The New Keynesian Transmission Mechanism

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Two main questions for the introduction

- Why is 3-equation model important?
  - Minimal model designed to capture the intuition of demand-driven fluctuations in output and inflation through intertemporal substitution
  - Main vehicle for discussions centered around this intuition
    - Monetary policy (including forward guidance)
    - Determinacy and stablization
  - Benchmark for adding other demand-channels: Most notably distribution of MPC
    - McKay and Reis (2014), Auclert (2015)
  - Accordingly, it is what we teach students
- Why is the profit channel in the 3-equation labor market model important?
  - It tells us that when augmenting the minimal model with a labor market things get complicated
  - With supply-determined labor, the model needs a countercyclical response of profits
  - With demand-determined labor, the model cannot produce much movement in inflation
- Hence, do we need other transmission channels?
  - Capital formation

Intro 1: Motivation

- The New Keynesian 3-equation model is the minimal model designed to capture the intuition of demand-driven fluctuations in output and inflation through intertemporal substitution
- Main vehicle for discussions centered around this intuition, e.g. monetary policy
- Benchmark for adding other demand-channels, such as heterogeneity in MPC
- Teaching device

Intro 2: Main result

- Claim: The 3-equation model IR results are a consequence of profits being large and countercyclical
- We show this by comparing the IRs of the 3-equation model to a model where workers must not consume any profits in equilibrium: The WC model
- Channels:
  - Profits being large depresses relative income effect of wages
  - Profits being countercyclical forms a countercyclical income effect in itself

Intro 3: Wage rigidities

- When adding rigid wages to the model, the difference between the two models vanish
- I.e. profits do no longer play any crucial role for the determination of output
- The reason is that labor supply become demand-determined

Intro 4: TFP result

- The profits-labor supply channel also accounts for another successful IR: Countercyclical movement in hours to TFP shocks
- This result does not survive the WC pertubation
- As with monetary policy shocks, the difference goes away when adding rigid wages

Intro 5: Consequences

- Without rigid labor markets, there is little hope that the intertemporal substitution channel will make sense
- Consequently, it is first order importance to uncover the empirical prevalence of wage rigidities

Intro 6: Related literature

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Models

- Presentation of the similarity and difference between the standard and WC model
- Why this particular WC model?
  - The essential property is that only labor income is consumed by workers in equilibrium
  - This could be achieved by making workers hand to mouth instead
  - But due to profits being countercyclical, the Taylor rule has to be inverted
  - Ergo, this model is the simplest way of removing profits while maintaining rest of the model constant

IRs of the two models to monetary policy shocks

- Model outcomes are identical beside the behavior of hours and output
- What is going on?

Explanation

- Under BGP preferences, hours are determined by $\frac{D_t}{W_t}$
- Large profits in steady state reduces inomce effect of wages
- Countercylical profits becomes a direct income effect

Introducing rigid wages

- The effect of profits goes through the determination of labor supply
- Under rigid wages, employment becomes demand determined and we should not expect the profit channel to be operating there
- We introduce wage rigidities as in Erceg et al (2000)

IRs of the two models to monetary policy shocks

- Model outcomes are identical
- What is going on?

Explanation

- Under wage rigidities, hours are determined by labor demand
- Auxiliary result: Profits become procyclical and so capitalist contribution to demand becomes procyclical

TFP shocks

- We have shown that the effect of monetary policy shocks in the model without wage rigidities rely on the counterfactual profit channel
- We now show that it also account for another IR which have been deemed successful by many researchers: Countercyclical response of hours to TFP shocks
- Describe experiment

Explanation

- The profit response dominates the wage response

Conclusion

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