ECONOMIC POLICY

NEW SZÉCHENYI PLAN

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Main features

- Real sector:

- Monopolistically competing identical firms

- Price rigidities

- Calvo pricing

- New keynesian Phillips curve

- Model is formulated in gaps of the original variables

Monetary policy

- Policy tool is i, the nominal interest rate.

- Time path of i cannot be arbitrary though.

- The dynamic system may not have a solution at arbitrary paths for i.

- For example: if monetary policy set i as constant forever, then the system could not converge towards a steady state.

Monetary policy

- We start out of steady state equilibrium.

- All gap variables are 0 here.

- Assume a positive u shock → positive output gap → inflation → r decreases as i is a constant → output gap increases and so on.

- Due to forward looking current inflation would be infinite.

- A central bank would not behave like that.

Policy goals

- In the long run money is neutral, therefore long run monetary policy can target inflation only.

- The interest rate rule should be a feedback one reflecting current output and inflation.

- In case of the output gap the target is 0. In case of inflation target, the value is a choice, in most cases it is 2-3 percent.

Inflation target

- 2-3%, Hungary, ECB
- Why not 0?
- Measurement problems, measured inflation has an upward bias.
- Fear of negative inflation, the problem of the zero bound.

Monetary policy rule

- It can be derived theoretically from some value function of the central bank.

- Most central banks follow some ad hoc routine.

- Empirical evidence shows, that the basic form of the rule is alike in both cases.

Policy rule

- Taylor rule
- $i_t = \alpha_1(\pi_t - \bar{\pi}) + \alpha_2\tilde{Y}_t + rr_t$ if $\bar{\pi} = 0$, then

$$i_t = \alpha_1\pi_t + \alpha_2\tilde{Y}_t + rr_t$$

- Lean against the wind

- If measured inflation exceeds the target we increase i, and decrease otherwise.

- If the output gap is positive we increase, if negative we reduce i.

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Policy rule

- α_1 has to be larger than 1.

- If the central bank raises i parallel to the inflation rate only, then the real rate would not rise. To reduce inflation, the output gap should shrink and that requires an increase in r.

- This coefficient measures how aggressive the central bank is against the inflation. The larger this coefficient is, the more important it is for the bank to reduce inflation.

Policy rule

- The larger α_1 is the less volatile Π is going to be, but volatility of Y gets larger.

- As inflation depends also on expected future inflation, if α_1 is large, then the public knows that the inflation is restricted also in the future. Therefore, a smaller increase of i in the present is enough to curb inflation.

g shock

- It is autoregressive, we know it will be positive for a while in the future.

- A positive output gap ensues due partly to the expected future increase in income as consumers smooth backwards.

- If the central bank did not react, inflation would be infinite. Positive output gap causes inflation reducing the value of r. This increases the output gap further.

g shock

- Raising i with expectations of holding it there for a while reduces the output gap and the inflation.

- The move with the interest rate serves both targets of the central bank at the same time

- There is no trade off in between the two targets. In case of complete information, the bank could reach both of its targets at the same time immediately.

Price shock (u)

- It is autoregressive, increases inflation now and in the future.

- Expectation for future inflation reduces the real interest rate. If the bank did not interfere, this would cause a positive output gap and so further inflation.

- The central bank raises i now and expectedly in the future.

- This causes a negative output gap in the present.

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Price shock (u)

- The central bank can reduce inflation only trough reducing demand. Therefore, there is a trade off between inflation and output gap targets.

- How can it reduce inflation with relatively small cost in terms of unemployment?

- How volatile inflation and the output gap is going to be? The smaller is the better.

- It depends on how credible monetary policy is against inflation.

TFP shock

- A change in the TFP changes the current and the natural output levels in the same way. Therefore, the output gap does not change. Measured output does, of course.

- A permanent change in the TFP would also leave the natural rate of interest unchanged.

- Income decreases in the present as well as in the future, there is no reason for the consumer to reallocate consumption.

- There is no reason for monetary intervention, although the measured level of output shrinks.

Example

- FED policy in the 2000s' under Greenspan

- Measured output grew fast, unemployment was low, measured interest rate was low.

- The FED did not restrict policy, because they thought: it was not the output gap, the potential output grew faster than before.

- Therefore there was no reason to be afraid of inflation picking up.

Temporary TFP shock

- Temporary decrease in the TFP → temporary increase in the natural rate of interest.

- If the bank does not react, it causes a negative interest rate gap, and a positive output gap.

- The latter will cause inflation to pick up.

Temporary TFP shock

- The bank will have to accommodate and increase i to fight inflation.

- Difficulty: measured output just slows down, the public senses „recession".

- Still, the potential level of output drops faster than measured output does. If the bank does not raise the policy rate, inflation will follow.

Combined shocks

- An u shock and a temporary negative TFP shock happening together.

- Example: price shock of the imported oil, significant increase in nominal wages due to union pressure.

- 1973–75, price increase of imported oil (u shock), increase of the relative energy cost (TFP shock).

- Should the FED want to concentrate on inflation, it should have raised the policy rate. It did the opposite, and there was high inflation for a whole decade.

Literature

- Gali–Gertler (2007): Macroeconomic Modeling for Monetary Policy Evaluation, The Journal of Economic Perspectives, Vol. 21, No. 4

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