THE OPTIMAL MONETARY POLICY RESPONSE TO TARIFFS

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- **How should a central bank respond to import tariffs?**

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  - Tighten monetary policy to contain inflationary pressures, or...
  - Maintain monetary stance ("look-through") and allow one-time jump in CPI?

Jay Powell pushes back on calls for Federal Reserve rate cuts as soon as July

US central bank chair tells congressional committee economy remains 'solid' but tariffs could push up prices

Jay Powell has been under fire from the US president over the Federal Open Market Committee's decision to keep interest rates on hold © Mark Schiefelbein/AP

Top Federal Reserve official calls for rate cuts as soon as July

Governor Chris Waller says US has yet to see an inflation 'shock' from Donald Trump's tariffs

Christopher Waller joined the Fed's policy-setting panel in 2020 after being nominated by Donald Trump during his first term as president © Bloomberg

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This paper:

- Optimal monetary policy response to tariffs is **expansionary**

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- Open-economy New Keynesian model with home and importable goods

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    - Macroeconomic effects depend on monetary policy

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  - Wedge between internal and international price
  - Fiscal externality ⇒ Depress inefficiently imports

≠ terms-of-trade shock

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Tariffs can lead to an expansion or contraction in output

≠ textbook cost-push shock

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Trade surplus and exchange-rate depreciation

→ weak dollar post Liberation Day

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- Extensions: temporary/anticipated, ex/endogenous TOT, supply chains

Literature on Tariffs in International Macro

- Classic question: Are tariffs expansionary or contractionary? Keynes vs. Mundell
- Recent studies: Auray, Devereux, Eyquem (2022,2024); Eichengreen (2019); Barattieri, Cacciatore and Ghironi (2021); Comin and Johnson (2021); Jeanne (2021); Bergin and Corsetti (2021); Erceg, Prestipino and Raffo (2023); Lloyd and Marin (2024)

Focus literature: positive analysis and *joint* optimal tariffs-monetary policy

- Bergin-Corsetti (2023): Optimal cooperative is *contractionary* for tariff-imposing

Our contribution:

- Non-cooperative: optimal policy is expansionary
  - Fiscal externality ⇒ tariff $\neq$ TOT shock
- Analytical conditions for tariffs expansionary/contractionary

Active agenda!

Environment

- Deterministic SOE, infinite horizon, representative household
- Two final consumption goods: home-produced (h) and foreign-produced (f)
    - Prices of domestic inputs are sticky in domestic currency
- Monetary authority: sets monetary policy optimally, taking as given tariffs $\{\tau_t\}$

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Households

$$\sum_{t=0}^{\infty} \beta^t \left[U(c_t^h, c_t^f) - v(\ell_t) \right]$$

$$U(c_t^h, c_t^f) = \frac{\sigma}{\sigma - 1} \left[\omega (c_t^h)^{1-\frac{1}{\gamma}} + (1 - \omega)(c_t^f)^{1-\frac{1}{\gamma}} \right]^{\frac{\gamma}{\gamma-1} \frac{\sigma-1}{\sigma}}, \quad v(\ell_t) = \omega \frac{\ell_t^{1+\psi}}{1 + \psi}$$

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- Budget constraint:

$$P_t^h c_t^h + P_t^f (1 + \tau_t) c_t^f + \frac{e_t b_{t+1}}{R^*} + \frac{B_{t+1}}{R_t} = e_t b_t + B_t + W_t \ell_t + T_t + D_t$$

- Law of one price (before tariffs): $P_t^h = e_t P_t^{h*}$, $P_t^f = e_t P_t^{f*}$

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- Law of one price (before tariffs): $P_t^h = e_t P_t^{h*}, \quad P_t^f = e_t P_t^{f*}$
- Terms-of-trade exogenous $p \equiv \frac{P_t^{f*}}{P_t^{h*}}$ $\Leftarrow$ Limit case w/ export elasticity = ∞

Firms

- Production of final home good is competitive

$$Y_t = \left(\int_0^1 y_{jt}^{\frac{\varepsilon - 1}{\varepsilon}} \, dj \right)^{\frac{\varepsilon}{\varepsilon - 1}}$$

- Intermediate good varieties

$$y_{jt} = \ell_{jt}$$

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  - Monop. competitive w/ Rotemberg price adjustment costs φ

$$\max_{\{y_{jt},P_{jt}\}} \sum_{t=0}^{\infty} \Lambda_{t+1}\left[(1+s)P_{jt}\,y_{jt} - W_t\,y_{jt} - \frac{\varphi}{2}\left(\frac{P_{jt}}{P_{j,t-1}} - 1\right)^2 P_t^h\,y_t\right]$$

$$\text{s.t.} \quad y_{jt} = \left(\frac{P_{jt}}{P_t^h}\right)^{-\varepsilon} y_t$$

Constant subsidy to correct markup distortion

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  - NK Phillips Curve

$$(1 + \pi_t)\pi_t = \frac{\varepsilon}{\varphi} \left[\frac{W_t}{P_t^h} - 1 \right] + \beta \frac{u_h(c_{t+1}^h, c_{t+1}^f)}{u_h(c_t^h, c_t^f)} \frac{\ell_{t+1}}{\ell_t} (1 + \pi_{t+1})\pi_{t+1}$$

where $\pi_t \equiv P_t^h / P_{t-1}^h - 1$ denotes Producer Price Index PPI inflation

Competitive Equilibrium

- Optimization (households and firms) + govt. budget + labor mk. clearing.

$$\tau_t P_t^f c_t^f = T_t + sP_t^h y_t$$

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$$\underbrace{\left(1 - \Upsilon \frac{\varphi}{2} \pi_t^2\right) \ell_t - c_t^h}_{\text{exports}} - \underbrace{p c_t^f}_{\text{imports}} = \underbrace{\frac{b_{t+1}}{R^*} - b_t}_{\text{capital outflows}} \qquad \text{(Country budget constraint)}$$

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- Portfolio undetermined, assume $B_0 = 0$ ⇐ Abstract from valuation effects

Efficient Allocation

$$\max_{\left\{b_{t+1},c_t^f,c_t^h,\ell_t\right\}} \sum_{t=0}^{\infty} \beta^t [u(c_t^h, c_t^f) - v(\ell_t)],$$

$$\text{s.t } c_t^h + pc_t^f + \frac{b_{t+1}}{R^*} = b_t + \ell_t.$$

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$$(1+\pi_t)\pi_t = \frac{\varepsilon}{\varphi}\left[\frac{v'(\ell_t)}{u_h(c_t^h, c_t^f)} - 1\right] + \frac{1}{R^*}\frac{\ell_{t+1}}{\ell_t}(1+\pi_{t+1})\pi_{t+1}$$

$$\frac{u_f(c_t^h, c_t^f)}{u_h(c_t^h, c_t^f)} = p(1+\tau_t)$$

$$u_h(c_t^h, c_t^f) = \beta R^* u_h(c_{t+1}^h, c_{t+1}^f)$$

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- Tariffs: distort MRS $= p$ constraint
- Sticky prices: labor wedge & inflation costs

Two distortions

Competitive equilibrium $\tau = 0$

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Competitive equilibrium $\tau = 0$ (with $\pi_t = 0$)

$$0 = \frac{\varepsilon}{\varphi}\left[\frac{v'(\ell_t)}{u_h(c_t^h, c_t^f)} - 1\right]$$

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Competitive equilibrium $\tau > 0$

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Proposition. Assume that $\beta R^* = 1, \tau_t = \tau$. Then, employment is given by

$$\ell_t(\tau) = \left[\frac{\Theta_\tau + \tau}{1+\tau}\left(\omega\Theta_\tau\right)^{\frac{\sigma-\gamma}{\gamma-1}}\right]^{\frac{1}{1+\sigma\psi}}, \qquad \Theta_\tau \equiv 1 + \left(\frac{1-\omega}{\omega}\right)^{\gamma}\left(p(1+\tau)\right)^{1-\gamma} > 1$$

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and

$$c_t^h(\tau) = \frac{1+\tau}{\Theta_\tau + \tau} \ell_t(\tau), \qquad c_t^f(\tau) = \frac{\Theta_\tau - 1}{p\left(\Theta_\tau + \tau\right)} \ell_t(\tau)$$

Are Tariffs Expansionary or Contracionary?

- Under look-through policy ⇝ flex-price allocation

$$\frac{d\log\ell(\tau)}{d\tau} = -\overbrace{\frac{(\Theta_\tau - 1)}{(1+\sigma\psi)(1+\tau)(\Theta_\tau+\tau)\Theta_\tau}}^{>0}\left[\sigma\Theta_\tau + (\sigma-\gamma)\tau\right]$$

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    - Consumption rebalancing towards c^h leads to $\downarrow u_h$, which implies in a flex-price eqm. a lower level of employment

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  - For large τ, ambiguous.

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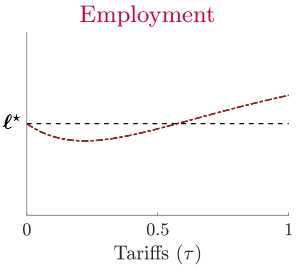
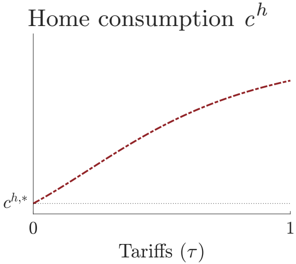
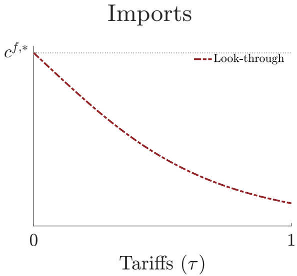
- Three goods, two changes in relative prices:
  1. Substitution (c^f, ℓ)
     - Tariff reduces the real wage in terms of c^f $\Rightarrow$ substitution away from labor
  2. Substitution (c^f, c^h)
     - $\sigma > \gamma$ goods are Hicksian complements $\Rightarrow$ labor unambiguously falls
     - $\sigma < \gamma$ goods are Hicksian substitutes $\Rightarrow$ labor increases for large τ

Illustration: Hicksian Substitutes

$\sigma = 1/2$, $\gamma = 4$







Ramsey Optimal Monetary Policy

$$\max_{\pi_t, b_{t+1}, \ell_t, c_t^f, c_t^h} \quad \sum_{t=0}^{\infty} \beta^t \Big[u(c_t^h, c_t^f) - v(\ell_t) \Big],$$

$$\text{s.t.} \quad c_t^h + p\, c_t^f + \frac{b_{t+1}}{R^*} = b_t + \ell_t \left(1 - \Upsilon \frac{\varphi}{2} \pi_t^2 \right),$$

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

$$u_h(c_t^h, c_t^f) \;=\; \beta R^* \, u_h(c_{t+1}^h, c_{t+1}^f),$$

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$$\Upsilon = 0,$$

$$\text{s.t.} \quad c_t^h + p\, c_t^f + \frac{b_{t+1}}{R^*} = b_t + \ell_t,$$

Sticky prices induce costs only from output gap (will relax later)

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$\Upsilon = 0, \ \tau_t = \tau, \ \beta R^* = 1$

$$\text{s.t.} \quad c^h + p\, c^f + \ \frac{b}{R^*} - b \ = \ell \ ,$$

$$\frac{1-\omega}{\omega} \left(\frac{c^h}{c^f} \right)^{\frac{1}{\gamma}} = p\,(1 + \tau \ ),$$

Ramsey Optimal Monetary Policy

$$\max_{\ell, c^f, c^h} \sum_{t=0}^{\infty} \beta^t \Big[u(c^h, c^f) - v(\ell) \Big], \qquad \text{Assume } \Upsilon = 0,\ \tau_t = \tau,\ \beta R^* = 1$$

s.t. $$c^h + p\, c^f + \frac{b}{R^*} - b = \ell,$$

$$\frac{1-\omega}{\omega}\left(\frac{c^h}{c^f}\right)^{\frac{1}{\gamma}} = p\,(1 + \tau),$$

Planner picks ℓ;

Households choose c^h, c^f

Ramsey Optimal Monetary Policy

$$\max_{\ell \;, c^f, c^h} \sum_{t=0}^{\infty} \beta^t \Big[u(c^h, c^f) - v(\ell \;) \Big], \qquad \text{Assume } \Upsilon = 0, \; \tau_t = \tau, \; \beta R^* = 1$$

$$\text{s.t.} \quad c^h + p\, c^f + \frac{b}{R^*} - b \; = \ell \;,$$

$$\frac{1-\omega}{\omega} \left(\frac{c^h}{c^f} \right)^{\frac{1}{\gamma}} = p\,(1 + \tau \;),$$

Planner picks ℓ;
Households choose c^h, c^f

Proposition: Under optimal monetary policy, the level of employment is

$$\ell_t^{opt}(\tau) = \left(\frac{1+\tau}{1+\Theta_\tau^{-1}\tau} \right)^{\frac{\sigma}{1+\sigma\psi}} \left[\frac{\Theta_\tau+\tau}{1+\tau} \left(\omega\Theta_\tau \right)^{\frac{\sigma-\gamma}{\gamma-1}} \right]^{\frac{1}{1+\sigma\psi}} > \ell_t^{\text{look}}(\tau).$$

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$$c_t^h(\tau) = \frac{1+\tau}{\Theta_\tau + \tau} \ell_t^{opt}(\tau), \qquad c_t^f(\tau) = \frac{\Theta_\tau - 1}{p\,(\Theta_\tau + \tau)} \ell_t^{opt}(\tau)$$

Fiscal Externality

Households "indirect utility" as a function of c^f

$$\mathbf{W}(c^f;\tau) \equiv u\Big(\underbrace{\mathbf{L}(c^f)}_{\text{employment } \frac{\Theta_\tau+\tau}{\Theta_\tau-1} pc^f} + \underbrace{\mathbf{T}(c^f)}_{\text{revenue } p\tau c^f} - p(1+\tau)c^f, c^f\Big) - v\Big(\mathbf{L}(c^f)\Big)$$

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employment $\frac{\Theta_\tau+\tau}{\Theta_\tau-1}pc^f$

revenue $p\tau c^f$

- Optimality

$$-\underbrace{\frac{\partial \mathbf{L}}{\partial c^f}}_{<0}\overbrace{\left[1-\frac{v'(\ell)}{u_h(c^h, c^f)}\right]}^{\text{labor wedge must be negative}} = \underbrace{\frac{\partial \mathbf{T}}{\partial c^f}}_{\text{fiscal externality}>0}$$

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- Households do not internalize that ↑ c^f raises tariff revenue and agg. income
  - Optimal policy tries to mitigate externality by stimulating employment
- Without fiscal rebate: flex-price allocation is efficient ⇒ zero labor wedge and $\pi_t = 0$

Tariff without Rebate

Competitive equilibrium

$$(1+\pi_t)\pi_t = \frac{\varepsilon}{\varphi}\left[\frac{v'(\ell_t)}{u_h(c_t^h, c_t^f)} - 1\right] + \frac{1}{R^*}\frac{\ell_{t+1}}{\ell_t}(1+\pi_{t+1})\pi_{t+1}$$

$$\frac{u_f(c_t^h, c_t^f)}{u_h(c_t^h, c_t^f)} = p(1+\tau)$$

$$u_h(c_t^h, c_t^f) = \beta R^* u_h(c_{t+1}^h, c_{t+1}^f)$$

$$\left(1 - \Upsilon\frac{\varphi}{2}{\pi_t}^2\right)\ell_t - c_t^h - \boxed{p(1+\tau)}\,c_t^f = \frac{b_{t+1}}{R^*} - b_t$$

Efficient allocation

$$\frac{v'(\ell_t)}{u_h(c_t^h, c_t^f)} = 1$$

$$\frac{u_f(c_t^h, c_t^f)}{u_h(c_t^h, c_t^f)} = p$$

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$$\ell_t - c_t^h - p\,c_t^f = \frac{b_{t+1}}{R^*} - b_t$$

Tariff without Rebate

Same eqm. conditions as with TOT shock → $\widehat{p} \equiv p(1+\tau)$

Competitive equilibrium

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Tariff without Rebate

Flex-price allocation ($\pi_t = 0$) coincides with efficient with different TOT

Competitive equilibrium

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Tariff without Rebate

With a genuine rise in cost, optimal to let imports fall and set $\pi_t = 0$.

Competitive equilibrium

$$0 = \frac{\varepsilon}{\varphi}\left[\frac{v'(\ell_t)}{u_h(c_t^h, c_t^f)} - 1\right]$$

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Employment under Optimal Policy

Tariffs: Expansionary or Contractionary?

$$\frac{d\log \ell^{opt}}{d\tau} = \frac{(\Theta_\tau - 1)}{(1+\sigma\psi)(1+\tau)(\Theta_\tau+\tau)\Theta_\tau}(1-\sigma)\gamma\tau$$

No first-order effect on ℓ at $\tau = 0$

- At $\tau = 0$, no first-order effect on employment $\Leftarrow$ Planner purely rebalances c^h, c^f

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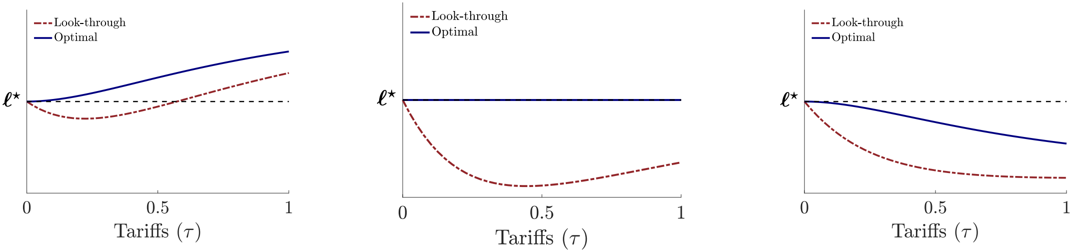
- At $\tau = 0$, no first-order effect on employment $\Leftarrow$ Planner purely rebalances c^h, c^f
- For large τ, the consumption distortion reduces the marginal return to labor leading to substitution and income effects
    - First-order effects on employment depend entirely on σ

Employment Response

output increases ($\neq$ cost-push shock)



(a) $\sigma = 0.5$

(b) $\sigma = 1$

(c) $\sigma = 2$

Under optimal policy, output is always above natural level. With $\sigma < 1$, output exceeds efficient level as well.

Quantitative Analysis

Standard NK assumption: price adjustment costs are not rebated, $\Upsilon = 1$

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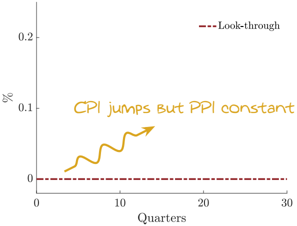
- With $\Upsilon > 0$, optimal policy remains expansionary:
  - Starting from $\pi = 0$, costs of stimulating are second order, but there are first-order gains from mitigating fiscal externality
  - Stimulus only in the short-run $\Leftarrow$ inflation in the long-run is too costly

Calibration

Parameter	Description	Value
β	Discount factor	0.99
γ	Elasticity between h and f	4
σ	Intertemporal elasticity	0.5
ψ	Inverse Frisch elasticity	1
ε	Elasticity of substitution (varieties)	6
φ	Price-adjustment cost	$3,272$

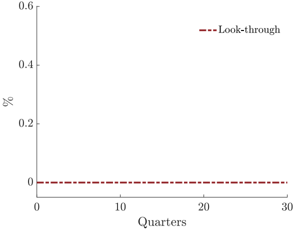
- Target: slope of PC=0.0055 (Hazell et al.) & ratio of imports to tradable GDP
- Baseline tariff: $\tau_t = 0.15$
- Non-linear impulse response

Permanent Tariff: Look-through

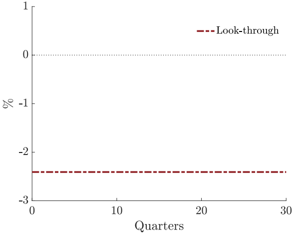


Home-goods inflation

CPI jumps but PPI constant



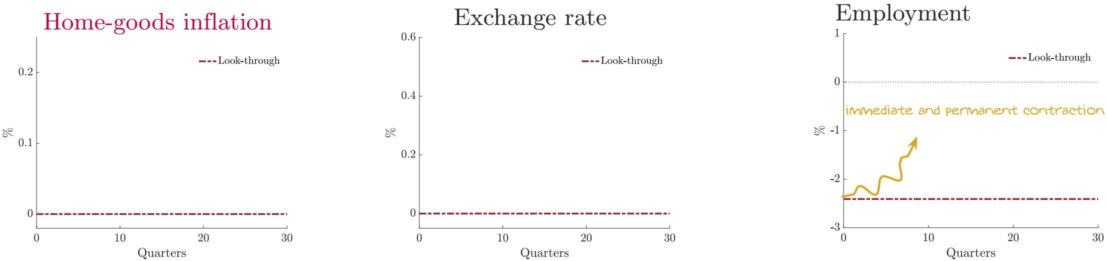
Exchange rate



Employment

Inflation is annualized. Consumption, employment and the exchange rate are expressed in percentage deviation from the pre-tariff allocation. Trade balance and NFA are expressed as a fraction of GDP.

Permanent Tariff: Look-through vs. Optimal Policy


Home-goods inflation

Exchange rate

Employment

immediate and permanent contraction

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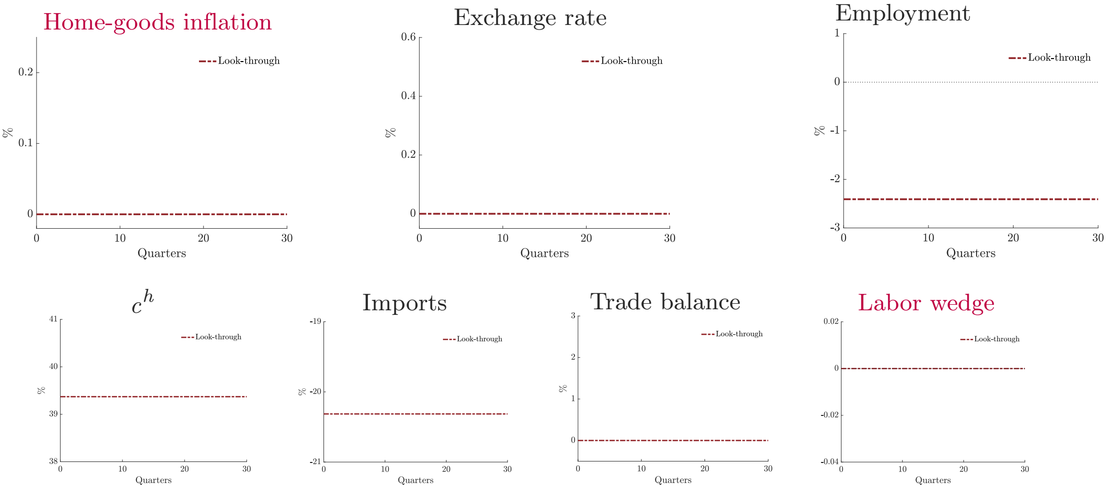
Home-goods inflation

Exchange rate

Employment

c^h

Imports

Trade balance

Labor wedge

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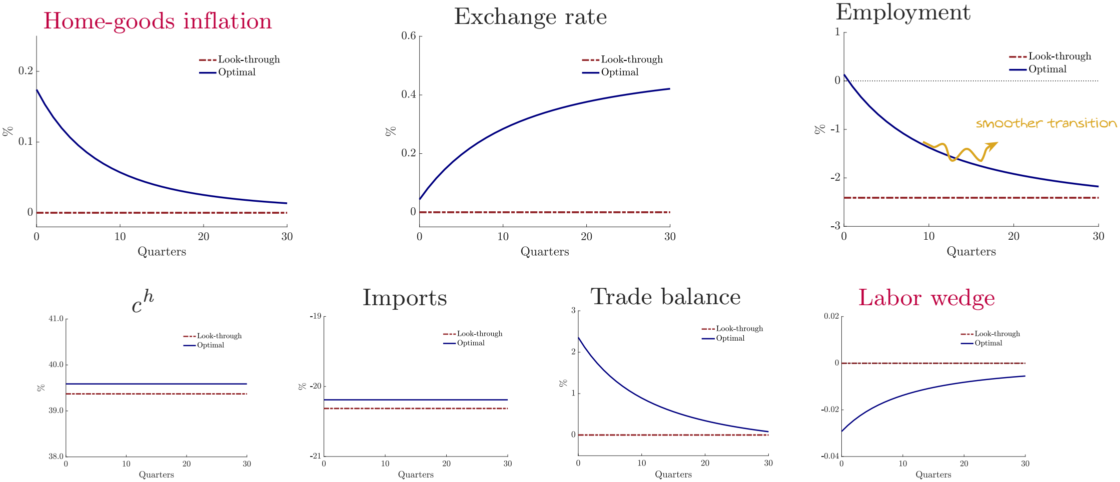

Home-goods inflation

Exchange rate

Employment

smoother transition

c^h

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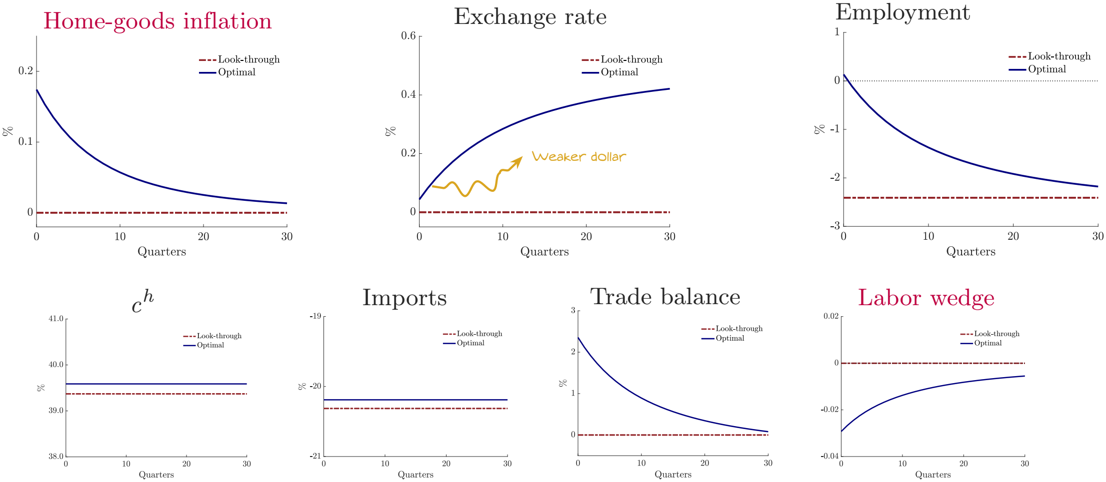

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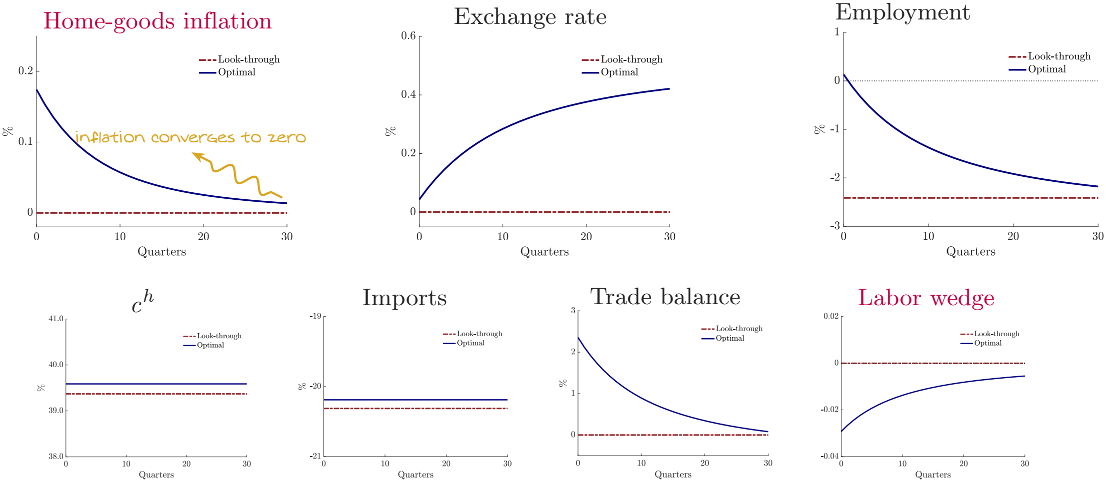
inflation converges to zero

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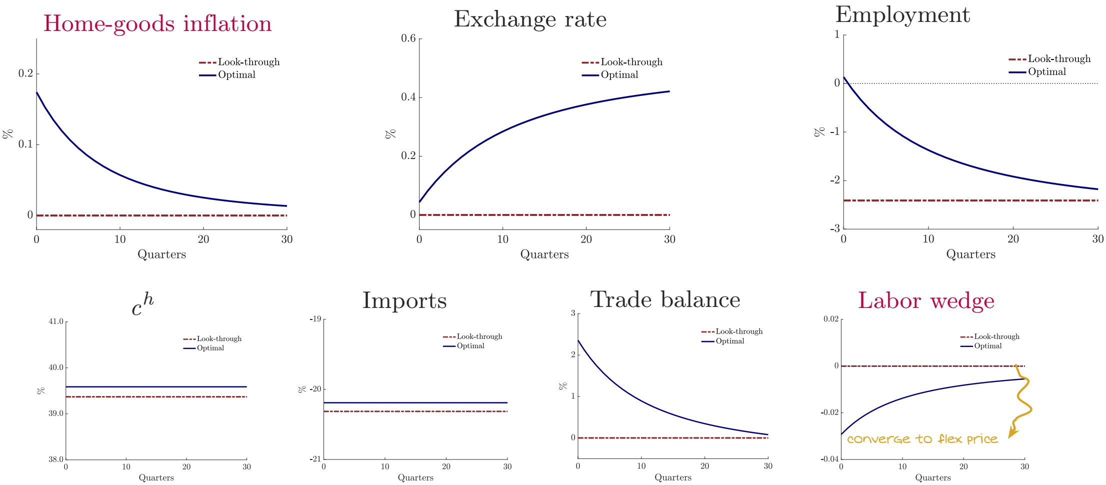
Permanent Tariff: Look-through vs. Optimal Policy



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Additional Results in the Paper

- Permanent shocks vs transitory ⏩ Details
- Anticipated shocks: ⏩ Details
  - Respond today, but less strongly
  - Trade deficit on impact
- PPI vs. CPI Targeting ⏩ Details
- Main extensions
  i) Imported intermediate inputs
  ii) Endogenous terms-of-trade
  iii) Distorted steady state
- Welfare

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The case with distorted steady state

- Baseline model: labor subsidy s is set to offset markup distortion

The case with distorted steady state

- Suppose we start at $s = 0$ and use tariff revenue to subsidize labor $P_t^f \tau_t c_t^f = s_t W_t \ell_t$
    - Unambiguous increase in employment
    - Output above natural but inflation is mitigated

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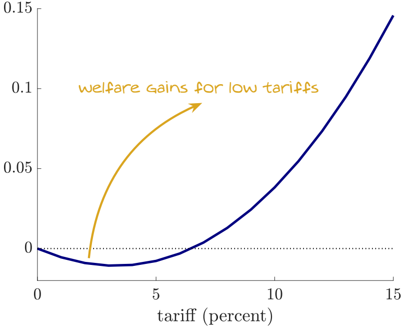
Welfare loss from tariffs



Note: All parameters are set to their baseline values.

Conclusions

- How should a monetary authority should respond to import tariffs?
- Optimal policy is to overheat economy:
    - Monetary stimulus to offset fiscal externality
    - Let inflation rise above and beyond the direct effects from tariffs

Extra Slides

Tariffs on Imported Inputs

- Production of domestic varieties $y_{jt} = \ell_{jt}^{1-\nu} {x_{jt}}^{\nu}$
- NK Phillips curve:

$$(1+\pi_t)\pi_t = \frac{\varepsilon}{\varphi}\left[mc_t - 1\right] + \beta \frac{u_h(c_{t+1}^h, c_{t+1}^f)}{u_h(c_t^h, c_t^f)} \frac{y_{t+1}}{y_t}(1+\pi_{t+1})\pi_{t+1},$$

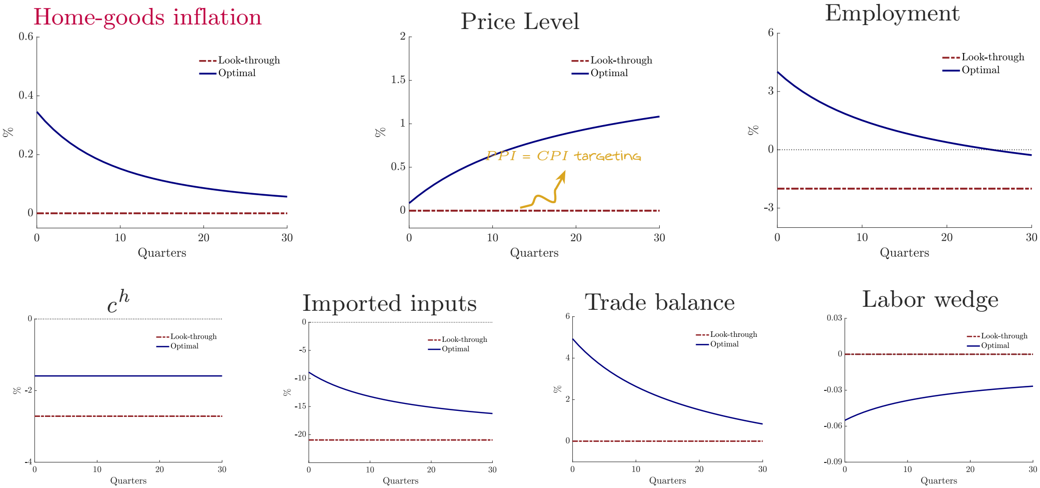
$$mc_t = \left[\frac{W_t}{(1-\nu)P_t^h}\right]^{1-\nu}\left[\frac{p(1+\tau_t^x)}{\nu}\right]^{\nu}$$

- Same as baseline: firms perceive cost of imported inputs to be larger than social one

  ⇒ Optimal policy is stimulative

Quantitatively, larger welfare gains and increase in employment

Tariff on Inputs Only



PPI = CPI targeting

Note: Calibrate ν, ω to match: (i) share of intermediate inputs in total imports; (ii) imports-tradable GDP (%).

Endogenous TOT

- Continuum of SOE where c^f is a CES composite of goods produced abroad

$$c_{it} = \left[\omega\left(c_{it}^h\right)^{1-\frac{1}{\gamma}} + (1-\omega)\left(c_{it}^f\right)^{1-\frac{1}{\gamma}}\right]^{\frac{\gamma}{\gamma-1}}, \quad c_{it}^f = \left(\int_0^1 \left(c_{it}^k\right)^{1-\frac{1}{\theta}} dk\right)^{\frac{\theta}{\theta-1}}$$

- Export demand for home good

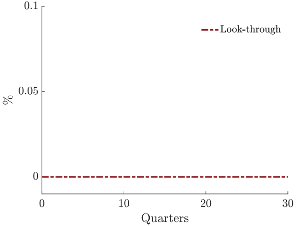
$$p_t = A(y_t - c_t^h)^{\frac{1}{\theta}} \qquad \text{Baseline } \theta = \infty$$

- Optimal tariff is positive $\tau^* = \frac{1}{\theta-1}$ with $\theta > 1$
  - Same results as baseline as long as $\tau > \tau^*$
- Quantitatively, modest attenuation ▸▸ Results

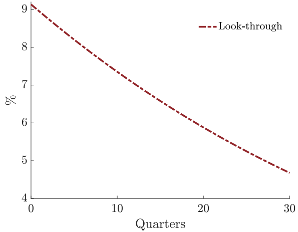
Temporary Tariff $\tau_t = 0.97 \cdot \tau_{t-1}$

▸ back

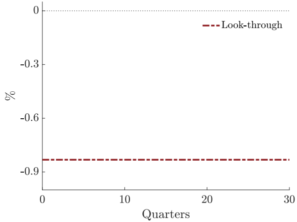
Home-goods inflation



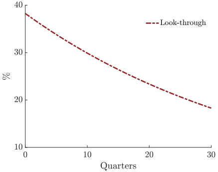
Price Level



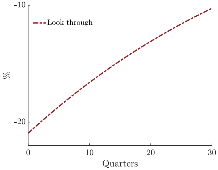
Employment



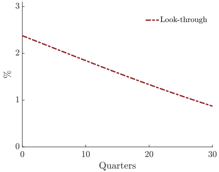
c^h



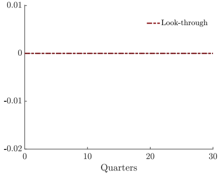
Imports



Trade balance



Labor wedge



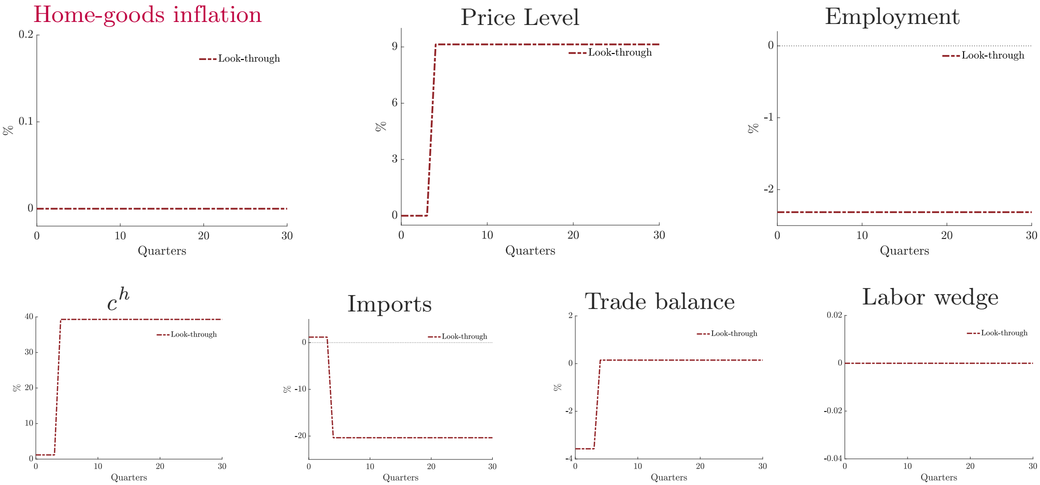
Temporary Tariff $\tau_t = 0.97{\cdot}\tau_{t-1}$

▸ back

As in the case of a permanent tariff, optimal MP stimulates the economy

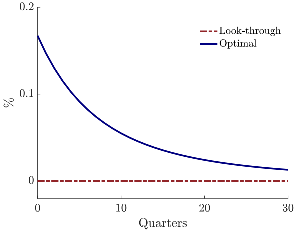
Anticipation Effects

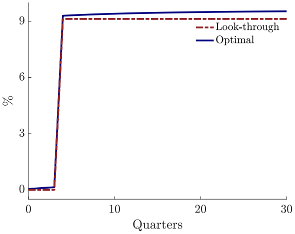
▸ back

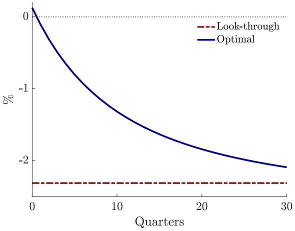


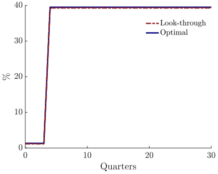
Anticipation Effects

▸ back


Home-goods inflation


Price Level


Employment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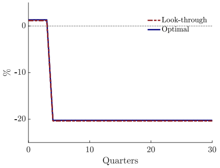
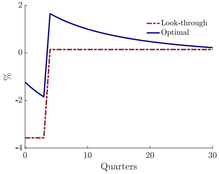
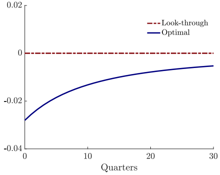

Imports


Trade balance

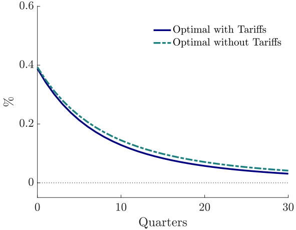

Labor wedge

MP less expansionary: imports inefficiently high before tariff takes place

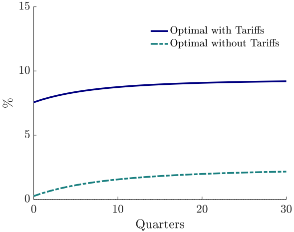
The Case with Distorted Steady State

▸ back

Home-goods inflation



Price Level



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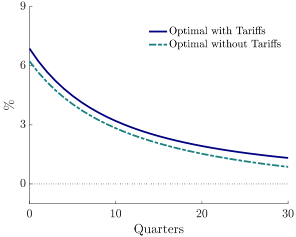

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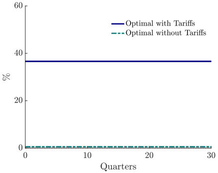

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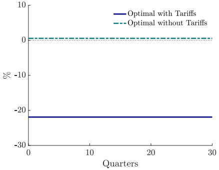
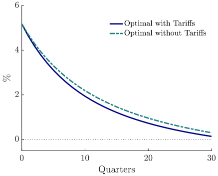
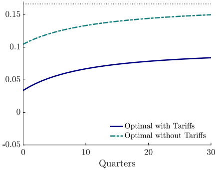


Trade balance

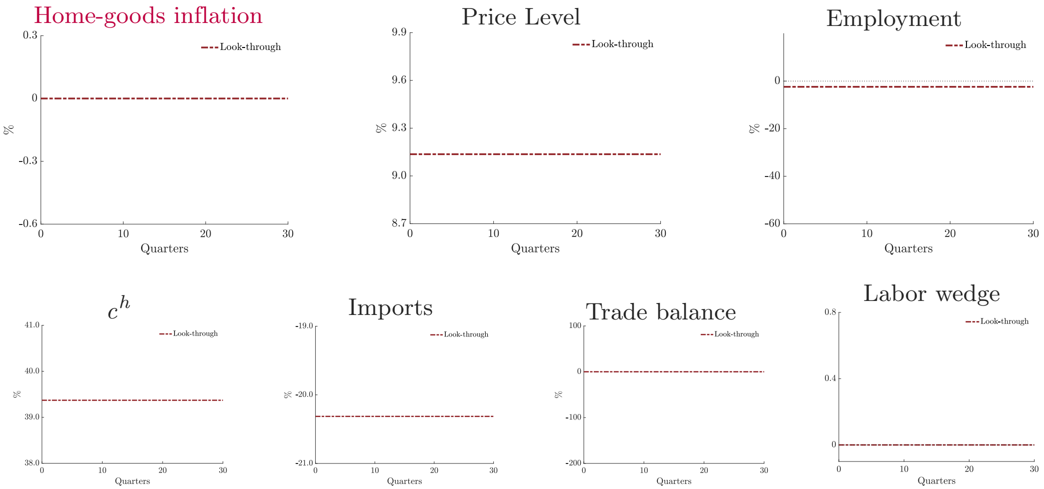


Labor wedge

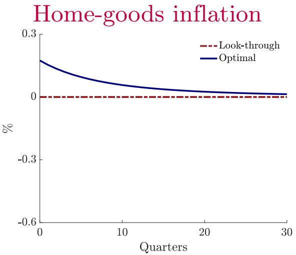


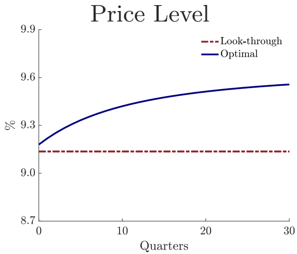
CPI Targeting Rule

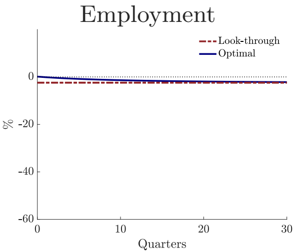
Permanent Tariff

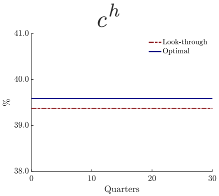


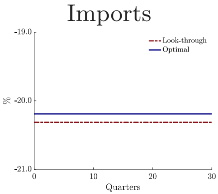
Permanent Tariff

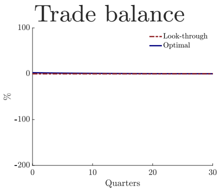


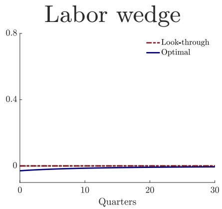




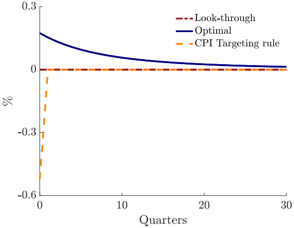




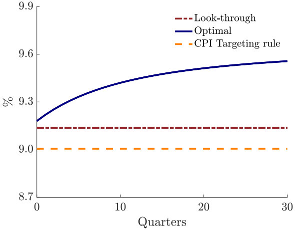




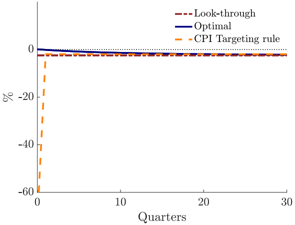
Permanent Tariff



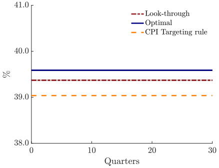
Home-goods inflation



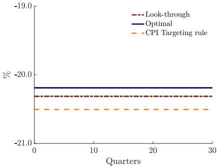
Price Level



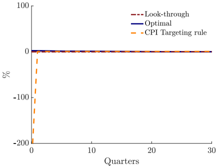
Employment



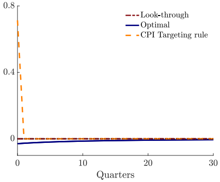
c^h



Imports

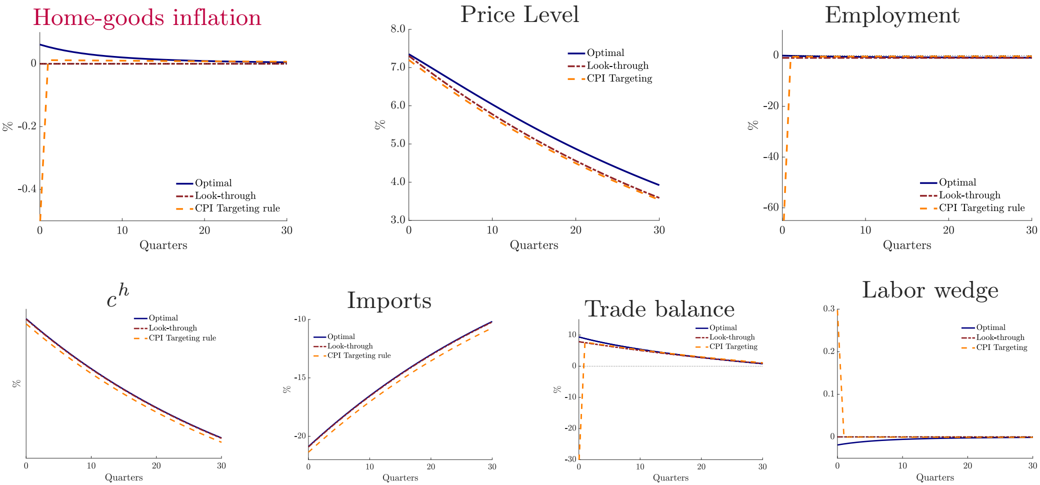


Trade balance

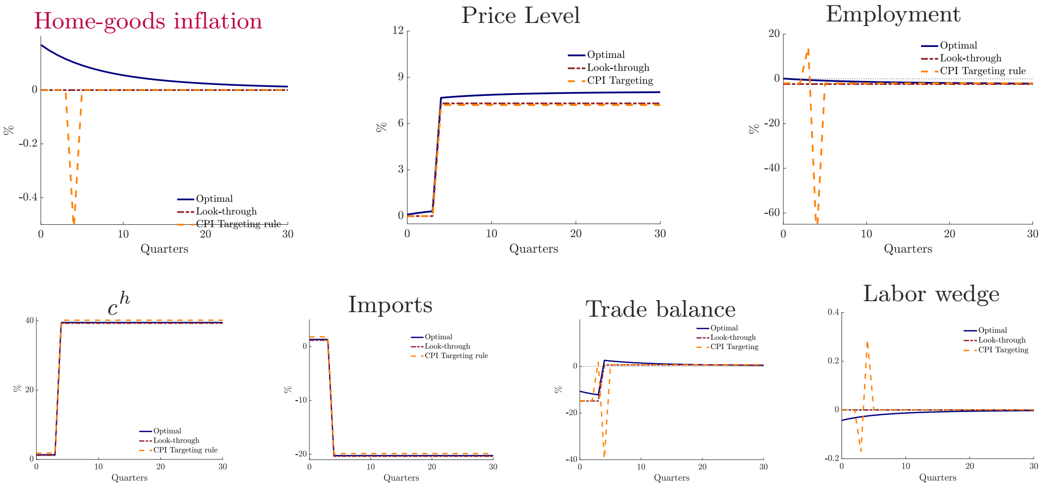


Labor wedge

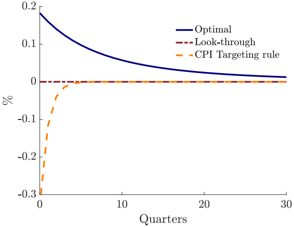
Temporary Tariff $\tau_t = 0.97 \cdot \tau_{t-1}$

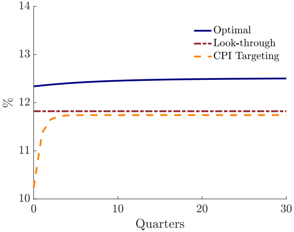


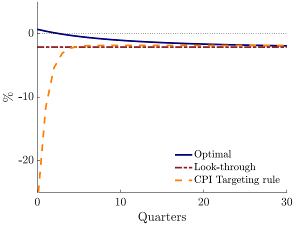
Anticipation Effects

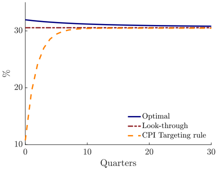


Endogenous Terms of Trade


Home-goods inflation


Price Level


Employment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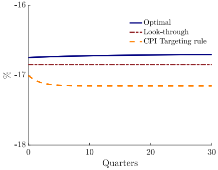
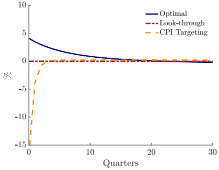
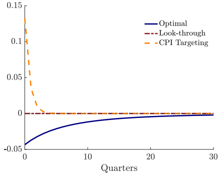
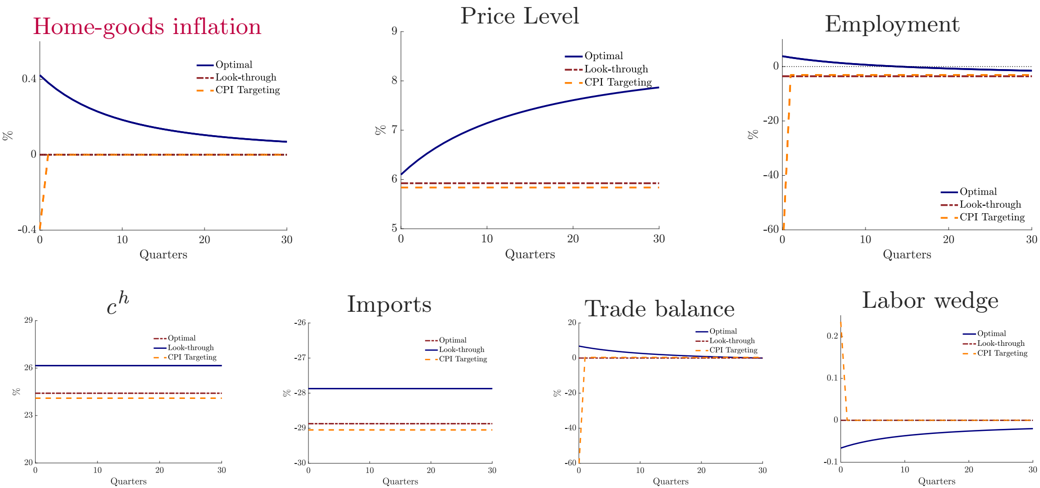

Imports


Trade balance

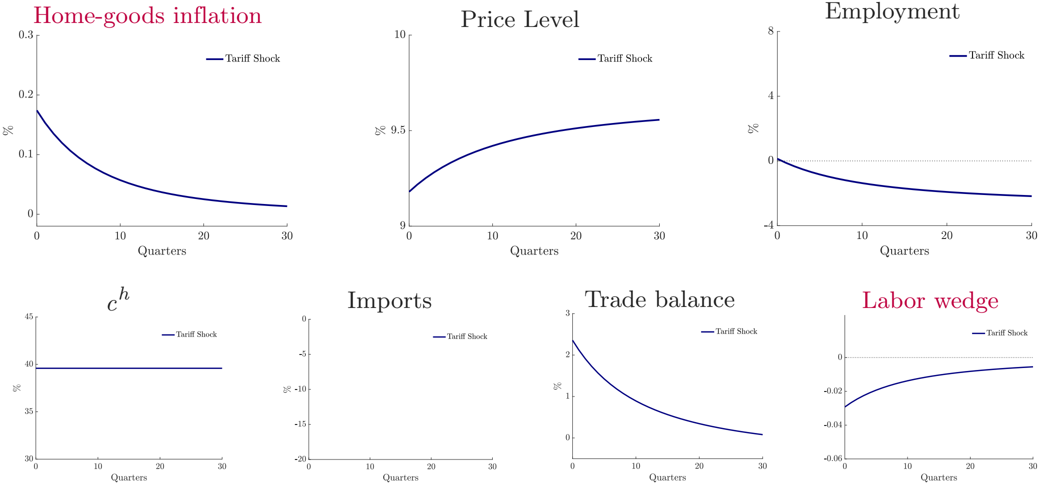

Labor wedge

Model with Imported Inputs

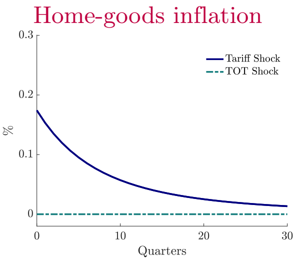


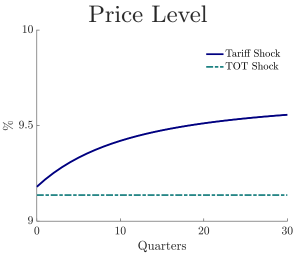
⏩ Back

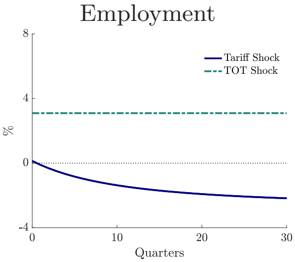
Tariffs vs. Terms-of-Trade Shocks

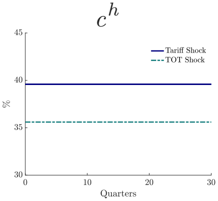


Tariffs vs. Terms-of-Trade Shocks


Home-goods inflation


Price Level


Employment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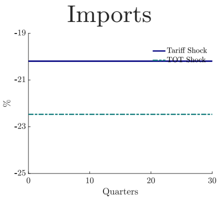
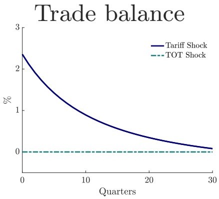
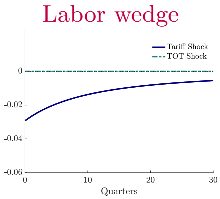
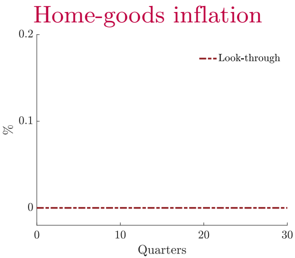
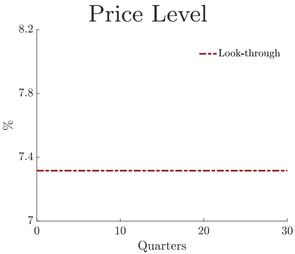

Imports


Trade balance


Labor wedge

Endogenous Terms-of-Trade


Home-goods inflation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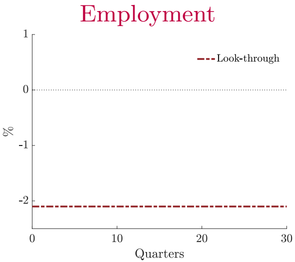
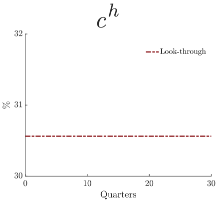

Employment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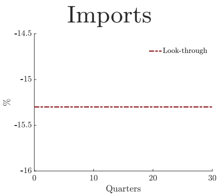
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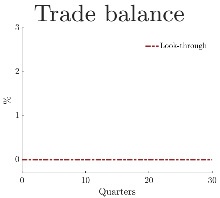
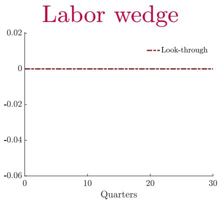
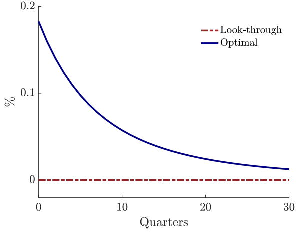
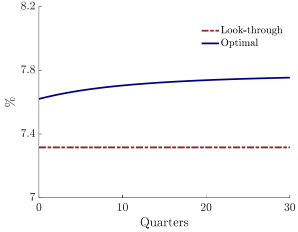

Trade balance


Labor wedge

⏩ Back

Endogenous Terms-of-Trade


Home-goods inflation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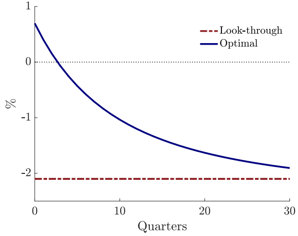
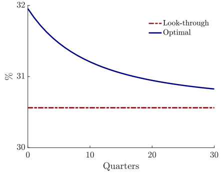

Employment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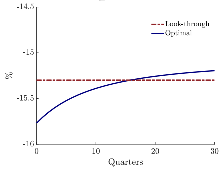
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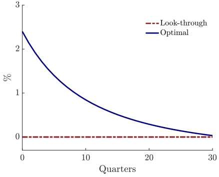
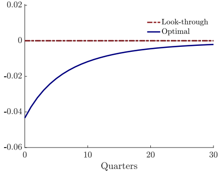
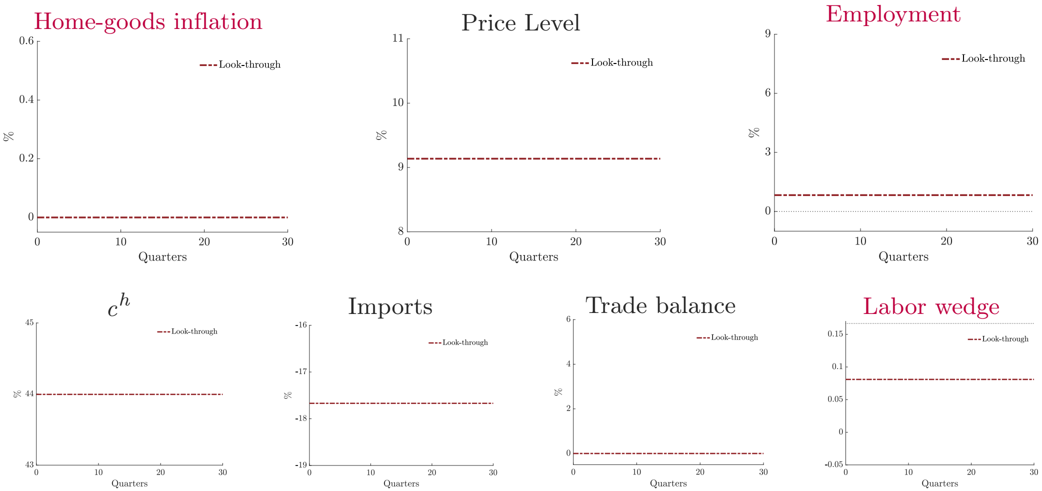

Trade balance


Labor wedge

Back

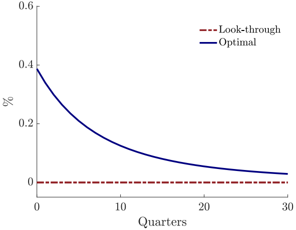
Distorted Steady State: Tariff Revenue to Subsidize Wage Bill

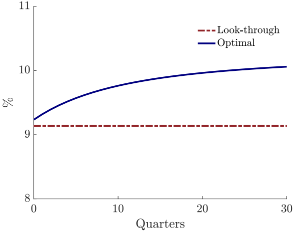


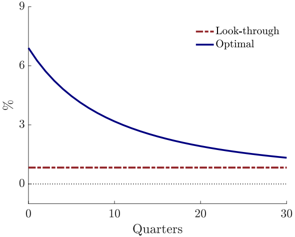
Employment rises under look-through

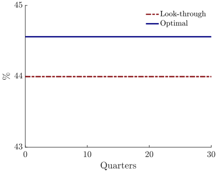
▸ Tariffs vs. No tariffs

Distorted Steady State: Tariff Revenue to Subsidize Wage Bill


Home-goods inflation


Price Level


Employment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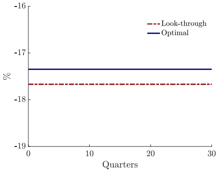
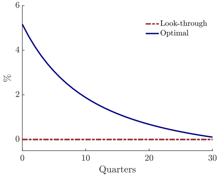
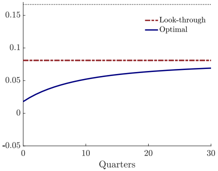

Imports


Trade balance


Labor wedge

Effect of tariff and labor subsidy cancel out approx. on inflation

▸ Tariffs vs. No tariffs