

The viability of redistribution

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A critique of the projects for "reforming" redistributive pensions and the supposed advantages of capitalization that concludes with a central proposition: the demographic "problem" must be dealt with within the system for reasons of economic efficiency and social justice.

The whole discussion starts with the demographic ratio, which is the ratio between the number of people aged 60 and above and the number of people aged from 20 to 59. In 1995, it was 38.5% but, according to the Charpin report, will have changed to 72.6% by 2040. In other words, for every person of retirement age and above in 1995, there were 2.6 people of working age, but in 2040 there will only be 1.4. Within the logic of the redistributive system, this sharp increase in the ratio of dependency should be accompanied by an increase in contribution rates, to ensure that contributions cover pensions. Then, everything else is based on the following premise according to which this increase in contributions, reflecting the ageing of the population, will be insupportable. *"The whole question is whether these mandatory deductions are tolerable. If there is no ceiling to them, then we can gradually adapt to the new demographic facts of life without any problems (assuming that increases in productivity continue at a satisfactory rate) and the debate can end there. If not, and if there is really a ceiling, then we need to think about how to get round the problem. We are going to adopt the widespread hypothesis that this ceiling has already been reached."* [1] This is the idea ("widespread", but by whom?) that we must obviously refute because it is based on an excessive and irresponsible dramatisation of the forecasts.

Redistribution is a formula

A redistributive pension system is a payment system that transfers the contributions paid by companies to pensioners as a continuous flow. If we allow for management costs - which are vastly less than those incurred by pension funds - the outgoings of this payment system are equal to the total of the pensions paid, which can be broken down into number of pensioners and average pension. The receipts are obtained by applying an average contribution rate to the total wage bill, which can itself be broken down into the number of employees and the average salary. The balance between jobs and the resources of the payment system can be expressed in the following way:

number of employees * average salary * contribution rate = number of pensioners * average pension

We can deduce from this equation the contribution rate that ensures accounting equality between the payments system's incomings and outgoings. It is expressed as follows:

$$\text{contribution rate} = \frac{\text{number of pensioners}}{\text{number of employees}} * \frac{\text{average pension}}{\text{average salary}}$$

We can then see that there are two significant factors: the ratio between the number of pensioners and the number of people in paid work is the **observed dependency ratio** (it leaves out the unemployed) and the ratio between the average pension and the average salary is the **replacement rate**. Therefore, the whole logic of a redistributive system is contained within the following formula:

contribution rate = dependency ratio * replacement rate

If we consider this formula, we can see that any increase in the dependency ratio can be solved by only two ways:

- either the contribution rate also increases in line with the increase in the dependency ratio, and exactly parallel to it, if the replacement rate is to be maintained constant,

- or the contribution rate does not increase at all, or not enough, and the replacement rate must fall, which means that the pensioners get poorer in relation to the people in work.

Now, after this brief description, we can already understand why it is completely impossible for people to pretend that they are in favour of the redistributive principle if they also assert that the contribution rate must never increase again.

Productivity-equivalence

Can the increase in the contribution rate become unbearable? In absolute terms, we can imagine that the number of pensioners could increase so quickly that it would be impossible to increase their purchasing power and that of the wage-earners at the same time. We would see a kind of class war between the generations, which is what the opponents to redistribution are trying to provoke. In reality this is far from being the case.

To show this, we will argue on the basis of two rules, which are fair and sustainable rules:

- first rule: the wage bill increases at the same rate as the added value. This means that the share allocated to wages is constant in the medium term, or that wages (including contributions) increase at the same rate as productivity - the value added per person,

- second rule: the purchasing power of the average pension increases at the same rate as the net wage and this parallelism is ensured, within the total wage bill, by the increase in the contribution rate.

Given these two rules, the increase in productivity can be broken down into two parts:

- the uniform increase in purchasing power, the same for net wages and pensions,

- a "levy" corresponding to the increase in the number of pensioners (who receive a revenue without contributing to producing it) in relation to the wage earners who produce that new value.

Does this way in which the redistributive system reallocates resources really lead to insupportable situations where, for example, the average purchasing power would not increase and might even decrease? This is certainly the implicit threat underlying the dominant arguments but in reality we are a long way from any such catastrophe. The two rules adopted above lead to a fundamental relationship that we can describe in the following way: the average net wage and the average pension increase at the same speed and that increase is equal to that of productivity minus a certain amount of purchasing power, which corresponds to the transfer to new pensioners. In other words, the increase in the contribution rate can be measured in productivity-equivalence and this ageing effect no longer solely depends on the dependency ratio, given, once again, the rules we have adopted.

Therefore, we must consider the size of this transfer in relationship to the expected increase in productivity. If it was around the same size or greater than this increase, then we would be entitled to imagine a conflict of redistribution, because almost all the gains in productivity would be captured by the new pensioners and would be absorbed in simply maintaining everyone's standard of living. It is only above this point that the absolute conflicts of redistribution between pensioners and wage earners would start. Now we have mapped out the algebra let's get down to the arithmetic to see if we are anywhere near situations of insupportable tension or not.

Our evaluation of the forecasts in the Charpin report

We have carried out this study on the basis of the assumptions in the Charpin report and another scenario that corrects some of them. These are the assumptions about the number of people in work, which are particularly subject to question. In practice, numerous factors can lead to changes in the results, amongst them migratory balances or the retiring age. Here, we would like to point out another one, women's work. On this subject, the forecasts in the Charpin report postulate a continuing increase in women's work but at a slower rate because it is close to "saturation". This is to completely ignore the question of part time work, to a large extent imposed on women, which is the compensating factor for the rate of activity that is, effectively, near that of men. Let us suppose that in order to measure the potential working population we increase the rate of activity of women from 20 to 59 years old from 80 to 90% and we transform all the part-time jobs into full-time jobs. The first hypothesis corresponds to an increase of 12.5% (90/80). Let us assume part-time is on average half time. By increasing from part-time to full-time, we would double the number of hours for the third of women in part-time work at present, which leads to a potential increase of 20% of the worked hours. In total, women's work can increase by one third, or about 15% of the working population.

Finally, there is the assumption of a "equilibrium" rate of unemployment, which in its initial phase, the Charpin report fixed for all eternity at 9%. It is based on a pseudo-theory that decrees that unemployment cannot fall below a crucial unemployment rate named NAIRU. That said, this parameter does not radically modify the change in the dependency ratio. For example, if we imagine an optimistic scenario with a return to almost full employment, with an unemployment rate of 3% instead of the crucial 9%. We would then get a correcting factor of $(1-0.03)/(1-0.09)$ or about 6% more working people, which does not qualitatively change the terms of the problem. If we retain this last

evaluation, along with the increase in women's work, we get an increase in the working population of 20% that defines our "high variant".

In total, the result is unambiguous: even with the pessimistic data in the Charpin report, the ageing of the population causes a transfer of 0.52 productivity points per year. With our high hypothesis, which assumes a 20% larger working population, the supplementary contribution to pensioners is reduced by about that proportion and is equal to 0.34 productivity points (table 1). Therefore, we are a very long way from the predicted catastrophe.

Table 1. Change in the ratio between pensioners/working people

Hypothesis	1995	2040	Productivity equivalent
Scenario in the Plan	46%	84%	0.52%
Our "high" hypothesis	46 %	70%	0.34%

The way the productivity equivalent of aging is calculated is very simple. Furthermore, it is independent of any hypothesis on the increases in productivity, in so far as it allows the incomes of working people and pensioners to increase more without modifying the relative shares of the people in the two categories. In the scenario described in the Plan, the dependency ratio increases from 46% to 84% between 1995 and 2040. The pensioners' "levy" indicator is multiplied in proportion $(100+84)/(100+46)$ giving 1.26. But this increase is spread over 45 years. Each year the coefficient of multiplication is equal to 1.26 to the power $1/45$ or 1.0052 giving a productivity equivalent of 0.52%. This result, obtained using the Charpin commission's figures, is similar to previous evaluations, including those produced by opponents of redistribution like Kessler [2].

We can illustrate this result in a more striking manner. With an increase in hourly productivity of 2% (equivalent to the average observed in the XXth century) we can, at the same time:

- maintain the relative shares of labour and profits,
- increase pensions at the same rate as net wages: 0.5% of productivity
- gradually reduce the working week to 30 hours: 0.6% of productivity,
- ensure a general increase of purchasing power of 0.9% per year, for a constant labour cost unit, so that everyone's purchasing power, wage earners or pensioners, would have thus increase by 50%.

If we make different choices about the distribution of the increases in productivity, we could arrive at a situation in 2040 where the working week would be 25 hours, and everyone, wage earners and pensioners, would have an income 25% greater than it is today. These projections are undoubtedly the opposite of a catastrophe, which does not prevent them from implying a considerable increase in the contribution rate.

What about growth?

The Teulade report[3] advanced the idea that strong growth would ensure the balance of the redistributive system without there being any need to increase the contribution rate or alter the retirement age. The share of the national income dedicated to pensions can be stabilised if there is an average growth of 3.5% for the next 40 years. We may dispute the plausibility of this scenario and consider it very over optimistic from the point of view of growth, equalling that of the post-war period. But the hypothesis based on productivity is even stronger: in order for the number of jobs created to compensate for the new pensioners, it must increase at a much lower rate than the rate of growth of the economy, 2% productivity for 3.5% growth, for example.

The Teulade report's favourable scenario assumes that productivity remains at 2% for growth of 3.5%, so that the number of working people increases considerably: 1.5 % over 40 years, gives an increase of 80% of the number of working people who are employed. This increase actually corresponds to that of the number of pensioners, so that the working population/pensioners ratio is stabilised.

Let us assume that things do not quite work out like that and that productivity increases by 3.5%. This means (if the number of working hours remains the same) that the number of working people remains the same. This increase in productivity means that everyone, working people and pensioners, would have a purchasing power that increases faster, but that would in no way change the fact that the pensioners' share of the income, and therefore the contribution rate, would have to rise. Productivity in itself does not reduce the transfer from working people to pensioners.

There are two obvious objections to this scenario. The first is that we have never experienced growth that has created so many jobs. Thus, during the years of expansion lasting from the end of the war to the 1974 crisis, the growth in productivity was about the same as that of GDP (around 5%) so that growth was achieved with an almost static number of jobs. Therefore, this growth is not only sustained but of a type we have never seen before. Even if we put

our faith in the virtues of the new economy, we still come up against a second objection: the postulated increase of the working population vastly exceeds the demographic potential and implies a massive reliance on immigration. It is becoming evident that immigration is playing a regulatory role but the idea that it can make such a large contribution (almost 15 million people in 40 years) seems so far fetched that it should in any case never be presented as a credible alternative which would be sufficient to definitively exclude any new increase in the contribution rate.

Confirmation from the COR's report

This report supports our analysis, when it says that *"in a context of sustained growth in productivity, an increase in the contribution rates can be compatible with an increase in the net income of the working population, which will be less than the increase in productivity but significant; thus it can bear comparison with the change in the net income of the working population in the last few decades. Therefore, this scheme can be considered to be fair because it allows the living standards of the working population and pensioners to rise even if it corresponds to a deterioration of the return on transfers for each generation"*.

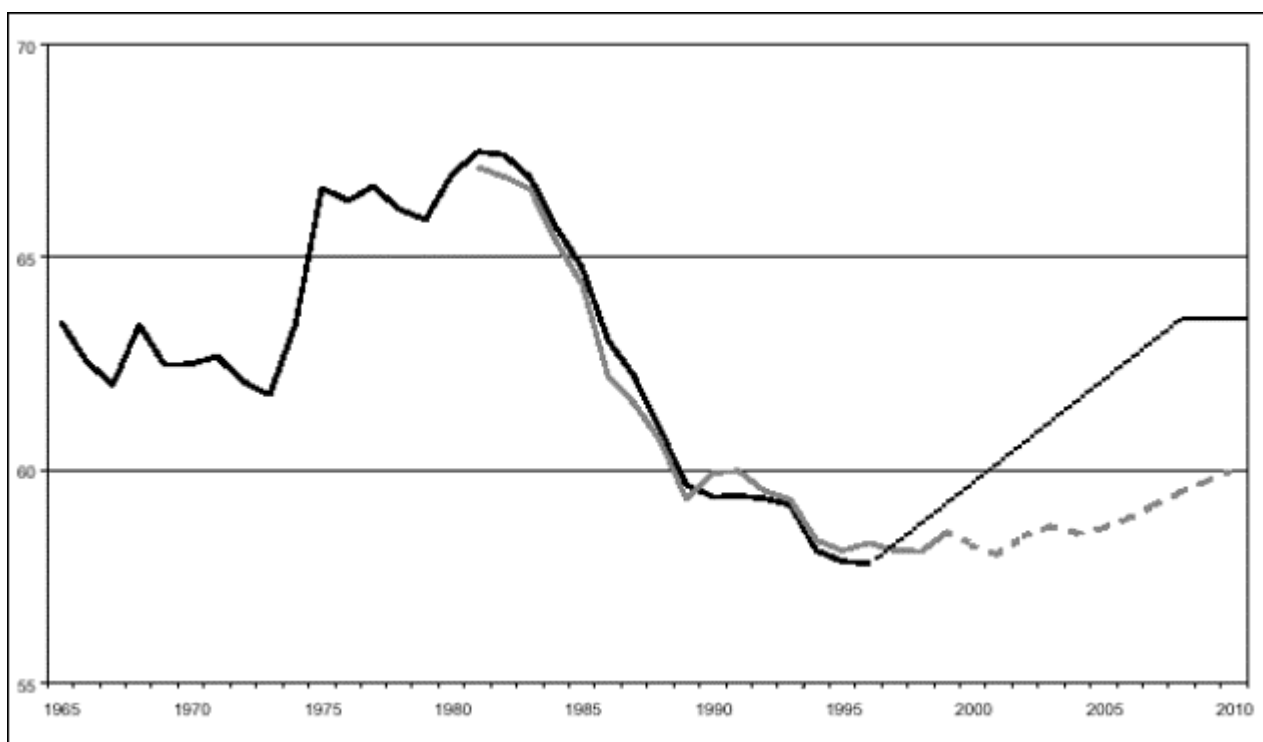
The estimates in the latest report from the COR gives the following figures: the pensions contribution rate should rise from 25% to 40% of wages. When it is put like that, this increase seems considerable, but such a stark presentation ignores two important facts. Firstly, the phenomenon is spread out over 40 years. This somewhat changes the notion of tolerability and one of the advantages of redistribution is that it makes the necessary adjustments little by little, to be exact an increase in contributions of 0.37 percent per year. What this is doing is accommodating a social transformation whose undisputable scale will, in any case, imply a whole series of adjustments in society (the most profound of which will undoubtedly not affect the economic sphere). The second fact that has been ignored is the increase in purchasing power: the increased contribution will apply to an income whose purchasing power will have considerably increased^[4], on condition, naturally, that the rewards of growth are shared out fairly. To illustrate these two ideas and demonstrate their pertinence, let's consider the simplified numerical example that has been given, for ease of reference, in box 1.

Obviously, acceptability increases with gains in productivity, but it also depends on other factors. The first is the "contemporaneousness" of the choices made in redistribution: not only the average contribution rate but also all the other parameters of the system can be adjusted step by step and the social conflicts around these choices can be fought out transparently, whereas capitalisation is the kingdom of individual opaqueness and long-term uncertainty. In addition, this transfer is legitimised by the fact that the number of working people in the population does not increase or increases very slightly. In other words, as we showed in the first section, the increase in the number of old people is in part compensated by the decrease in the number of young people. The increase in the contribution rate can then be interpreted as the way of organising relatively less rapid rise in the private expenditure of households dedicated to the education of children to the benefit of socialised care for old people.

A matter of redistribution of wealth

This 6.5 percent increase in the pensioners' share of the GDP should be viewed relatively, in the light of the fact that between 1960 and 1998 the weight of pensions increased by more than 7%, increasing from 5% to 12% of GDP, without the start of the economic crisis affecting this trend or there being any sign of a "revolt of the working people". There is even less justification for any catastrophic view if we consider that a rebalancing of the shares of added value is quite possible. There is certainly no reason to accept as unquestionable the decrease of ten percent in the share of wealth allocated to wages in the last few years. Therefore, the discussion about pensions is inseparable from the question of the distribution of income. If the labour's share decreases again, no "reform" of pensions will prevent the relative pauperisation of working people, whether they are active or pensioners. This highlights the idea that the threat hanging over pensions is one of capital returns rather than a demographic one.

Graph 1. Wages as a % of added value (corrected to take the self-employed into account)



Sources: OCDE, INSEE, OFCE

Box 1.

The arithmetic of pensions

If we consider a simplified economy for 2000, giving the main statistics of the French economy: labour's share is 60%, the pensions contribution rate is 25%, and pensions represent 12% of GDP. This is shown in column a. Now let's look at 2040, using hypotheses similar to those in the Charpin report. GDP has increased by an average of 2% per year, therefore it has been multiplied by 2.25 and grown from 8,000 to 18,000 billion francs. To simplify matters, we are assuming that the workforce has not changed and therefore that the increase in productivity is equal to that in GDP.

The wage bill has increased at the same rate as GDP, but its internal distribution has changed due to an increase in the relative number of pensioners that increases the contribution rate to 40%. Pensions now represent 17% of GDP. Is this the catastrophe predicted? We could try and give that impression by saying, for example, that pensions have increased from 960 to 3,100 billion, that they will more than triple, that we will have to find 2,000 billion francs to finance them, that they are a black hole, etc., just what the prophets of doom are saying. But if we look a little closer at the changes in wages we see that things are quite different: the purchasing power of the working population has increased a little slower than GDP per head, but has still increased by 1.75% per year, as opposed to 2.05%, the difference going to finance the pensions paid to the new pensioners.

Therefore, the levy is far from insupportable, and this is even truer when we consider the fact that this table is extremely sensitive to the assumption made about labour's share of GDP. If, instead of maintaining it at the very low level it is at today, we assume that it recovers five percent of GDP, or half of what it has lost since the start of the 80s (see graph 1), we get a new forecast for 2040, in which the average wage increases by 1.96% per year, therefore in a way very similar to the increase in GDP. In this case, the "levy" related to the increase in the number of pensioners is paid for out of profits. A variant in the appendix to the COR report shows that an increase in labour's share has neutral effects on the global working of the economy if it is compensated for by a decrease in dividends.

	(a) 2000	(b) 2040 labour's share unchanged	(c) Tcam (%)	(d) 2040 labour's share + 5 percent	(e) Tcam (%)
(1) GDP	8000	18000	2.05	18000	2.05
(2) Wages	3840	7700	1.75	8350	1.96
(3) Pensions	960	3100	2.97	3350	3.17
(4) Wage bill (2)+(3)	4800	10800	2.05	11700	2.25
(5) Contribution rate = (3)/ (2)	25 %	40 %		40 %	
(6) Labour's share = (4)/(1)	60 %	60 %		65 %	
(7) Pensioners' share = (3)/ (1)	12 %	17.2 %		18.6 %	

[1] Didier Blanchet, « Retraites et croissance à long terme : un essai de simulation » ("Pensions and long term growth: an attempt at simulation"), *Economie et prévision* n° 105, 1992.

[2] "Let's take the period of fastest degradation, i.e. the period 2005-2025. In this period, an increase in productivity of around 0.5% per year would be sufficient to compensate for the relative decrease in the number of people working" wrote Didier Blanchet and Denis Kessler in "Prévoir les effets économiques du vieillissement" (Forecasting the economic effects of ageing), *Economie et statistique* n°233, June 1990.

[3] *The future of pension schemes*, opinion of the Social and Economic Commission presented by Mr. René Teulade, January 2000.

[4] 40 of growth at 1.7% corresponding the a doubling of GDP.