies rooted in theory are essential to good empirical work, she argued. Ramey discussed two identification issues when it comes to estimating Phillips curves. First, cost-push shocks are correlated with the explanatory variable, i.e. output. Second, monetary policy is endogenous. The paper carefully addresses the second issue by exploiting variations at the regional level, according to Ramey. However, the first issue persists and the paper’s estimates should be interpreted as lower bounds on the slope of the Phillips curve, she argued. Ramey encouraged the authors to use existing state-level datasets on demand shocks, as in Nakamura and Steinsson (2014), to address the first issue. The authors were very much in agreement with Ramey’s comment.

Frederic Mishkin seconded the authors’ conclusions, by referring to recent work of his. In Hooper et al. (2019), he and co-authors found that the Phillips curve is flatter for periods during which monetary policy is more effective at stabilizing inflation. Indeed, the objective and the control variable should be uncorrelated when monetary policy is set optimally, he argued. Hooper et al. (2019) exploit regional variations – as in the authors’ paper – to identify the relationship between unemployment and inflation. The identification assumption is that monetary policy is exogenous to regional shocks. Regional variations have also been exploited in the context of fiscal policy, Mishkin noted, citing again the work of Nakamura and Steinsson (2014). Furthermore, Mishkin and co-authors document the presence of important nonlinearities in the Phillips curve. These nonlinearities command a more responsive monetary policy when labor markets are tight, he suggested. Mishkin emphasized that identifying these nonlinearities requires a longer sample than the one used by the authors. Finally, Hooper et al. (2019) inspect both the price and wage Phillips curves. Their findings are in line with those presented by one of the discussants, Matthew Rognlie: there is no evidence of a disappearing Phillips curve when using wage data. Mishkin concluded with an advice for policymakers. Central bankers should not interpret the apparent flattening of the Phillips curve as evidence that inflation will remain low in the future. In particular, anchoring inflation expectations is crucial for achieving price stability, Mishkin argued. He praised the role of the Federal Reserve – and its chairman at the time, Ben Bernanke – in managing inflation expectations during the Great Recession.

Iván Werning offered two comments. The first one was related to the paper’s framing. Werning noted that the authors raise an identification issue and propose a strategy to address it. At the same time, they partly motivate their exercise using existing evidence on the flattening of the Phillips curve. However, he wondered whether these estimates are sensitive to using (or not) HP-filtered inflation data (as in Stock and Watson (1999)), which could in appearance undermine the author’s motivation. The second comment was related to the implementation of optimal policy. Optimal policy requires knowledge of parameters that are impossible to identify in the first place when policy is set optimally, he noted. Werning asked how monetary authorities resolve this tension in practice. James Stock followed up on
Werning’s first comment. Filtering data affects the estimates of price and wage Phillips curves differently, he argued. In particular, the price Phillips curve is still flattening over time, despite filtering, while the wage Phillips curve is not, confirming a point made earlier by Frederic Mishkin. The authors confirmed that the paper’s motivation lies in the identification issue itself, rather than on existing evidence on the flattening of the aggregate Phillips curve. On the second comment, the authors agreed that setting monetary policy optimally supposes that policy makers know the exact shape of the Phillips curve, which might be difficult in practice.

Kristin Forbes praised the paper for providing a very intuitive explanation for the flattening of the Phillips curve. She viewed this explanation as very complementary to the ones already put forth in the literature, including the role of mismeasurement of the output gap and inflation. Forbes offered a suggestion based on existing work of hers. Using U.K. data, Forbes et al. (2018) found that inflation is more responsive to changes in the exchange rate than in output gap or unemployment. She argued that extending the paper’s analysis to allow for asymmetric responses to changes in unemployment and exchange rate would be an interesting avenue. The authors were very sympathetic to Forbes’ suggestion. Exchange rate movements act as large cost-push shocks in a small open economy like the U.K., they pointed out. This explains in part why the slope of the price Phillips curve is not significant in the U.K., while the slope of the wage Phillips curve is.

James Stock followed up on Forbes’ comment. He saluted the authors’ effort to provide a unifying exposition of the issues inherent to the identification of the aggregate Phillips curve, from weak identification to the robustness of the wage Phillips curve. Stock also suggested using locally determined prices – instead of core CPI, as in the paper –, when exploiting regional variations. The authors thanked Stock for his suggestion, and referred to an ongoing project of theirs, which uses disaggregated price data in the U.K.

Jordi Galí commented on the difference between Phillips curves at the regional and national levels. He pointed out that the elasticity of labor supply is an important determinant of the slope of the Phillips curve. Labor is mobile across regions, he noted, while it’s mostly immobile across countries. As a consequence, the slopes of regional and national Phillips curves are predicted to be different, he suggested. Galí also asked the authors whether they had found evidence of a flattening of Phillips curves at the regional level. Erik Hurst and Michael Klein added that regional mobility has declined over time, referring in particular to recent work by Austin et al. (2018). Klein also asked whether there is evidence of a flattening Phillips curve in Europe. The authors observed that a higher elasticity of labor supply at the regional level would bias their estimates downward, so that they provide a lower bound on the slope of the aggregate Phillips curve. Regarding a potential flattening of regional Phillips curves, they mentioned that their sample – which begins in 1990 – is too short to investigate such a trend. The same issue applies to the European monetary union, they argued.

The authors concluded the general discussion by thanking the two discussants, Marc Giannoni and Matthew Rognlie, for their comments.
References


