Discussion of P. Benigno and L. Ricci
"The Inflation-Unemployment Trade-off at Low Inflation"

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“The Inflation-Unemployment Trade-off at Low Inflation” by P.Benigno and L.Ricci

This is a very elegant theoretical paper about very relevant empirical and policy issues

Very pedagogical, thoroughly presented and argued. A pleasure to read, and great figures!

Adds mathematical rigour to Tobin (1972) and Akerlof (1996), by obtaining their same results in an intertemporal, forward-looking, optimizing framework

The paper in a nutshell

Very stylized forward-looking optimizing 1-sector DSGE model, with distortions in goods and labor markets (imperfect competition) and Downward Nominal Wage Rigidity (DNWR):

- Long-run Wage inflation = nominal income trend growth θ = long-run average inflation
- Without DNWR, flex-prices&wages: vertical Phillips curve at u^f, actual W,u=desired=W^f,u^f
- With **exogenous DNWR**, $dW_t(j) \geq 0$:

(1) Actual W ≥ desired W, hence u ≥ desired u. Equal except when DNWR is binding: actual W > desired W and actual u > desired u

(2) DNWR more likely binding at low π

(3) desired W < W^f, since fwd-looking households optimally set wages to minimize the inefficiencies of DNWR: **"endogenous upward wage rigidity"**

→ this rigidity in W (or departure of u from u^f) is larger the more elastic L^S, the higher nominal volatility σ_y AND the smaller θ

The paper in a nutshell

(4) Long-run PC non-vertical and non-linear: large u for low $E[\pi^W]=\theta$, vertical PC for high θ

Trade-off larger the higher σ_y → gain from stabilization policies

(5) Short-run PC: endog.upward wage rigidity → temporarily $u < u^f$. With time, s/rPC → l/rPC

Also here Trade-off larger the lower long-run π (θ) and the higher σ_y

(6) Relaxing the DNWR constraint as inflation declines (realistic! Unions more likely to cope with wage cuts now than in july) reduces the unemployment costs of low inflation, but trade-off still there

(7) Long-run trade-off also in volatilities at low π: higher W rigidity→low vol(π^W) but more real effects of nominal shocks, hence higher vol(u)

Some issues about the paper

MAIN CONCERN:

Most of the results seem to be derived from the central result of **"endogenous upward wage rigidity"** self-imposed by optimal wage setters acting under monopolistic competition:

While this is cleanly derived from the exogenous DNWR (which has sound empirical base), it is hard to think of unions or wage setters self-imposing this constraint on themselves. Rather, under DNWR it would be firms and not unions or households the ones pushing for lower wages

→ Would your short-run and long-run Phillips Curves hold under a maybe more realistic wage setting mechanism i.e. search&matching frictions model with Nash bargaining? There the labor suppliers would not have the full bargaining power and may not need to show "upward wage rigidity" behaviour when negotiating wages

Some issues about the paper

RELATED MONETARY POLICY IMPLICATION:

The paper challenges the design and choice of Central Banks targets:

- It takes from Tobin & Akerloff the "grease inflation" argument for positive inflation Central Bank targets –as opposed to interpreting price stability as zero inflation as in many NK models-: DNWR causes high sacrifice ratio of pursuing disinflation at low π

- Goes beyond by obtaining a relationship between the choice of target inflation and features upon which the degree of the π-u trade-off depends. Most notably: macroeconomic volatility σ_y.
  It seems to me a very plausible empirical feature: trade-off larger for more volatile economies, hence maybe CB target different.

→ again: would this hold without the endogenous upward wage rigidity?

Some issues about the paper

MACROECONOMIC VOLATILITY:

Macroeconomic volatility here is nominal income volatility:

- → No government, no capital, no rest of the world in the model. It is argued that adding more features does not eliminate the π-u trade-off in as long as there is DNWR. But how about a more realistic characterization of macroeconomic volatility? How would the implications of the model change in terms of the effect of macro volatility on the Phillips Curve? How about the implications for stabilization policies?

- → What is the role of productivity shocks? Seems not much. Not even for macro volatility?

UNEMPLOYMENT:

A very theoretical definition (common to a wide literature): gap between actual hours worked and those under flex-prices&wages and no market distortions → hard to take model implications for unemployment levels or volatility to data

Some issues about the paper

COMPARISON WITH OTHER PRICE RIGIDITY MECHANISMS:

1. wage rigidity stronger at low inflation, none at high inflation. Very plausible!
2. DNWR → persistent real effects of nominal shocks, especially at low inflation. Also realistic.

Other time-dependent models of price rigidities, or menu cost models, fail in these dimensions.

It would be great to see the comparison along more model implications.

WELFARE:

It should be easily feasible and would be very illustrative to report some of the issues discussed in the paper in terms of welfare rather than in terms of unemployment:

- welfare costs of disinflationary policies at different inflation levels
- welfare costs of macroeconomic volatility

Also, they would be independent of the flex-price level of unemployment, unlike the real effects, and hence more general across countries

Some issues beyond the paper

WHO IS WHERE IN YOUR PHILLIPS CURVES & IMPLICATIONS?

Which should be the real world economies more prone to departures from vertical Phillips curve?

- larger departure from flex-prices&wages (pg.14) the more elastic the labor supply and the more nominal volatility → larger trade-off in emerging economies?
- larger trade-off the lower inflation → developed economies? (but may show L^s more inelastic, less σ_y)

HOW WOULD YOUR SHORT-TERM PHILLIPS CURVE STAND DEFLATION?

--Implications for bad times we may soon live through--

1. Would the higher real costs of price stability shown to apply at low inflation stand or exacerbate in deflation times? Or seeking for positive/higher inflation in that case will have great benefits in terms of rapidly decreasing unemployment? How should then monetary policy behave in deflation times? At which costs?
2. Would the increased volatility of unemployment obtained in this model when inflation decreases mean exacerbated unemployment and output volatility in deflation times?
3. Which stabilization policies should act then?

THANK YOU FOR YOUR ATTENTION