

## Demographic trends and pensions: fifteen years of debate

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The future of pensions has been a prominent issue in French public debate for at least fifteen years. Two key events were the release of the report entitled "Aging in Solidarity" (*Vieillir solidaires*) by the State Planning Commission (Commissariat Général du Plan) in 1986 [1, 2] and that of the "White Paper on Pensions" (*Livre blanc sur les retraites*) in 1991 [3]. Since then, the topic has stayed on the social agenda, with the "Balladur reform" in 1993, the attempt to extend the latter to special pension systems in 1995, the Charpin report in 1999 [4], and the establishment of the Pension Steering Committee (Conseil d'Orientation des Retraites) in 2000, which submitted its first report in fall 2001 [5].

The debate persists because pension systems are bulky, complex entities that can only evolve very slowly, but also because of the difficulty of agreeing on the demographic prospects and their impact on pension systems. However, the discussion has made progress. With the first generations of baby-boomers approaching retirement (figure 1), we can identify the initial disagreements that have now been smoothed over and the issues that remain problematic.

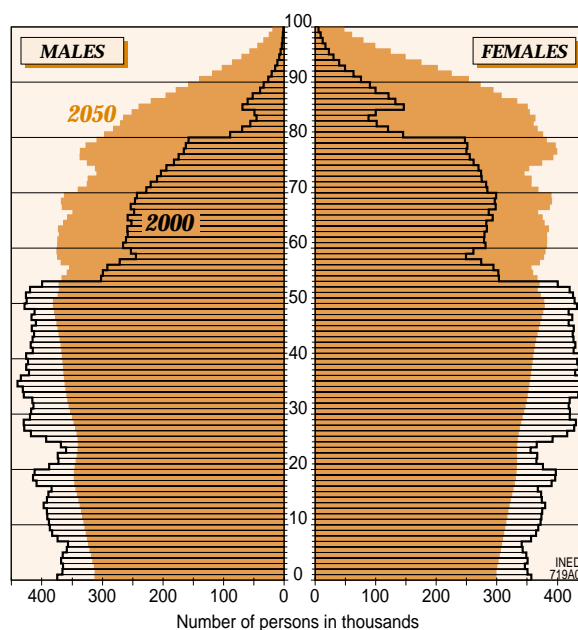
### ◆ Fewer economically active persons or more pensioners?

In the early 1990s, part of the debate focused on the robustness of demographic projections, owing to the uncertainty over future fertility levels. The prevailing view blamed population aging on a fertility rate that was too low to ensure generation replacement and

would cause the labor force to shrink. Hence the belief that an upturn in fertility would be enough to solve the problem, whether the pick-up was spontaneous or promoted by a more active family policy.

This vision proceeded from a misunderstanding. The labor force is indeed heading toward a gradual decline from 2006 or 2008 onward, which could make it contract by 10% in about forty years [6, 7]. This phenomenon is indeed due to the stagnation of the fertility rate at 0.2-0.3 points below the generation replacement

Figure 1 - Population pyramids in 2000 and 2050\*



\*Assuming fertility stays at 1.8 children per woman and the downward trend in mortality continues at the same pace as in recent years. Source: INSEE

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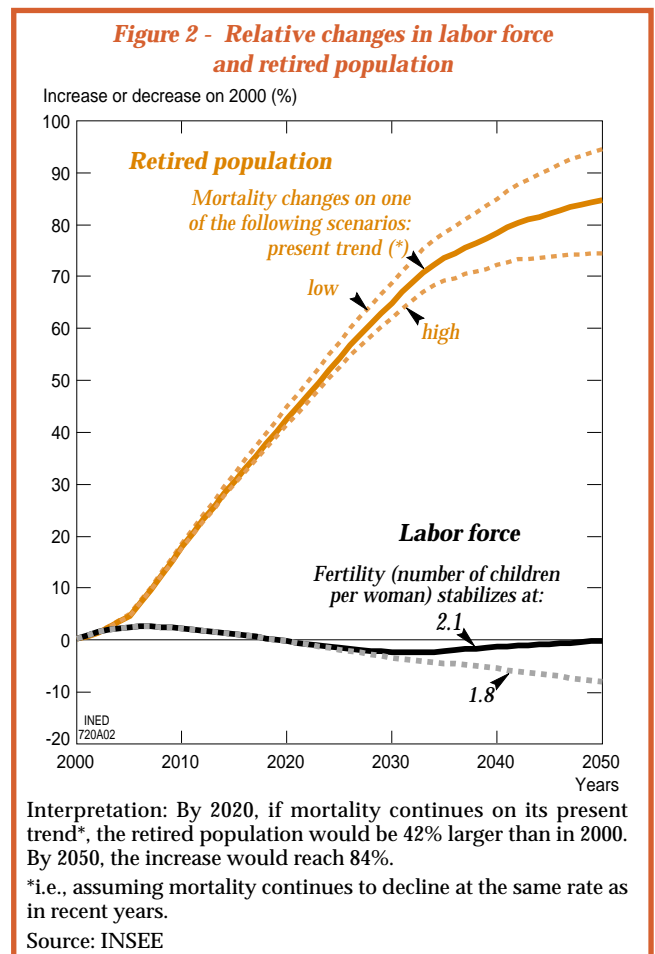
threshold of 2.1 children per woman since the 1970s. But the main cause of population aging lies elsewhere. Aging is the result of two irreversible trends: the increase in life expectancy and the entry into retirement of the large cohorts of baby-boomers, which will begin in 2006 or so. At around that date, the retired population will enter a rapid growth phase, swelling by 85% in the four decades thereafter (figure 2).

The weight of these two factors explains why aging is inevitable in the long run. Offsetting the rise in the number of retirees would require a parallel growth in the number of economically active persons, i.e., in the labor force. A generation later, however, that bigger labor force would trigger extra growth in the number of retirees, which would in turn demand another round of compensatory growth of the economically active population. The mechanism can be extended indefinitely. In sum, the requirement would be a perpetual baby boom or substantial and steadily rising migration flows [8]—i.e., in either case, a swift, endless population growth.

#### ◆ Pensions and productivity gains: what economic growth doesn't solve...

The aging trend is thus largely inevitable, and the open question is rather how to accurately measure its real consequences on pension systems. One cause of potential confusion here is the inclusion of productivity gains. Productivity may rise dramatically over four decades. Would that necessarily dampen the influence of demographic variables to a substantial degree? There are two ways of evaluating the impact of productivity gains: one gives the impression of totally resolving the pension problem, but is erroneous; the other is correct but more limited in scope.

The wrong reasoning goes like this: Aging will admittedly double the burden on each economically active person, but if their productivity doubles in forty years—a very reasonable assumption—than they should be able to provide the same pensions to twice the number of retirees without the need to raise their contribution rates. This “solution” to the pension problem is, however, a fallacy. The problem is not how to ensure the same absolute standard of living to retirees in 2040 as to retirees today. That goal is easy to reach but utterly inadequate. Rather, the efficiency of pension systems should be measured in terms of retirees' relative real income, i.e., the ratio of the mean pension to the mean net income of the economically active. Assessed on this second criterion, productivity gains become neutral again. At a given retirement age, unemployment rate, and labor-force participation rate, demographic change effectively entails one of the



following two extreme alternatives, which are totally independent of the productivity hypotheses:

- either a halving of retirees' relative living standards in the next forty years;
- or the strict preservation of their relative living standards, which, however, would need to be paid for by a nearly two-thirds increase in the contribution rate of the economically active. As a percentage of GDP, pension benefits would rise from slightly over 12% to about 20% by 2040.

#### ◆ ...and what it can facilitate

This does not mean that economic growth has nothing to contribute; rather, its contribution lies at another level. First, if growth is robust, it can promote a return to full employment that would reduce the financial outlay required. For example, on a scenario of 4.5% unemployment and a fairly brisk growth in the participation rate, the report by the Pension Steering Committee reckons that the volume of additional resources required to ensure total indexation of pensions to net wages would be reduced to six points of GDP. Also, economic growth facilitates the rise in contributions by making them compatible with the uptrend in net income.

But these funding sources should not be overstated. A steep fall in unemployment is to be hoped for, but is by no means certain. And while growth was undeniably the factor that allowed substantial increases in pension contributions during France's three-decade postwar expansion ("*les Trente Glorieuses*"), it should be recalled that GDP was growing by a brisk 4-5% a year. Since growth has slowed to 0-2% a year, the room for maneuver has shrunk, making it more difficult to reconcile economic performance and further growth in pension contributions. Moreover, even if some maneuvering room exists in regard to compulsory contributions to the basic system, it is legitimate to ask whether those resources should be entirely devoted to financing pensions. Other social needs may increase in the future—such as education, health, or coverage of dependency expenses.

A common tendency in many of the reforms under way (see box) is therefore to do the opposite, i.e., to take advantage of growth to promote the reverse scenario: the gradual delinking of pensions from mean working income. For this purpose, it is sufficient to set the pension growth rate below the overall growth rate. There are two ways of doing this. The first is to loosen the ties between initial pension benefits and final salary by changing the rules used to compute pensions when paid out. The second is to change the rule for indexing pensions after they start to be paid out, by linking them to prices rather than to wages or mean productivity. The two approaches have different consequences on the retirement experience for pensioners. The first accentuates the discontinuity in earnings at retirement. The second does not make the entry into retirement more painful but entails a gradual backsliding down the income scale with every year of retirement.

The 1993 pension reform borrowed from both approaches. The rules for determining the initial pension were toughened, and the reform consolidated the principle of pension indexation to the price index alone. The Pension Steering Committee estimates the reform will lower relative pension levels by about 18% in forty years' time. This would leave only four points of GDP in additional financing to be raised, rather than the six points implied by the scenario in which pensioners' relative real income was fully preserved. The reduction is thus not negligible, but still calls for sizable funding. If the latter cannot be found, an even steeper cut in the relative pension level will be needed. Now such a shift is acceptable only if individuals have the means to offset it, and there are just two options to ensure this: either a heavier reliance on savings—by introducing a dose of funded plans—or an increase in the retirement age. What issues does either option raise?

### Selected examples of reforms in other countries

All developed countries face the same demographic constraints as France. Indeed, they are sometimes heavier in countries where the fertility rate is lower and is expected to lead to a quicker contraction in the working-age population. To cope with these constraints, most countries have enacted reforms or are planning to do so. Those implemented in three countries—Sweden, Italy, and Germany—are often cited as models of reforms that have been successfully completed or are well under way [10, 11].

Sweden and Italy have planned strict caps on future contribution rises. Mechanically, this means sizable drops in the replacement rate at a given retirement age. This is obtained through arrangements known as "notional accounts," which simulate, under the pay-as-you-go (PAYG) system, the workings of a defined-contribution funded system. The contributions accumulate fictitiously on individual accounts, and this notional capital rises at the overall rate of economic growth. It is then converted into an annuity at retirement. The conversion rate depends on the life expectancy at that age. The longer the life expectancy, the lower the replacement rate. Under such a system, a cohort of contributors receives no more and no less than the sum of its contributions paid in during its working years, augmented by the economic growth rate alone. The system is thus broadly compatible with the stabilization of contributions. Sweden introduced the system in 1999. Italy carried out its reform in three stages: 1992, 1995, and 1997.

The problem is to find a way for individuals to offset the fall in the replacement rate. They can do so by choosing to work longer. In this type of system, the annuity conversion rate rises by about 5% per year of delay in retirement. The Italian plan will allow individuals a free choice of retirement between 57 and 65. In Sweden, the range of retirement ages runs from 61 to 70. Obviously, the labor market must allow persons to remain in employment until an older age. Sweden already posts relatively high participation rates in the 55-64 age group.

Part of the fall in pension benefits may also be offset by income from savings. Sweden has already planned to achieve this via a second-stage mandatory funded system operating under tight State guidelines. The only degree of freedom for individuals is the choice of pension fund in which to invest their savings. In Italy, the future role of pension funds is, for the time being, less clearly defined.

Unlike the Swedish and Italian reforms, the German reform of 2001 combines a cut in benefits and a moderate rise in the contribution rate. Again, the fall in benefits will be offset by a new funded system [12]. Unlike in Sweden, however, the system is voluntary. The reform will not clear the imbalance between pension contributions and benefits unless the employment rate rises sharply.

## ◆ Two complementary solutions: savings or working longer

The 1990s saw bitter clashes over the first of these solutions: savings. In one camp, funded plans were sometimes presented or understood as the sole alternative to the inevitable “failure” of PAYG systems. In the other camp, the funded-plan choice was described as sacrificing pensions to market principles, a move that was bound to backfire on pensioners themselves. The debate has become less polemical. Hardly anyone still claims that the demographic problem can be solved by a massive expansion of funded plans. It is now accepted that funded systems are not intrinsically immune to the effects of population changes, especially when these are due to longer life expectancy. Whatever the pension system, the steady increase in the duration of retirement implies that greater financial resources will need to be allocated to it, for a given replacement-rate target.

The advantages of funded plans thus lie elsewhere, and most experts regard them as secondary. If the plans are voluntary, they can lighten the pension burden of compulsory PAYG systems. They may also yield slightly higher returns than PAYG over the long run if interest rates consistently outpace economic growth. Lastly, they can lead to a more satisfactory corporate capital structure if one believes preferable that national firms be owned by national pension funds than by non-resident ones. But the fact remains that these advantages must be paid for—and up front: the funded-plan strategy involves anticipating the demographic shock, whereas the PAYG approach merely goes along with it. This financial preparation is especially hard to imagine for low-income wage-earners, and it is fraught with uncertainties. Even if some evidence suggests that funded plans may outperform PAYG in the long run, their returns are far more erratic, as the present stock-market performance reminds us

The increase in retirement age—or, more generally, the increase in labor-force participation rates at older ages—can be presented as a logical response to longer life expectancy. Arguably, the increase in the total length of life should be accompanied by a proportional lengthening of working life. One generation—that of the baby-boomers’ parents—has been able to avoid the adjustment, but only because it accepted the cost of heavier child expenses during the period when it was still economically active. The closing of the baby-boom interlude may be taken as an invitation to set the retirement age back in sync with the overall trend in life expectancy. That is the path chosen by the Swedish reform (box).

But the “work longer” policy, as well, involves difficulties and demands. First, if it were the sole adjust-

ment variable, the increase required would be considerable: to maintain the relative living standards of retirees at their present level solely by raising the retirement age would necessitate an increase of about nine years in the next 40-50 years [5, 9]. This suggests that even the age variable will play only a partial role. Second, for people to work at older ages, there has to be both a labor supply and a labor demand. In all likelihood, labor supply will grow spontaneously as pension benefits at a given retirement age dwindle. The latter phenomenon will restore the incentive of economically active individuals to keep working, all the more so as the extra years of work will effectively entitle workers to additional benefits. But the growth in labor supply also implies an adjustment in working conditions or the introduction of second careers in the most demanding occupations. And many doubts persist on the demand side. True, the downtrend in the labor force toward 2006 could well trigger labor shortages so severe that employers will tap all existing reserves, including older workers. But that would represent a complete reversal of their present human-resources management practices—a reversal whose early signs are hardly visible yet.

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