

Monetary policy and the Great Inflation of the 70s in France.

Some counterfactuals.

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What are the causes of the Great Inflation ?

- monetary policy became less effective (lower ability to control credit, money supply, wage inflation, capital flows.) Because of institutional change in early 70s.
- the central bank was less willing to fight inflation. For fiscal policy reasons (Meltzer), beliefs of a too low NAIRU and steepening of the Phillips curve (Romer & Romer, De Long). Estimations show more weight on unemployment in the 70s (Clarida, Gali, Gertler).
- supply shocks. Inflation is not mainly the consequence of a monetary policy change.

Can we quantify the importance of these three channels ? Would only one have been sufficient ?

Counterfactuals with monetary policy

- counterfactuals to assess the role of monetary policy in the Great Inflation:
- "if the Fed monetary rule in the 70s had been the same as Volcker and Greenspan's ?" (Sims and Zha, 2004, Primiceri 2005),
- "if the Fed had followed the Bundesbank restrictive policy ?" (Benati 2011).
- It makes only little difference ! No regime change. but problem with VAR counterfactuals (Benati 2011) : Lucas critique and lack of institutional characteristics of monetary policy.

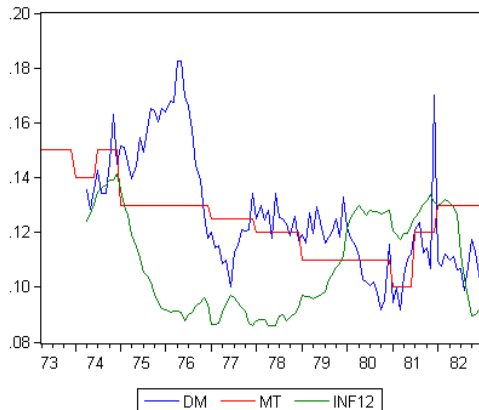
The French case

- Big difficulties with estimations of the monetary policy reaction function and VAR counterfactuals because interest rates were not the main instrument of monetary policy (Monnet 2010) and the 70s policy was very peculiar :
- 1948-1973 : restrictive policy = *temporary* quantitative credit controls. No role for the money market and interest rates.
- 1973-1984 : *permanent (but looser !)* quantitative credit controls. More role for interest rates (starting 1972). Bank reserves, credit ratios etc. Money growth target ("pragmatic monetarism")
- 1984 - 1998 : interest rates policy (end of credit controls : 1987) \implies A counterfactual with a interest rule (Taylor) will be nonsense...

This paper

- build a simple model with money targeting : incorporate the 'pragmatic monetarist' rule of the central bank.
- simulate counterfactuals to estimate whether monetary policy could have prevented the Great inflation.
- Start from 2 simple findings :
 - 1) M2 growth often exceeded its target.
 - 2) the official money growth target (average = 13%) was very low compared to previous achieved M2 growth during 50s and 60s restrictive episodes (average = 7%) and to the Bundesbank 70s target (average = 6-7%).

Money targeting



Counterfactuals

- if achieving the official target is sufficient to decrease inflation \Rightarrow inability of the central bank to control the money supply. Otherwise \Rightarrow the 70s inflationist policy was in line with objectives and beliefs of the central bank.
- if targeting a money growth around 6 or 7 % (corresponding broadly to disinflation policies of West Germany during the 70s and France before the 70s) is sufficient to decrease inflation \Rightarrow the Bank of France pursued deliberately an inflationist policy. Otherwise \Rightarrow supply shocks ?

A simple model

- close to a standard new keynesian model (Svensson 1997, Woodford 1998, Gali 2007) with money targeting (Issing et al. 2010)
- IS curve

$$\Delta y_t = \alpha i_t - \beta \pi_t + \theta \Delta y_{t-1}$$

Philipps curve

$$\Delta U_t = a \pi_t + b \Delta U_{t-1}$$

Main modification : *money quantity equation* with Fisher hypothesis (Duck 1993 etc.)

$$\pi_t = \mu \Delta m_t - \nu \Delta y_t + \rho (i_t - i_{t-1}) + d$$

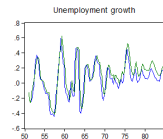
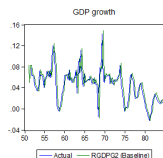
- last equation account for monetary policy in the 70s

A simple model

- also possible to add a money demand equation for the estimation :
$$m_t - p_t = \kappa y_t - \gamma i_t$$
- closed economy. Possible to add international (supply) shocks (US inflation rate, foreign interest rates, oil prices)
- estimated with GMM. All the variables of the model used as instruments. Specified to obtain significant coefficients and the best fit as a baseline.
- Quarterly data.

Closed economy

Was the Great Inflation predictable ? Estimations over 1950-1971.
 Simulations : 1950-1982.



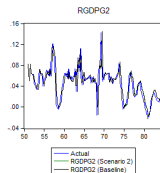
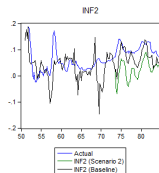
Closed economy. Counterfactual.

Counterfactual with the official target and the 7% target rule.

Estimation period : 1950-1982.

With 7% target rule \implies average inflation rate of 5.8% rather than 11.5% !

No significant change when using targeted M2 growth instead of actual !

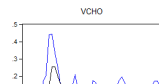
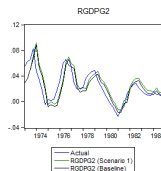
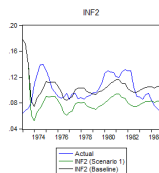


Closed economy. Counterfactual.

Counterfactual with the official target and the 7% target rule.

Estimation period : 1973-1982.

With 7% target rule \implies average inflation rate of 7.2% rather than 11.5% !



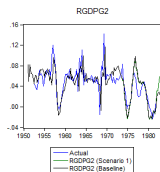
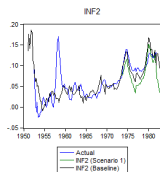
Small open economy. Counterfactual.

Add US inflation rate (supply shocks : energy and policy) to the money quantity equation.

Estimation period : 1950-1982.

With 7% target rule \implies average inflation rate of 9.2% rather than 11.5% !

Lower level between 1975 and 1978 (the 2 oil shocks) only ...



VCHO

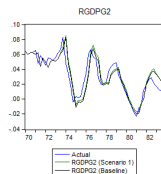
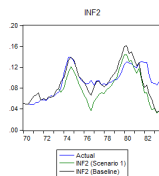
Small open economy. Counterfactual.

Add US inflation rate (supply shocks : energy and policy) to the money quantity equation.

Estimation period : 1973-1982.

With 7% target rule \implies average inflation rate of 8.3% rather than 11.5% !

Lower level between 1975 and 1978 (the 2 oil shocks) only ...



VCHO

Main results and further work

- Had the French economy be isolated, the Banque of France could have prevented the Great Inflation and reached an inflation rate close to Germany.
- But taken into account international factors (US inflation rate), the effect of monetary policy is reduced by more than half...
- These counterfactuals highlight the role of the two main explanation of the Great inflation : monetary policy and supply shocks. None is exclusive !
- What would have been the cost of a disinflationary policy ?
- Problem: bad estimation of the inflation-output(employment) tradeoff → need for a richer model...
- Was Germany more isolated from foreign supply shocks than France ?

The monetary policy rule

- Why monetary policy had not been more restrictive ?
- Have the central bank put a greater weight on unemployment ?
- Problem with estimations of a French monetary rule : interest rates are bad (incomplete) measures of monetary policy.
- Use another measure of monetary policy (not previously used) : a monthly survey of monetary policy tightness among French firms. (Index between 0 and 4)

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$$CB_t = \alpha_{1t}(\pi_{t-1} - \bar{\pi}_{t-1}) + \alpha_{2t}(U_{t-1} - \bar{U}_{t-1}) + \alpha_{3t}W_t + \epsilon_t$$

The monetary policy rule : OLS estimations

When using the right measure, very strong response to unemployment.
Importance of the German rate.

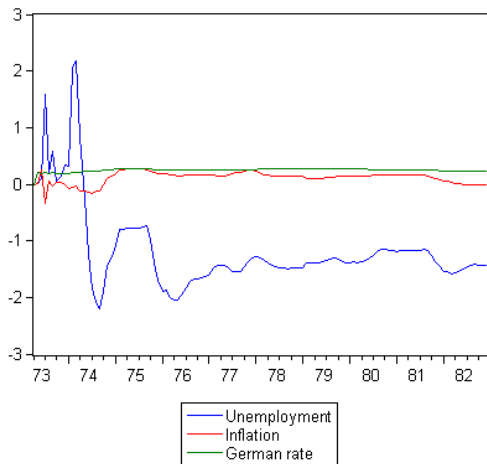
TABLE 1 – Estimation of forward looking reaction functions

<i>Dependent variable</i>	Inflation : α_{1t}	Unemployment : α_{2t}	German rate : α_{3t}
Index (OLS)	0.172** (.05)	-1.233*** (.52)	0.267*** (.02)
Index (2SLS)	0.191** (.05)	-1.147*** (.57)	0.269*** (.02)
Bank rate (OLS)	0.29** (.04)	0.76 (2.11)	1.24*** (.00)
Bank rate (2SLS)	0.28** (.13)	2.49 (2.05)	1.27*** (.07)

Notes : significance level : * :10% ** :5% *** :1%. SE in parentheses.

The monetary policy rule : Kalman filter estimations

Lower response of unemployment at the beginning of the period.
Change in 1981 (2nd semester).



The monetary policy rule : measures

