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THE SUSTAINABILITY OF PENSION SYSTEMS: NEW INDICATORS

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Sustainability and adequacy

European Union:

“The challenge for pension policies is to put in place a system that is financially sustainable so that the basic purpose of pension systems, namely

- **to deliver adequate retirement incomes and**
- **to allow older people to enjoy decent living standards and economic independence,**

can be achieved”.

Need to measure sustainability

- The financial crisis imposes to consider the sustainability of a national pension scheme as a crucial issue.

- This implies that technicians must adopt adequate indexes to define sustainability.

Key indicator used up to now

- The key indicator is the pension expenditure ratio that is the ratio (in a given year) between
  - the total gross expenditure amount related
  - to the gross domestic product (GDP).
- Why ?
  - ➢ It has an intuitive interpretation as it measures the part of domestic product aimed at covering pension expenditure.
  - ➢ it is easy to calculate

It is largely used in the international comparisons

Drawbacks of the indicator

- This indicator does not show the main factors affecting the amount spent in pension systems.
- It should be always accompanied by a detailed expenditure analysis.

- Example in the Ageing Report edited by the European Commission (AWG) the overall ratio of the public pension expenditure to GDP is expressed as the product of the five main factors
  - the dependency ratio,
  - the coverage ratio,
  - the employment rate,
  - the benefit ratio,.
  - the labour intensity.

The problem and the solution

- The indicator does not show whether a pension system is affordable by the public finance
- Moreover, in the international comparisons the index can be misleading

- Over time,   actuaries have introduced a number of indicators, each of one reflecting a specific performance
- A typical example is given by the annual assessment rate (pay-as-you-go rate), always supplemented by a careful analysis

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The first step

- Tax system may affect in different way the social protection and disturb cross-national comparisons of social expenditure.

- Then, a first step towards a consistent index is given by considering the pension expenditure net of taxation. This step is taken by
  - AWG Report
  - OECD analysis

OECD papers suggested to adjust the gross figures by considering direct taxation on income benefits

The further step

- **Another factor that greatly affects the burden for the public finance is the amount of contributions paid by (or on behalf of) the social insured persons.**
- **By taking into account also this item, the sustainability indicator as the ratio:**

$$I_{new} = \frac{Gross\ pension\ expenditure - Pension\ taxations - Pension\ Contributions}{GDP}$$

All the values that appear in the formula are usually collected by the national statistical offices

Examples

	Projection year: 2010				
	Italy	Finland	Germany	Spain	European Union
Public Pension Gross	15.3	12.0	10.8	10.1	11.3
Public Pension Net	12.8	9.9	9.1	9.5	10.0
Contributions	11.0	9.9	7.4	10.9	8.7
New Indicator	1.8	0.0	1.7	-1.4	1.3
	Projection year: 2030				
Public Pension Gross	14.5	15.6	12.0	10.6	11.9
Public Pension Net	11.9	12.8	9.9	10.0	10.2
Contributions	11.1	12.0	7.9	10.9	9.1
New Indicator	0.8	0.8	2.0	-0.9	1.1


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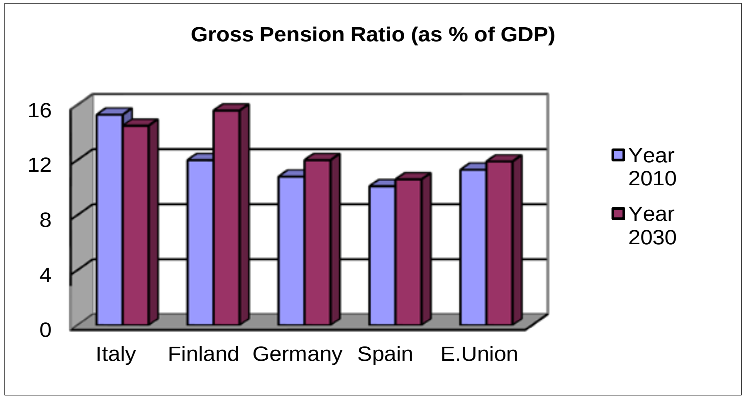
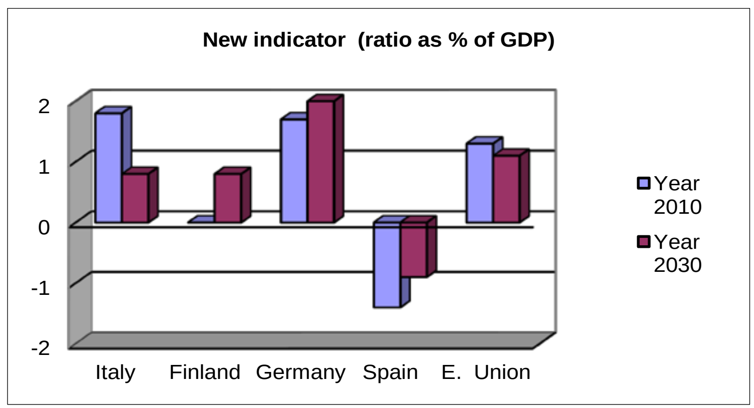
Examples


Gross Pension Ratio (as % of GDP)
16
12
8
4
0
Italy
Finland
Germany
Spain
E.Union
Year 2010
Year 2030


New indicator (ratio as % of GDP)
2
1
0
-1
-2
Italy
Finland
Germany
Spain
E. Union
Year 2010
Year 2030