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Comment on Anders Forslund: Unemployment – Is Sweden Still Different?

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The belief in a low and structurally stable equilibrium unemployment rate has survived longer in the Scandinavian countries than elsewhere in Europe. For example, a Norwegian governmental report estimated the equilibrium unemployment rate to be 2.8 percent in 1988. Fours years later, a second report revised this figure only modestly upward to 3.0 percent. This optimism was not universal, however, and several authors warned against the precarious nature of the Nordic low-unemployment equilibrium, pointing to such factors as accommodative policies and a delicately balanced "gift-exchange" between government and unions, i.e., "acceptable" wage policies in exchange for government commitment to full employment (see e.g. Rødseth, 1985; Calmfors and Nymoen, 1990; and Lindbeck, 1993).

As we now know, events did eventually catch up with the Nordic countries, and in the same way as in the European economies a good decade ago, low and invariant NAIRUs appear to be increasingly implausible. In this respect at least, Sweden, Finland and Norway are not different from the rest of Europe. Forslund's paper is therefore a timely contribution. Indeed, there is obviously a strong demand for models that can encompass changes in equilibrium unemployment and that can produce estimates of the likely level and future development of equilibrium unemployment.

Two approaches are currently enjoying popularity among economists interested in the empirical aspects of equilibrium unemployment: Phillips-curve natural-rate estimates (called NAIRU and NAWRU in Forslund's paper), and estimates based on the influential Layard–Nickell model.

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Although Forslund reports NAIRU/NAWRU estimates, he is clearly not very impressed with this approach, and I think rightly so. Recursively unstable NAIRU estimates from a Phillips-curve regression are unpersuasive since the *only* conclusion that can be drawn is that the underlying constant parameter assumption is falsified. In this sense any attempt to estimate a changing equilibrium rate from simple Phillips curves are self-defeating; the procedure is only valid when the NAIRU/NAWRU rate is in fact constant.

Within a constant-parameter framework, a natural way to model the secular rise in unemployment is to introduce "exogenous" variables affecting the unemployment process. Forslund follows this approach in his main analysis, where he develops a Layard-Nickell-type model, albeit with due consideration of institutional aspects of the Swedish labour market. The rest of this comment raises some specific issues relating to Forslund's model.

1. Nominal rigidities

The model is kept deliberately in real terms (except for the expectation error term). More generally, there is no room for nominal rigidities in the form of dynamic inhomogeneity, which means ruling out a potentially important propagation mechanism of shocks to the economy (see e.g. Andersen, 1994). As far as I can tell, Forslund does not test this assumption. Although nominal rigidities would perhaps not alter the qualitative results in the paper, some remarks on their implications for equilibrium unemployment are in order.

Dynamic inhomogeneity (nominal rigidity) implies that inflation together with unemployment (and possibly the real exchange rate), acts as an arbiter of conflicting wage claims (see Kolsrud and Nymoen, 1994). The steady state of such a system seems to be a promising starting point for a discussion of equilibrium unemployment. In particular, there is no need to invoke "causal reversion" (see below) in order to derive the equilibrium unemployment rate.

Obviously, one would not automatically accept the steady-state unemployment rate as a really long-run equilibrium rate. For example, the steady state might entail too high (though constant) inflation. Adding low inflation as a constraint on the solution would, all things equal, cause an increase in the steady-state equilibrium rate of unemployment. The

predictions of this model fit nicely with the historical record: simultaneous commitment to low and stable inflation in many countries will increase steady-state unemployment levels across the board. The last countries to "take the lesson" and adopt low inflation as primary policy objective, will also be the last to experience a rise in actual and equilibrium unemployment rates.

2. Dynamic consistency

Forslund's calculation of the equilibrium rate hinges on the estimated long-run relationships (1')–(4'). For dynamic consistency, the estimated equilibrium rate from this system needs to act as an attractor on actual unemployment, with some mechanism existing such that if unemployment drifts away from the estimated equilibrium, there will be a tendency to get back close to it at a later date. This is a natural property of any equilibrium concept. Note that a low and invariant equilibrium unemployment rate loses its credibility exactly because it no longer acts as an attractor on unemployment: as time goes by and there is little or noticeable tendency of reversion towards the constant rate, that rate cannot represent an equilibrium of the centre-of-gravitation type. Presumably, given that labour demand and wage formation provide the necessary mechanisms, Forslund's estimated equilibrium series has the attractor property. But because of its importance, more formal analysis at this point would be helpful. For example, do the lagged residuals from (1')–(4') help predict unemployment?

3. "Causal inversion"

It is perhaps curious that a model that is used to estimate equilibrium unemployment does not have an econometric unemployment equation in it. The answer, I gather, is that the price equation is really the labour demand equation "turned on its head". But this involves inverting the estimated price equation to obtain employment (and likewise with the wage equation). This is similar to the widespread practice of inverting money demand equations to obtain the price or interest rate as a function of money. The pitfall of this procedure is that if the price equation is stable, the inverted labour-demand equation need not be constant, and this

might invalidate any inference based on the inverted model (see e.g. Ericsson, 1994).[1]

4. Structural-form versus reduced-form estimation

The point about causal inversion is an argument for modelling unemployment directly. Towards the end of the paper, Forslund does attempt a direct approach. Forslund is understandably worried by the lack of correspondence between the reduced-form and the structural-form estimates. For example, the replacement ratio is never significant in the latter but appears to be an important explanatory variable in the reduced form. Although the practical difficulties should not be understated, this form of inconsistency is in principle avoidable by first modelling the reduced form unrestrictedly and in the second step encompassing that system by a strucutral model (see e.g. Hendry and Mizon, 1993; and Nymoen, 1991). In the context of integrated data series, this procedure also allows valid inference on any theory-based cointegration relations that one might wish to test, e.g. the two curves in Figure 5. In the present version of the paper the exact mode of inference (i.e., standard or non-standard distribution theory) is not entirely clear.

5. Conclusions

Having said all this, I believe that the overall picture does carry some conviction. With some exceptions noted by Forslund, the econometric results appear to be interpretable and reasonable. At the end of the day it is also significant that the different measures reported all point in the same direction. It seems relatively safe therefore to conclude that the low historical unemployment rates in Sweden no longer represent an equilibrium. This conclusion by itself does not imply that Sweden does not possess singular institutional features that might help solve the unemployment problem more successfully than other European countries have done in the past decade.

[1] Although the argument was initially developed for conditional models, it also applies for overidentified equations estimated with instrumental variables, which is the case here.

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