Discussion of Leeper and Leith: “Inflation Through the Lens of the Fiscal Theory”

Bob Barsky
Federal Reserve Bank of Chicago
Three Theories of Inflation

• Quantity Theory – Inflation is caused by growth in the quantity of money in excess of growth in real money demand

• Fiscal Theory – Inflation is caused either by excessive issue of nominal bonds or by bad news about the real primary surpluses that will service the debt

• Wicksellian approach – Inflation is caused by an interest rate that is set below the natural rate by the central bank

Questions

• Are they separate theories? Mutually exclusive? Compatible? (A-)

• What do these theories tell us about optimal policy? (A+)

• Does each contribute something to the empirical understanding of inflation? Under which circumstances and in which historical episodes? (F? I?)

• Is there a general theory of inflation?
My Plan

• The quantity theory vs. the fiscal theory
• Price increases as an eraser of nominal claims
• Positive economics of actual inflations
How Different is Fiscal Theory From “Unpleasant Monetarist Arithmetic”? 

• Sargent: “Inflation is .... a fiscal phenomenon”
• He meant that fiscal considerations are the underlying cause of inflation; the proximate channel is money creation
• Discussion of fiscal theory often takes place in the “cashless limit.” How does this work?
• Increases in price level equilibrate macroeconomy by erasing bondholders’ excess claims on government revenue
  • *Can* happen without creation of non-interest-bearing debt
  • A point emphasized by Leeper and Leith
• But do we see these magical, moneyless inflations in the world?
Claim: Evidence from Alternative Monetary Standards Shows That Quantity Theory Trumps Fiscal Theory

• In the broad sweep of history, two sorts of events have been the dominant triggers for truly major inflations
  • War
  • Gold discoveries
• The war case is compatible with both the fiscal theory and the quantity theory
• Worldwide inflations associated with major gold discoveries were *not* fiscal
  • If anything that would go the wrong way, because some of the gold went into the government’s treasury
  • At national level, fiscal theory could still be relevant because governments can borrow gold be (Cochrane
• The quantity theory can encompass both
Suppose that (at the initial price level)

\[
\frac{B}{P} > Exp \ PV [\text{future primary surpluses}]
\]

• Then it’s not hard to believe that agents will be unwilling to hold the debt
  • In the absence of any other adjustment mechanism, attempts to unload bonds will set
    off some process that puts upward pressure on the price level
  • Thinking about whether the debt can be serviced at the current price level gives a
    more down-to-earth, less magical, way of thinking about the valuation equation

• Now what if the inequality goes the other way? - i.e. there is a surfeit of
  resources available to service the debt

• Then it’s debt, not equity – by what mechanism will bondholders raise the
  price level?
Fiscal Theory as a Special Case of a “Nominal Claims” Theory of Inflation

- Increases in price level equilibrate macroeconomy by erasing bondholders’ excessive claims on government revenue.
- But why limit oneself to bondholder claims?
- A direct generalization would be to consider social security and other entitlements as government debt.
- More boldly, what about claims on private agents?
  - Excessive wage or pension obligations.
  - Firms raise prices and cut production.
Is Fiscal Theory “Supported by the Data?”

• Previous work by Leeper-Walker and by Cochrane illustrates the difficulty (impossibility?) of rejecting the fiscal theory
  • Essentially observational equivalence arguments

• But this defensive stance isn’t necessarily good science:
  “Ask not what smart economists can do for the fiscal theory, ask what the fiscal theory can do for economists who want to understand the world”

Suggestion for next phase of the research program

• Focus on episodes which are a puzzle from the point of view of alternative theories – e.g. long period in British history in which Schwartz finds near-zero correlation between prices and money
  • Can fiscal considerations provide the missing link?
Relevance of Alternative Inflation Theories: Big vs. Little Inflations

**Big inflations**
- Almost invariably associated with very high money growth
  - Sounds like quantity theory
  - *but*
- In case of *non-commodity money*, they are also almost invariably associated with major current and prospective future deficits
  - Sounds like fiscal theory
- Often, there is also a war in the picture
  - In principle, there might be supply effects here as well
- Some combination of quantity theory and fiscal theory seems to reign in the case of big inflations
  - Not always possible to assign differentiated roles to the two
Does the Fiscal Theory Provide any First-Order Guidance as to Variation in U.S. Inflation Since 1955?

- 1970s?
- Crisis and Great Recession?
- Around the world, the last ten years have not been kind to the fiscal theory
- We live in a debt-ridden, deflationary world
Relevance of Alternative Inflation Theories: Big vs. Little Inflations

Little Inflations (<10%?)

• Fiscal role is subtle – certainly not a first-order stylized fact
• Monetary growth is also a poor guide to year-to-inflation (just a bit better at the decadal level)
• Here, Wicksell is the place to look
So What’s the General, Encompassing Theory of Inflation?

AD – AS!

• Printing money raises AD, as does issuing nominal bonds
• Bad technology and supply developments reduce the demand for money and the primary real government surplus
• Current and anticipated future supply disturbances change the natural rate of interest, affecting the price level except when policy is optimal, and then only in special cases
• The fiscal theory – like the quantity theory – is just part of the aggregate block of a big DSGE!