27th Annual DNB Research Conference

The Macroeconomic Effects of Geopolitical Uncertainty

DeNederlandscheBank

EUROSYSTEEM

Trade Fragmentation, Inflationary Pressures and Monetary Policy

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Discussion by Kai Arvai

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[1]The views of the author do not necessarily reflect the ones of the Banque de France

Motivation and Contribution

How does trade fragmentation affect inflationary pressures?

- Common narrative: Globalization helped to keep inflation low
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How does trade fragmentation affect inflationary pressures?

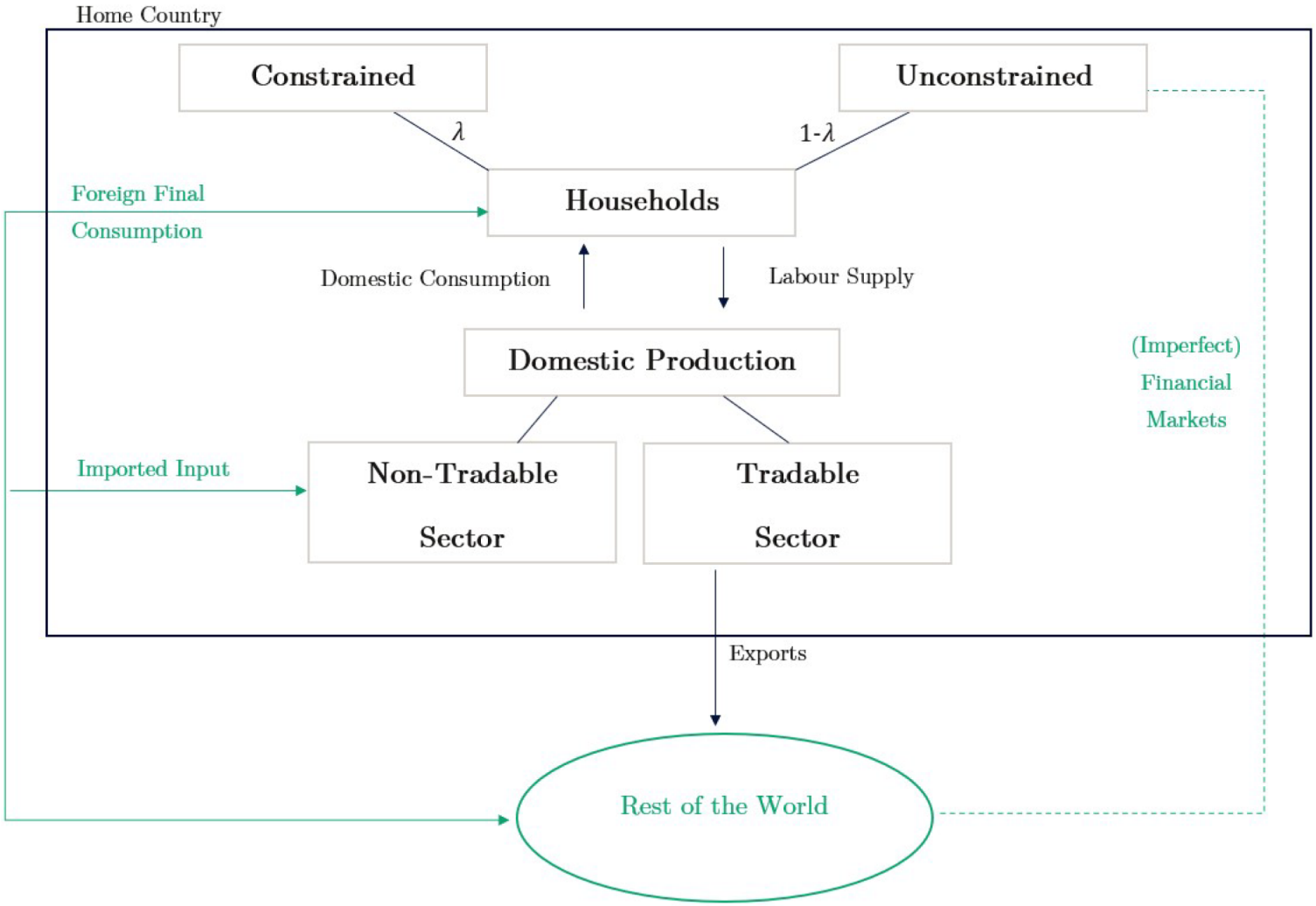
- Common narrative: Globalization helped to keep inflation low
- If this reverses: More inflation possible

This paper: This narrative is not necessarily true

- Supply and Demand effects of fragmentation important
- HANK model with open economy dimension
- Impact on inflation depends on the specifics

→ Challenges dominant views of policymakers on inflationary impact

Model Overview



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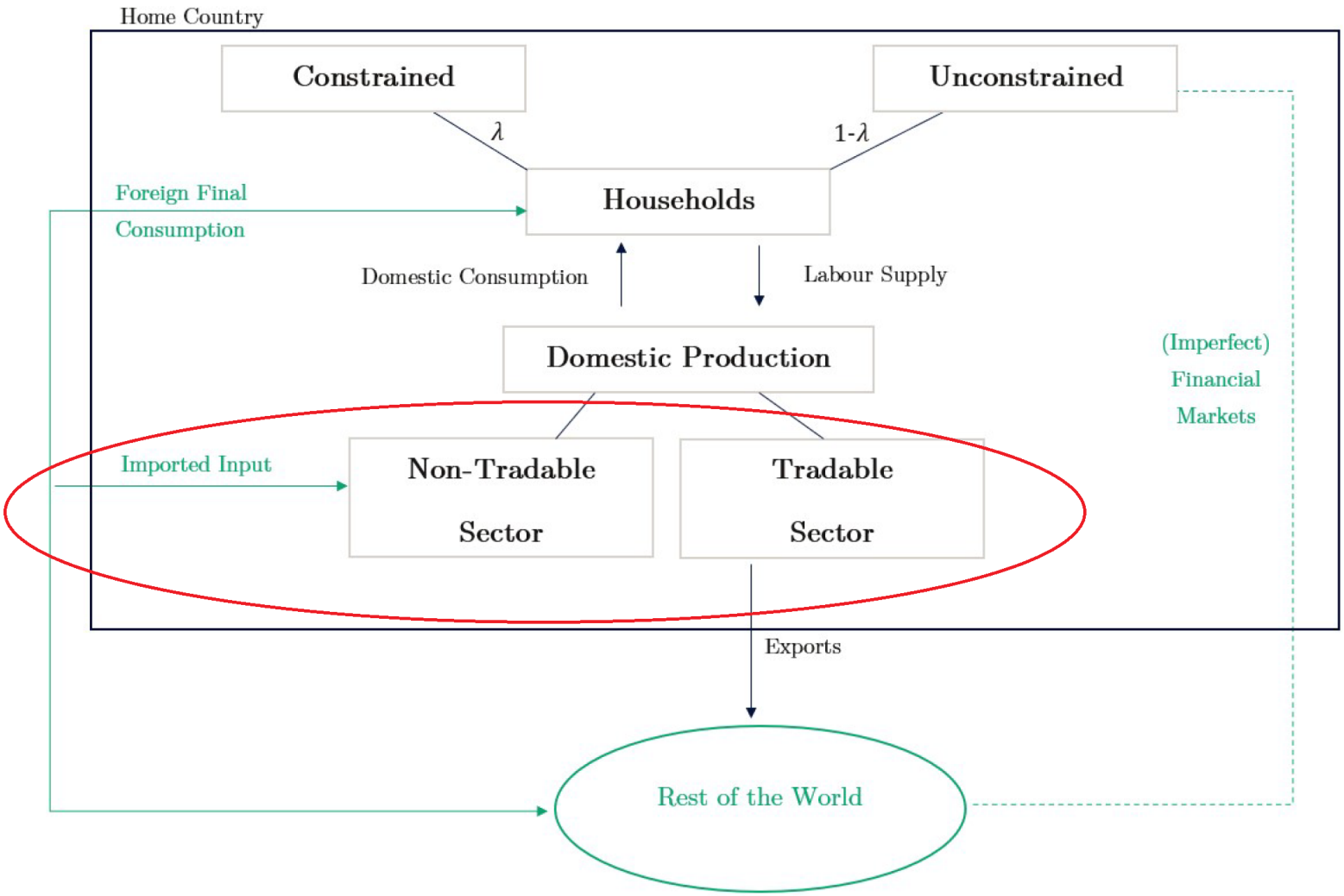

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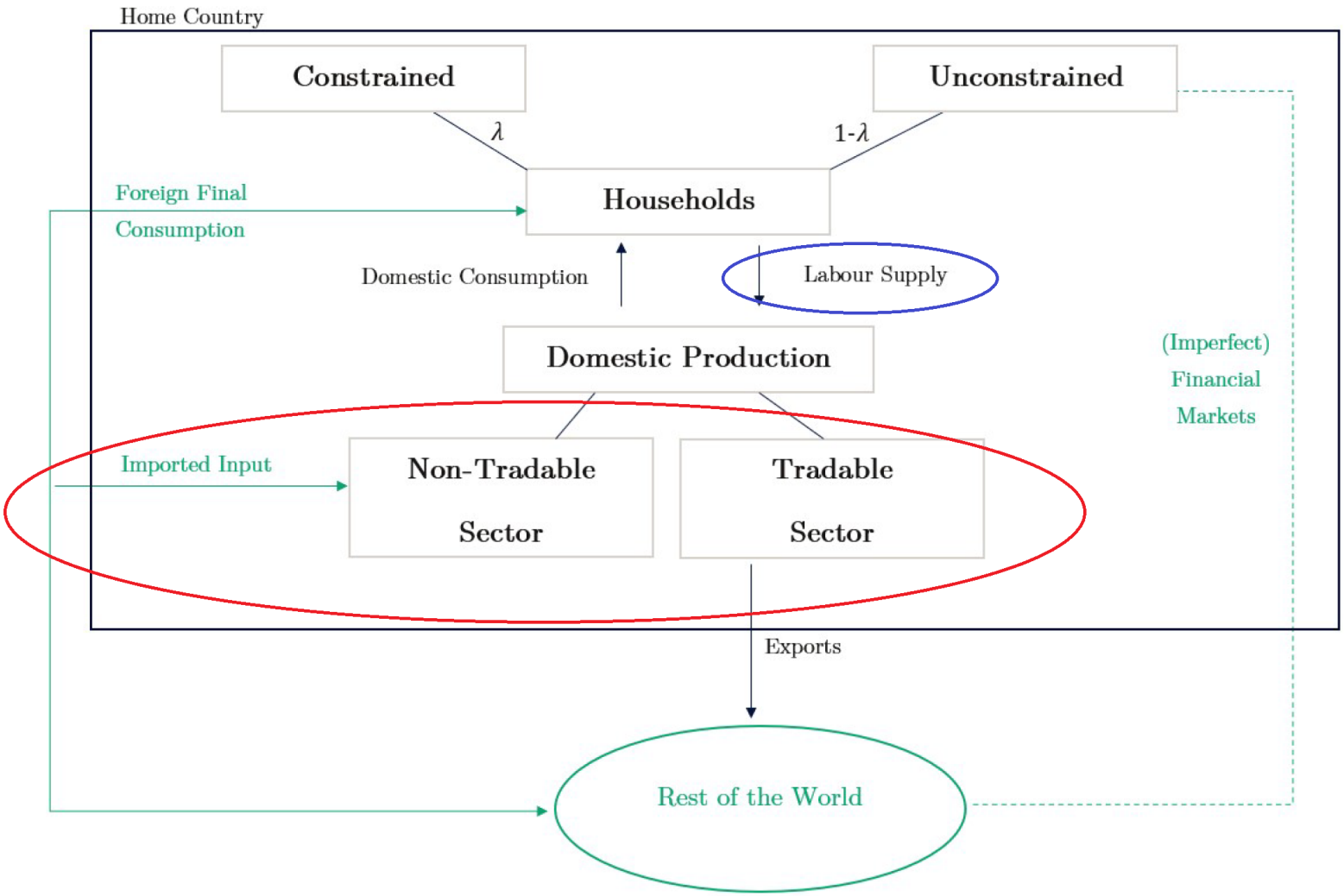
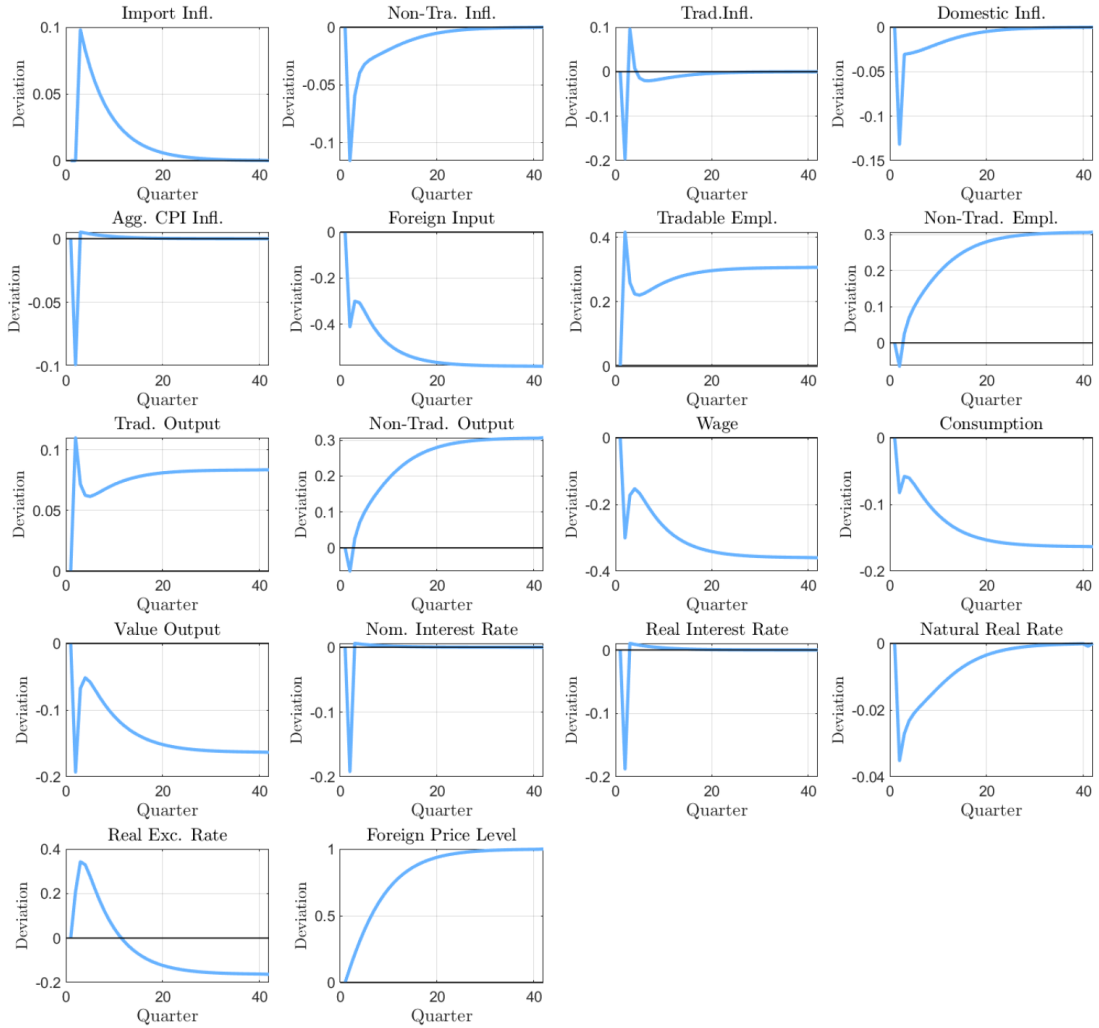


Inflation Mechanism: Scenario 1

Gradual increase in foreign prices: Not inflationary, but deflationary



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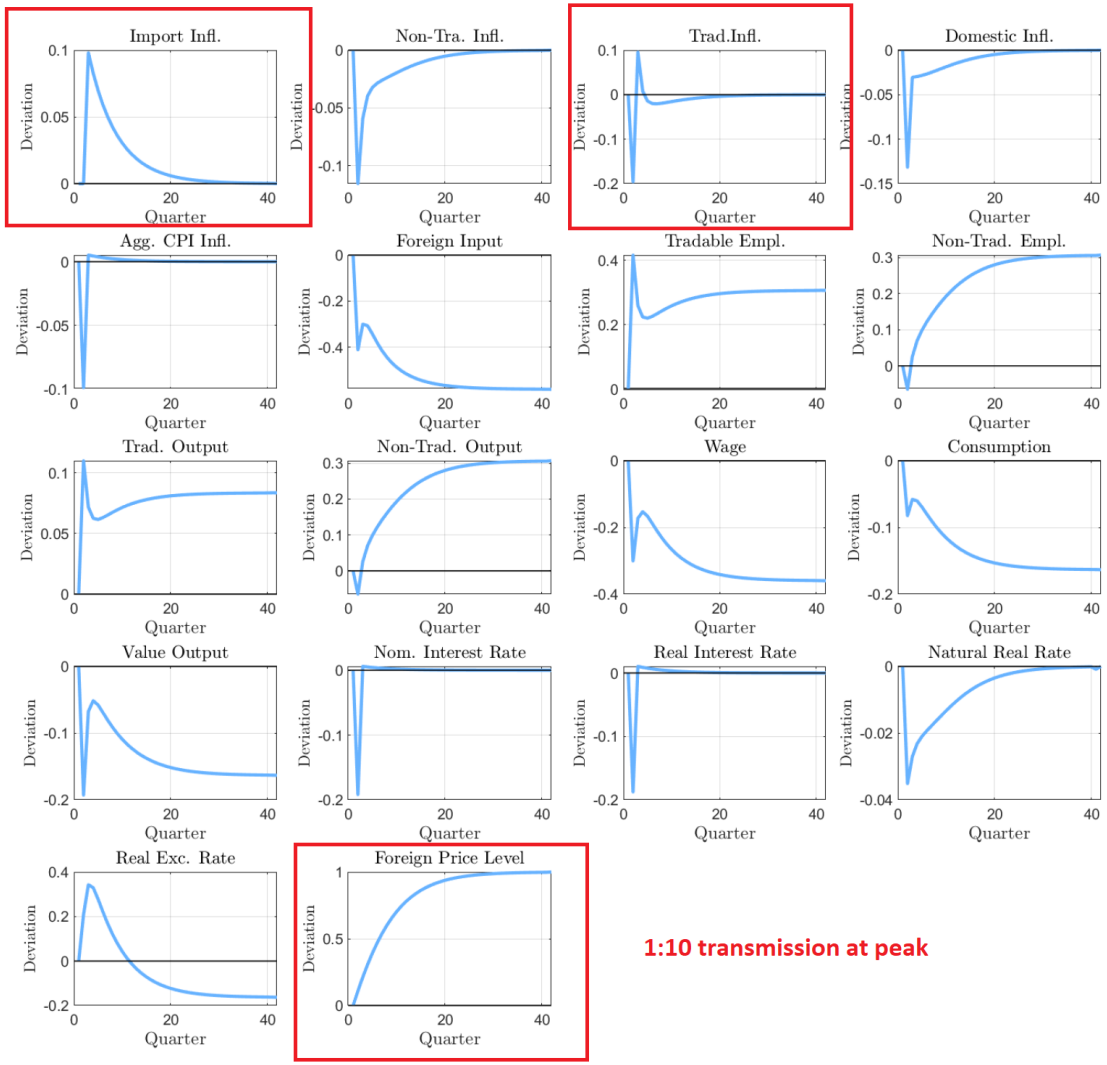

1:10 transmission at peak

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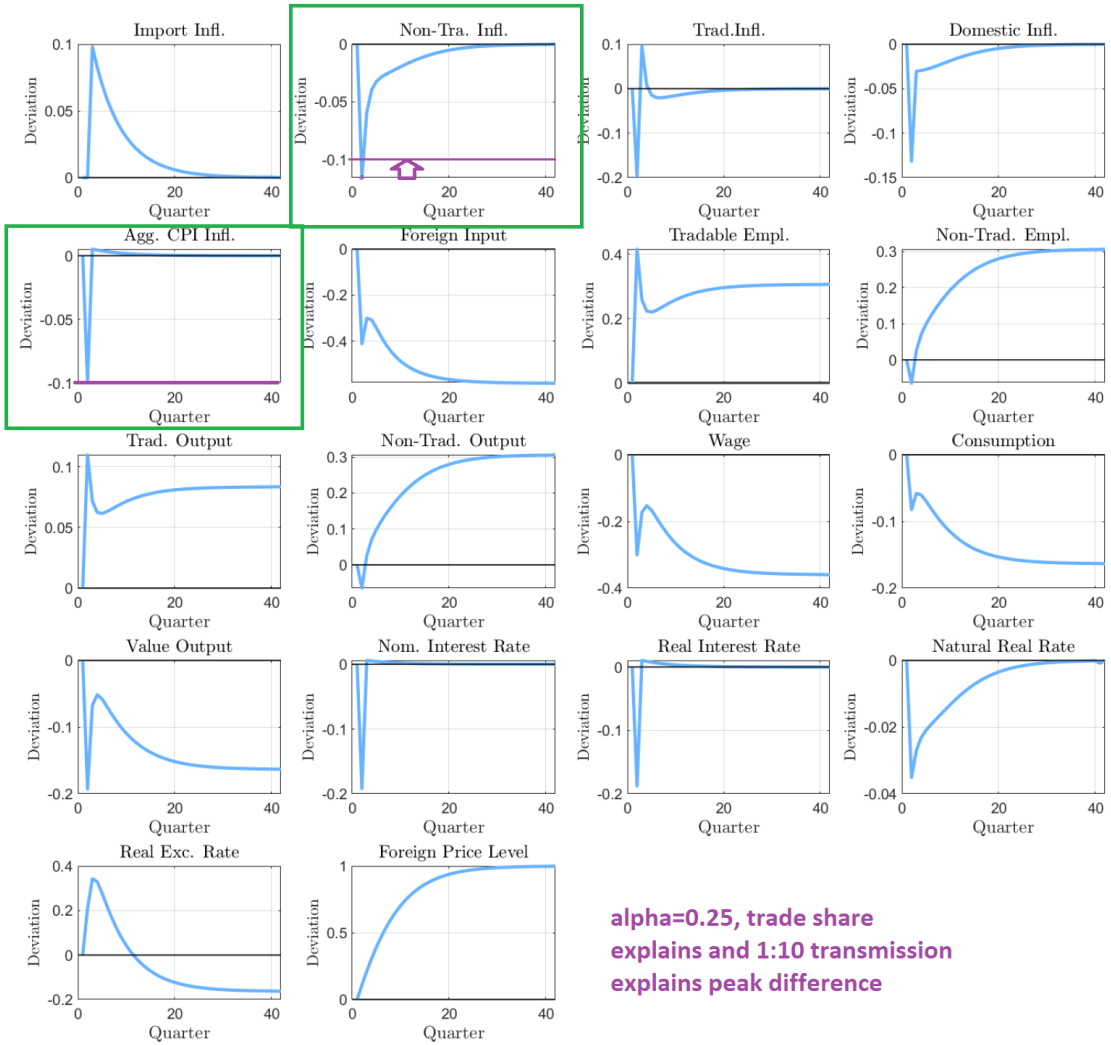
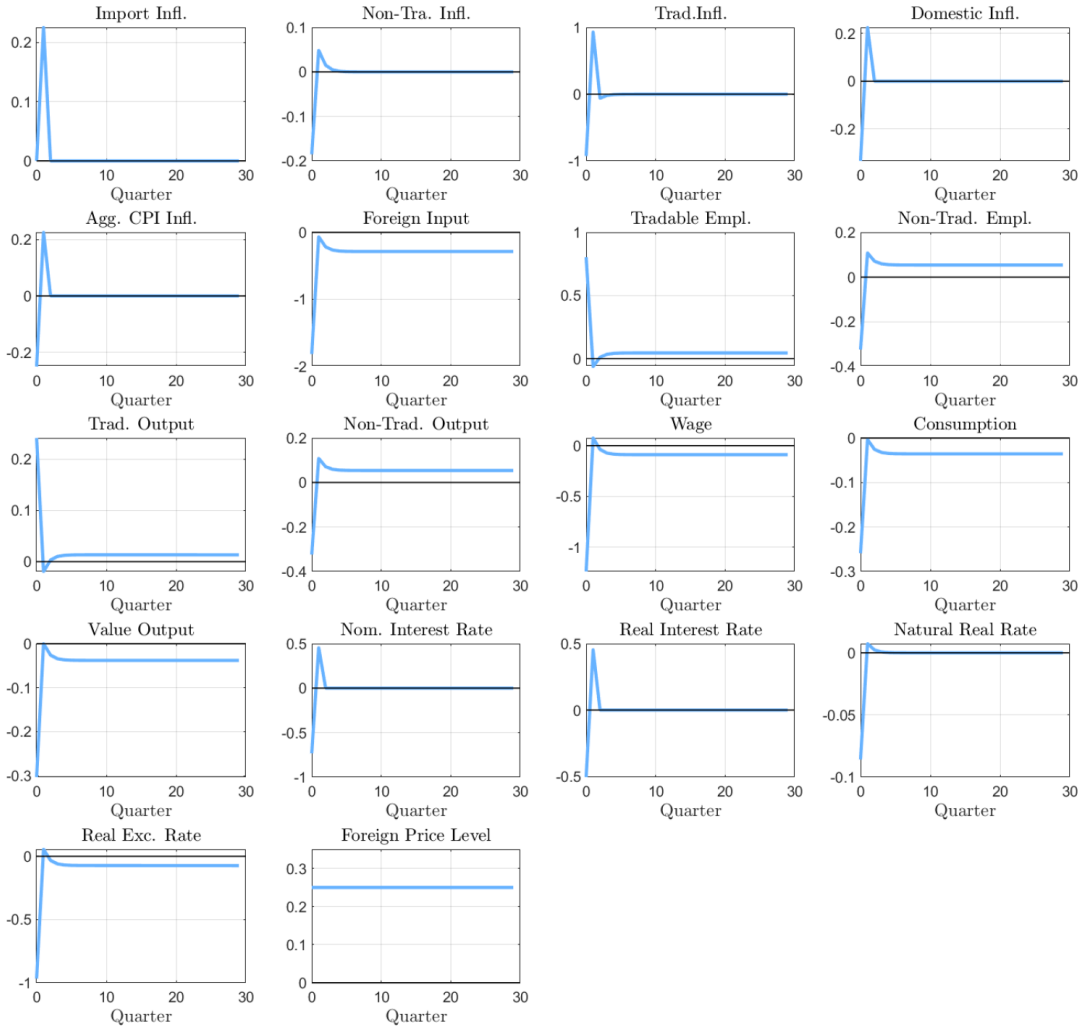


alpha=0.25, trade share explains and 1:10 transmission explains peak difference

Inflation Mechanism: Scenario 2

Front-loaded increase in foreign prices: initial inflation



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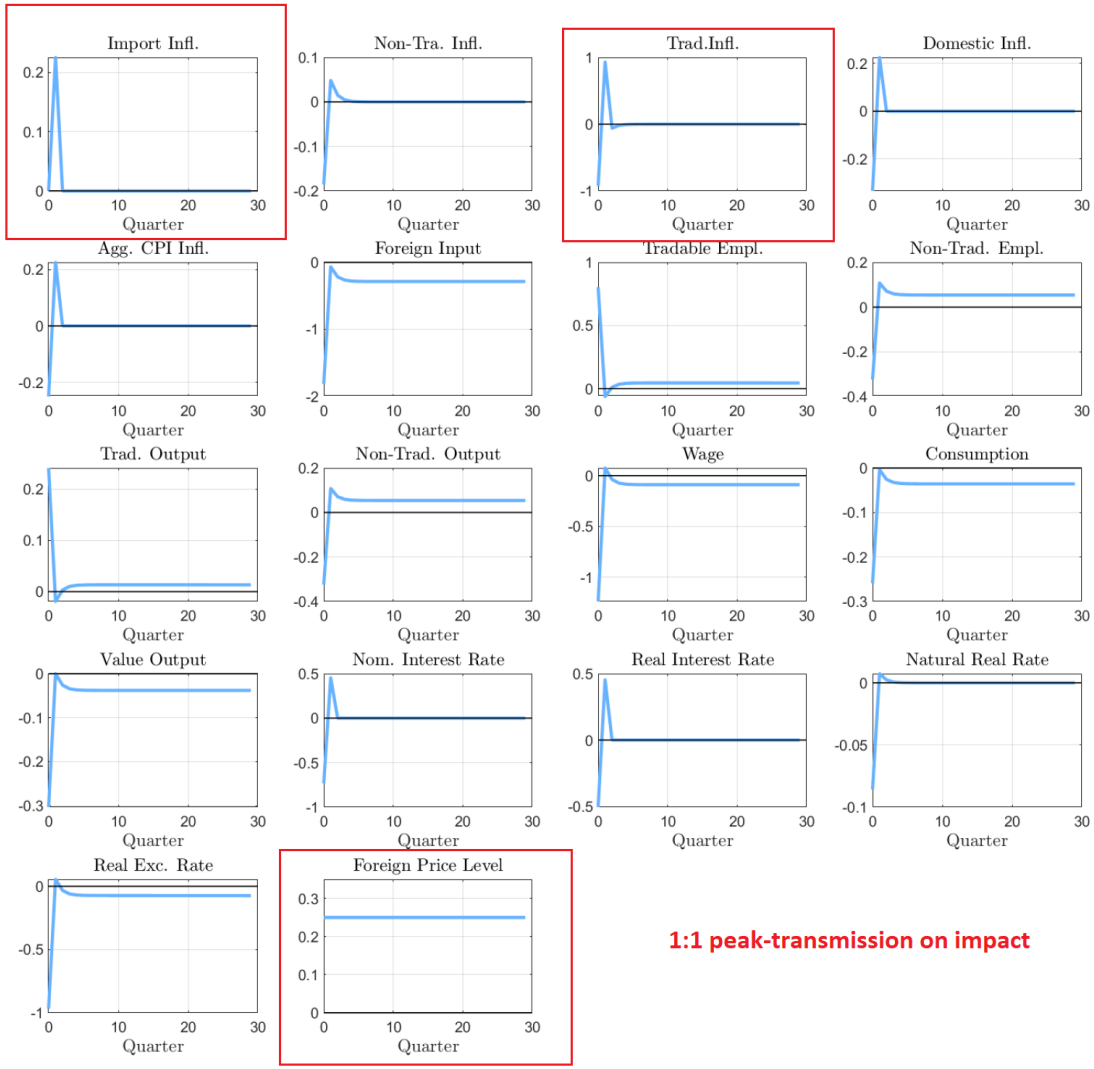

1:1 peak-transmission on impact

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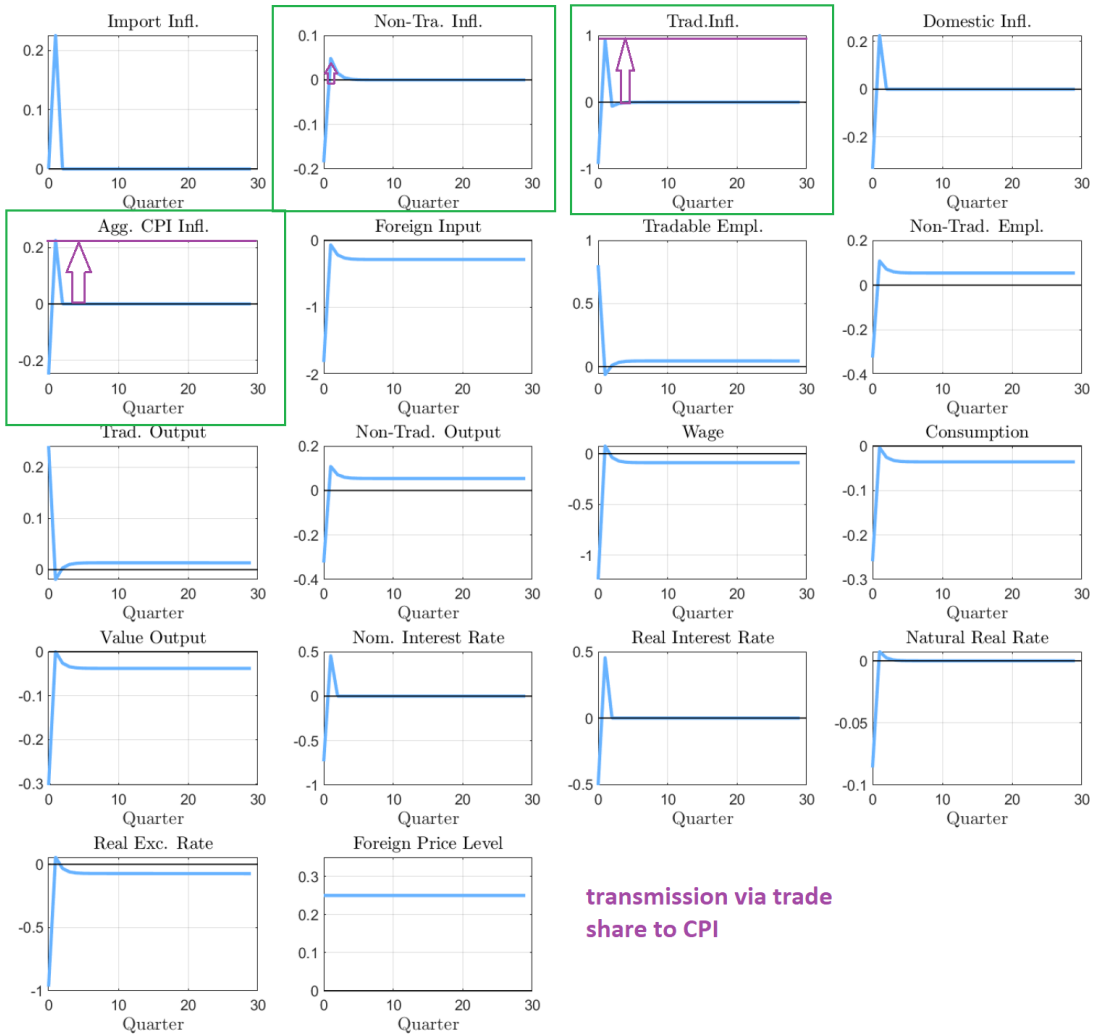

Comment: Non-traded, Intermediates, Traded and TFP

Production functions:

$$Y_{N,t}(i) = A_{N,t} M_{F,t}^{\kappa}(i) N_{N,t}^{1-\kappa}(i), \quad Y_{N,t} \equiv \left(\int_0^1 Y_{N,t}(i)^{\frac{\epsilon-1}{\epsilon}} di \right)^{\frac{\epsilon}{\epsilon-1}}$$

- Intermediates only in N, elastcity of substitution 1 and M-share κ

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$$MC_{N,t}(i) = \frac{W_t^{1-\kappa} P_{F,t}^{\kappa}}{A_t} \left[\left(\frac{\kappa}{(1-\kappa)} \right)^{1-\kappa} + \left(\frac{(1-\kappa)}{\kappa} \right)^{\kappa} \right]$$

$\rightarrow$ Where is exchange rate? Rise in P_{Ft} includes exchange rate?

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$\rightarrow$ Where is exchange rate? Rise in P_{Ft} includes exchange rate? Contrast with specification of Traded goods:

$$Y_{T,t} = A_{T,t} N_{T,t}^{1-\zeta}$$

- Perhaps too simplistic? Is there a price increase for these goods that lower foreign demand?
- Productivity $A_{T,t}$ in TFP scenario (not $A_{N,t}$)

Comment: Labor markets

Consumer Focs and aggregator determines reaction of labor markets to shocks:

$$N_t^{\phi} = \left(\frac{\epsilon - 1}{\epsilon} \frac{A_{N,t} p_{N,t}}{\Gamma} p_{F,t}^{-\kappa} \right)^{\frac{1}{1-\kappa}} C_t^{-\sigma},$$

$$C_t \equiv \left[(1-\alpha)^{\frac{1}{\eta}} C_{H,t}^{\frac{\eta-1}{\eta}} + \alpha^{\frac{1}{\eta}} C_{F,t}^{\frac{\eta-1}{\eta}} \right]^{\frac{\eta}{\eta-1}}$$

$$C_{H,t} = \left[(1-\gamma)^{\frac{1}{\nu}} C_{N,t}^{\frac{\nu-1}{\nu}} + \gamma^{\frac{1}{\nu}} C_{T,t}^{\frac{\nu-1}{\nu}} \right]^{\frac{\nu-1}{\nu}}$$

Many elasticities required to be just right:

- Frisch Elasticity ψ: are you willing to adjust working hours?
- Intertemporal elasticity σ: are you willing to save?
- Trade elasticities η, ν: Can you substitute goods ?

Calibration

Parameter	Benchmark Model	Parameter	Benchmark Model
β	0.99	χ	0.00001
α	0.25	ϕ_π	2
ϵ	6	ϕ_y	0
η	1	ρ_s	0.9
ν	1	ξ	28.003
λ	0.3	ζ	0.7
γ	0.2	ϕ	1
σ	4	κ	≈ 0

If you want to emphasize the labor market channel you need robustness checks, at least in the Appendix.

$\rightarrow$ just footnotes are not enough as quantitative magnitude could differ quite a bit