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What's up in Europe?

Public pensions in the EU, reforms in Germany

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in the Max Planck Institute for Social Law and Social Policy*

18th Annual Meeting of the Retirement Research Consortium,
Washington, D.C., August 5, 2016

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Outline

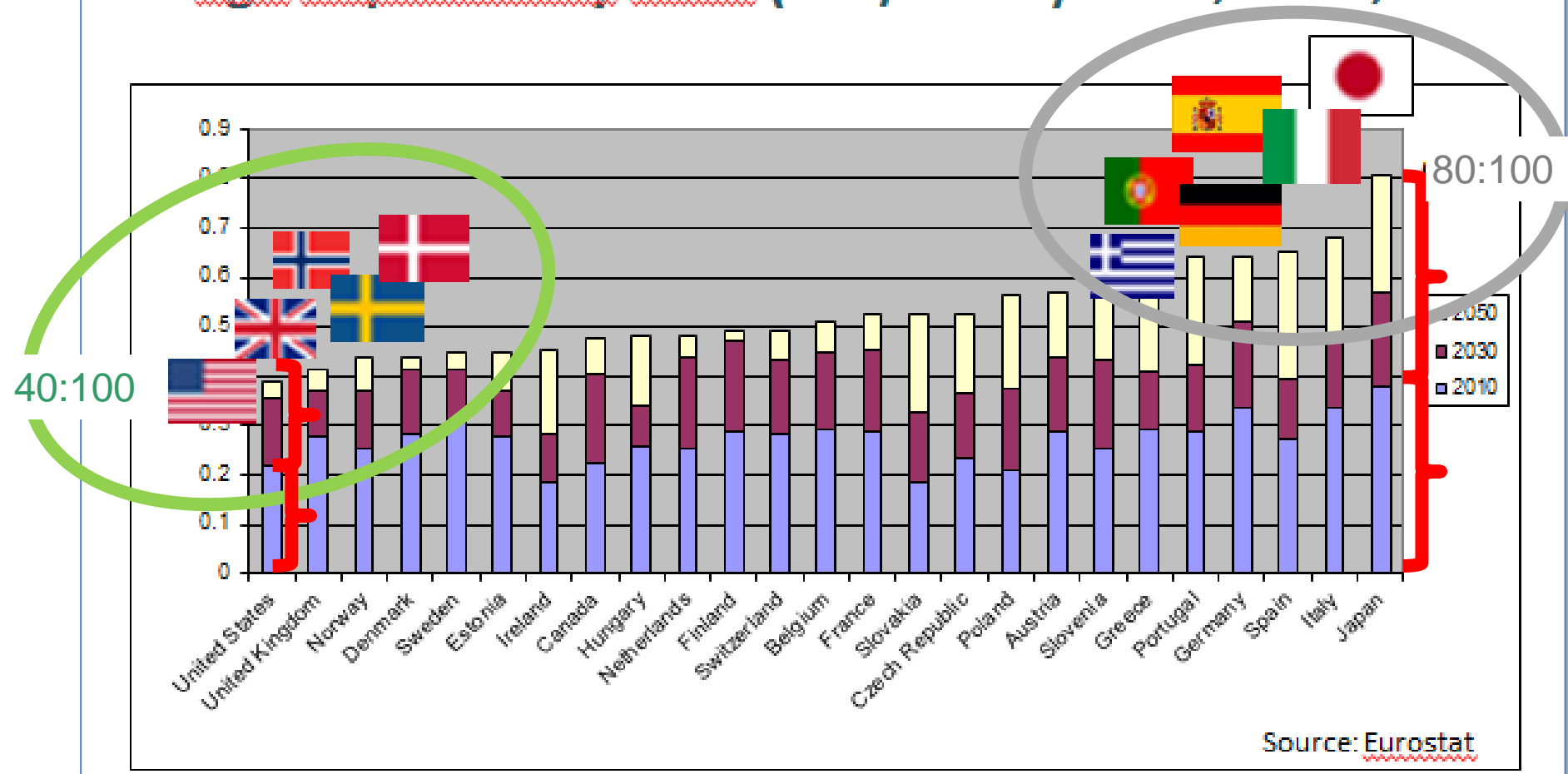
1. **Countries are different**, even in their demography
2. **Very different** current pension **systems**
3. **Pension reform ideas**: convert to notional defined contribution (NDC) system; keep DB idea: sustainability adjustment; automatic retirement age adjustments
4. Challenges and solutions for the **German** pension system
5. **Conclusions** and outlook



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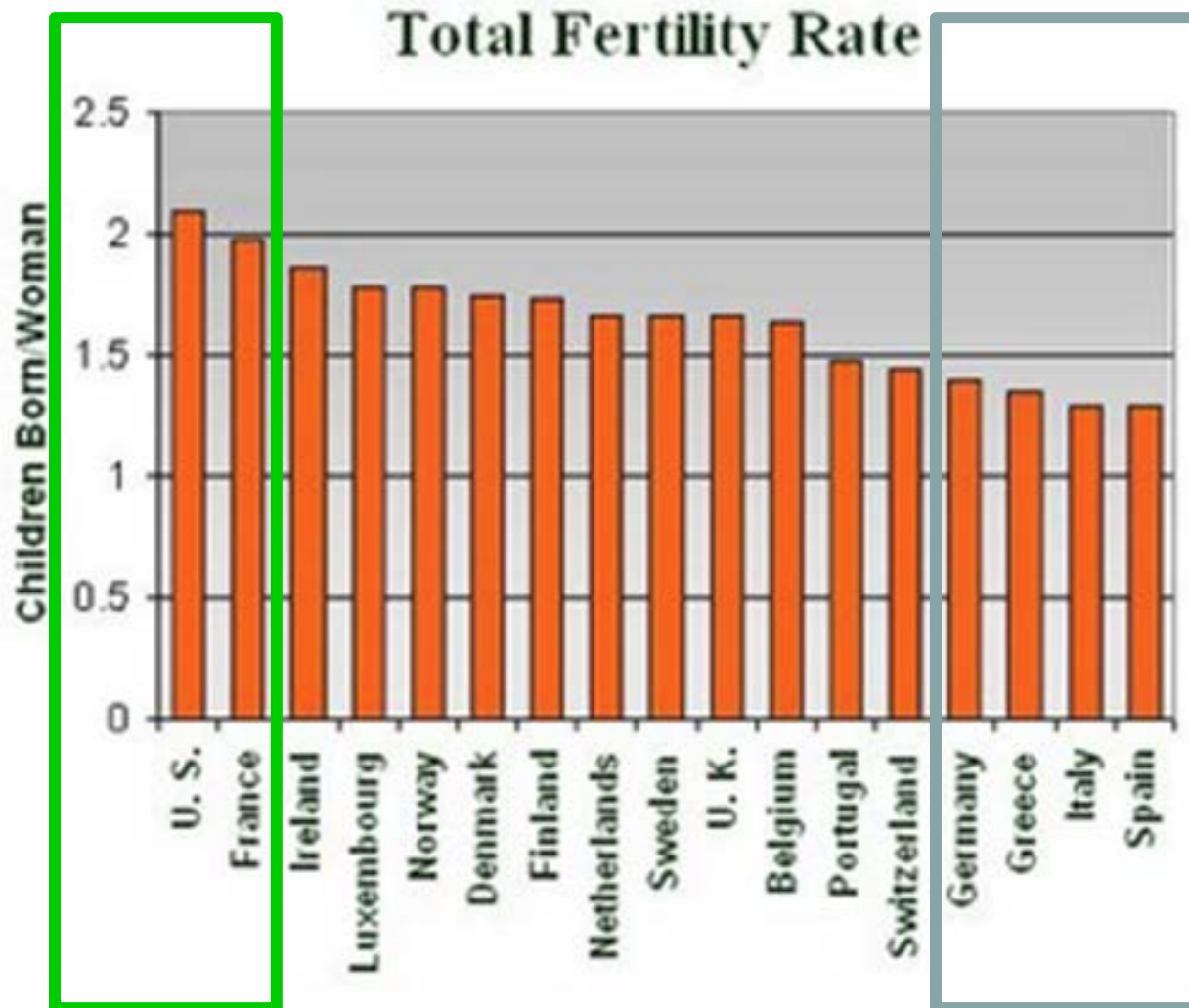
Large variation in demography

Old age dependency ratio (60+/20-59) 2010, 2030, 2050:



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Large variation in demography



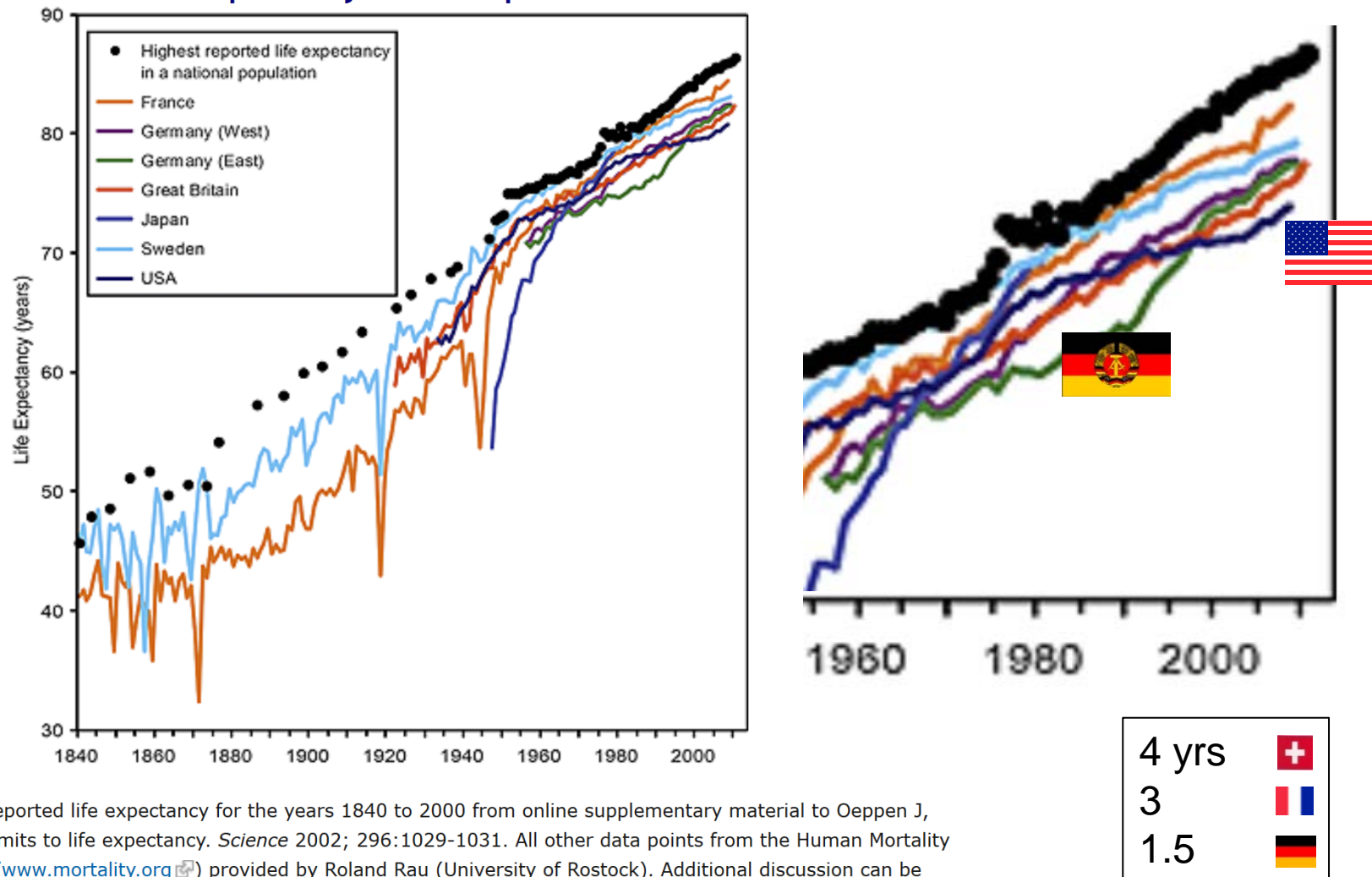
Source: Eurostat



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Large variation in demography

Figure 4. Female Life Expectancy in Developed Countries: 1840-2009



Source: Highest reported life expectancy for the years 1840 to 2000 from online supplementary material to Oeppen J, Vaupel JW. Broken limits to life expectancy. *Science* 2002; 296:1029-1031. All other data points from the Human Mortality Database (<http://www.mortality.org>) provided by Roland Rau (University of Rostock). Additional discussion can be found in Christensen K, Doblhammer G, Rau R, Vaupel JW. Aging populations: The challenges ahead. *The Lancet* 2009; 374/9696:1196-1208.



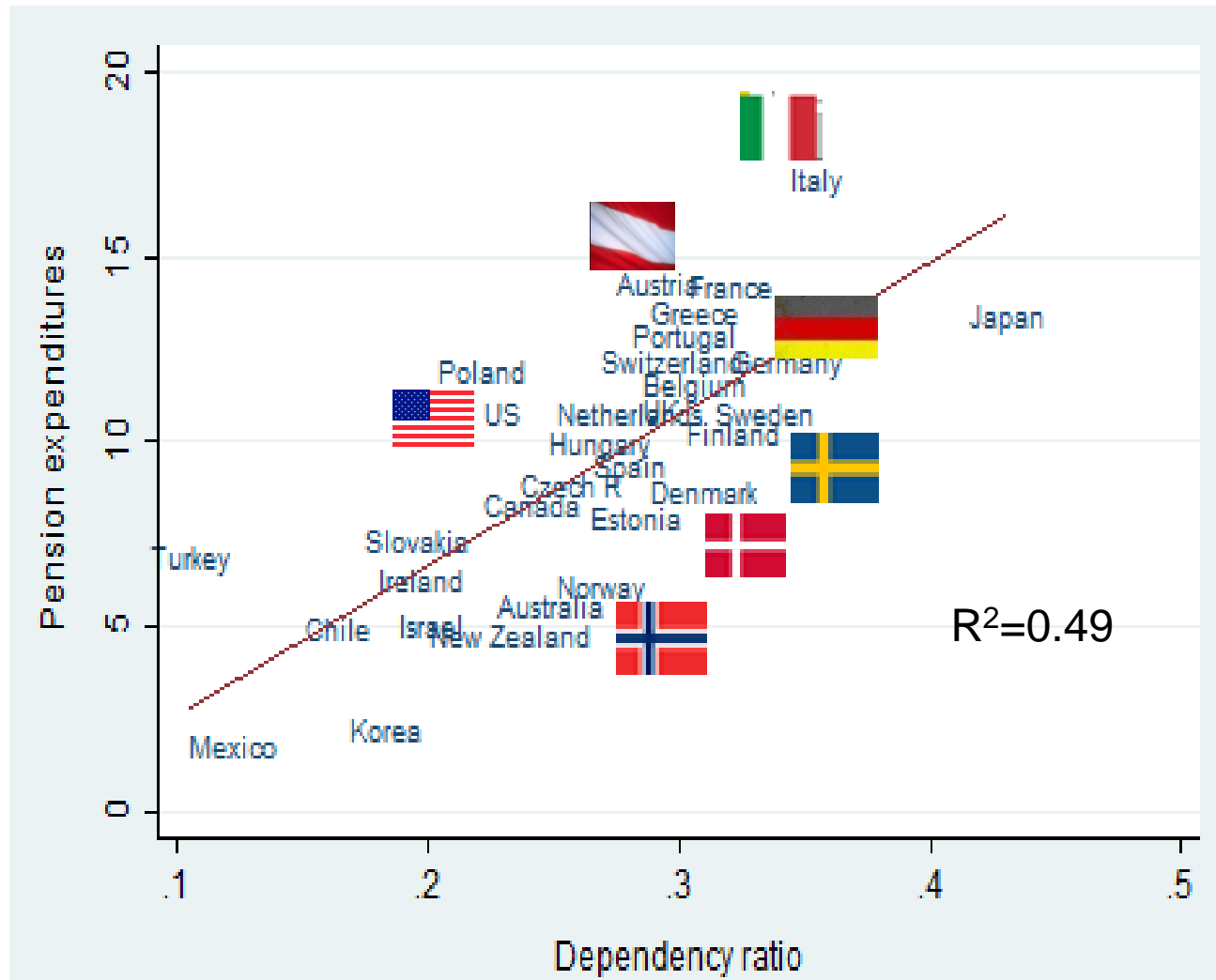
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Demography is not all:

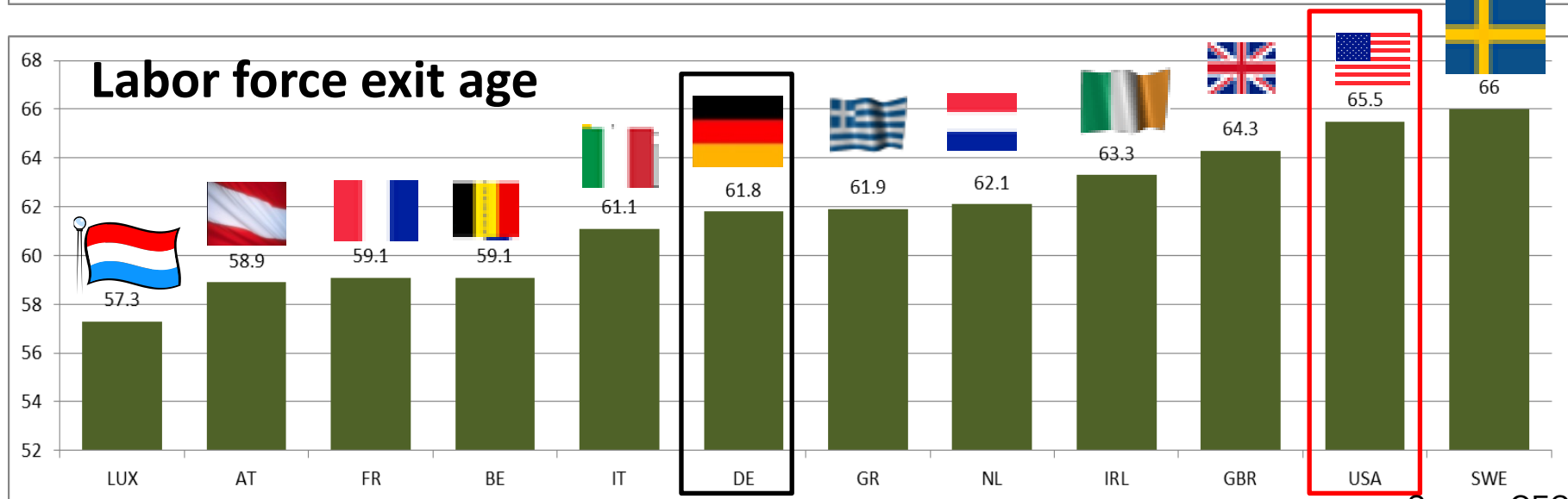
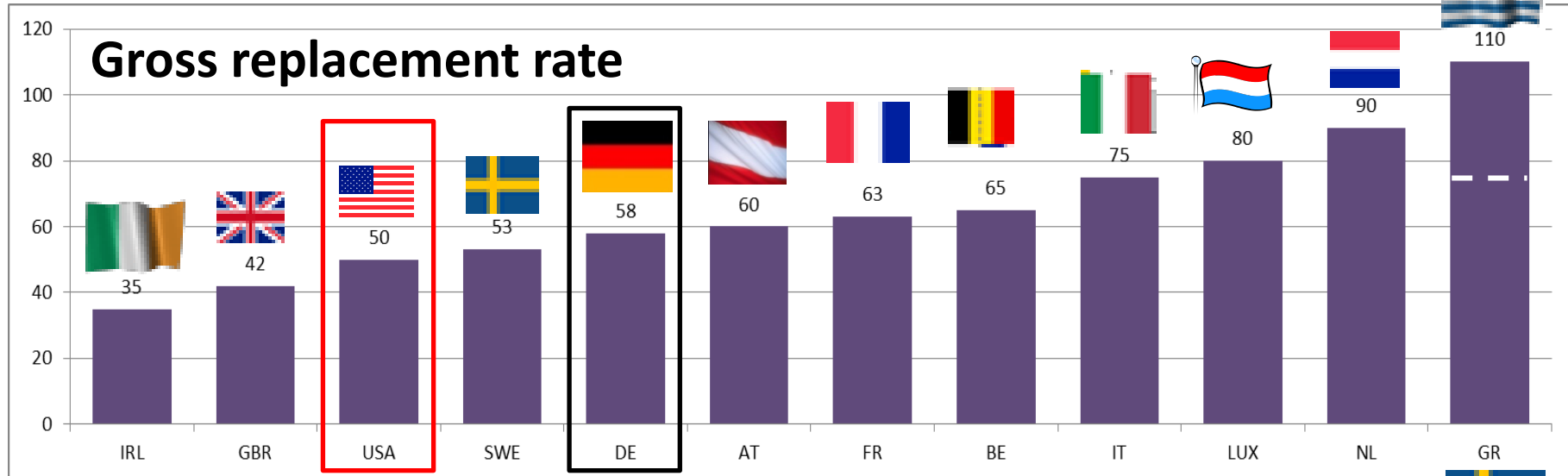


Source: OECD



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Generosity







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Incentives to early retirement

Actuarial adjustment factors at earliest age of claiming benefits

	Current legislation	
Austria	4.2	
Germany	3.6	
France	5.0	
Italy	2.3-2.9	
Spain	6.0-7.5	
Greece	6.0	
Sweden	4.1-4.7	
Finland	4.8	
US	6.67	

*The table shows the adjustment factors for statutory early retirement. Many countries have additional pathways not included here.
Source: OECD (2013) and Queisser and Whitehouse (2006).*

Old age labor force participation (Men 55-64)



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Reforms: General framework

1. Prevent poverty

Means-tested base pension



2. Solve sustainability issues for the „normal“ worker

Pay-as-you-go part

Retirement
age

Replacement
rate

Index both

NDC



Life
expectancy



System
dependency



Fully-funded part

Mandatory
(occupational)



Voluntary
(individual)



*Solve governance
problems*

3. The long-term issue of low fertility

Education



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Notional defined contribution system

Mechanics:

Credits:

All contributions are credited on a life-time basis to an individual account on a currency basis. Accounting rules are equivalent to financial accounts

Rate of return (*the* crucial [N]DC parameter!):

Balance accumulates with a *notional* rate of interest: pay-as-you-go fundamentals (internal $ror=n+g$), productivity (wage growth), demography (wage bill)

Benefits:

Conversion at retirement into an annuity, some flexibility in choice of retirement age and type of annuity. Stock-flow conversion according to actuarial rules: Function of „SS wealth“, internal ror , longevity

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Notional defined contribution system

Advantages:

Creates sense for actuarial fairness:

Annual benefits in line with life-time contributions

Automatic adjustment to retirement age

Exposes redistribution:

Any non-contributory credits can be clearly shown
(credits for education, child raising, unemployment...)

Automatic response to macro environment:

Demography: longevity (annuity), fertility (notional ror)

Employment: notional rate of return (if indexed to bill)

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Notional defined contribution system

Disadvantages:

Not automatically balancing (short-run stability):

If annuities are frozen at retirement and contribution rate is fixed: missing feedback mechanism if longevity increases unexpectedly

Not automatically sustainable (long-run stability):

Unless contribution rate is fixed and rate of return equals the contribution bill (or equivalent trajectory)

No substitute for pre-funding:

NDC does not change intergenerational burden (unless it generates a benefit cut which in turn precipitates real savings)

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Reform strategy in Germany

1. Keep the point system ("equivalence principle")
2. "Sustainability factor" to introduce DC element into pay-as-you-go pillar
3. Gradual increase of retirement age
4. Strengthening of funded pillars
5. Poverty prevention via minimum pension



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1. Point system

$$PBenefit_{i,t} = EPoints_i * Adj_{R(i)} * PVal_t$$

€1012.50
45 years*1
100%
€22.50

-3.6% p.a.
+6.0% p.a.

1 Earnings Point = 1 Year at average wage

Currently no minimum

Capped at about 2 (as are contributions)

Indexed to net
wages and system
dependency



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2. Sustainability factor

Annual Pension
Increase

Change in earnings,
net of contributions
(wage indexation)

Change in system
dependency ratio

(„sustainability factor“)

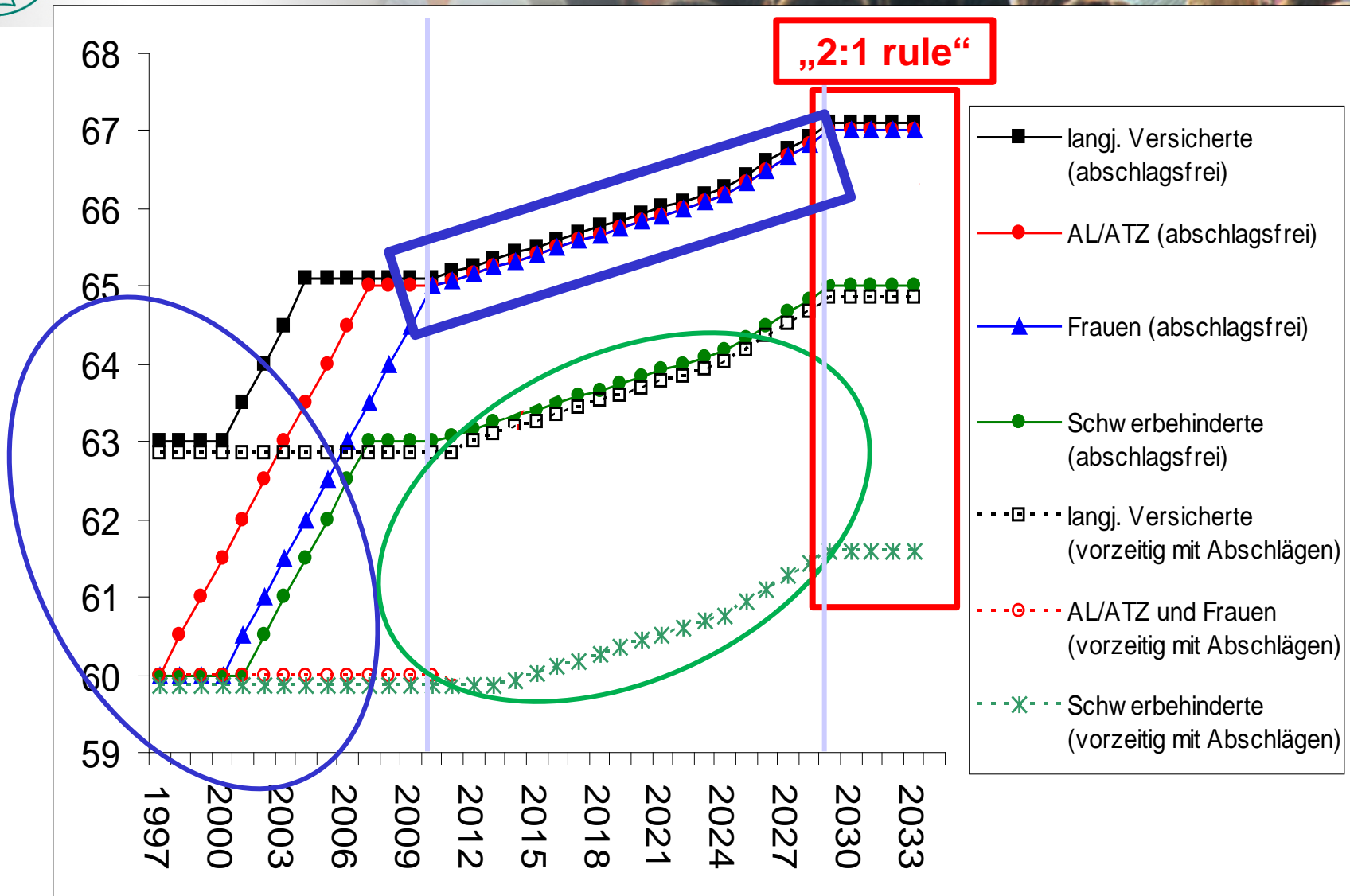
$$PVal_t = PVal_{t-1} \left(\frac{NetWage_{t-1}}{NetWage_{t-2}} \right)^a * \left(\frac{SysDepRat_{t-2}}{SysDepRat_{t-1}} \right)^{1-a}$$

=> Mix of defined benefits and defined contributions



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3. Benefit eligibility age

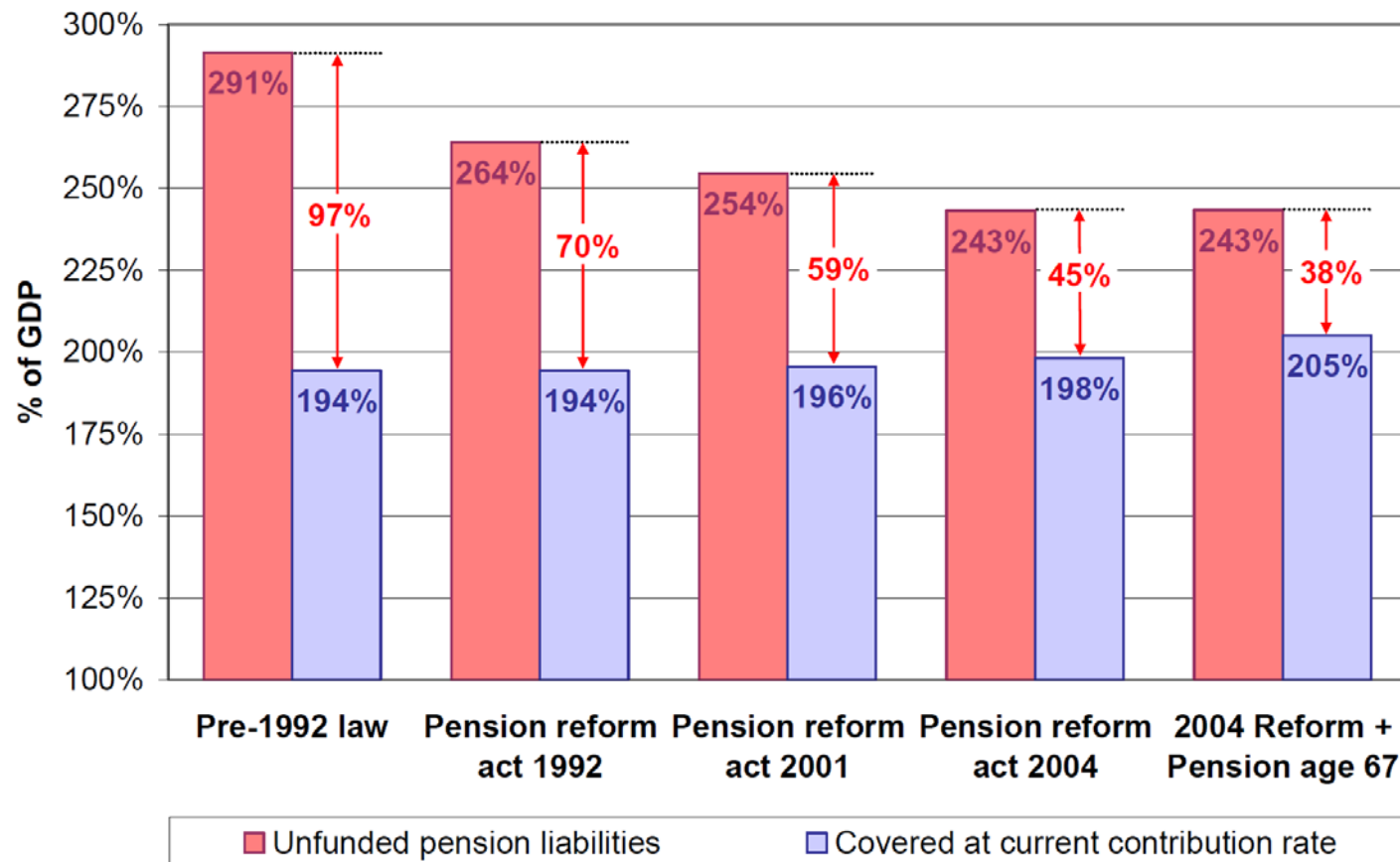




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First pillar sustainability

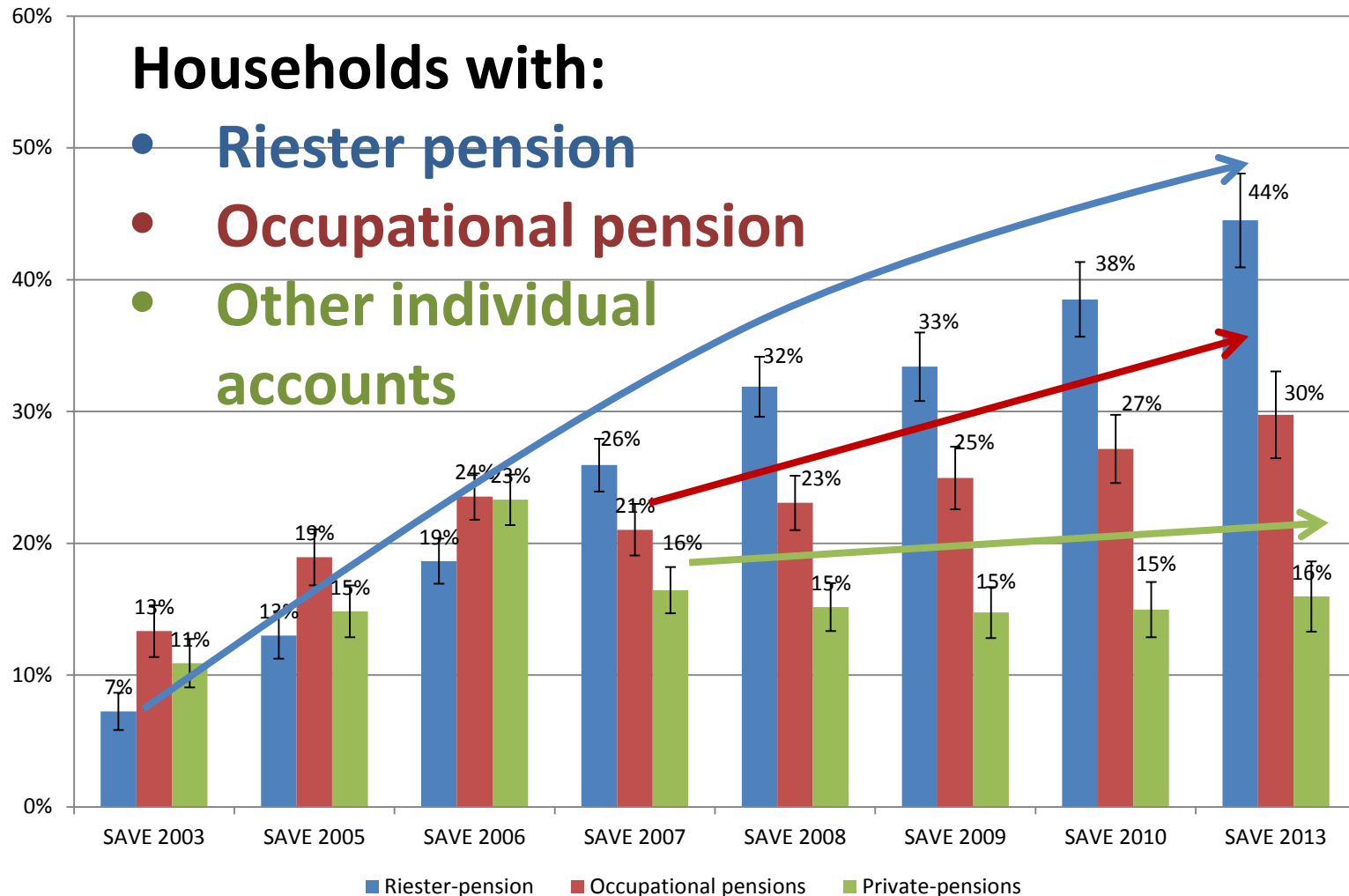
Fiscal effects of reforms on implicit debt





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4. Establish a multipillar system

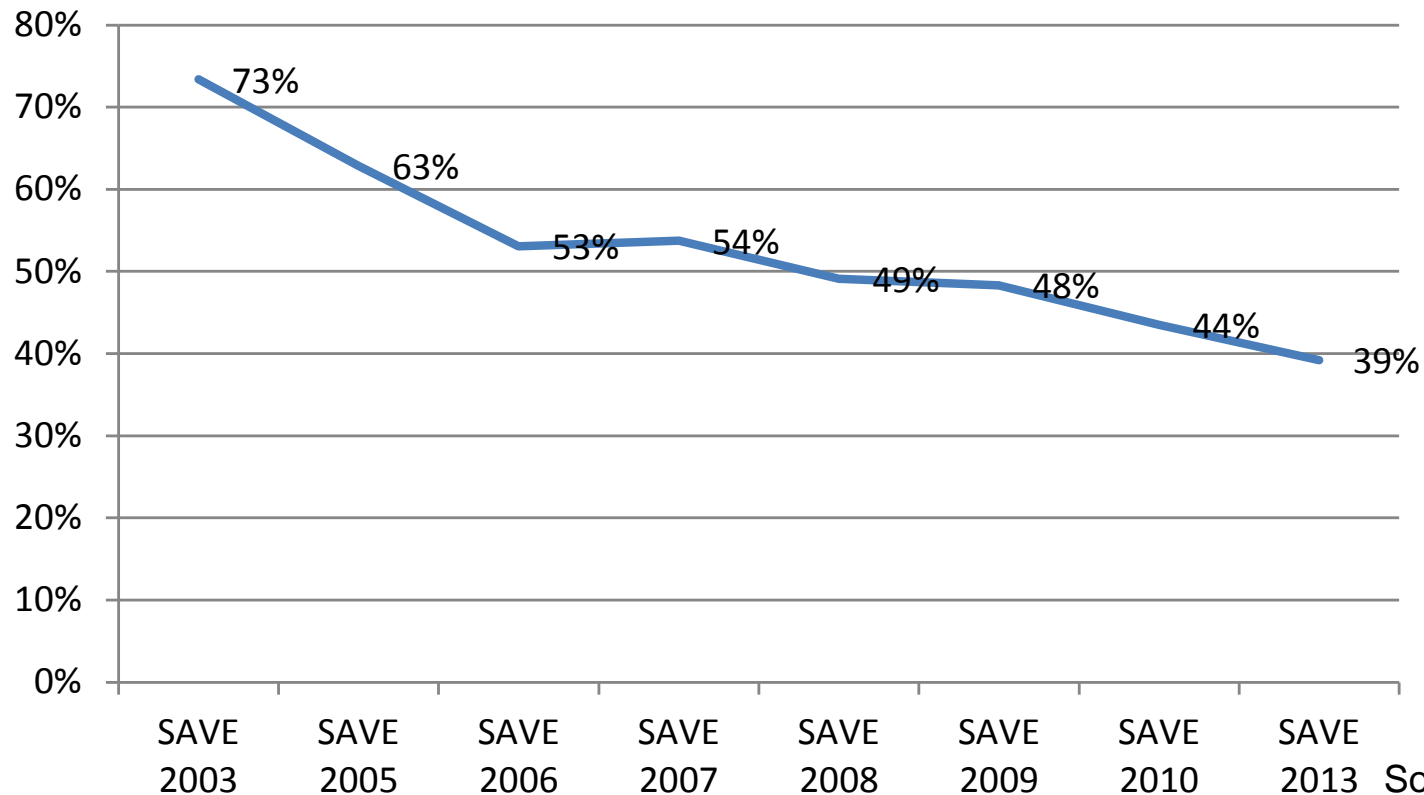


Source: Börsch-Supan et al 2015

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Second and third pillar

Households without any supplemental pension

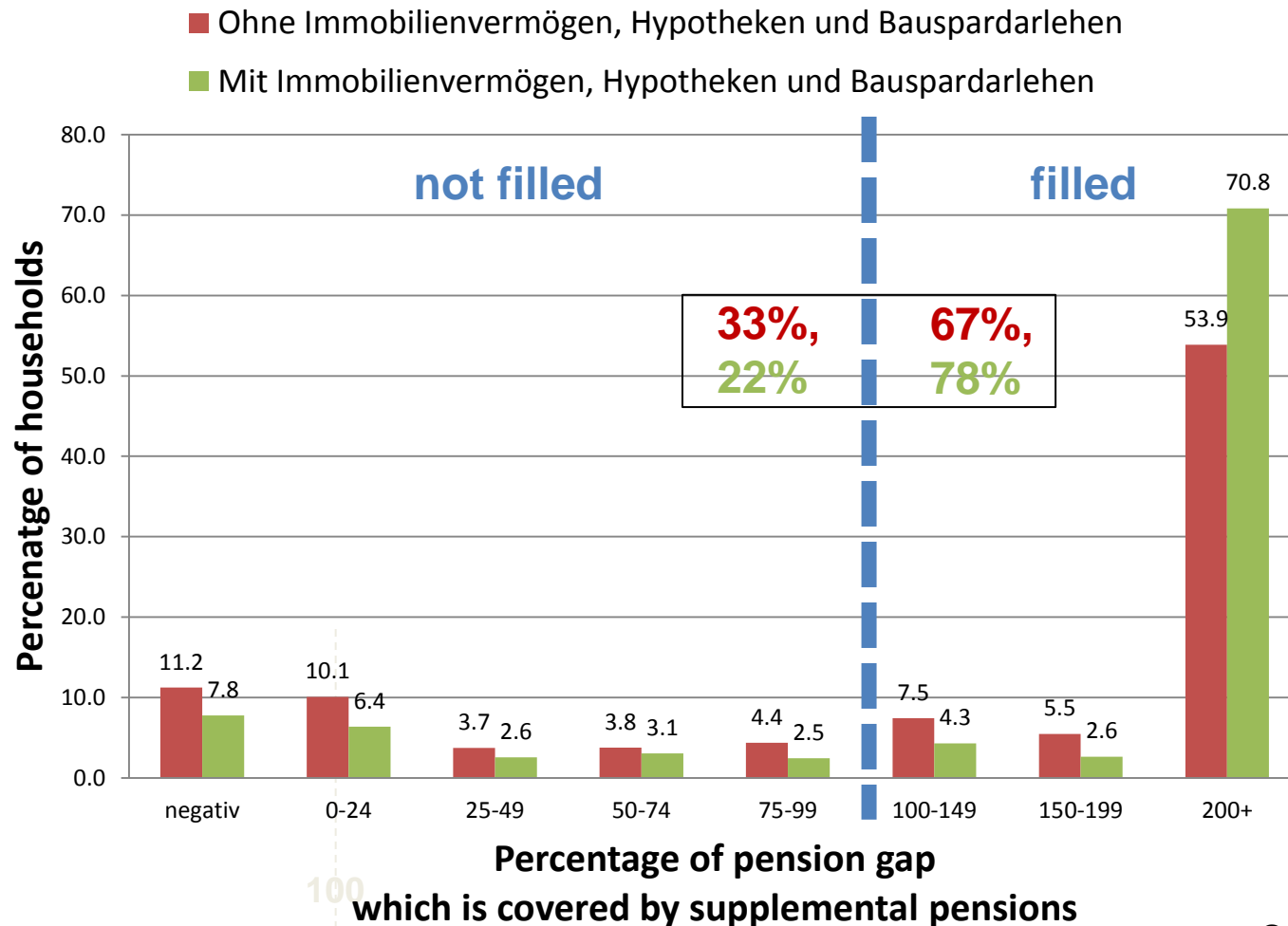


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Pension gap



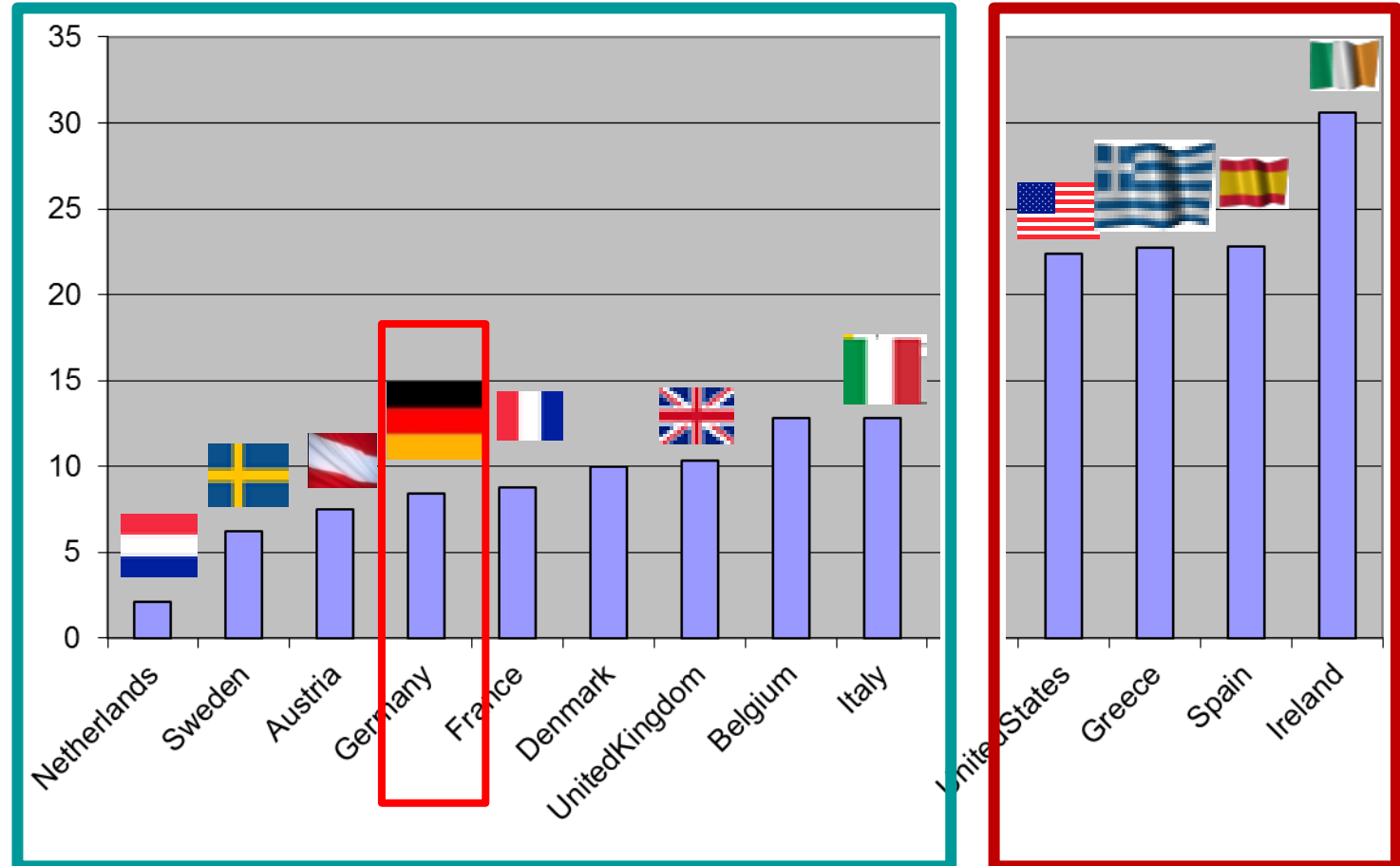
Source: Börsch-Supan et al 2015



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5. Prevent old-age poverty

*Share of 65+
with income
below
50% median
income*

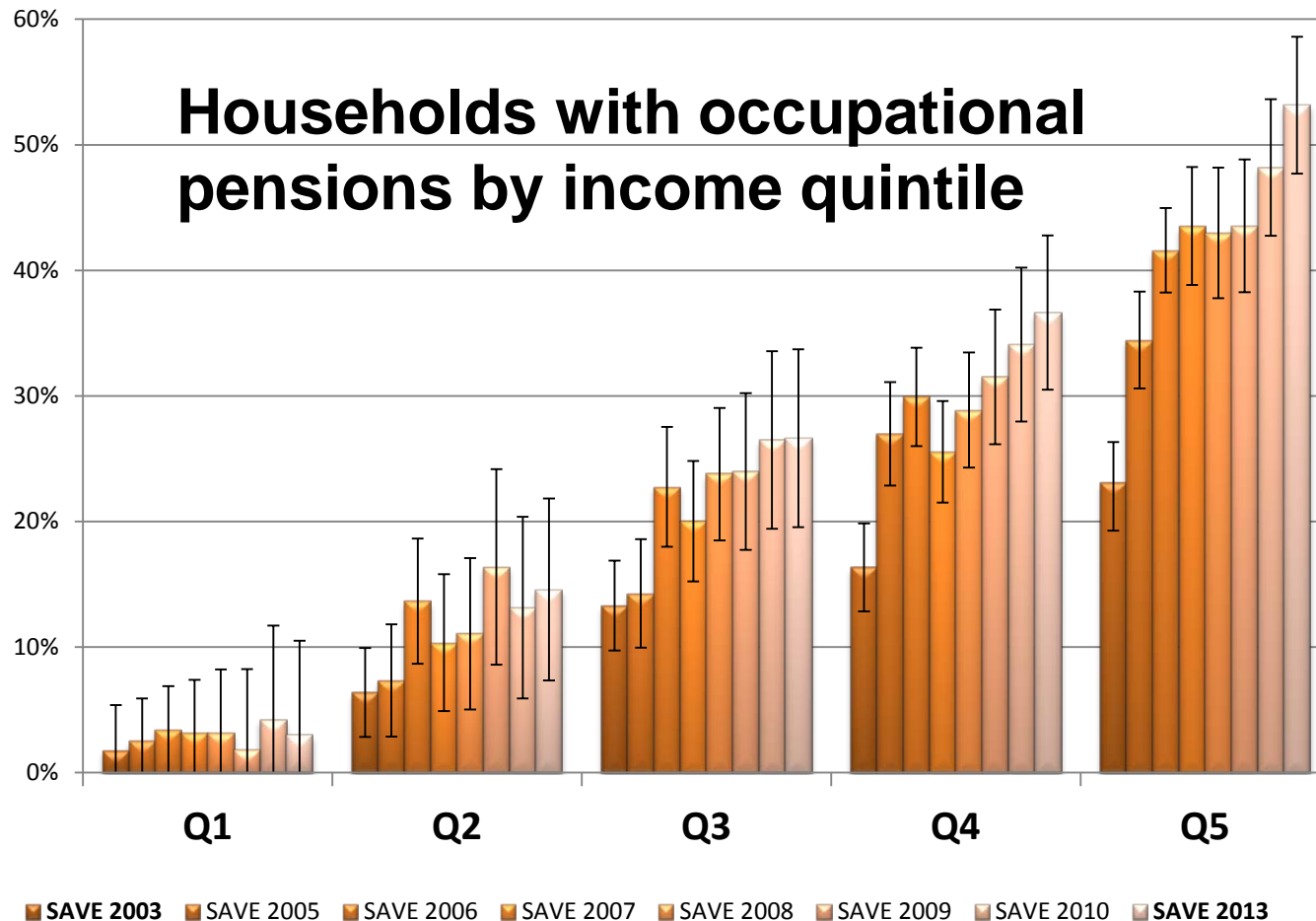


OECD Definition. Source: OECD (2012) Pensions at a Glance, OECD, Paris.



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Problems: Second pillar



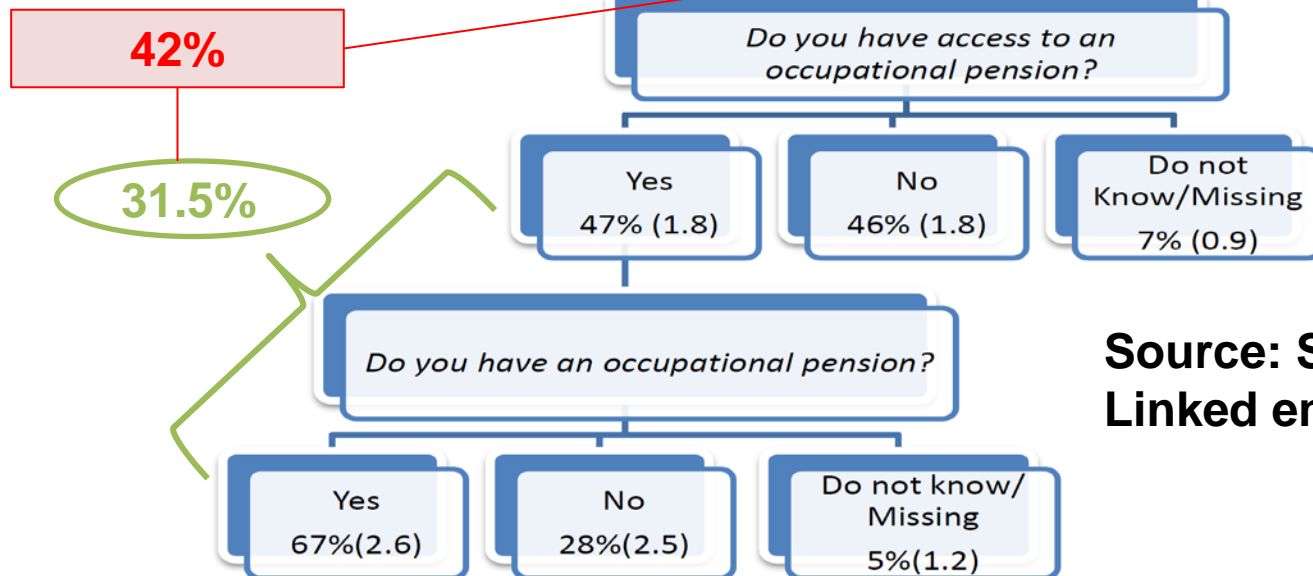
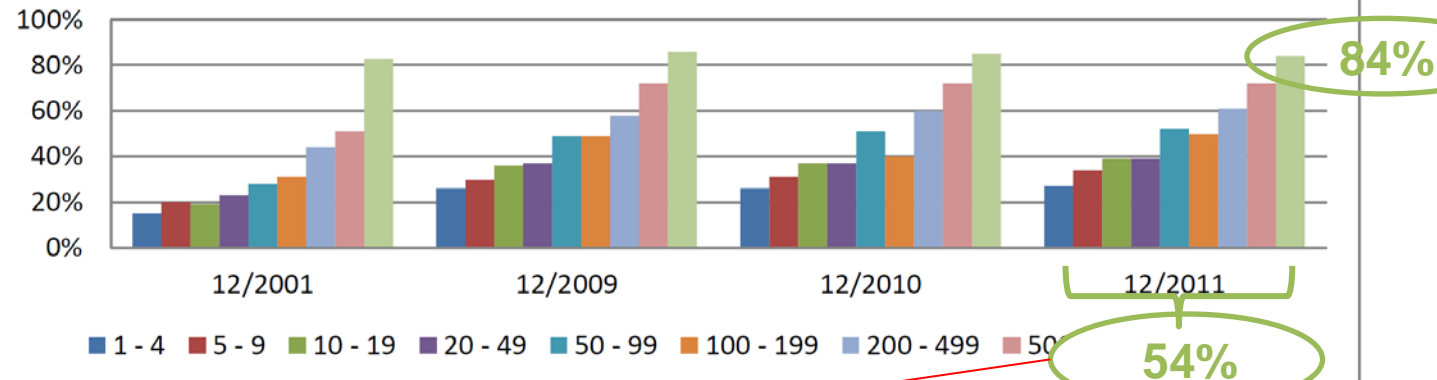
Source: Börsch-Supan et al 2015



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Coverage of, and knowledge about, occupational pension

Coverage by employers (Source: BMAS)

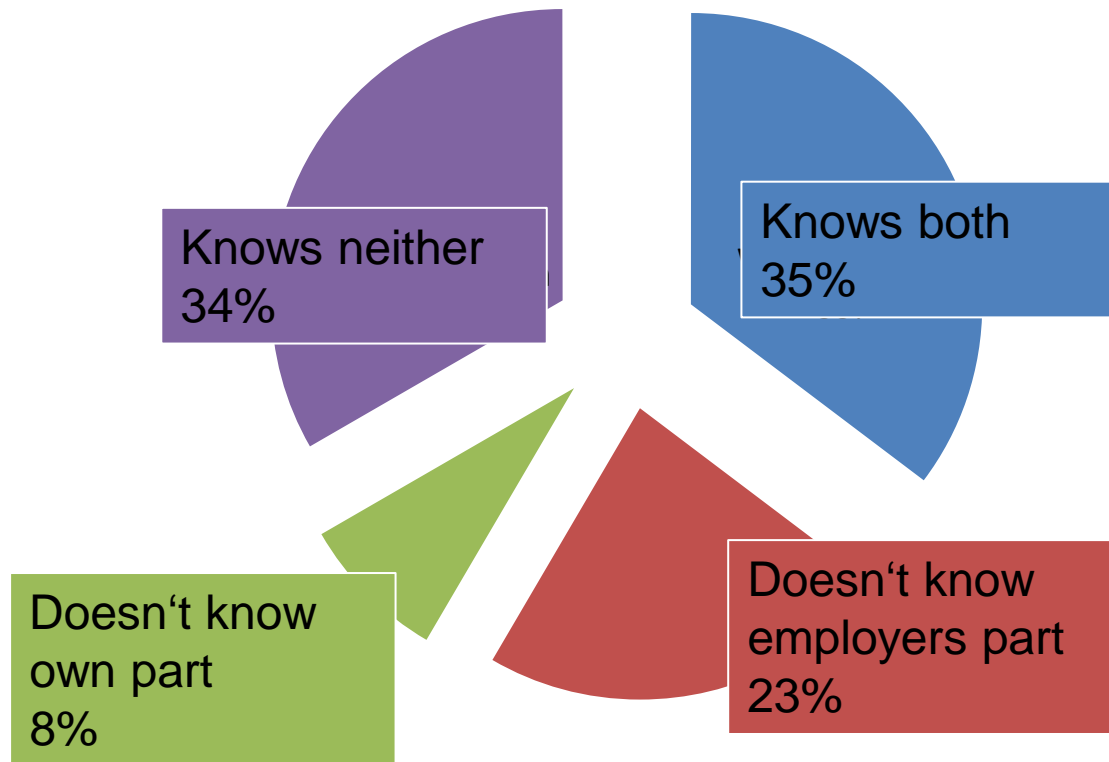


**Source: SAVE-IAB
Linked employee survey**

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Lack of information

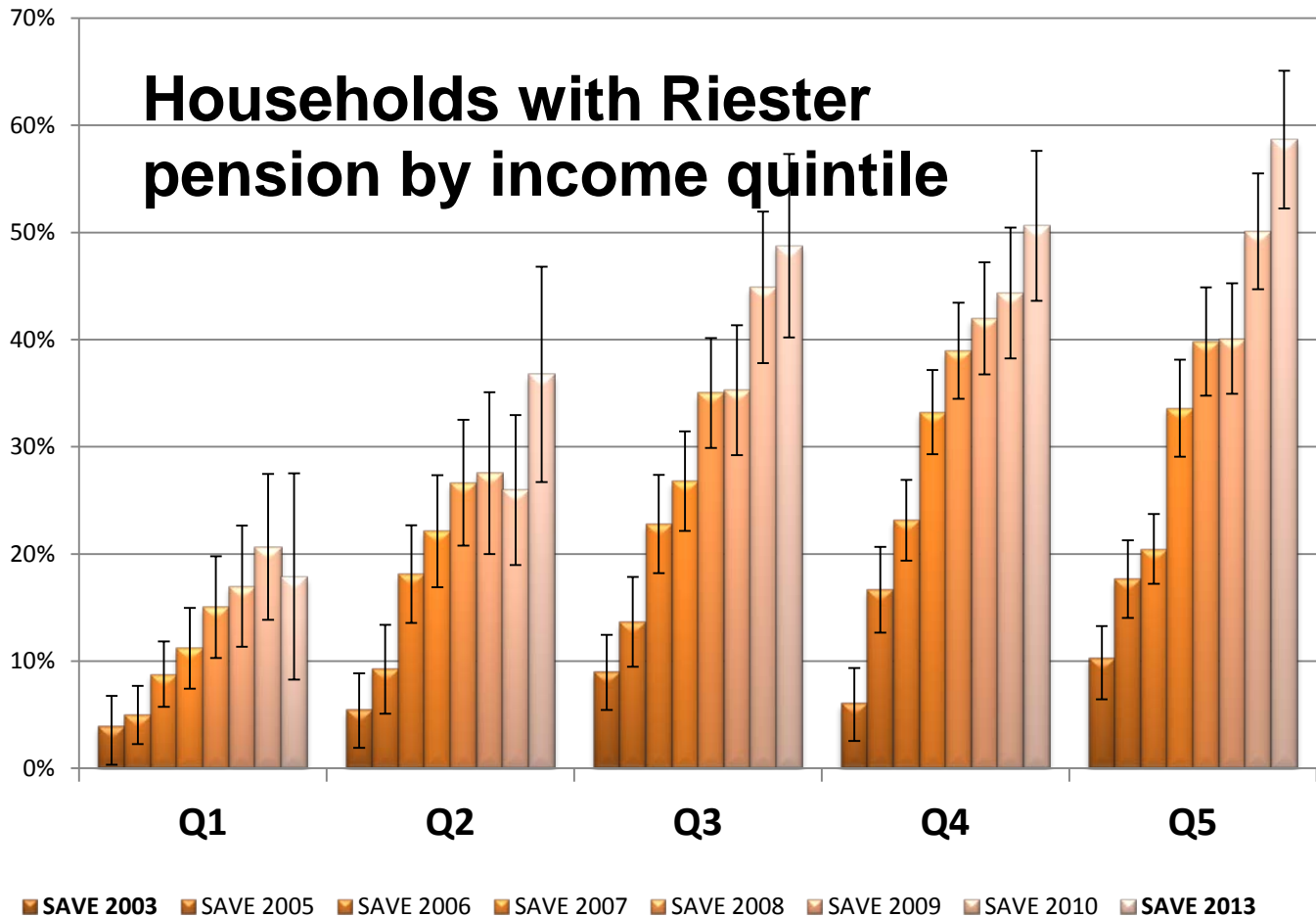
How much do you/does your employer contribute to your occupational pension?





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Problems: Third pillar



Source: Börsch-Supan et al 2015



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Lack of information

Are you eligible for a government subsidy?

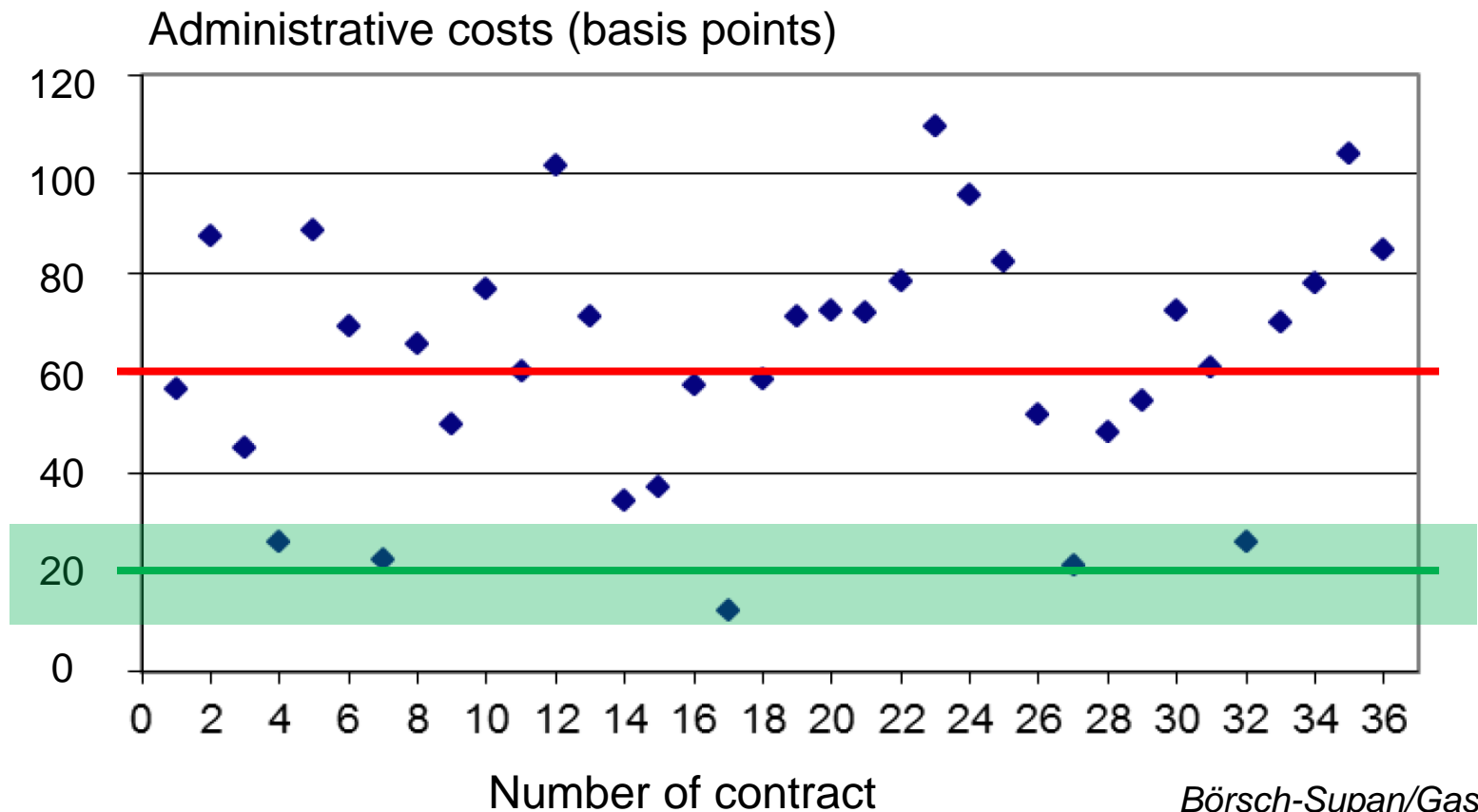
		Not eligible (percentage of households)		
Income quintile		Law	Own assessment	Diff
		1	2	3
1		27,54	62.15	34,61
2		28,38	50.76	22,38
3		29,73	47.78	18,05
4		22,4	41.47	19,43
5		21,35	41.89	20,54
Total		26,27	50.58	24,31

Source: Coppola
and Lamla 2013

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Market failure

Huge variation in administrative costs



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Conclusions

- ▶ **There are many good reform ideas in Europe**
 - Notional defined contribution systems which adapt to population aging and create a sense of actuarial fairness
 - Automatic adjustment of retirement age to life expectancy
 - Sustainability factor: Index benefits to dependency ratio
- ▶ **Germany has managed to keep PAYG system under control**
in spite of serious population aging
- ▶ **Second and third pillars took up, but still problems**
 - Serious lack of information
 - Markets failed to weed out costly pension plans