

Discussion of
Fiscal Unions

BY EMMANUEL FARHI AND IVÁN WERNING

OLEG ITSKHOKI
Princeton University

NBER
Chicago Fed
December 2012

Simple model

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

where
$$C = \left[\alpha C_T^{\frac{\theta-1}{\theta}} + (1-\alpha) C_N^{\frac{\theta-1}{\theta}} \right]^{\frac{\theta}{\theta-1}}$$

Special case: $\varphi = \theta = 0$

Tradables	Non-tradables
$C_T = \tilde{C}_T + \Delta$	$C_N + G = Y_N = A_N N$
$P_T = \mathcal{E} \cdot P_T^*$	$P_N = (1 - \zeta^P) W / A_N$

- Demand side:
$$C_N = \left(\frac{P_N}{P_T} \right)^{-\theta} C_T$$
- Wage rate:
$$W = \tilde{W}^{1-\lambda} \bar{W}^\lambda, \quad C^\sigma N^\varphi = \frac{\tilde{W}}{P}$$

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 $\bar{N} = \frac{\tilde{C}_T}{\bar{W}} < \tilde{N}$ (*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: $\bar{N} < N \leq \tilde{N}$

Policies

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

- **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 ς^P (together with VAT; FGI)
- **Second-best policy** — distorts some other margin to alleviate the distortion ($\bar{N} < N < \tilde{N}$):
 - ① Fiscal Union (EW2): Δ 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

$$\bar{W} = W_{t-1}, \quad W_{t-1}^\alpha A_{N,t-1}^{1-\alpha} = C_{t-1}^\sigma = \frac{C_t^\sigma}{\beta[1 + r^*(1 + \varsigma^{CC})]}$$

Policies

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

- **First-best policies** — directly offsets the distortion ($N = \tilde{N}$):
- **Second-best policy** — distorts some other margin to alleviate the distortion ($\bar{N} < N < \tilde{N}$):
 - ① Fiscal Union (EW2): Δ 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
- **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 $N > \bar{N}$:

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

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

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

- 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

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

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 disease (Luis Garicano)
- $W \downarrow$ policies more potent (deal with both distortions)