

Macroeconomic Policy, Growth Strategy, and Redistribution

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Bruegel: "Secular Stagnation in Europe and Japan"
Brussels, 5 October 2015

The legacy of the crisis: high private and public debt under troublesome trends

- The Great Recession (and subsequent events): Something else than the "typical recession".
- Private debt increased significantly. Slow deleveraging (Butiglione, Lane, Reichlin, and Reinhart, 2014)
- Public debt at historical records. Not deleveraging at all.
- Two views:
 - 1 Credit cycles. It will take some time to come down, but it will.
 - 2 Structural trends:
 - Lower population growth
 - Declining working age population
 - Increasing weight of older population
 - Lower productivity growth

Why the interactions are important (I)

- Low growth makes it more difficult to deleverage, and...
- ...higher debt makes it more difficult to adapt to a low growth scenario
 - Jimeno (2015): A OLG model to understand these interactions (Eggertsson and Mehrotra, 2014 with exogenous technical progress and inter-generational transfers)
 - The role of population ageing, productivity growth and inter-generational transfers at determining the natural interest rate and inflation (Kara and von Thaden, 2014, Carvalho and Ferrero, 2014).
 - Aksoy, Basso, Smith and Grasl (2015) "Demographic Structure and Macroeconomic Trends"

Why the interactions are important (II)

- New macroeconomic regime: Negative natural interest rate
 - Monetary policy unable or unwilling to accommodate negative natural interest rate→
 - Permanent shortfall of demand
 - The role of nominal and real rigidities
 - The role of fiscal policy:
 - Only effective if it implements inter-generational transfers (from old to the young)
 - Debt restructuring and pension reforms
 - Structural reforms: Which ones and how -and how not: Boeri and Jimeno (2015)
 - Focus on productivity
 - "Carrot rather than stick"

Some insights (I)

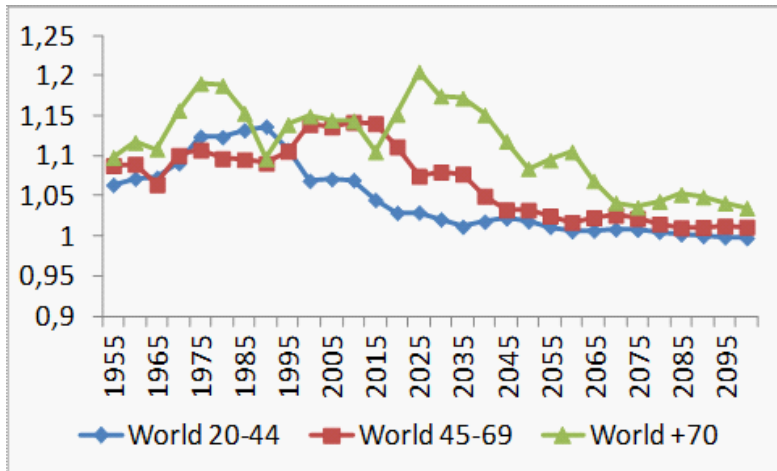
- As population growth falls (n_t), the natural interest rate falls
 - Less young people demanding credit.
 - Expected transfers to the old generation (for constant public debt) also fall. This is even more so if sustainability of public debt is dubious to begin with.
- Higher current productivity growth rate, a_t , increases savings
 - The middle generation pay for its debt accumulated while young using a lower fraction of its income
- Higher next period productivity growth, a_{t+1} , decreases savings
 - Expected transfers to the old generation are higher.
- A decrease in the price of capital or a higher depreciation rate pushes the equilibrium real interest rate downwards
 - Future expected income by the middle generation is lower

Some insights (II)

- The lower the demand of credit by the young generation, d_t , is, the lower the equilibrium real interest rate is.
- The lower the private debt accumulated by the middle generation while young, the higher savings are, and, thus, the lower the natural rate is.
- A higher current tax rate crowds out savings by lowering disposable income, and, hence, increases the natural rate.
- A higher next period tax rate also crowds out savings by increasing expected future income, also pushing the natural rate up.
- Current debt increases the demand for loans,
- Future debt allows for increases expected transfers to the old generation, so that high debt ratios push the natural rate up.

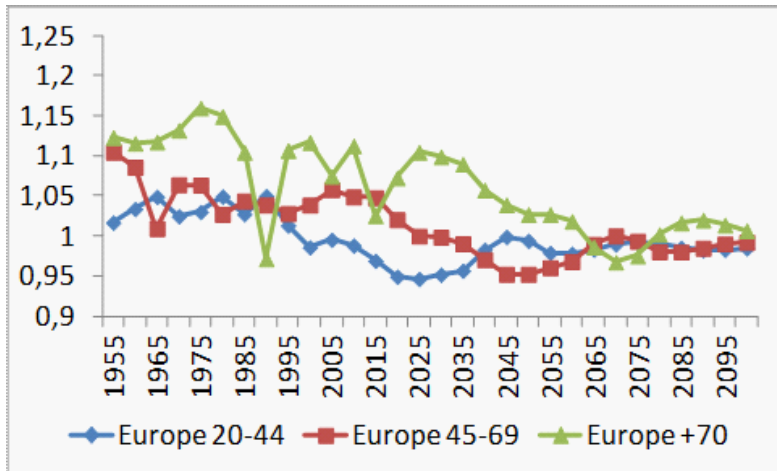
The European Situation: Population growth

Figure 1. World Population Growth, by areas and age groups (5-years gross growth rates)



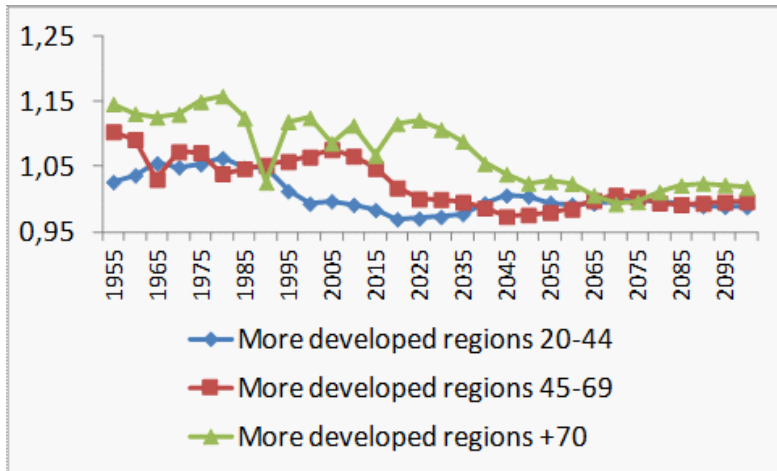
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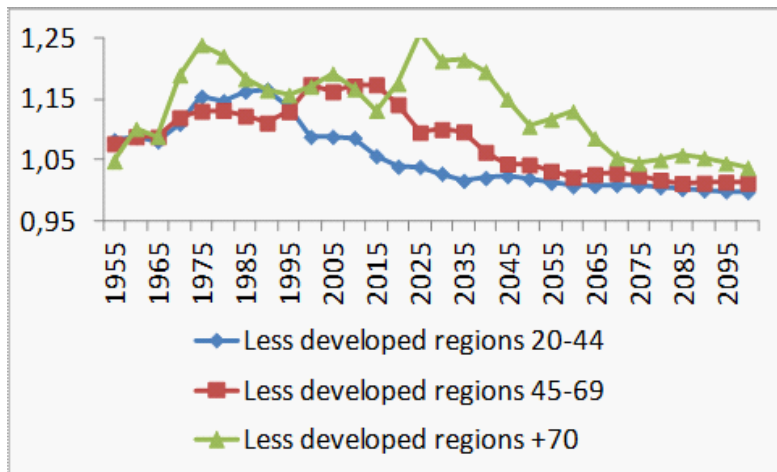


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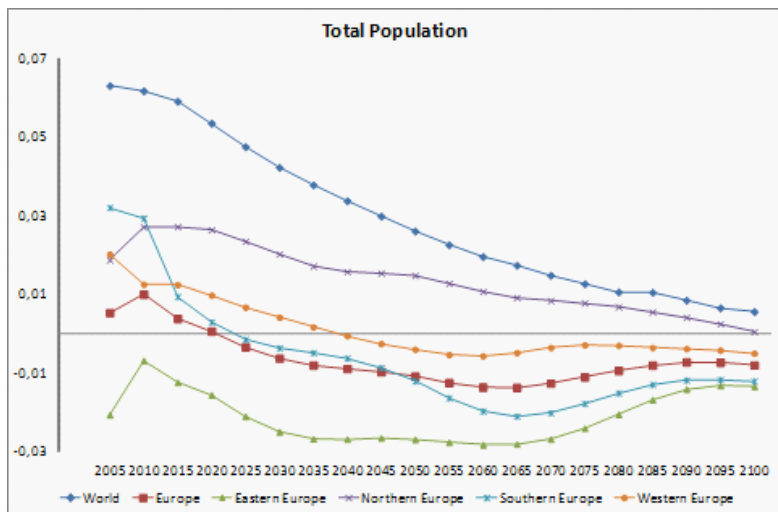


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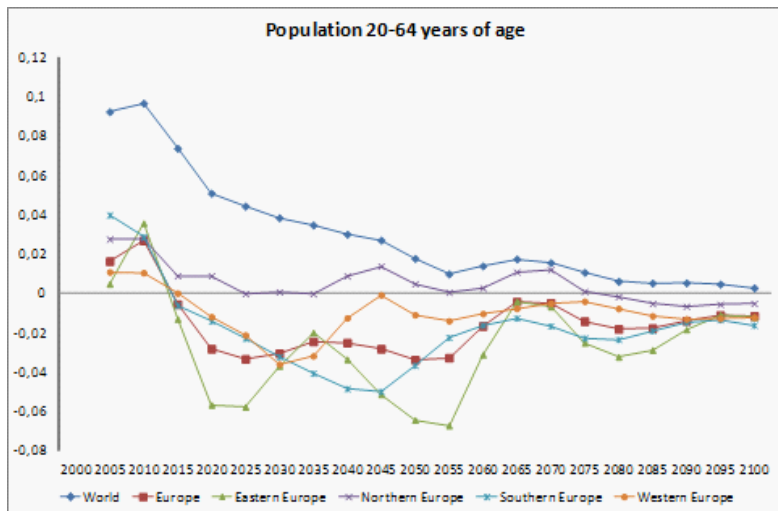
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Figure 2. Population Growth in Europe (growth rates over 5 year periods)

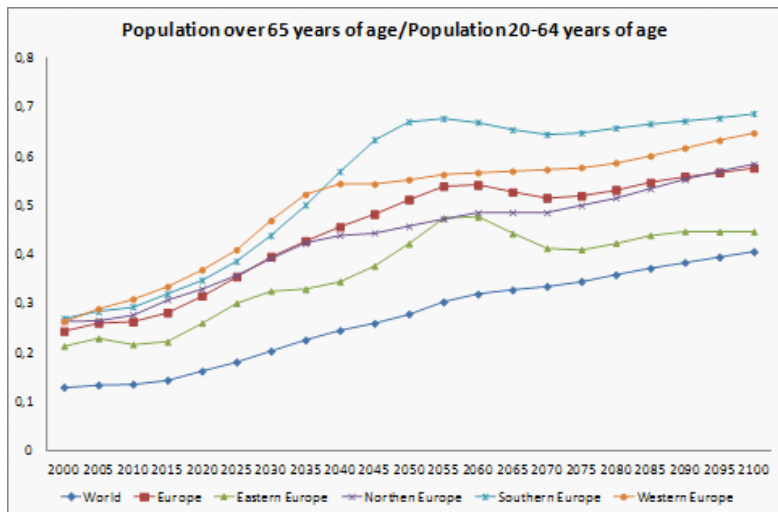


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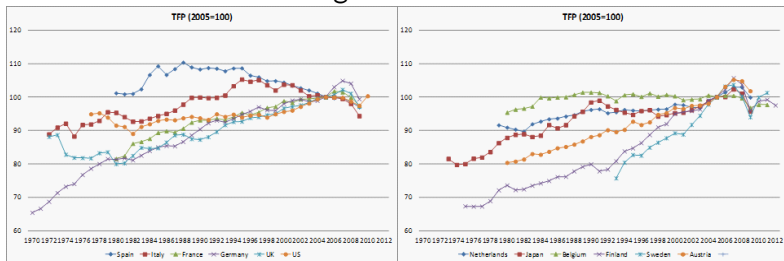


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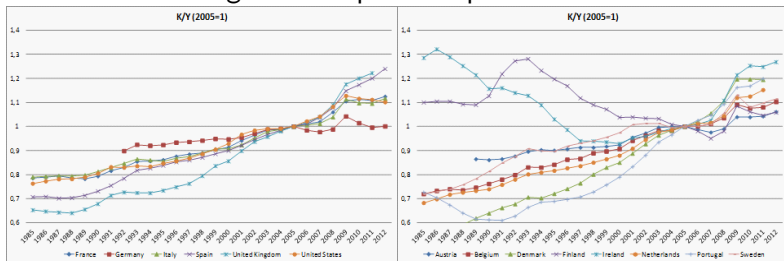
The European Situation: Productivity growth and capital accumulation

Figure 3. TFP



The European Situation: Productivity growth and capital accumulation

Figure 4. Capital-Output Ratios



The European Situation: Productivity growth and capital accumulation

Table 1. TFP Growth by periods

	Average annual growth/change, selected periods, in %				
	1995-2011	2007-2011	1995-2012	2001-2007	2007-2012
Australia	0,8	-0,1	0,8	0,2	0,1
Austria	0,9	0,1	0,9	1,4	0,1
Belgium	0,3	-0,6	0,2	0,8	-0,6
Canada	0,6	0,2	0,6	0,4	0,1
Denmark	-0,2	-0,8	..	0,4	..
Finland	1,6	-0,9	1,4	2,3	-1
France	0,7	-0,3	0,6	0,9	-0,3
Germany	0,9	0	0,8	1,1	0,1
Ireland	2,3	0,5	2,2	1,3	0,4
Italy	-0,1	-0,6	-0,2	-0,3	-0,3
Japan	0,6	0,2	0,7	1	0,4
Korea	3,3	3,3	2,9	3,4	2,1
Netherlands	0,4	-0,7	..	0,9	..
New Zealand	0,6	0,2	0,6	0,4	0,2
Portugal	0,2	0	..	-0,1	..
Spain	0	0,1	0,1	0,2	0,4
Sweden	1,2	-0,4	1,2	2,2	-0,2
United Kingdom	0,9	-1,1	..	1,7	..
United States	1,3	1	1,3	1,4	0,9

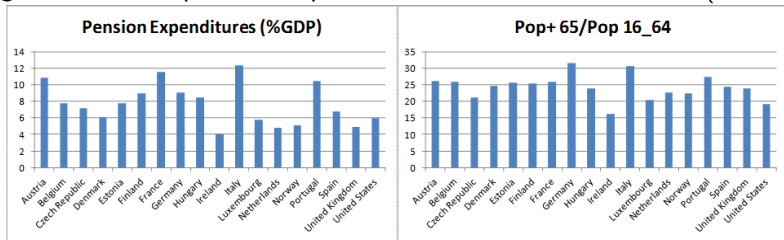
The European Situation: Intergenerational transfers

P : Pension Expenditures, Y : GDP, N : Employment, Y/N : Average Labour Productivity

$$\frac{P}{Y} = \frac{B \cdot R}{N \cdot (Y/N)} = \frac{POP_RET}{POP_TOT} \frac{POP_TOT}{N} \frac{B}{Y/N}$$

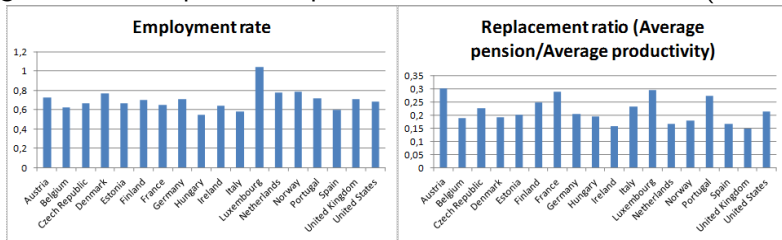
The European Situation: Intergenerational transfers

Figure 5. Public pension expenditures and its determinants (c. 2009)



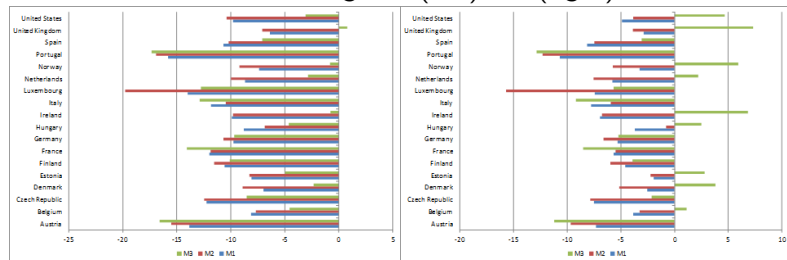
The European Situation: Intergenerational transfers

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The European Situation: Intergenerational transfers

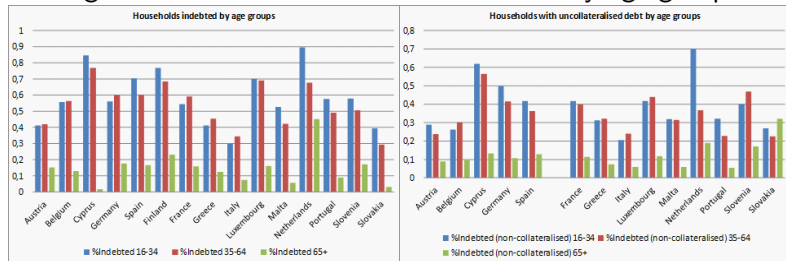
Figure 6. Forecasted reduction in public pension replacement ratios
Retirement age 65 (left), 70 (right)



- M1: Countries will have the same pension expenditures (in %GDP) and the same employment rates in 2050 than in 2009
- M2: Countries will converge to employment rate of 65% and keep the same pension expenditures (in %GDP) of 2009
- M3: Countries will converge both in employment rates (65%) and in

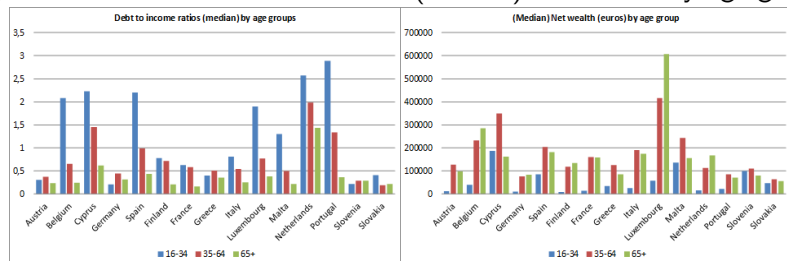
The European Situation: Household debt

Figure 7. Household debt and net wealth by age groups



The European Situation: Household debt

Figure 8. Debt-to-income ratios and (median) net wealth by age groups



How much more deleveraging to go? Scope for alternative theories of consumption beyon consumption smoothing?

Concluding Remarks

*The swift stream of events in the last quarter century offers, however, overwhelming testimony in support of the thesis that **the economic order of the western world is undergoing in this generation a structural change no less basic and profound in character than that transformation of economic life and institutions which we are wont to designate loosely by the phrase "the Industrial Revolution". ...We are moving swiftly out of the order in which those of our generation were brought up, into no one knows what.** (A. Hansen, "Economic Progress and Declining Population Growth", *American Economic Review*, vol. 29, 1939)*

*Indeed, I think it is fair to say that today, the amplitude of fluctuations appears large, not small...there is room for **doubt about whether the cycle actually cycles** (L. Summers, "U.S. Economic Prospects: Secular Stagnation, Hysteresis, and the Zero Lower Bound", *Business Economics*, vol. 49,2, 2014)*