Downward wage rigidity and optimal monetary policy
- comments on papers by Fahr & Smets and Fagan & Messina

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There is now strong evidence of DNWR and DRWR in many OECD countries
How does DNWR and DRWR affect optimal monetary policy in a Monetary Union?
Steady-state inflation depends on DNWR and DRWR
Effect of asymmetric shocks depend on DNWR and DRWR
Variation in DNWR and DRWR will imply that effect of symmetric shocks vary within union
Policy response will have different impact on different parts of the union

Two-region monetary union DSGE model with costs of adjusting wages and prices
- Households in two regions, H and F
  - Buy composite Home and Foreign goods
  - Monopolistic suppliers of own labour type (á la Erceg, Henderson, Levin) – set wage as markup on marginal rate of substitution
- Firms produce differentiated products with decreasing returns in labour
  - Buy labour from households
  - Set prices as markup over nominal marginal costs
  - Final goods, H and F, aggregate over different goods.
- Costs of adjusting wages and prices
  - Allowing for asymmetric costs in adjusting nominal and real wages

Calibration to euro area – steady state and effects of shocks
- Optimal steady state inflation
- DRWR => zero inflation
  - No grease effect of inflation
- DNWR and rigid prices => 0.16% inflation
  - Grease effect, but inflation is costly with rigid prices
- DNWR and flex prices => 3.3% inflation
  - Only grease effect
Dynamic effects – effect of negative aggregate shock

What do I think?

- Impressive paper,
- On important subject
- Fine research

Some comments/concerns

- Wage rigidity for one household affects all firms
  - Carlsson & Westermark – workers linked to firms
- DNWR and DRWR seen as alternatives
  - High DRWR likely to imply high DNWR
- Exts: prod. growth; other shocks
- Asym. shocks in a monetary union

Asymmetric productivity shocks in a monetary union

- Effects mitigated by
  - Strong opposing price effect
  - International risk sharing
  - Deflationary effect via wages

More plausible (?)
- Negative country-specific shocks rarely countered by higher prices
- Walter’s effect in downturn (lower inflation involves higher real interest rate)
- DWR pushes up average wage growth
Downward wage rigidity and optimal steady-state inflation (G Fagan & J Messina)

- What are the effects of Downward Wage Rigidity (DWR) on optimal steady-state inflation?
- Modify DSGE model, allow for DNWR and DRWR
- Calibrate using IWFP micro data
- Focus on steady-state, with cross-sectional distributions of wages and prices
- Solve for alternative values of steady state inflation
- Compare welfare effects

Main findings

- Some European countries: Evidence of DRWR, but no/less DNWR
  - Optimal steady-state inflation 0 – 2 percent
- The US: Evidence of DNWR, but no DRWR
  - Optimal steady-state inflation 2-5 percent (depending on data set)

What do I think?

- Another impressive paper, on a related important subject, fine research
- Great combination:
  - Micro data from IWFP, the most extensive empirical work on DWR
  - State-of-art theoretical framework, appropriately modified to problem at hand
- Aim of paper close to Holden, Economica 2004, but two major improvements
  - Data and macroeconomic framework

Some comments/concerns

- Combine DNWR and DRWR

Extensions:

- Productivity growth – gives more scope for nominal wage growth
- Fluctuations – DWR binding in downturns, amplifying the problems
- Asymmetric shocks - leads to higher wage growth when combined with DNWR
Are DNWR and DRWR alternatives?

- Estimates of DNWR and DRWR from IWFP are negatively correlated
  - Wage setters focus either on real or on nominal wages

- But: Estimates of DNWR affected by the strong DRWR (positive inflation in estimation period)
  - Employees taking a real wage cut may not be representative for the whole labour force

- May give misleading indication of what the extent of DNWR would be under low or zero inflation

Sources of Downward Wage Rigidity

- Coordination problems
  - Workers concerned about relative wages (Keynes)

- Fairness considerations
  - Wage cuts hurt morale and productivity (Kahneman et al, Akerlof et al, Bewley, others)

- Contractual/legal effects
  - Old nominal wage applies unless mutual agreement on change (MacLeod&Malcomson, AER, 1993; Holden, EER, 1994)

- Extent of DNWR differs across and within countries, and is not absolute
  - Stronger for DNWR than DRWR (?)

Downward Wage Rigidity DWR

- DWR reflects
  - Union/employee power vs. “economic push downwards” – what the wage would have been without DWR (the notional wage)

- Easier to defend nominal wage than real wage

- Strong unions/employees able to maintain real wage in spite of notional wage cut
- Less strong unions/employees able to maintain nominal wage in spite of notional wage cut
- Weak unions/employees must accept wage cut if notional wage falls
My conjecture

- With lower inflation, DNWR would be more apparent also in European data
- At zero inflation, DNWR and DRWR would melt together, and downward wage rigidity be amplified
- Going to zero inflation would be more costly in many European countries than in the US
- Wage formation system would to some extent adapt, but slowly and costly
- Productivity growth and other types of flexibility (turnover, etc) may give room for lower inflation in spite of DNWR