KANTTEKENINGEN

INQUIRY INTO THE ADEQUACY OF THE BELGIAN OLD AGE PENSION SCHEME FOR WORKERS (*)

by

Guy CARRIN

Research Associate at the Center for
Operations Research and Econometrics, Leuven

SAMENVATTING — *Onderzoek naar de doeltreffendheid van het Belgisch stelsel van arbeiderspensioenen.* — Vooreerst wordt nagegaan welke de karakteristieken zijn van een „dynamisch" ouderdomspensioensysteem, d.w.z. een stelsel dat welvaartsvaste ouderdomspensioenen waarborgt. Vervolgens wordt onderzocht of het Belgische stelsel van werknemerspensioenen aan de criteria van een dynamisch pensioenstelsel beantwoordt. Er zal dan blijken dat de pensioen-loon verhoudingen en het gebruikte pensioenaanpassingsmechanisme onvoldoende adequaat zijn. In de laatste paragraaf worden enkele aanbevelingen geformuleerd.

1. THE NOTION „ADEQUATE OLD AGE PENSIONS" IN A NUTSHELL (1)

If old age pensions „at retirement" are determined in such a way that they are closely related to the highest pre-retirement earnings, and if they are adjusted automatically „during retirement" for price increases and rising productivity, they may be called „adequate" or „dynamic" pensions. It should thus be realised that the provision of adequate pension levels at retirement is merely a partial measure on the part of the policy makers if they aim at meeting the economic needs of the elderly throughout retirement life. Indeed, the advantages of an adequate old age pension at the time of retirement can be wiped out soon, in the absence of an appropriate adjustment mechanism, by increasing price- and productivity levels : Rising prices tend to reduce the purchasing power of a nominally fixed pension, whereas the results of increasing productivity, namely a welfare surplus, cannot be shared by pensioners receiving constant nominal- or real old age pensions.

In order to investigate whether pension levels are adequate „at the time of retirement", the simplest criterion to use is the pension-earnings ratio (P/E ratio), its denominator being defined as the average of the five or ten highest earnings received during working life or alternatively as the earnings of the

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(1) Note that we will only deal, in this paper, with the old age pension systems for white- and blue collar workers.

last working year. Earnings replacement rates in terms of the average lifetime earnings are in our opinion not well suited to base conclusions on, the reason being that the average lifetime earnings also cover the working years that were not so fruitful in terms of income, especially those in the beginning of one's career, which have no real significance in the light of wage- and price levels at the time of retirement. Adequacy „during retirement" is, of course, reflected by the adjustment procedure defined in the pension legislation.

There remains the problem of the determination of an adequate P/E ratio. Convention 128 of the 1967 I.L.O. Conference calls for a minimum replacement rate of 45 % with respect to the average lifetime earnings of a male worker while Recommendation 131 suggests countries to raise this replacement rate to 55 %. Intuitively, one can see that these P/E ratios imply inadequate replacement of the pre-retirement standard of living. What replacement rate is then to be regarded as „the" optimal one? It should be realised that no uniform answer is available to this question. The ideal replacement rate differs from country to country and depends upon the preferences of the people and their government. It seems reasonable, however, for an old age pension system to choose a P/E ratio of 60 % to 70 %, in the case of individuals' pensions, and of 75 % to 85 %, in the case of couples' pensions, of the earnings received during the 5 or 10 best years of a worker's career or alternatively of the earnings of the last working year.

2. Is the Belgian old age pension scheme for workers dynamic ?

In this section we will investigate how well the characteristics of Belgium's old age pension scheme for workers tally with those of a dynamic pension system. We will, therefore, analyse the pension-earnings ratios of four representative workers and take a look at the applied adjustment mechanism during retirement. First, however, we will present, in 2.1., the old age pension formula used to calculate these four workers' pensions as well as the simplifying assumptions made about our hypothetical workers. This presentation of the old age pension formula will be particularly useful if we want to capture some ideas about the location of eventual dynamic elements in the formula, and if, in the case of inadequate pension levels, we intend to suggest some remedies.

2.1. *The old age pension formula*

To make the calculation of replacement rates as simple and clear as possible, we will assume that our representative workers

(i) are male;
(ii) have been either a blue collar- or a white collar worker throughout their career;
(iii) have received average earnings in industry or commerce throughout their working period;

(iv) can be attributed a complete career;
(v) have started to work in January 1926;
(vi) have received their first pension in January 1971.

The old age pension used to calculate the pensions of our hypothetical workers can now be written as follows :

$$p^{j,z} = x \left[\frac{29}{45} W + \frac{1}{45} \Sigma_{i=1955}^{1970} y_i^{j,z} r_i\right] + s^z \qquad (a),$$

where j = I (ndustry), C (ommerce),
z = B (lue collar worker), W (hite collar worker),
$p^{j,z}$ = old age pension of a worker of type z in sector j
x = 75 % in the case of a retiring worker whose spouse has also stopped all professional activities except those permitted by law and does not, herself, receive any social security benefits, and
= 60 % in the case of other benefit recipients (1).
W = the flat wage applicable at the time of the pension calculation(2).
$y_i^{j,z}$ = average gross earnings of workers of type z in sector j in year i (3).
r_i = an adjustment coefficient that is equal to the consumer price index figure in January 1971, namely 150.44, divided by the average retail price index figure of year i.
s^z = capitalized interests a worker of type z is entitled to (4).

Notice that

$$y_{1970}^{j,z} = y_{1969}^{j,z} \{1 + [(r_{1969} - r_{1970}) + .04]\} \qquad (b);$$

the latter rule is practised in order to speed up the calculation and distribution of the pension. However, sometimes the actual wage of the last working year is taken account of if one proves one's employment during that year. Note that the figure .04 in formula (b) stands for an „assumed" rise of income in the last working year.

(1) These two cases may be called „couple's pension" and „individual's pension" respectively.

(2) Flat wages are used since no individual earnings records of the time before 1955 are available.

(3) Note that, in the case of white collar workers,
(i) the pension administration takes account of a certain wage from January 1 1955 until December 31 1957 (The daily salary is for that purpose fixed at 370 F and is related to retail price index number 132), since it has no special record of gross earnings of white collar workers in that period;
(ii) the wages that are taken account of are limited to the maximum taxable earnings figures determined by the pension legislation;
(iii) the maximum taxable earnings from 1958 to 1967 have to be increased by 10 % if they are exceeded by the gross earnings in those years.

(4) These amounts originate from the period in which the old age pension system was still running on an „individual capitalisation" basis. To calculate the pensions of our representative workers we set s^z equal to the average capitalised interests workers are entitled to, namely about 18,000 F in the case of white collar workers and approximately 1,800 F in the case of blue collar workers.

Where now would the dynamic elements be situated in the pension formula ? One may think of the replacement rates in the pension formula as quite adequate. However, it should be realised in the first place that these replacement rates are at present merely nominal since the old age pension scheme only matures in the year 2000, and secondly that they are defined in terms of average lifetime earnings and are therefore bad indicators of the degree of pension adequacy. As to us, the only „dynamic" feature in the pension formula is the adjustment of gross earnings for price increases; note, however, that no account is taken of increasing productivity levels.

2.2 *Analysis of pension-earnings ratios*

Taking account of the simplifying assumptions given above and applying formulas (a) and (b), we obtain two sets of P/E ratios (1), in Tables 1 and 2, pertaining to our white- and blue collar workers respectively. As denominators of the P/E ratios, we selected the income of the last working year, the average of the incomes of the last 5 working years and that of the incomes of the last 10 working years (2).

What remarks can now be made after studying Tables 1 and 2 ? First, the P/E ratios for workers in the trade sector are more adequate than those for workers in industry : this can be explained by the fact that on the one hand average earnings in industry exceed those in the trade sector and on the other hand that the flat wages used in the pension formula are more closely related to the average earnings in the trade sector. Secondly, the P/E ratios for white collar workers appear to be rather inadequate : this is due most likely to the application of wage ceilings in the calculation of their pensions. In general, blue collar workers seem to be better off; this is reflected especially by the replacement rates in column (9) of row 1 and in column (8), (9) and (12) of row 2 in Table 2. Thirdly, one is inclined to conclude that the pension of the average pensioner, and especially of the white collar worker, is far from being solid. The latter carries of course a great amount of truth. However, one has to have in mind that individual savings and/or private pensions are able to close the gap between a worker's, possibly inadequate, public pension and an income amount that is regarded as sufficiently adequate by that worker. This signifies then that a pensioner's final „income" position is not bound to be inadequate with regard to his income needs. At present, relevant information and statistics about private pensions and individual savings for old age are lacking so that we cannot integrate them in this paper. In any event, it can be stated that old age pensions in Belgium provide the elderly with a first, yet insufficient, layer of retirement income.

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(1) To calculate the pensions, the appropriate figures were taken from issues of the R.M.Z. *Jaarverslag* and from the *Statistisch Jaarboek van de Sociale Zekerheid*, 1970.

(2) The choice of denominators here agrees perfectly with our a priori preferences regarding P/E ratios (See section 1.) since the earnings received by our hypothetical workers during the last 5 or 10 working years are at the same time the 5 and 10 highest earnings received by these workers respectively.

TABLE 1 : Replacement rates in % of old age pensions in 1971 of male white collar workers with average earnings in industry and commerce respectively.

Type of Sector	Pension Amount in BF		Denominator of P/E Ratio in BF			P/E Ratio					
						Couple's Pension			Individual's Pension		
	Couple's Pension	Individual's Pension	Income of Last Working Year	Average of the Incomes of the Last 5 Working Years	Average of the Incomes of the Last 10 Working Years	(2) : (4)	(2) : (5)	(2) : (6)	(3) : (4)	(3) : (5)	(3) : (6)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Industry	100450	83960	275340	242256	207006	36.48	41.46	48.53	30.49	34.66	40.56
Commerce	100450	83960	245760	215208	184176	40.87	46.68	54.54	34.16	39.01	45.59

TABLE 2 : Replacement rates in % of old age pensions in 1971 of male blue collar workers with average earnings in industry and commerce respectively.

Type of Sector	Pension Amount in BF		Denominator of P/E Ratio in BF			P/E Ratio					
	Couple's Pension	Individual's Pension	Income of Last Working Year	Average of the Incomes of the Last 5 Working Years	Average of the Incomes of the Last 10 Working Years	Couple's Pension			Individual's Pension		
						(2) : (4)	(2) : (5)	(2) : (6)	(3) : (4)	(3) : (5)	(3) : (6)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Industry	75859	61046	162490	139452	117044	46.68	54.40	64.81	37.57	43.78	52.16
Commerce	71046	57197	134316	116294	98777	52.89	61.09	71.93	42.58	49.18	57.91

2.3. *Adjustment during retirement*

Once the old age pension is determined and distributed, it is also related automatically to the consumer price index (1). This enables pensioners, at least theoretically, to acquire the same package of consumer goods throughout retirement life. It should also be noted that, apart from these automatic price adjustments, old age pensions are from time to time increased on an ad hoc basis, in order to adjust for increases in the average standard of living of the active population. One may have serious reservations, however, about whether a non-automatic productivity adjustment mechanism is the appropriate instrument to maintain the pensioners' share in national income. First there is often a considerable lag involved in ad hoc adjustments, and secondly the level of ad hoc adjustments may be underestimated vis-à-vis the actual productivity growth in the economy.

3. . *Some recommendations*

We have seen in section 2.2, that white collar workers seem to receive the least adequate pensions. In the context of the present system, this can be remedied partially by generating a sufficient increase in the wage ceiling that is applied in the case of white collar workers.

In general, the adequacy levels of all pensions „at the time of retirement" can be raised substantially by reforming the pension formula. Two alternative modifications could be applied, depending upon the characteristics of Belgium's income distribution :

(i) Either, the pension could be based on the five or ten highest earnings only;

(ii) or, it could consist of a minimum adequate pension supplemented by an earnings related component based on the five or ten highest earnings.

One recognises that suggestions (i) and (ii) are related to the situation of a just and a less equitable income distribution respectively.

The „permanent adequacy" of pensions, i.e. the adequacy of pension levels during retirement could be provided for by adjusting pensions, not only for price increases as is actually the case, but also for productivity growth.

If no significant changes are introduced in the present pension scheme, it is clear that the workers have to acquire private pension plans and/or will have to save individually for old age if they want to assure themselves a certain adequate P/E ratio during their old age. At present little is known, however, about the quantity and adequacy of private pension plans in Belgium. There

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(1) A pension increase of 2.5 % is made automatically if the consumer price index increases by 2.5 %. The law precises further that adjustments may be made starting from the second month that follows the end of a period in which the price index number reaches a figure that justifies an adjustment.

is also insufficient knowledge of the yearly amounts that would have to be saved during one's active life, in order to constitute supplements to one's public pension, so as to be able to enjoy a reasonable standard of living during one's old age. One can see that some new topics emerge, at least in the Belgian context, namely the theory of private pensions and individual savings models for old age. The latter should constitute the content of further research about the Belgian old age pension system.