Discussion of “How Much Inflation is Necessary to Grease the Wheels?”
by Kim and Ruge-Murcia

Emi Nakamura
Federal Reserve Bank of NY and Columbia University

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Background

- **Evidence on Wage Rigidity**
  - Panel Data: Nominal wage change distribution is asymmetric and has spike at zero
  - Survey evidence: Workers dislike nominal wage decreases

- **Theoretical implications**
  - Tobin: Inflation speeds the decline of real wages following an adverse shock
  - Akerlof, Dickens and Perry: Downward rigidity interferes with the ability of some firms to make adjustments in real wages → higher unemployment
Paper Summary

- Sophisticated DSGE model
- Households: set wages, face “Linex” adjustment costs
- Firms: set prices, face quadratic adjustment costs
- Monetary policy: Government maximizes household welfare
- Symmetric equilibrium: All firms and households are identical
Figure 1: Adjustment Cost Functions

Gross Wage Inflation
Loss as a Proportion of Labor Income
Paper Summary (cont’d)

- **Estimation**
  - Estimate parameters of model on aggregate US data using SMM
  - Parameter estimates indicate asymmetric wage adjustment costs

- **Simulation: Optimal Monetary policy**
  - Simulate optimal monetary policy for estimated model
  - Find 1.2% inflation in model with asymmetric wage adjustment costs

- Also study responses to shocks, higher order moments (skewness, kurtosis)
My Comments

1. Estimation of adjustment costs
2. Heterogeneity
1. Estimation of adjustment costs

- Model is estimated assuming that government follows optimal monetary policy
- Ramsey policy does not fit observed monetary policy well
  - e.g. Implies zero inflation
- Concern: Could estimation approach “hard-wire” the estimates of asymmetric adjustment costs?
Estimation approach

- SMM: variances, covariances and autocovariances of all variables
- Real wage, hours worked, real consumption per capita, price inflation, wage inflation, nominal interest rate
- Mean inflation is not used
Which moments matter?

- I compared fit of moments for quadratic vs. asymmetric adjustment cost models
- Most important moments: \( \text{var}(c) \), \( \text{cov}(c,l) \), \( \text{cov}(c,w) \), \( \text{autocov}(c) \), \( \text{autocov}(w) \)
- Not clear what identifies adjustment costs
- Important to determine to what extent asymmetric adjustment cost estimates are robust to assuming a more empirically plausible monetary policy
Alternative approach: Use Micro-data

- Fit moments of micro wage change distribution
  - Spike at no change
  - Wage changes below zero are “swept up” to zero

Challenges

- Time series distribution of aggregate wage changes not comparable to micro-evidence on distribution of individual wage changes
- Model implies no wage rigidity: Hard to reconcile with micro-data
Figure 1b: Histograms of the Distribution of Log Real Wage Changes, PSID Samples 1976-79 and 1985-88, Hourly-rated workers, same employer
Price Adjustment Costs

- Firms face quadratic adjustment costs for prices
- Price adjustment costs are crucial in determining the costs of inflation
- How can we assess whether the price adjustment cost parameter is reasonable?
- Calvo model vs. menu cost model?
2. Model

Heterogeneity

- Earlier literature emphasized importance of heterogeneity
- Akerlof, Dickens and Perry: Low inflation might prevent real wages from declining in response to declining labor demand in certain industries or regions, blocking reallocation of labor
- Current paper: all workers and firms are identical
- Sector specific shocks are much larger than aggregate shocks
- Only macro shocks $\rightarrow$ Less need for wage decreases
Conclusion

- Very interesting paper
- Huge improvement on earlier literature
- Empirics: Useful to understand identification of wage and price adjustment parameters
- Model: Heterogeneity may be crucial in understanding the role of inflation in the labor market