

The Optimal Monetary Policy Response to Tariffs

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Summary of Paper

Question: What should a central bank do when tariffs increase?

Answer: Policy should be expansionary in the sense of temporarily positive PPI inflation and higher employment (than in the long-run).

- Tariffs depress demand for foreign good.
- Consumers do not internalize tariff revenue and cut back imports too much.
- Inflation and labor effects are temporary.

Authors argue results are robust to several extensions.

Efficiency, Constrained Efficiency, etc.

Small open economy NK model following textbook settings:

- Tariffs are exogenous: τ_t .
- Terms of trade are exogenous and constant:

$$p = \frac{P_t^F}{P_t^H} = \frac{e_t P_t^{F*}}{P_t^H}. \quad (1)$$

Implications of shutting down terms of trade movements:

- Tariffs are purely inefficient; wedge between consumption of home and foreign good.

$$\frac{1 - \omega}{\omega} \left(\frac{c_t^h}{c_t^f} \right)^\gamma = p(1 + \tau_t). \quad (2)$$

- Consumption of home (foreign) good will be inefficiently high (low).

Tariff Revenue Internalization

Monetary policy cannot remove the tariff in the long-run under rational expectations and commitment.

But in the near term can use the difference between

- household budget constraint

$$c_t^h + p(1 + \tau_t)c_t^f + \frac{b_{t+1}}{R^*} = b_t + \frac{1}{P_t^h} [W_t l_t + T_t + D_t] \quad (3)$$

- and consolidated government budget constraint

$$c_t^h + pc_t^f + \frac{b_{t+1}}{R^*} = b_t + \left[1 - \Upsilon \frac{\phi}{2} \pi_t^2 \right] l_t. \quad (4)$$

to improve outcomes as households fail to internalize tariff revenue.

Key Finding

Policymaker uses surprise PPI inflation which

- raises employment relative to see-through approach
- allows accumulation of NFA
- higher consumption in future out of NFA, higher than under see-through.

Baseline Response Bianchi/Coulibaly

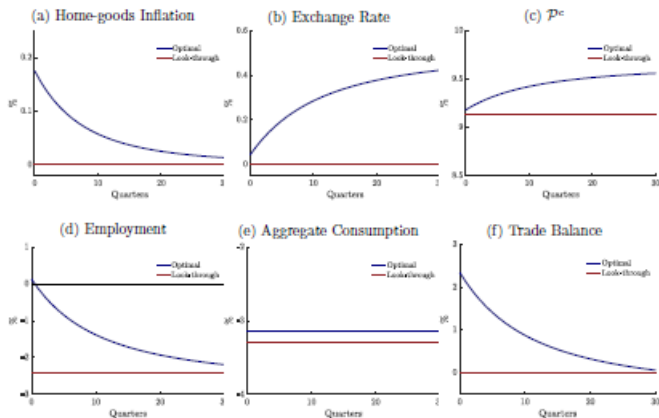


Figure 2: Baseline response to a permanent tariff

Comments

Several sets of comments:

1. Model features (terms of trade; financial markets)
2. Solution approach (timeless perspective versus Ramsey policies)
3. Generalization
4. Bigger picture

Model Features

- Terms of trade
 - To shut down terms of trade motive, you could assume central bank takes terms of trade parametrically; no need to shut down terms of trade movement altogether.
 - When terms of trade are endogenous, you start from optimal tariff and increase further to confirm results; but what if you start from below the optimal tariff?
- Financial markets
 - Financial markets and trade balance response: accumulation of NFA allows to raise consumption permanently compared to see-through policy
 - What happens if trade balance response is curbed and adjustment has to occur more through prices? (Bodenstein et al (2025): limits to risk sharing induce endogenous departures from UIP which in turn force adjustment through terms of trade and less through trade balance.)

Solution Approach

To what extent is expansion the result of surprise policy move?

- Authors employ Ramsey-optimal policy; i.e., policy maker reoptimizes entire policy path at the time of the tariff shock.
- The optimal monetary policy literature has gravitated to the concept of **”optimal policy from a timeless perspective.”**
 - Under this concept, policymakers face an additional constraint that prevents them from exploiting ”time-zero” discretion.
 - Timeless perspective policy is more constrained than optimal Ramsey policy.

Regardless of preference, it would be helpful to clarify implications of different approaches!

Ramsey Optimal Policy versus Timeless Perspective

Optimality condition wrt to inflation π_t , Equations (33):

$$\frac{\pi_t}{1 + 2\pi_t} = \frac{1}{\phi\lambda} \left(\frac{\eta_t}{l_t} - \frac{\eta_{t-1}}{l_{t-1}} \right) \quad (5)$$

- Under Ramsey, the initial multiplier η_{-1} is set to zero. Monetary policymakers are not bound by any earlier promises (discretion in the initial period):

$$\frac{\pi_0}{1 + 2\pi_0} = \frac{\eta_0}{\phi\lambda l_0} > 0 \quad (6)$$

- Under timeless perspective, monetary policymakers cannot set η_{-1} to zero. For appropriately set value of η_{-1} , we could get

$$\frac{\pi_0}{1 + 2\pi_0} = 0. \quad (7)$$

Recommendations

Just to be clear: I do not want to take a strong position on the issue of timeless perspective versus optimal Ramsey policies.

- **But**, many results discussed in the literature assume optimality from a timeless perspective (e.g., Aoki (2001), Benigno (2004), etc).
- To place results properly into context, it might be good to include full treatment of timeless perspective approach.

Generalization

But it could all be much more complicated...

U.S. is not a small open economy and even if it is relatively closed, the terms of trade are endogenous.

Consider a simple 2-country model as in Bodenstein, Corsetti, Guerrieri (2025).

- Analyze monetary policy under cooperation and Nash equilibrium.
- Gains from cooperation depend on the initial size of the NFA (imbalances):
 - Creditor country tightens policy compared to debtor country.

Simple 2-country Model

Indirect utility function country 1:

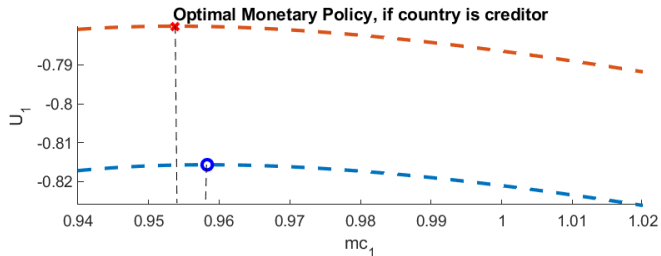
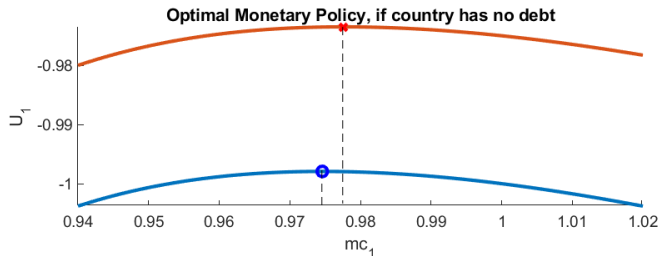
$$\begin{aligned} U_{1,T} = & \ln \left(\frac{1}{\chi_0} \right) + \ln (mc_{1,T}) - (1 - \omega_1^c) \ln (1 + \tau_{1,t}^m) - (1 - \omega_1^c) \ln (\delta_{1,T}) \\ & + -\Delta_{1,T}^p mc_{1,T} + (1 - \omega_1^c) \Delta_{1,T}^p mc_{2,T} \left(\frac{mc_{1,T}}{mc_{2,T}} - \delta_{1,T}, \right) \end{aligned} \quad (8)$$

Terms of trade:

$$\delta_{1,T} = \frac{\frac{mc_{1,T}}{1 + \tau_{1,t}^m} - \frac{1}{\Pi_{1,T}} \frac{\chi_0}{2(1 - \omega_1^c)} \bar{B}_{1,T-1}}{mc_{2,T} + \frac{1}{\Pi_{2,T}} \frac{\chi_0}{2(1 - \omega_1^c)} \bar{B}_{1,T-1}}. \quad (9)$$

For country 2, we set $mc_{2,T} = 1$.

Optimal Policy and Imbalances



Open Questions

In discussions that I participated in, the following concerns keep coming up:

- Anchoring/unanchoring of inflation expectations
 - Small inflation increase should normally leave long-term inflation expectations unchanged, but what about large increases after period of high inflation?
- Retaliation by foreign trading partners
 - Unilateral tariff increase could trigger foreign retaliation. What is the optimal monetary policy response to that?
 - Is there interesting nonlinear interaction between home and foreign tariff with implications for optimal monetary policy?