

Demographic Pressures on European Unity?

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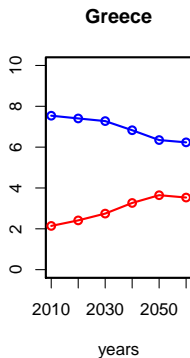
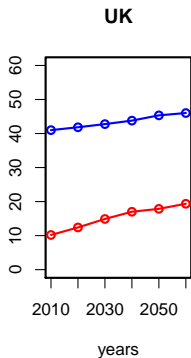
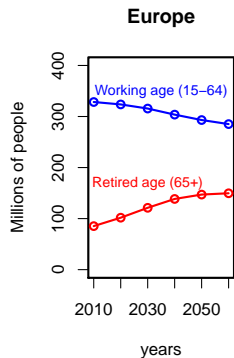
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If we calculate Greece's “demographic debt” from now until 2060, we get numbers like 500 billion, or even 1 trillion euros.

And, “donor” countries are also aging. Germany's demographic debt in the many trillion.

Demographic Futures



Short-term: Babyboom retirement (2020-40)

Longer-term: Life expectancy forecast to climb from 80 to 90

Longer-term: Fertility differences (1.5 – 2.0)

Research Questions

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- ▶ Will differential aging tear Europe apart?
- ▶ Is Merkel right?
(Can a common age of retirement save Europe?)

Outline

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- ▶ Conclusions
- ▶ Generational Accounting and profiles of taxes and benefits
- ▶ Fiscal impacts of aging
- ▶ Adjusting the economic life cycle
- ▶ Discussion

Conclusions

- ▶ Europe will age a lot, but even from a fiscal point of view this is a solvable problem.
- ▶ Most of the differences in fiscal futures come from policy differences (retirement and healthcare).
- ▶ Modest policy reform can make differences manageable.

Methods

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- ▶ Generational accounting

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 - ▶ Eurostat population projections

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- ▶ Simple life cycle adjustments for longevity

The Fiscal Support Ratio: a measure of fiscal balance

$$\text{Fiscal Support Ratio} = \frac{\text{Taxes}}{\text{Benefits}} = \frac{\int n(x)t(x) dx}{\int n(x)b(x) dx}$$

Advantages:

- ▶ Simple
- ▶ Better than OADR (children, actual costs by age)
- ▶ Can show effects of changing demography and/or changing economic profiles

Disadvantages:

- ▶ Reifies “1.0”
- ▶ Static (would need to be integrated over time in order to include debt)
- ▶ Only public sector (more pessimistic)

Forecasts of fiscal support

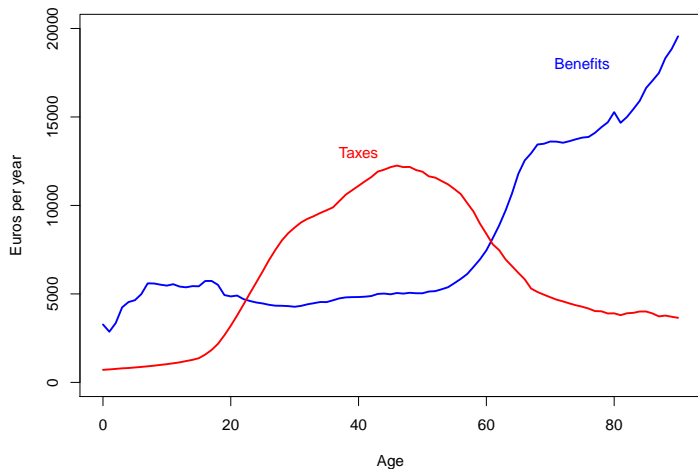
Very partial equilibrium:

$$\text{FSR}(\tau) = \frac{\text{Taxes}(\tau)}{\text{Benefits}(\tau)} = \frac{\int n(x, \tau) t(x) dx}{\int n(x, \tau) b(x) dx}$$

Partial equilibrium (where b , and t , and n all change with time but are not endogenous):

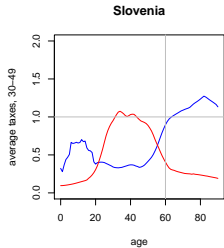
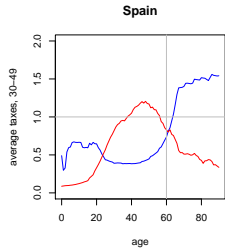
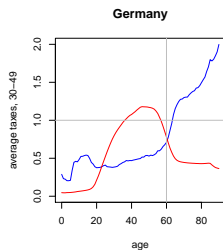
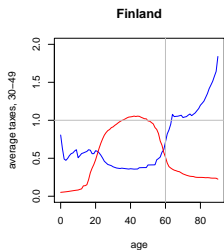
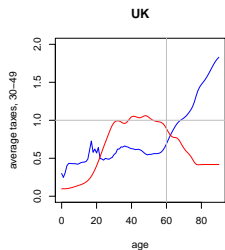
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Fiscal age profiles for generational accounting



European average of NTA profiles from 2000-2007.

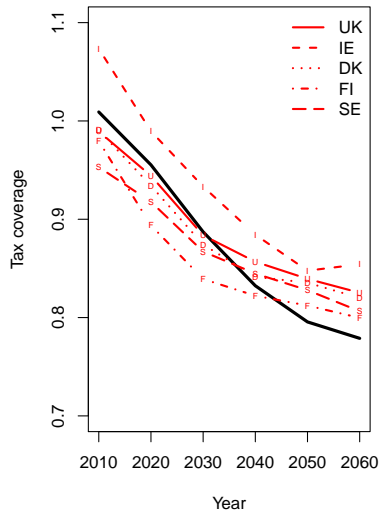
Profile diversity



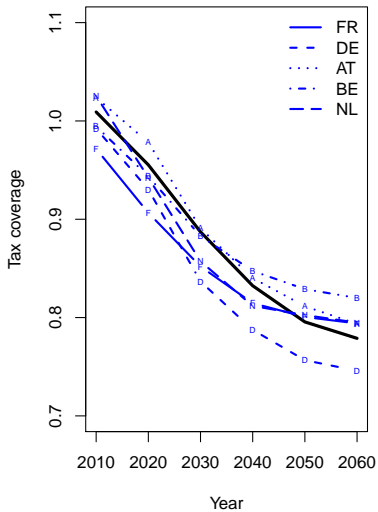
Demography and policy: older countries have more long-term care, younger countries earlier retirement.

Diverse Aging in the EU (average profile)

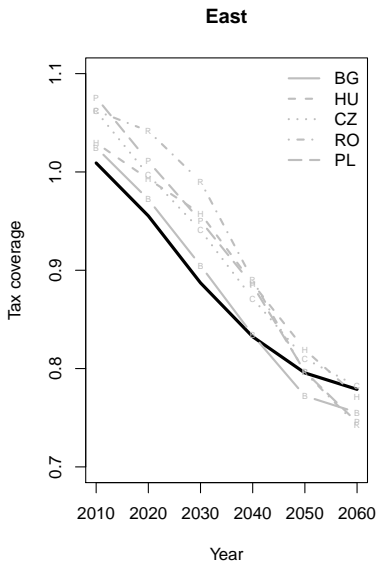
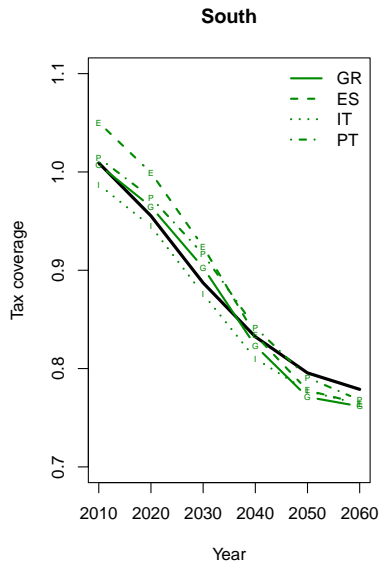
North



Continent

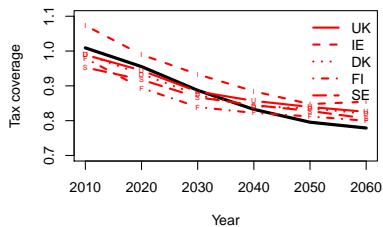


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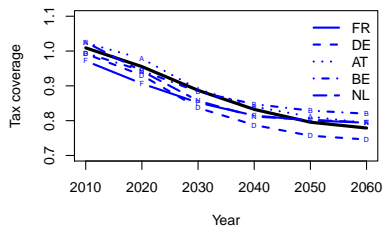


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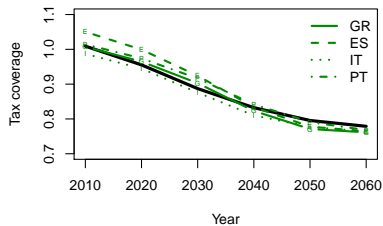
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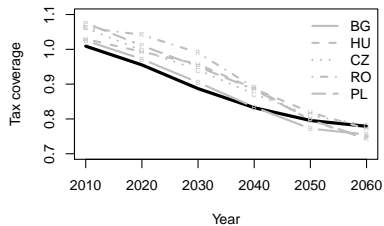
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South

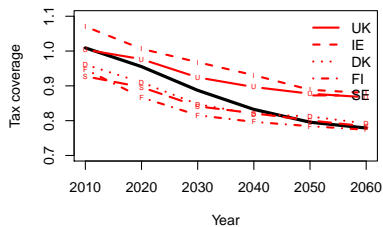


East

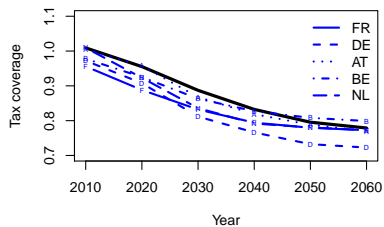


The magnitude of fiscal “imbalance”

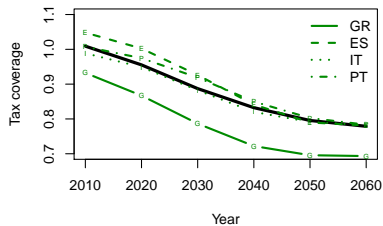
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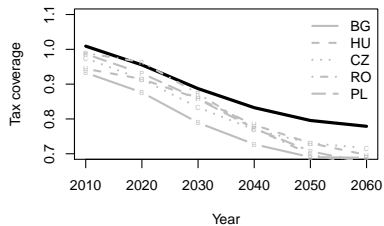
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How can Europe stay united?

1. Let each country go their own fiscal way ...

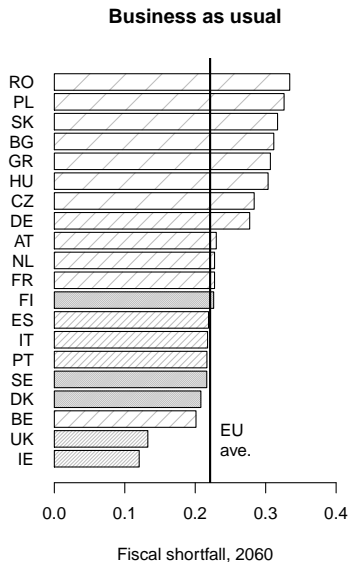
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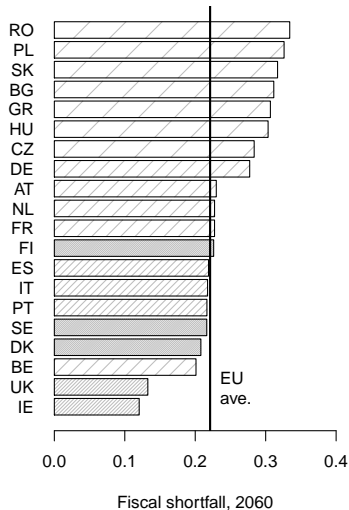
1. Let each country go their own fiscal way ...
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3. “Super Maastricht”, homogenize fiscal policy

Inequality in fiscal balances, with and without “Super Maastricht”

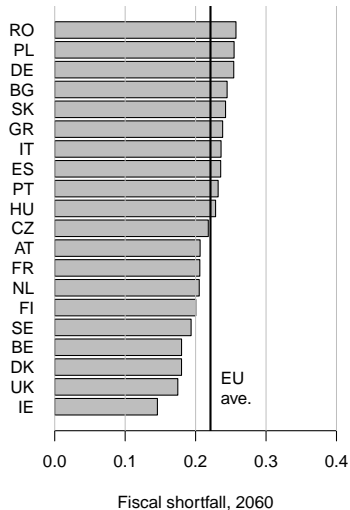


Inequality in fiscal balances, with and without “Super Maastricht”

Business as usual



Harmonization today's average profile



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- ▶ Economic age-profiles are root of differences

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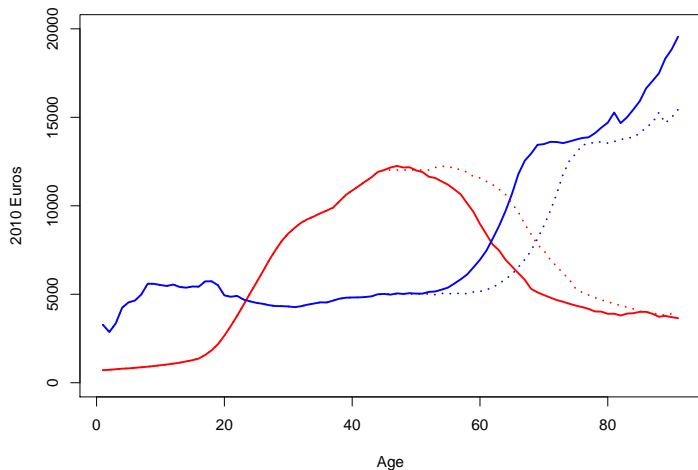
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- ▶ Harmonization would create near equality
- ▶ Still a universal imbalance, due to increases in life expectancy
- ▶ Need to extend working years, and delay benefits. Will modest changes suffice?

Stretching the Economic Lifecycle



Longer life → longer work, later benefits (health & retirement)

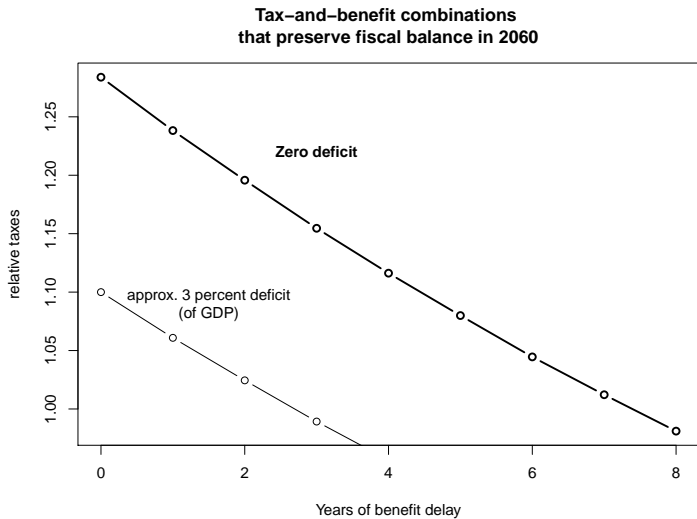
The time path of delayed retirement

Stretch n	Period					
	2010	2020	2030	2040	2050	2060
0	1.01	0.96	0.89	0.83	0.80	0.78
1	1.04	0.99	0.92	0.86	0.83	0.81
2	1.07	1.02	0.95	0.90	0.86	0.84
3	1.11	1.06	0.99	0.93	0.89	0.87
4	1.14	1.09	1.02	0.96	0.92	0.90
5	1.17	1.13	1.06	0.99	0.95	0.93
6	1.20	1.16	1.09	1.03	0.98	0.96
7	1.23	1.20	1.13	1.06	1.01	0.99
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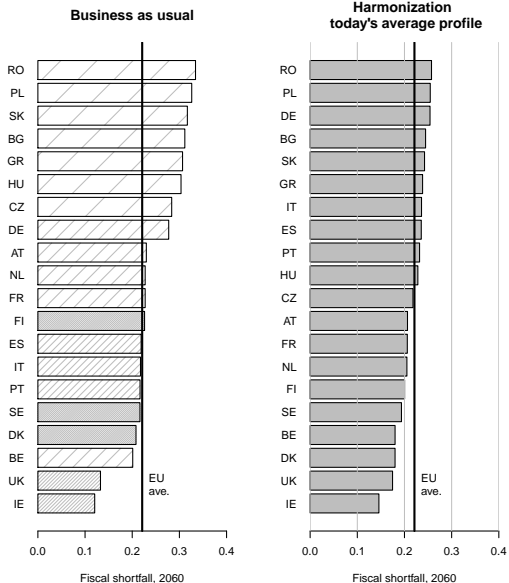
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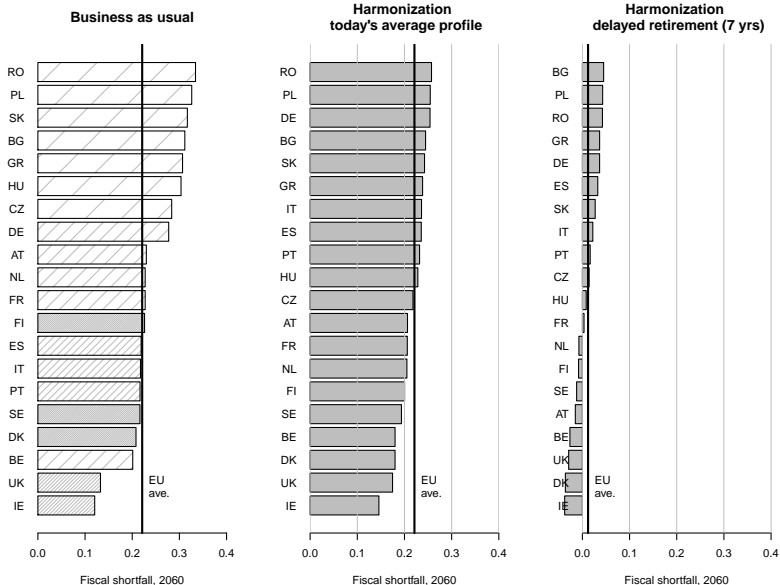
Addressing the challenge of aging (EU)



Inequality in fiscal balances, revisited



Inequality in fiscal balances, revisited



Discussion: Is it really possible to raise retirement ages?

- ▶ Most countries are already planning
- ▶ Changes are moderate, not massive
- ▶ Can choose to increase taxes (reduce benefits)
- ▶ Young retirement of past few decades a transitional phase, consumption of demographic dividend

Discussion: Economic pressures on unity

- ▶ Countries that can't stretch the economic life cycle will be in big trouble. So demography does matter.
- ▶ But stretching economic lifecycle by a few years will solve most of the demographic problem.
- ▶ From our point of view, Europe is on the right track.

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- ▶ Most of the differences in fiscal futures come from policy differences (retirement and healthcare).
- ▶ Modest policy reform can make differences manageable.

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- ▶ Increasing productivity