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# Workshop

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## **Sustainable Ageing Societies: Indicators for Effective Policy-Making**

### **Thematic session 3**

The labour market and the economic activity  
of older and younger persons

Madrid, Spain, 14-16 April 2004

## **Retirement Incentives and Living Condition Indicators**

*Sergio Perelman*

**Sustainable ageing societies: Indicators for Effective Policy-Making**  
***IMSERSO Workshop, Madrid 14-16.04.2004***

*Policy brief:*

***Retirement Incentives and Living Condition Indicators***

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The main factor explaining the ageing process in most European societies is undoubtedly the demographic transition created by the baby-boom-baby-boost mainstream.

Baby-boomers are currently reaching the age of retirement. However, the scrutiny that the sustainability of ageing societies has been subject to is due to several other factors which are at work simultaneously. We may cite among others:

- 1) Parsimonious significant increases in life expectancies
- 2) Dramatic decline of activity rates among the population aged 50 and over
- 3) Systematic increase in health care expenditure due to technological progress
- 4) Independence between generations within families

These factors are certainly related each other, but overall they are deeply affected by national institutions. All kind of social security, labour market and taxation regulations play an important role, namely on the determination of expected replacement rates and on individual behaviour.

Last but not the least, individuals' life-cycle income and savings behaviour, and health and wealth status are powerful factors determining aging sustainability. Finally, one must consider the more general country economic situation: per capita GDP, expected productivity growth and indebtedness.

***An ageing burden indicator***

I think that we need an indicator that must be able to summarize countries' situations in face of the ageing process. Such indicator will give us an appraisal of the potential *ageing burden* under a series of alternative reforms, leaving the evaluation of which reforms are sustainable or not to each individual country.

This indicator is founded on the most reliable projections: on the one hand, old-age dependency ratios adjusted to take into account labour force participation, mainly among older cohorts, and, on the other hand, replacement rates that take into account transfers in the favour of the aged dependent population, mainly pension benefits and health care.

Schematically, the *ageing burden* indicator is as following:

$$B_i^t = R_i^t \times E_i^t,$$

where  $B_i^t$  indicates the *ageing burden* for country  $i$  at year  $t$ ,  $R_i^t$  the replacement rate, including health care, and  $E_i^t$  the effective old-age dependency ratio:

$$E_i^t = D_i^t \times P_i^t,$$

where,  $D_i^t$  is the (demographic) old-age dependency ratio, i.e. 65+ / 15-64, and  $P_i^t$  its adjustment to take into account labour force participation, mainly among elderly people.

For instance, assuming that the old-age dependency ratio ( $D_i^t$ ) is expected to follow the EU-15 evolution described in Table 1, with labour participation and replacement rates maintained constant at their 2000 level ( $P_i^{2000} = 1.20$  and  $R_i^{2000} = 0.50$ ), we obtain the corresponding *ageing burden* ( $B_i^t$ ) as following:

Table 1

Year	$D_i^t$	$P_i^t$	$E_i^t$	$R_i^t$	$B_i^t$
2000	0.25	1.20	0.300	0.50	0.150
2020	0.32	1.20	0.384	0.50	0.192
2050	0.50	1.20	0.600	0.50	0.300

This indicator has, in my view, several advantages:

1. It can be easily calculated from other available indicators: old-age dependency ratios, labour force participation rates by age categories, and average replacement rates.
2. Its value must be interpreted as the cost of ageing for the active population, which is a proxy of the burden of ageing on total households' disposable income. In our example the *ageing burden* is expected to increase from 15.0% today to 19.2% in 2020 and to 30.0% in 2050, which are extra 4.2 and 15.2 percentage points on households' disposable income, respectively.
3. Alternative scenarios can be calculated combining expected values of the primary indicators. However, while expected old-age dependency ratios are easily available from international demographic projections and must be considered as the baseline case for calculations, the expected evolution of labour force participation and replacement rates are generally estimated assuming potential individual behavioural changes and institutional reforms.
4. It is a decomposable indicator; i.e. it would be possible to make the distinction between the *ageing burden* of older-old (80 and over) and the *ageing burden* corresponding to the younger-old cohorts (less than 80).

The most interesting feature of this indicator is however its potential capacity to check different policy issues and sustainability. In order to illustrate this, we come back to our example.

As showed before, the supplementary effort to be provided by the active population to finance the *ageing burden* will represent 4.2 and 15.2 extra points of their total income in 2020 and 2050, compared with the *ageing burden* in 2000. But in fact we don't know which categories in the population are to support this extra burden, and in which proportion?

This is a central issue when we talk about ageing sustainability. The *ageing burden* will be perceived differently in different countries and by different individuals, particularly by policymakers, depending on which categories of the population the burden will fall.

Assuming that the burden on the active population reached in 2000 (15.0%) is an implicit limit that cannot be exceed, and if the international market competition conditions are to be maintained, at least three other alternatives are still available:

1. To transfer the extra *ageing burden* to the coming generations, this implies the emission of long term bonds. In our example, that means a public debt (annual) increase equivalent to 4.2% of GDP in 2020 and 15.0% in 2050. Is this option compatible with country indebtedness and with long-term economic growth perspectives?
2. To put the entire extra *ageing burden* on the older dependent population. In terms of our example, this implies a dramatic deterioration of the replacement rate that becomes  $R_j^{2020} = 0.39$  and  $R_j^{2050} = 0.25$ , *ceteris paribus*. This means that the average net income among the retired population will be divided by two in 2050, compared with the average income among the active population. Probably this option will be considered as politically unsustainable too. Poverty among elderly will explode, even under a universal flat pension scheme.
3. Finally, another option is to maintain the ageing burden at the 2000 level by postponing retirement. In our example, assuming that the replacement rate is maintained at the 2000 level, this will imply the maintain of the effective old-age dependency ratio at its 2000 level ( $E_j^t = 0.30$ ). In this case, the expected evolution of the old-age dependency ratio, from  $D_j^{2000} = 0.25$  to  $D_j^{2050} = 0.50$ , would be compensated with changes in retirement practices. In other words, the expected age of retirement will be close to 65 years old in 2020, and largely exceed 65 years old in 2050 (the exact age of retirement could be estimated using detailed demographic projections).

Summing up, in my view the *ageing burden* indicator can be used as a simple way to check the viability of alternative policy reforms. For this purpose it must be complemented with other indicators, among them the income and wealth distribution among elderly people and the public debt burden, which represent the different dimensions on which sustainability will be appreciated.

At the end of the day, it's the well-being of at least three generations that is at stake when we talk about ageing sustainability, and the way this problem is addressed in each country will have direct implications for them.

### **Intermediate age indicators**

It is clear today that ageing sustainability depends upon the place the intermediate cohorts (50 to 69 years old) will take in each country, not only in the labour market, but in the society as the whole. The decision to quit the active life depends on several factors, among them health status, work desutility and job opportunities. However, many indications seem to confirm some form of discrimination against aged workers.

Moreover, international comparisons show that social security regulations and labour market institutions imply substantial financial incentives in favour of early retirement in most countries (Gruber and Wise, 1999, 2004). Some evidence appears too that in countries in which earnings include an important seniority component, firms lay-off aged workers as soon as they can. And, as a consequence of that, an increasing number of pre-retired individuals fall under the poverty threshold. Two reasons contribute to this: their shorter professional careers and the greater size of households, that still often include dependent children.

Therefore, I think that it is important to dispose of a set of indicators specific to this intermediate population, accompanied by indicators of institutional facts owing to their potential influence on retirement behaviour. The information needed for the computation of these indicators is available from LFS and ECHP-SILC type of surveys.

#### *Well-being among pre-retired*

Several age-oriented indicators, i.e. relative income and poverty rates, give information on these intermediate cohorts (50-70 years old). Nonetheless they do not make the necessary distinction between individuals at work and pensioners.

#### *Replacement rates by age of retirement*

Pre-retirement incentives may be detected comparing the evolution of expected pension rights accordingly to the age of retirement. An actuarial neutral scheme implies an increase of approximately 5% in pension benefits by year of postponement. The comparison between replacement ratios observed for workers leaving their active life at different ages gives a rough indicator of the kind of pre-retirement incentives prevailing in each country: positive, neutral or negative.

#### *Labour force participation (50 to 69 years old)*

Detailed information on labour force participation by age cohorts and by educational attainment will be extremely useful as a base of comparison among countries. They are also useful to identify the factors at work and the potential reforms to be proposed to favour labour force participation among young older individuals.

The following indicators include information collected upon younger active population cohorts:

#### *Wage earnings by age category*

Productivity and salaries are expected to grow with experience during the individual life cycle. Great differences were however observed between countries. These can mainly be explained by national labour market regulations. A very simple indicator can be computed, i.e. the ratio between average wage earnings at 50-55 and 25-30 years old.

#### *Expected age of retirement*

A representative sample of the European population was asked the following Eurobarometer question: "At what age do you intend to retire?" (European Commission, 2003). Even if a difference exists between individuals' expectations and realisations, their answers are very informative of the intentions they have in mind. Moreover the differences reported between countries were significant and highly correlated with the observed retirement paths, confirming the difficulties governments have to introduce reforms.

### **Older old indicators**

From now up to 2050, the population aged 80 and over will be multiplied by ten in most European countries. As recognised by most specialists, very little is known about this category of the population and all projections made today suffer from this ignorance.

A new international survey on the "50 and over" population, SHARE (*Survey on Health, Ageing and Retirement in Europe*) will be undertaken this year. It is expected to bring information on several aspects of the older old life, among others health status, living arrangements, care needs and social support (Börsch-Supan *et al.*, 2003). Eleven countries participate on this project and the results will be comparable with those obtained from the HRS (Health and Retirement Study) and the ELSA (English Longitudinal Survey on Ageing) started in 1992 in the USA and in 2002 in Great Britain, respectively. The results of the first wave of SHARE will be available at the end of 2004 and will allow the computation of specific indicators for the 80 and over.

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