Consumption Reallocation and the Natural Rate of Interest

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Research Question

- How does a permanent shift towards durable expenditure affect the natural rate of interest?

Model Description

Representative Household:

A representative household chooses C_t, D_t, X_t, and a_t to maximize

$$\mathbb{E}_0 \sum_{t=0}^{\infty} \left[\frac{C_t^{1-\sigma}}{1-\sigma} + \nu_t \frac{D_t^{1-\gamma}}{1-\gamma} \right] \quad \text{s.t.}$$

(1) budget constraint

(2) law of motion of durable good:

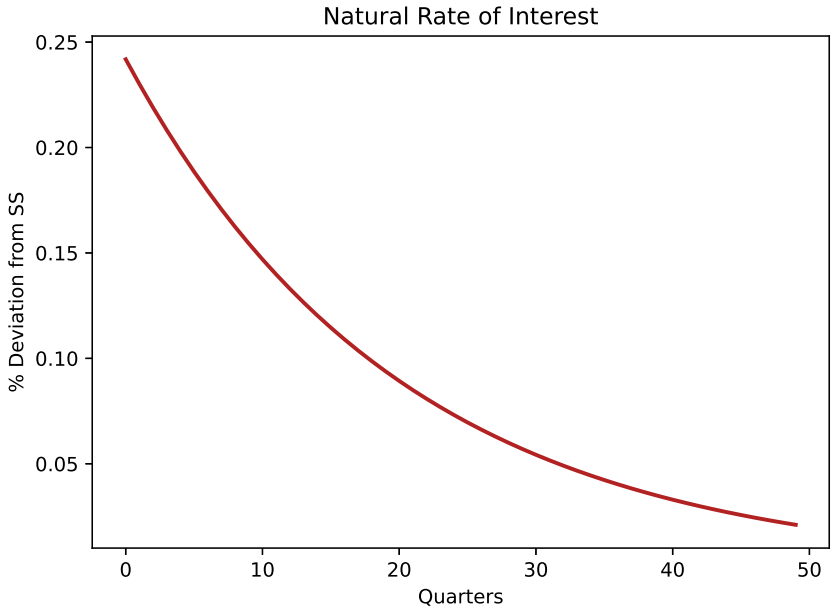
$$D_t = (1-\delta) D_{t-1} + \phi \left(\frac{X_t}{D_{t-1}} \right) D_{t-1}$$

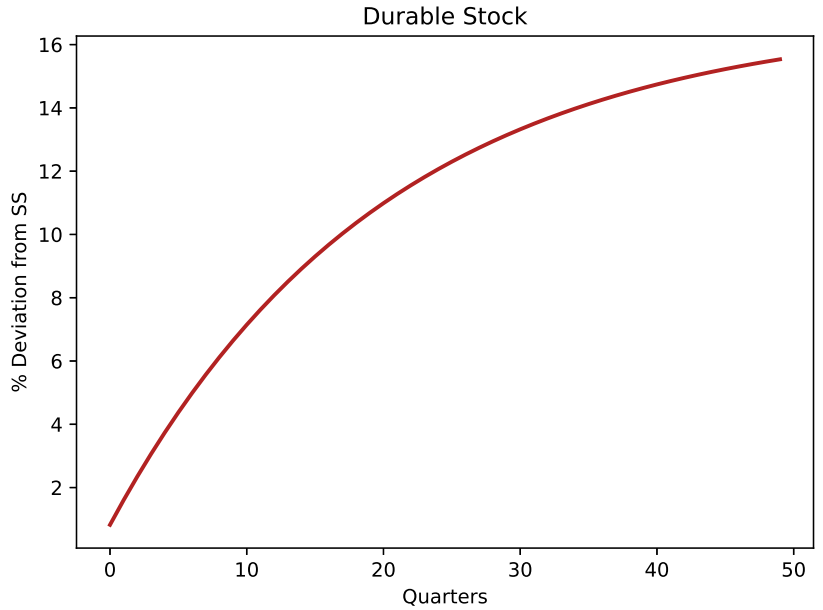
Representative Firm:

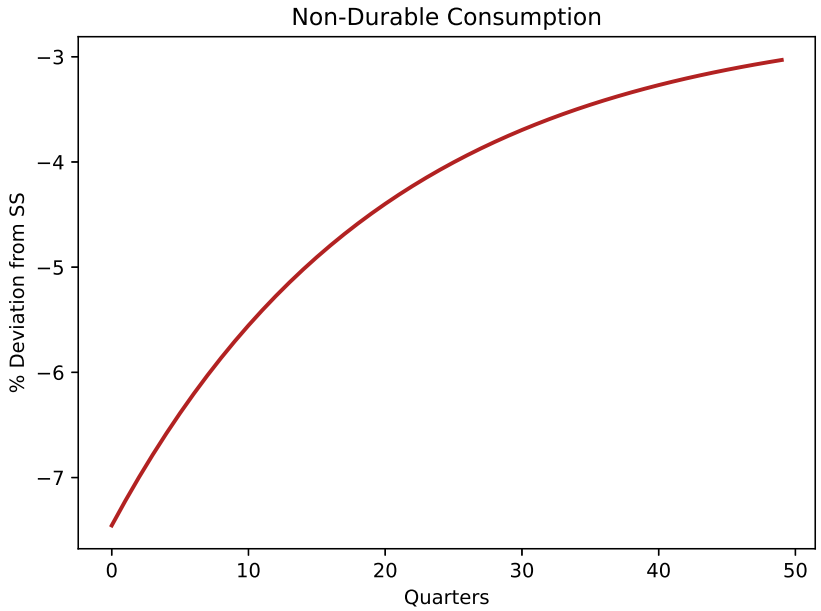
Non-durable good producer and durable good producer

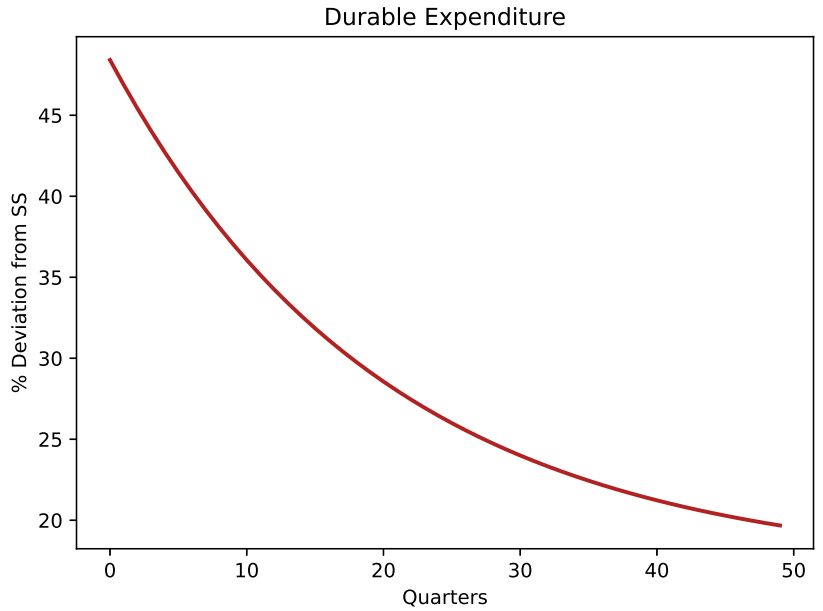
- Output linear in labor
- Perfectly mobile labor

Results: No adjustment costs

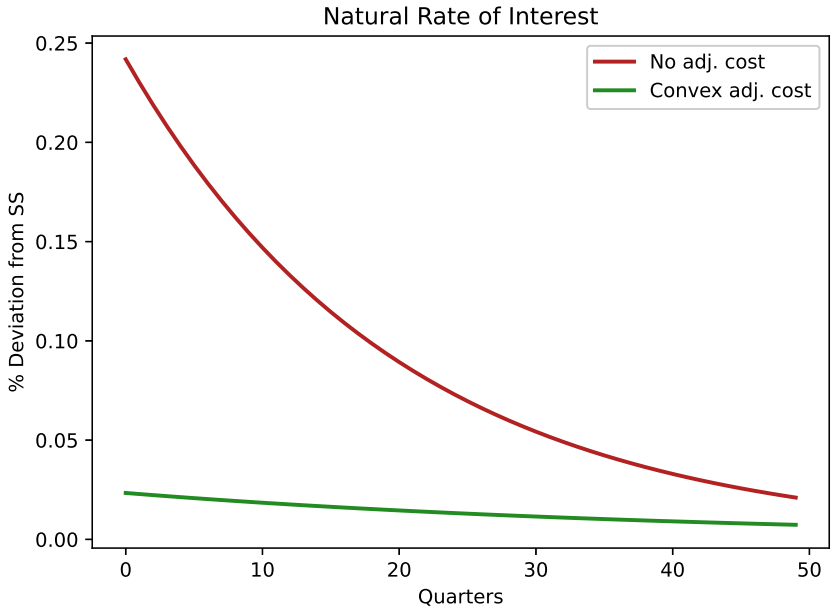


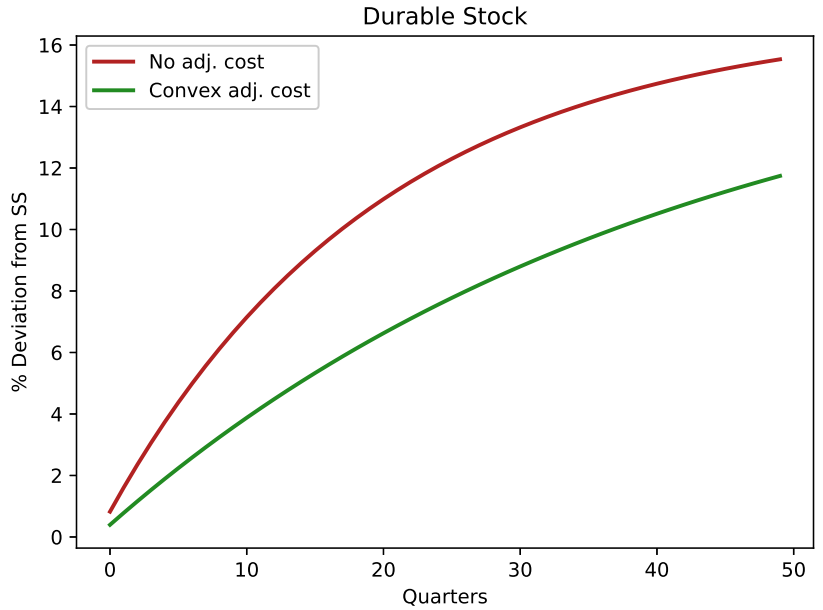


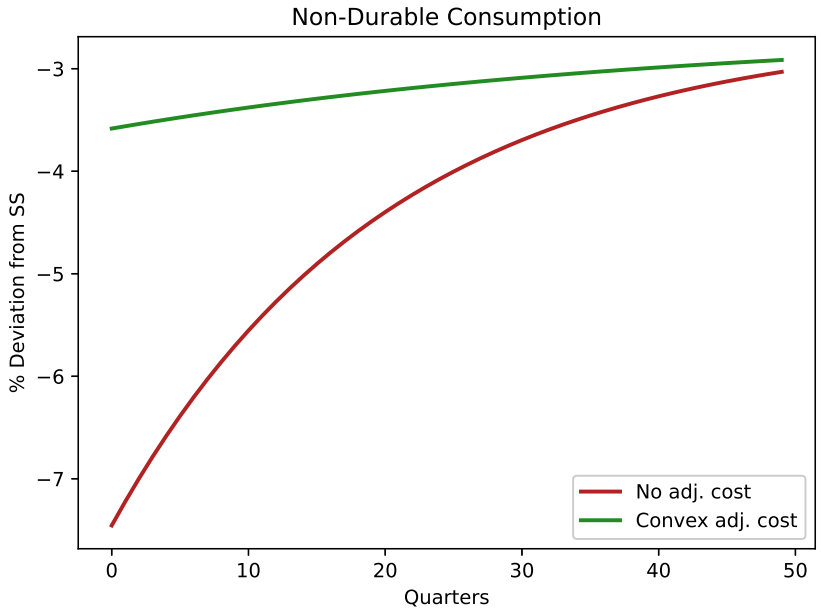


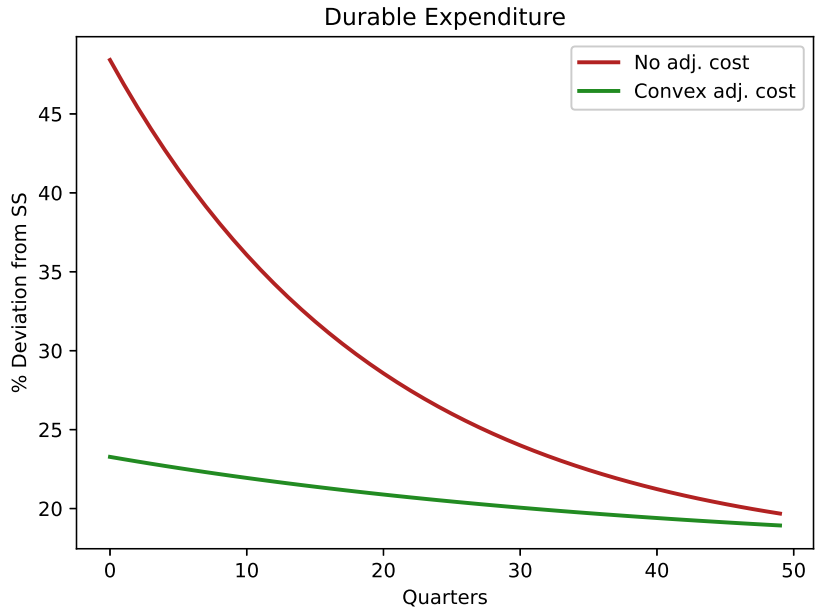


Results: Convex adjustment costs









Future Work

- Shift to remote work since COVID-19
  $\Rightarrow$ Edged-up natural rate of interest (Benigno et al. 2024)
  - ▷ Shift to remote work $\Rightarrow$ Shift towards durables (Mondragon & Wieland WP)
  - ▷ Non-durables price $\uparrow$ (relax CRS) and $r^* \uparrow$
  - ▷ Monetary policy $\Rightarrow$ Persistence in the path of r^* (McKay & Wieland 2021)
  - ▷ Fiscal policy to control for strong government response during COVID
- Optimal monetary policy