1997 conference

Price Stability, Inflation Targets and Monetary Policy

Proceedings of a conference - May 1997

Session 3 – General Discussion

Prepared by Robert Amano and Geneviève Verdier

Dupasquier indicated her willingness to consider Fortin's suggestions on other hypotheses and tests with respect to the shape of the short-run Phillips curve. She noted the need for further work, particularly on the issue of expectations. In response to Rowe's comments, Dupasquier wondered whether the same conclusions could be drawn for the costly adjustment model. However, she agreed with his comments regarding the capacity constraint model.

Glenn Rudebusch asked whether Dupasquier and Ricketts had attempted to link their estimates of the Canadian time-varying sacrifice ratio with measures of monetary policy credibility. Rudebusch also mentioned that many Phillips curve studies using U.S. data fail to find evidence of non-linearities. Indeed, the ones that do find non-linearities tend to find asymmetries that go in the opposite direction to that found by Dupasquier and Ricketts. For Dupasquier and Ricketts' study to be convincing, Rudebusch argued, they would need to reconcile their work with the literature on the linear Phillips curve. One avenue would be to use Robert Gordon's U.S. data and attempt to determine why his approach does not find evidence of non-linearities.

Claes Berg argued that it is important to use other variables to proxy the output gap. His experience suggested that the relationship between output and inflation is sensitive to the way the output gap is measured. Berg also said that one important advantage of the Dupasquier and Ricketts method is that it uses a state-space approach to treat the output-inflation relationship as an unobserved state variable. The measurement equation contains another unobserved variable, however, namely the output gap. He argued that it would be better to estimate a system of equations that incorporates the covariance restrictions on cyclical output and unemploy-ment using an Okun's law relationship, and then to treat both the non-accelerating-inflation rate of unemployment and the potential output as unobserved variables using a state-space model. Berg suggested that this approach may allow the authors to get at the question posed previously by Rudebusch.

David Rose mentioned some work he was doing that is helpful in understanding why there is such a wide range of opinions on the empirical evidence on asymmetries in the Phillips curve, especially for the United States (see Laxton, Rose, and Tambakis 1997). The study finds that the tests used typically to identify asymmetries in the Phillips curve literature suffer from low power to reject the null hypothesis of linearity. In fact, Gordon's method has little power to identify asymmetries—about 5 per cent for the usual sample sizes.

Regarding the sacrifice ratio, Ricketts argued that the slope of the Phillips curve is only one of the many factors that contribute to the sacrifice ratio when moving to a lower level of inflation. Credibility and expectations, in particular, strongly influence the sacrifice ratio. At the 1996 Bank of Canada conference on exchange rates and monetary policy, the paper by Amano et al. (1997) dealt with the question of what measures should be used to gauge credibility. Ricketts suggested that these measures may be useful in their framework as well. Ricketts also mentioned that those who argue that there is much uncertainty in their estimates are correct. The uncertainty is due to the presence of several unobserved variables in their estimation scheme. To get precise estimates of the trade-off over time, they had to impose a lot of structure on the approach. Future work might perhaps expand the structure to include more variables.

On the issue of the sources of micro data to test for downward nominal wage rigidity, Crawford responded that no data source¯particularly not the wage settlements data¯is perfect, and that one must look at the evidence from all credible sources. He noted that their work showed that wage settlements data, which

cover only 10 per cent of the private sector, overstate the degree of downward rigidity. Regarding the definition of the wage freeze, Crawford disagreed with Fortin's argument that the first-year definition was better because freezes in the first year indicated firms in dire financial conditions. Crawford said that more than half of workers with first-year wage freezes received wage increases in subsequent years, so that the first-year definition did not capture firms in difficult conditions. Finally, he disagreed with Fortin's comment that there is not much evidence that smaller firms have more flexibility in their wage structure.

Harrison agreed with both Fortin and Bowlus that more covariates in the conditioning set would be useful. He noted, however, that computing limitations were a binding constraint but that perhaps, as Bowlus suggested, simpler estimation techniques could be used to circumvent that problem. Harrison also agreed with Fortin that with the first-year definition there are a relatively large number of freezes in the early 1980s, and this does reduce the measure of excess density at zero wage change when inflation is lower in the 1990s. He agreed that this may cause the excess density at zero to be understated using the first-year definition. He said, however, that while Fortin was advocating the first-year definition, in this context the lifetime definition had a clear advantage. In particular, the problem of "too many" freezes in the early 1980s goes away if one uses the lifetime definition, since most of the freezes in the early 1980s were for less than the life of the contract. Harrison concluded that if one had to pick a single definition of a wage freeze to compute the excess density, the lifetime definition appeared to be the best choice.

Norman Cameron asked why the Crawford and Harrison paper focussed on the private sector if the authors were trying to determine whether a particularly stressed group of workers were willing to accept nominal wage cuts. He argued that the public sector during the early 1990s may be more suited for this type of study since that period encompassed both low inflation and productivity growth, and the public sector suffered from low demand. Moreover, Cameron postulated that the measurement of wages may be cleaner in the public sector owing to a lack of bonuses.

Louis Christofides liked the fact that Crawford and Harrison's work moves away from purely descriptive methods to statistical methods. He also suggested that, as we use more statistical methods to examine rigidities, we slip back into the Phillips curve literature, albeit with a different method. The issue then becomes, what covariates do we want to use? For instance, what measure of inflation do we use¯inflation when the contract is signed? expected inflation? or inflation at some date in the future? Christofides also asked whether Crawford and Harrison were characterizing the issue of wage rigidities or examining wage determination. If the latter, then a simple proportion-hazard approach might be more fruitful, since it would allow us to examine many covariates at once.

In response to Cameron's comments, Harrison agreed that it would be useful to look more closely at the public sector. He argued, however, that he found it harder to identify the government's budget constraint than the private sector's. The decision to leave it aside in the paper came, not from the belief that it was unimportant, but from the feeling that it was perhaps too complex to address. Harrison responded also to Christofides' comment by saying that he would like to use a simpler model and see their work develop in a wage-determination framework.

References

Amano, R., P. Fenton, D. Tessier, and S. van Norden. 1997.
"The Credibility of Monetary Policy: A Survey of the Literature with Some Simple Applications to Canada." In Exchange Rates and Monetary Policy, 1-64. Proceedings of a conference held at the Bank of Canada, October 1996. Ottawa: Bank of Canada.

Laxton, D., D. Rose, and D. Tambakis. 1997.
"The U.S. Phillips Curve: The Case for Asymmetry." Draft. International Monetary Fund.