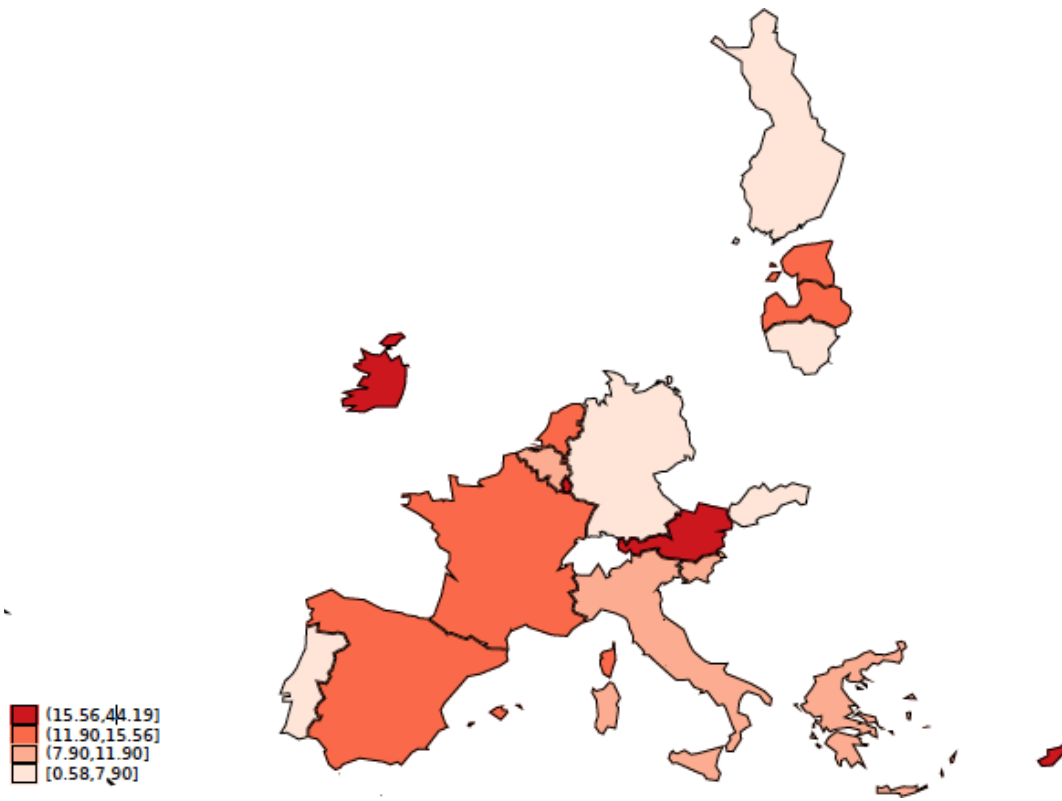


Discussion of “Labor Mobility within Currency Unions” by E. Farhi
and I. Werning

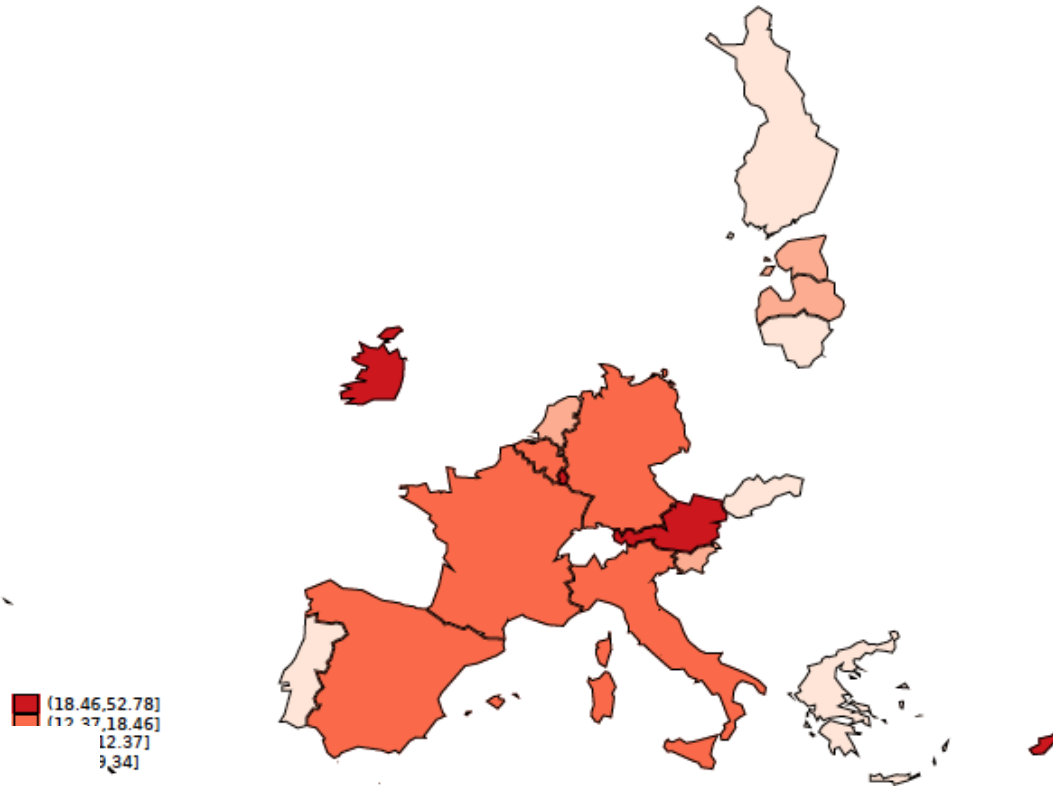
Tano Santos

Columbia University

Bank of Spain – September, 2019

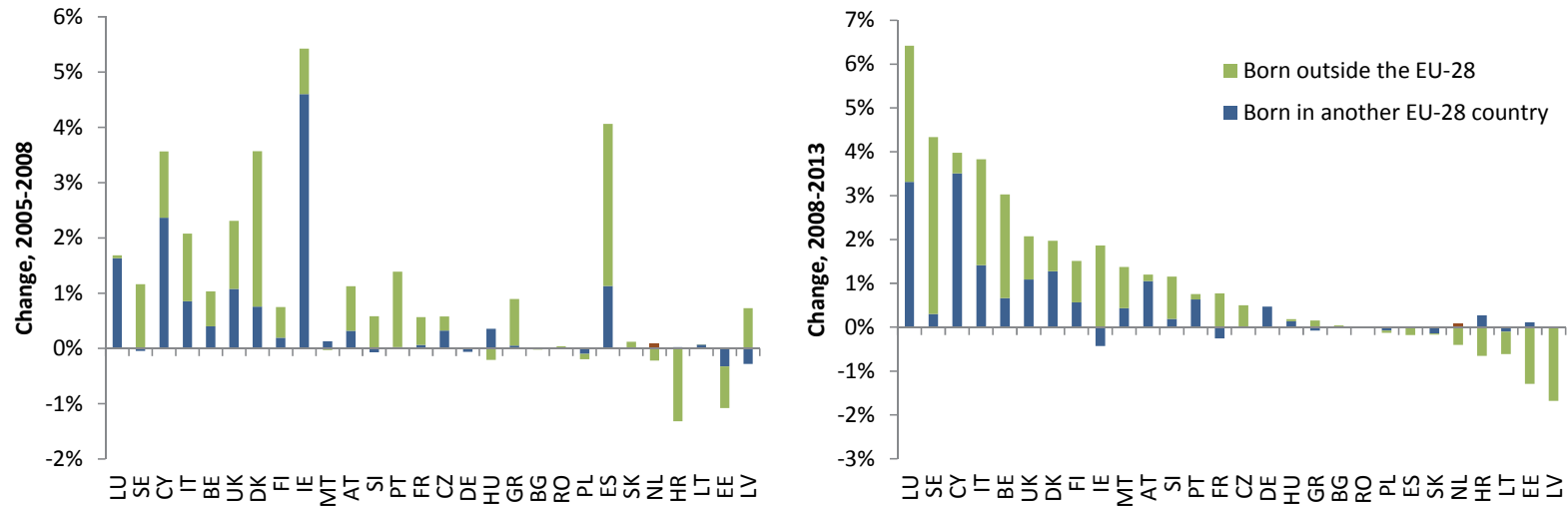


Eurozone – 2007: Share of foreign born in the population
 Source: Basso, D’Amuri and Peri (2019)



Eurozone – 2017: Share of foreign born in the population
 Source: Basso, D’Amuri and Peri (2019)

Graph 3: Change in the share of working-age population born abroad, before and during the crisis



(1) For BG, DE and IE, 2006 instead of 2005. For DE, the value is for all foreigners, no breakdown available. Countries are ranked according to change 2008-2013.

Source: Own calculations based on a Eurostat special extraction from LFS.

Source: Arpaia, Kiss, Palvolgyi and Turrini (2014, European Commission)

Mundell 1.0: Labor mobility and monetary policy

- Consider two countries, \mathcal{A} and \mathcal{B} , producing different goods and having demand for each other's goods. Assume
 - No capital mobility, downward rigidities in prices and wages and that central banks act to prevent inflation
- Two types of shocks:
 1. Assume a “boom” in country \mathcal{A} that raises the aggregate demand there.
 - $\uparrow Y_{\mathcal{A}} \quad \uparrow \pi_{\mathcal{A}} \quad \downarrow NX_{\mathcal{A}}$
 - Monetary policy tightening as a shock absorber
 2. A shift in the demand in country \mathcal{A} away from its own good and to those of \mathcal{B}
 - $\downarrow Y_{\mathcal{A}}(\uparrow u_{\mathcal{A}}) \quad \uparrow Y_{\mathcal{B}}(\uparrow \omega_{\mathcal{B}}) \quad \downarrow \pi_{\mathcal{A}} \quad \uparrow \pi_{\mathcal{B}} \quad \downarrow NX_{\mathcal{A}} \quad \uparrow NX_{\mathcal{B}}$
 - Central bank in \mathcal{B} acts to curb inflation
 - Flexible exchange rates: Strong appreciation of \mathcal{B} 's currency and lower activity and employment in \mathcal{A} restores balance.

- What if the countries form a currency union?
 - In this last case countries can restore balance if there is labor mobility:
 - Workers of country \mathcal{A} can migrate to country \mathcal{B} , relieving the adjustment pressure in country \mathcal{A}
 - Labor migration enlarges the economy of country \mathcal{B} and reduces that of \mathcal{A} .
 - When workers migrate from \mathcal{A} to \mathcal{B} , their (previously internal) demand for goods in \mathcal{A} is externalized, which helps to restore balance.
 - Labor mobility obviates the need of flexible exchange rate adjustment
 - * Corollary: Optimal currency areas are defined by the domain of labor mobility
 - Farhi and Werning:
 - (1) How does labor migration affect those who stay behind? Is it really an effective stabilization tool?
 - (2) Is the amount of mobility optimal?

OCA

- OCA: A checklist
 1. Do the countries have extensive trade relations (tradables vs. non-tradables)?
 2. Do the countries have similar shocks and cycles?
 3. Is there labor mobility between the countries?
 4. Is there a system of risk sharing between the countries?
- The wisdom of the euro (and other currency unions) is typically judged according to the four criteria above.
- Endogeneity of the criteria
 - i. Trade integration and industry specialization
 - ii. Increase in migration elasticity to unemployment gap (Arpaia et al., 2014)

The results

- Traded/non-traded goods, labor mobility and budget balance at the regional level
- Results
 1. **Benchmark:** Demand shortfall is located in the non-tradable sector
 - Migrants take their labor supply but also their purchasing power.
 - Both effects cancel and stayers are left equally off (migrants are better off):
If a region is in a bust ... it remains in a bust
 2. **Mundell:** Assume there are only traded goods. Then if there is an external demand shortfall for a particular region, migration from that region increases the demand for that region's good, increasing employment, activity and consumption on a per-capita basis: Migration makes stayers better off (and cools off activity in receiving country)
 3. **Corollary:** Migrants do not internalize the effect of their leaving on stayers
 - Benchmark: No effect, thus no inefficiency
 - External demand case: Too little mobility

Minor quibbles on preferences

- Section 2 vs. Section 4
- Section 2: Preference orderings for i –agents in region i are the same for j –agents in region i (but, notice, preferences depend on location)
 - Are types “nationals”? Rich heterogeneity in types, but the right heterogeneity?
 - A thought (on which more below): As many types as locations and types are “attached” to locations: Type i enjoys more the consumption of *any* good in location i than in location $-i$
 - A Beckerian preference specification: In the spirit of the times ...

$$\mathcal{U}^i(i, C_{NT,i}, \bar{C}_T, \mu_{i,-i}) \quad \text{with} \quad \frac{\partial \mathcal{U}^i}{\partial \mu_{i,-i}} < 0$$

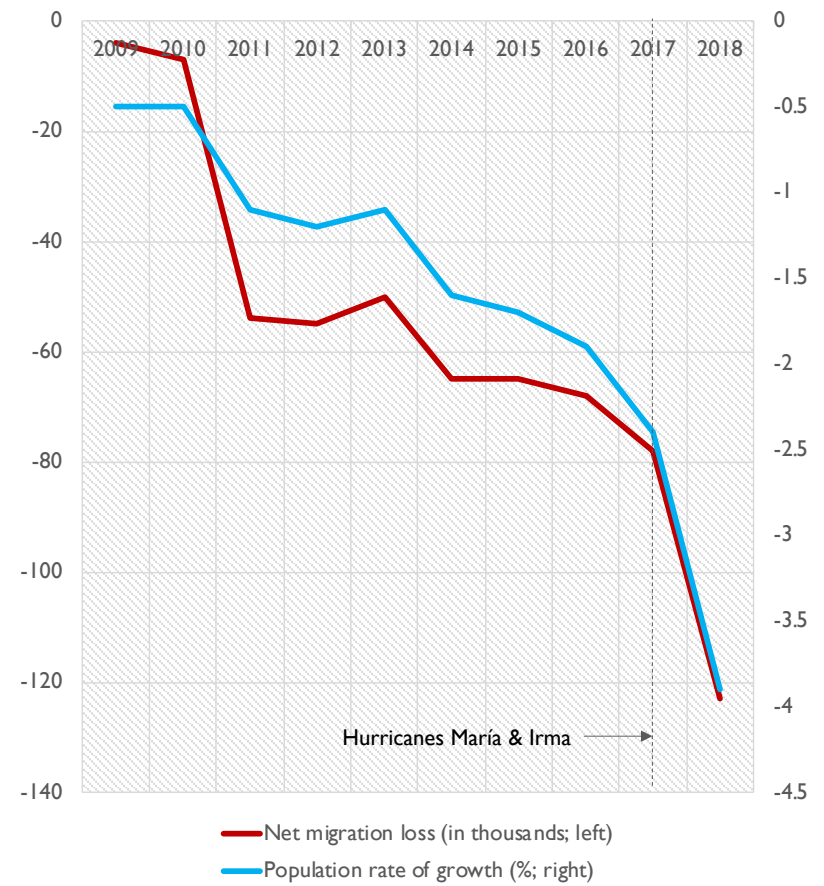
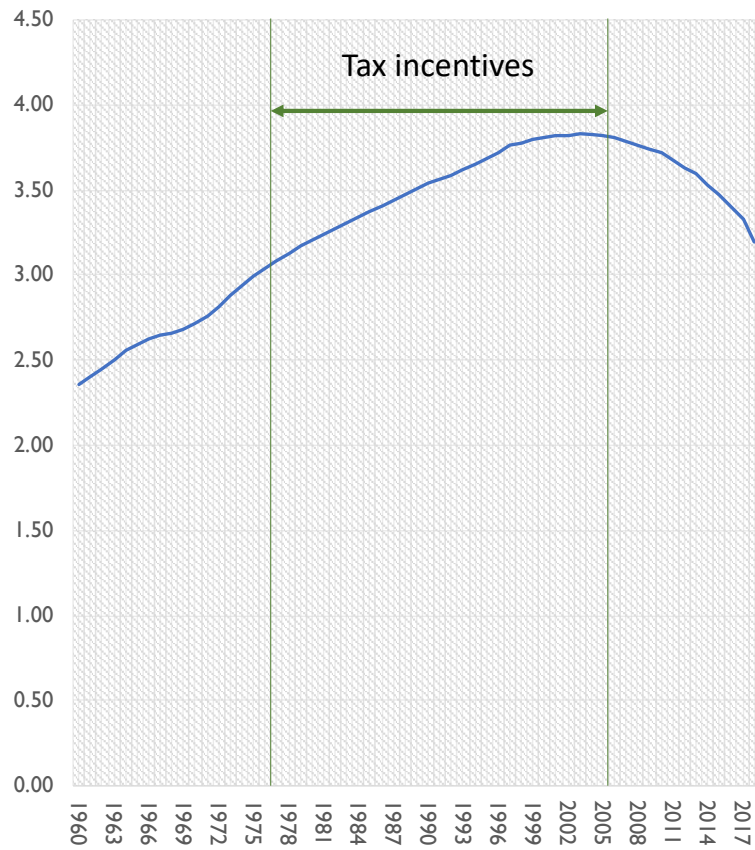
- Section 4: Utility flexible enough to allow *any* degree of home bias in consumption

On the utility of stayers and receivers

- Knife edge case: Mobility does nothing for stayers
- This case seems to me more relevant than what E. and I. are making it to be (more on this below) but ...
- Two caveats

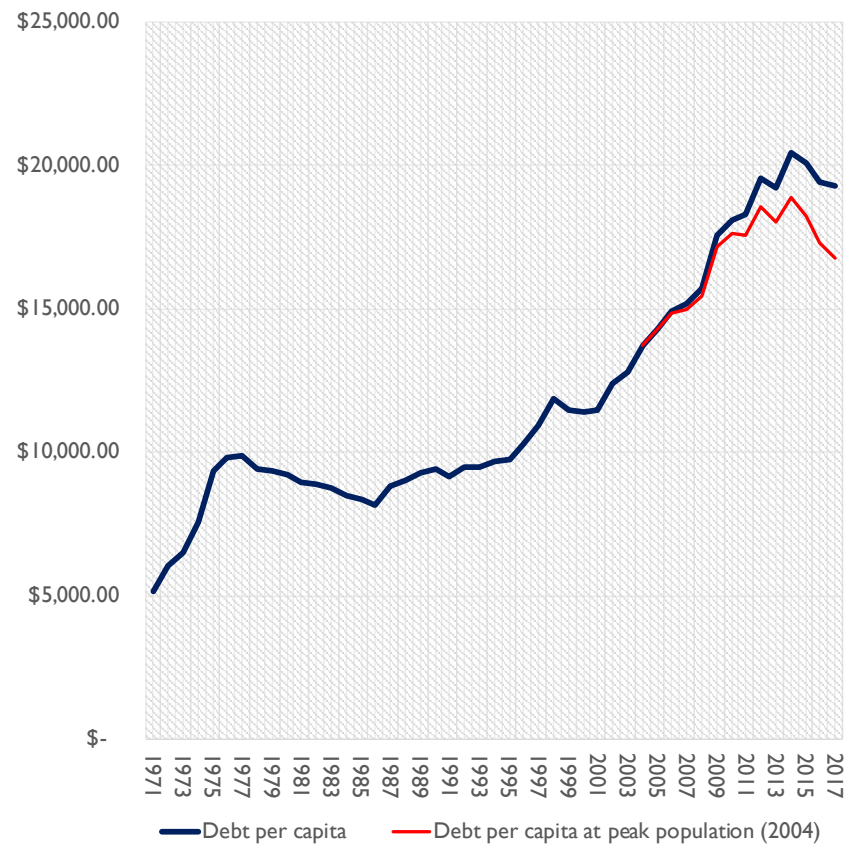
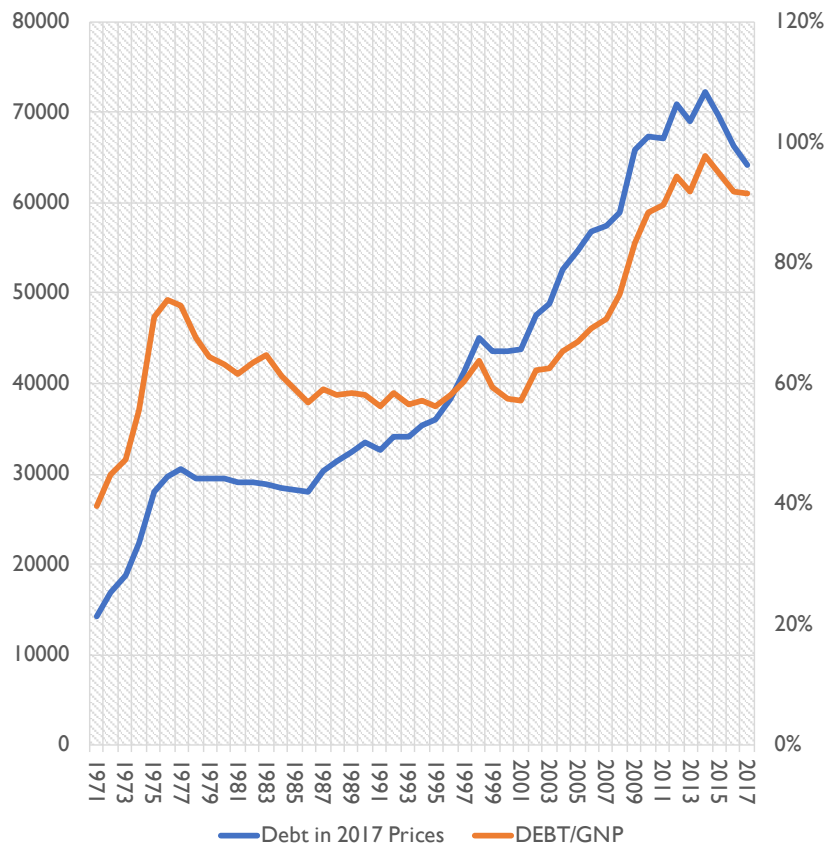
1. Fiscal implications of outward migration

- Increased tax burden on the stayers: associated distortions
- Example: A small open economy in a monetary union with large sovereign liabilities
 - * Difference in debt on a per capita basis due to population loss: \$2,530 in 2017 dollars
 - * Median income: \$19,975
 - * Additional tax burden about 13% of median income.



Puerto Rico: Left Panel: Population in millions: 1960-2018. Right Panel: Population rate of growth (in %; right axis) and net migration in loss (in thousands; left axis): 2009 – 2018.

Data source: World Bank, Population, Total for Puerto retrieved from FRED, Federal Reserve Bank of St. Louis and Pew Research Center



Puerto Rico: Left panel: Total debt (in millions; left) in 2017 dollars and debt to GNP (& right). Right Panel: Total debt per capita and total debt per-capita in the absence of population decline. 1971 – 2017 Source: US Census Bureau

On the utility of stayers and receivers ... in the long run

2. Does it matter for growth?

- Does a spur in immigration matter for the long run rate of growth of the *receiving* country?
- Recall: In the Solow growth model

$$Y_t = K_t^\alpha (A_t L_t)^{1-\alpha} \quad \dot{K}_t = sY_t - \delta \quad L_t = L_0 e^{nt} \quad A_t = A_0 e^{gt} \quad (1)$$

“one time supply shocks” (a one time increase in the labor supply say) do not affect the long run rate of growth of per-capita income, g :

$$\frac{\partial y^*}{\partial L} = 0 \quad \text{where} \quad y_t = \frac{Y_t}{L_t} \quad \text{and} \quad y_t \longrightarrow y^*$$

- In the short run though there is an initial drop in per-capita income, an increase in its rate of growth (as well as a drop in wages and increase the rental price of capital; more on this below)

– Does the skill composition matter?

(i) For the receiver (Mankiw et al. 1992, Borjas, 2019)

$$Y_t = K_t^\alpha H_t^\beta (A_t L_t)^{1-\alpha-\beta} \quad \dot{H}_t = s_H H_t - \delta_H + \mathcal{M}_t \pi \left(\frac{H_t}{L_t} \right) \quad (2)$$

* Relative skill of immigrants: π

* Net migration: \mathcal{M}_t so that $\dot{L}_t = nL_t + \mathcal{M}_t$

* If $m = \frac{\mathcal{M}_t}{L_t} \Rightarrow \dot{L}_t = (n + m) L_t$

* Then

$$\frac{\partial \ln y^*}{\partial m} = -\gamma_0 - \gamma_1 (1 - \pi) \quad \text{with} \quad \gamma_0, \gamma_1 > 0$$

(ii) For the stayer

* “Between 350,000 and 400,000 Greeks, mostly in their 20s and 30s, have emigrated mainly to other EU countries – since 2010. More than two thirds are university graduates.” (Greece brain drain hampers recovery from economic crisis, Financial Times, August 16th, 2018)

OCA and the rise of the service based economy

- To a first degree, labor mobility does not offer relief when the demand shortfall is mostly *internal* demand
- The growth of the service based economy and the decline of manufacturing: Most of the employment, most of the value added. Two points
 1. Open trade in services?
 - EU Services Directive (2006): Implementation
 2. Does it matter? A broad array of services are provided locally (non-tradables):
 - Education, health care, some forms of leisure, local (brick & mortar) retail and distribution, ...
 - Labor mobility thus will help less going forward as relevant shocks are more likely to be internal.

Mundell 2.0: Risk sharing: EMU during the GFC

1. Risk sharing features prominently in Mundell (1973)
 - (a) EMU led to an increase in business cycle synchronization (Frankel/Rose (1998)).
 - (b) And the correlation increased even further during the financial crisis
 - Convergence of optimal policy
 - Failure of risk sharing mechanism: Liability adjustment ($P_{NT,i}(s)$ vs. $D_i(s)$)
 - Missing markets vs. missing institutions: Sovereign bankruptcy court?
 - * US: States vs. Puerto Rico
 - * PROMESA (P. R., US V. I., Guam, Marianas & Samoa)
 - * Debt cram down and fiscal adjustment: Pensions
 - Detroit (2014): General pensioners \longrightarrow 34% cram down
 - Increased importance of labor mobility in the presence of this “failure” of risk sharing mechanism

Mundell – 2: Risk sharing: EMU during the GFC

(c) Correlations drop after the GFC: different recovery paths of respective countries.

- Divergence of optimal policy

2. Risk sharing and labor mobility

- The welfare state reduces incentives for labor mobility in a monetary union
- Increased importance of additional channels of risk sharing

“We asked for workers ...”

- Norris and Inglehart (2019): Impact of immigration on the rise of authoritarian/populist values
 - a. Strong “association” of rapid growth in immigration and authoritarian/populist values
 - Immigrants change and to some extent bring authoritarian values
 - b. Cultural grievances rather than economic insecurity drives these changes on values
 - c. But, even controlling for immigration, age is still the strongest predictor of authoritarian/populist values.
- Max Frisch: “We asked for workers. We got people instead”
 - Peter Catrell, “The unsettling of Europe: How migration reshaped a continent,” Basic Books, New York, 2019.