Project FIRSTRUN (G.A. 649261) funded by Horizon 2020

Fiscal Policy Coordination and Deleveraging

Financed through the project FIRSTRUN (Grant Agreement 649261), funded by the Horizon 2020 Framework Programme of the European Union.

Alexandre Lucas Cole, Chiara Guerello and Guido Traficante

LUISS Guido Carli (Rome)

FIRSTRUN Final Conference
January 29^{th} 2018
CEPS (Brussels)

Motivation

- Global economic crisis $\longrightarrow$ future of European economic integration
  $\Longrightarrow$ **need for fiscal policy coordination in Euro Area?**

- One monetary policy in EMU $\longrightarrow$ address Euro-wide shocks
  $\Longrightarrow$ **country-specific fiscal policies $\longrightarrow$ address country-specific shocks?**

- Sovereign debt crisis in Euro Area
  $\Longrightarrow$ **best way and timing for deleveraging?**

Strategy

A two-Country DSGE model of a Currency Union
$\Longrightarrow$ analyze **stabilization properties** of scenarios for coordination

Calibrated to mimic:

- Germany (Country H)
- The Rest of the Euro Area (Country F)

Two setups:

- **Balanced-budget fiscal policies in both countries**
  + complete international financial markets
  $\Longrightarrow$ **analyze gains from fiscal policy coordination**

- **Government debt deleveraging in the Rest of the Euro Area**
  + Germany balances the budget
  + incomplete international financial markets
  $\Longrightarrow$ **evaluate different deleveraging schemes and instruments**

Setup for Coordination

Three degrees of fiscal policy coordination:

- **Pure Currency Union**: Independent fiscal policy $\longrightarrow$ no coordination
  $\Longrightarrow$ **government consumption reduces output gap**
- **Coordinated Currency Union**: Countries coordinate
  $\Longrightarrow$ **government consumption reduces net exports gap**
- **Full Fiscal Union**: Government consumption reduces net exports gap
  $+$ **government budget constraint is consolidated**
  $+$ **financed by symmetric movements in tax rates across countries**
  $\Longrightarrow$ sharing costs of government spending

Coordination - Results

Governments keep real debt constant
$+$ fiscal policy is financed by movements in taxes
$+$ international financial markets are complete:

- Reducing output gap $\longrightarrow$ more distortions
  reducing net exports gap $\Longrightarrow$ more stabilization

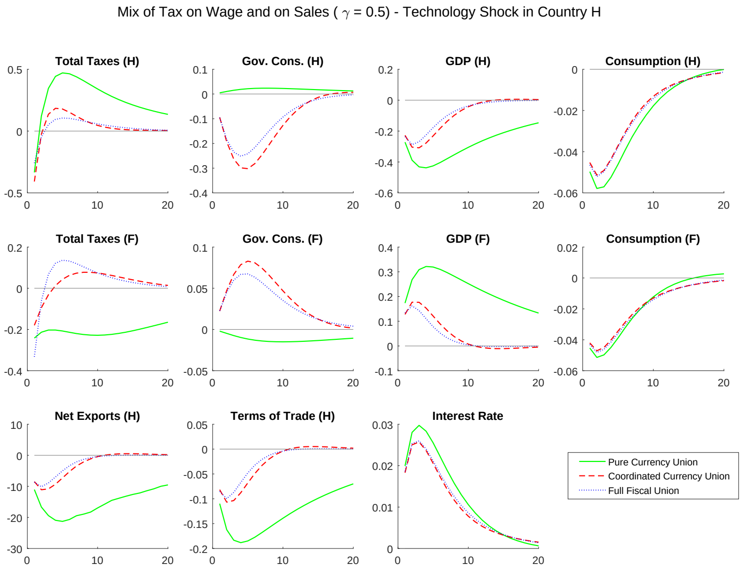
- Reducing net exports gap
  $+$ **consolidating budget constraints**
  $+$ **symmetric movements of tax rates across countries**
  $\Longrightarrow$ **even more stabilization**

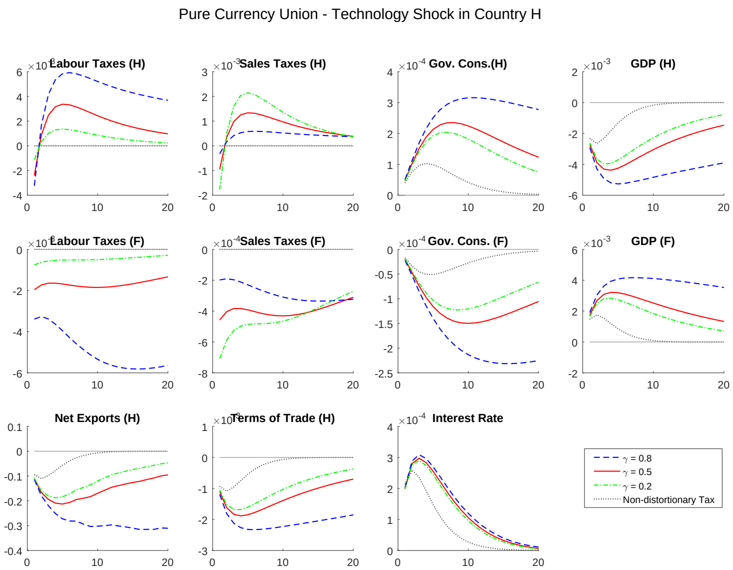
- Taxes on labour income to finance fiscal policy $\longrightarrow$ more distortions
  taxes on firm sales $\Longrightarrow$ more stabilization

Coordination - Key Mechanisms

- **Negative technology shock in country H**
  $\Longrightarrow$ increase in prices + decrease in output
- **Prices in country H are more flexible** $\longrightarrow$ terms of trade fall
  $\Longrightarrow$ fall in net exports + recession for country H + boom for country F
- **Pure Currency Union**: opposite movements across countries of output, government consumption and taxes $\Longrightarrow$ **big movements in terms of trade**
- **Coordinated Currency Union**: opposite movements across countries of output and government consumption + taxes move in the same direction
  $\Longrightarrow$ **less movements in terms of trade**
- **Full Fiscal Union**: symmetric movement in tax rates
  $\Longrightarrow$ **terms of trade are even more stable**
- **Fiscal policy financing**:
  tax rate on labour income $\longrightarrow$ affects mainly output through labour supply
  tax rate on firm sales $\longrightarrow$ affects mainly prices through price setting

Coordination - Simulation




Pure Currency Union - Technology Shock in Country H
Labour Taxes (H)
Sales Taxes (H)
Gov. Cons.(H)
GDP (H)
Labour Taxes (F)
Sales Taxes (F)
Gov. Cons. (F)
GDP (F)
Net Exports (H)
Terms of Trade (H)
Interest Rate
γ = 0.8
γ = 0.5
γ = 0.2
Non-distortionary Tax

Setup for Deleveraging

Three degrees of fiscal policy coordination with deleveraging:

- **Pure Currency Union**: Government consumption reduces output gap
  + **taxes or transfers reduce government debt in Rest of the Euro Area**
  + **taxes balances the budget in Germany**

- **Coordinated Currency Union**:
  Government consumption reduces net exports gap
  + taxes or transfers reduce government debt in Rest of the Euro Area
  + taxes balance the budget in Germany

- **Full Fiscal Union**: Government consumption reduces net exports gap
  + taxes or transfers reduce government debt in Rest of the Euro Area
  + taxes balance the budget in Germany
  + **government budget constraint is consolidated**
  + **financed by symmetric movements in tax rates across countries**
  $\Longrightarrow$ sharing the costs of government spending and deleveraging

Deleveraging - Results

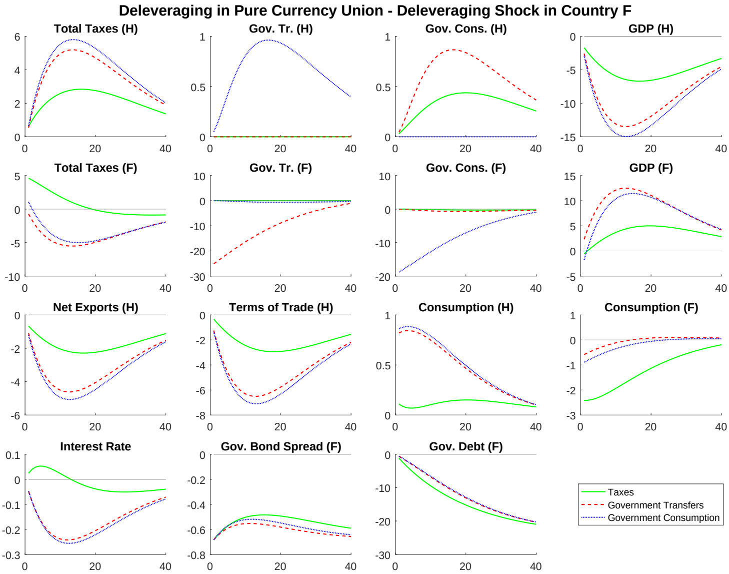
Germany keeps real debt constant
$+$ Rest of the Euro Area deleverages government debt
$+$ debt-elastic government bond spread (higher interest rate for higher debt):

- **Reducing net exports gap $\Longrightarrow$ more stabilization**
  creating some form of fiscal union $\Longrightarrow$ often more stabilization
- **Using distortionary taxes to deleverage $\Longrightarrow$ more stabilization**
  $\Longrightarrow$ counteracts deflationary effect of deleveraging shock

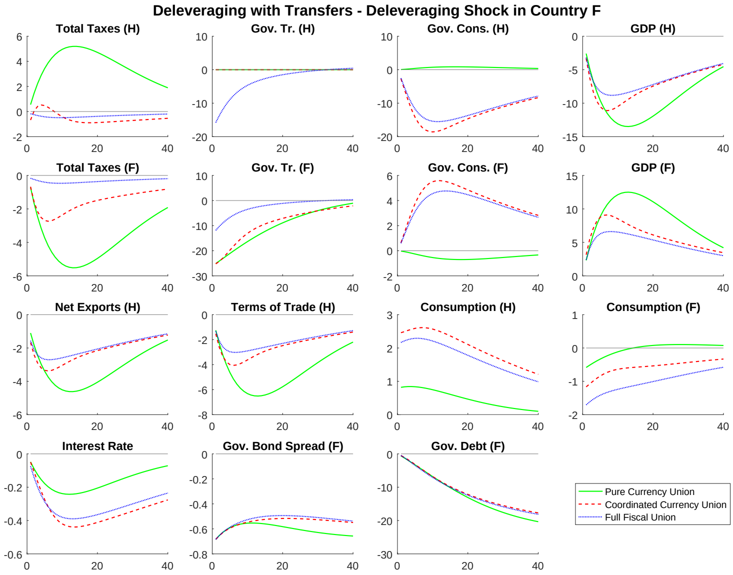
Deleveraging - Key Mechanisms

- **Negative debt target shock in country F from 80% to 60%**
  $\longrightarrow$ debt is reduced by 5% of the excess over 60% each year
- **Deleveraging with transfers**:
  In country F transfers decrease $\longrightarrow$ private consumption decreases
  $\longrightarrow$ prices fall + labour supply increases
  $\Longrightarrow$ **output increases** $\Longrightarrow$ **taxes fall**
  In country H interest rate falls $\longrightarrow$ private consumption increases
  $\longrightarrow$ labour supply decreases
  $\Longrightarrow$ **output falls** $\Longrightarrow$ **taxes increase**
- **Prices in country H are more flexible** $\longrightarrow$ terms of trade fall
  $\Longrightarrow$ fall in net exports + recession for country H + boom for country F
- **Deleveraging with taxes**: opposite movements across countries of output and private consumption + **taxes move in the same direction**
  $\Longrightarrow$ **less movements in terms of trade and net exports**

Instruments for Deleveraging - Simulation



Coordination with Deleveraging - Simulation



Policy prescriptions for the Euro Area

- Countries in Euro Area should reduce international demand imbalances
  $\Longrightarrow$ **by reducing net exports gap**
  $\Longrightarrow$ **by creating a fiscal union with common budget and taxation**

- To finance fiscal policy or deleveraging
  $\Longrightarrow$ **increase sales taxes, rather than labour taxes**
  $\Longrightarrow$ sales taxes are less distortive than labour taxes

- **Deleverage using distortionary taxes $\Longrightarrow$ more stabilization**
  $\Longrightarrow$ dampens the deflationary pressure.

The End

Thank you for your attention!