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THE SUSTAINABILITY OF PENSION SYSTEMS: NEW INDICATORS

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Warning!!

- When we speak about indicators we are dealing with powerful instruments of measurement.

- If they give wrong or imprecise measures they can result in wrong policy with disastrous consequences.

Adequate indicators are not only needed for economists and decision makers, but they are also necessary for the general public to avoid unproductive debates.

Purpose of an indicator

The purpose of an indicator is to show "how well a system is working" and it depends on the system to be examined. Usually the indicators should present certain characteristics. They must be

- **relevant (i.e. they must show the main performance of the system);**
- **easy to understand;**
- **reliable and**
- **based on available data.**

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".

Policy **initiatives** of the European Union

- **Many policy initiatives of the European Union concern national pension system such as**
  - **removing obstacles for the free movement of the persons,**
  - **promoting gender equality,**
  - **combating discrimination**

- **The European Actuarial Profession represented by the Groupe Consultatif, now Actuarial Association of Europe try to interact with the Commission and propose specific studies .**

- **In 2012 a sub-committee of the Pension Committee has been set up and a certain number of working groups have been established.**

The Sustainability of Pension Systems: New indicators by Cinzia and Giovanna Ferrara

What is Sustainability?

- **Sustainability is not achieved by cutting future spending**

- **Higher spending does not automatically indicate effective or efficient spending**

- **Sustainability and adequacy are not conflicting aims, but two different aspects of the same problems**

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.**

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Other studies

- **Careful analysis is performed by the report prepared by Chris Daykin for the Groupe Consultatif: "Sustainability of pension systems in Europe " where the main accent is put on the impact of demographic factors.**

- **Another study to mention was carried out by Allianz Global Investors (2011) . In this case a composite index was build up**

The index of Allianz Global Investors

- **The index was build up by considering some sub-indicators. The sub indicators are of two different types, i.e.   relevant**
    - **to pension system (level of pension benefit and coverage of work force, legal/effective retirement age, strength of fund pillar and reserve fund) ;**
    - **public finances (pension payments/GDP, public indebtedness/GDP, Need of welfare support)**

- **The sub-indicators are combined together by fixing for each of them a system of scores varying from 1 to 10**

A ranking index?

In one way or in another the ratio

pension expenses/GDP

is considered a good index and useful to perform the new sport of ranking countries from the best to the worst one.

ICA 2014 CIA
WASHINGTON DC

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**

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

Examples

Gross Pension Ratio (as % of GDP)

New indicator (ratio as % of GDP)