Discussion of
Fiscal Unions
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Simple model

- Utility: \[ U = \frac{1}{1-\sigma} C^{1-\sigma} - \frac{1}{1+\varphi} N^{1+\varphi} \]

where \[ C = \left[ \alpha C^\theta_T + (1 - \alpha) C^\theta_N \right]^{\frac{\theta}{\theta-1}} \]

Special case: \( \varphi = \theta = 0 \)

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<th>Tradables</th>
<th>Non-tradables</th>
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<td>( C_T = \tilde{C}_T + \Delta )</td>
<td>( C_N + G = Y_N = A_N N )</td>
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<tr>
<td>( P_T = \mathcal{E} \cdot P_T^* )</td>
<td>( P_N = (1 - \varsigma^p) W / A_N )</td>
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- Demand side: \( C_N = \left( \frac{P_N}{P_T} \right)^{-\theta} C_T \)

- Wage rate: \( W = \tilde{W}^{1-\lambda} \bar{W}^\lambda \), \[ C^\sigma N^\varphi = \frac{\tilde{W}}{P} \]
Allocations
Under $\sigma = \theta = 0$

1. Flexible wage $\tilde{W}$ (first best):

$$\tilde{N} = \frac{\tilde{C}_T}{\tilde{W}} = \tilde{C}_T \frac{\sigma}{\alpha + \sigma} A_N \frac{\sigma - (1 - \alpha)}{\alpha + \sigma}$$

2. Laissez-faire: if $\bar{W} > \tilde{W}$, then $\tilde{N} = \frac{\tilde{C}_T}{\bar{W}} < \tilde{N}$ (labor wedge)
   - $P_N/P_T$ too high
   - as a result, $C_N$ and $N$ too low

3. Policy with sticky wages:

$$N = \left( \frac{\mathcal{E} \cdot P_T^*}{(1 - \varsigma^p) W} \right) (\tilde{C}_T + \Delta) + G$$

   to reduce labor wedge: $\tilde{N} < N \leq \tilde{N}$
\[ N = \left( \frac{\mathcal{E} \cdot P_T^*}{(1 - \varsigma_p)W} \right) (\tilde{C}_T + \Delta) + G \]

- **First-best policies** — directly offsets the distortion \((N = \tilde{N})\):
  1. Nominal devaluation: \(\mathcal{E}\) (infeasible)
  2. Union-wide inflation: \(P_T^*\) (only if downwards stickiness; SGU)
  3. Fiscal devaluation: payroll subsidy \(\varsigma^P\) (together with VAT; FGI)

- **Second-best policy** — distorts some other margin to alleviate the distortion \((\tilde{N} < N < \tilde{N})\):
  1. Fiscal Union (EW2): \(\Delta\) distorts risk-sharing across countries
  2. Fiscal multiplier (EW3): \(G\) distorts intratemporal allocation
  3. Capital controls (EW1): \(W\) by distorting intertemporal allocation (and risk-sharing) — ex ante policy

\[ \tilde{W} = W_{t-1}, \quad W_{t-1}^\alpha A^1_{N,t-1} = C_{t-1}^\sigma = \frac{C_t^\sigma}{\beta[1 + r^*(1 + \varsigma^{CC})]} \]
\[ N = \left( \frac{\mathcal{E} \cdot P^*_T}{(1 - \zeta^p)W} \right) (\tilde{C}_T + \Delta) + G \]

- **First-best policies** — directly offsets the distortion \((N = \tilde{N})\):
- **Second-best policy** — distorts some other margin to alleviate the distortion \((\tilde{N} < N < \tilde{N})\):
  1. Fiscal Union (EW2): \(\Delta\) distorts risk-sharing across countries
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- **Second-best versus (Ramsey) constrained-efficiency view:**
  - distort risk-sharing to reduce labor wedge
  - not enough or too much insurance?
- **Rank second-best instruments**
Fiscal Union

- Fiscal transfer policy $\Delta \neq 0$ for $N > \bar{N}$:

$$A_N N = h \left( \frac{\tilde{W}^{1-\lambda} \tilde{W}^\lambda}{A_N} \right) (\tilde{C}_T + \Delta),$$

where $\tilde{W} = PC^\sigma N^\varphi$

- Does one always give $\Delta > 0$ to increase $N$?
- No:

$$\frac{dN}{d\Delta} = 1 - (1 - \lambda) \frac{\theta (\varphi + \sigma)}{1 + \varphi \theta}$$

or

$$\frac{dN}{d\Delta} < 0 \text{ iff } \lambda < \frac{\sigma - \frac{1}{\theta}}{\sigma + \varphi}$$

- sometimes a transfer away from the country in a recession
- similar but not the same as in the dynamic model ($\sigma = \theta = 1$)?
Dynamic model

• Key insight: $\Delta > 0$ when ToT need to depreciate ($\tilde{S}_i \uparrow$)
  — to proxy for expenditure shifting (by means of home bias)

• When prices are sticky: $\tilde{S}_i \uparrow$ when $A_i \uparrow$
  — too little (much) output when productivity is high (low)
  — a transfer towards Germany away from Spain?

• When wages are sticky (and $\sigma > 1$): $\tilde{S}_i \uparrow$ when $A_i \downarrow$
  — too little output when productivity is low
  — a transfer towards Spain!
Outside the model

is there a case for a $\Delta > 0$ for Spain?

- Is $\Delta > 0$ a good instrument?
- $N \uparrow$ (reduces labor wedge), but also $W \uparrow$ (worsens the source of the problems)
Outside the model
is there a case for a $\Delta > 0$ for Spain?

• Is $\Delta > 0$ a good instrument?

• $N \uparrow$ (reduces labor wedge), but also $W \uparrow$ (worsens the source of the problems)

• Imagine an extension: production in tradable sector

$$\Pi_T = \left( P_T^* \mathcal{E} - \frac{W}{A_T} \right) N_T$$

Two sides of the wage distortion:

— $W$ too high and hence $N$ too low ($\Delta > 0$ helps)
— $N_T/N_{NT}$ too low ($\Delta > 0$ reduces further)

• Imagine a second friction from $N_T$ being too low:
  — Financial friction in the tradable sector (Caballero-Lorenzoni)
  — Spanish version of Dutch decease (Luis Garicano)

• $W \downarrow$ policies more potent (deal with both distortions)