widely used catch-words in the political debate. The development of the contribution rate became the decisive indicator. Therefore cuts in the pension level would be unavoidable. To compensate such cuts additional private saving is necessary for living in old age. The 'stick' was the cut in public pension level and the 'carrot' was a subsidy for private pension saving ('government gives you a gift'). This looked especially attractive during the boom period   of the stock markets.

4.   A paradigm shift by the 2001 pension reform

4.1   The main elements of the existing scheme

On November 9, 1989 (just the same day as the Berlin Wall was opened) a pension reform act was decided in parliament. It was a further development of the scheme that was implemented by the major pension reform act of 1957: The introduction of a dynamic, earnings-related pension scheme, linking pension calculation and regular pension adjustment to gross earnings. The 1989 reform measures already tried to cope with the challenges of demographic ageing by using several instruments to reduce the growth rate of pension expenditure, e.g. by linking pension adjustment to the development of average net earnings. But these measures were based on a clear distributional objective and the idea of constructing the social pension insurance scheme according to a self-regulating mechanism.[11] Linking the development of individual pensions to the development of the growth rate of average net earnings, was an important instrument to realise an explicit distributional objective: Pensioners with a specific amount of pension claims (a certain number of Earnings Points) always should be entitled to a pension benefit equivalent to a specific percentage of actual

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[11] For a detailed discussion see Schmähl (1993b).

average net earnings of all employees. This should not only be realized at the time of retirement but also during the whole phase of receiving a pension benefit. Therefore, a constant net pension level (pension compared to net average earnings) was aimed at and realized by adjusting individual pension benefits to the growth rate of net average earnings. This underlines the character of the social pension insurance as a defined benefit scheme.

The pension scheme was constructed according to the idea of an 'expenditure-oriented revenue policy': The contribution rate was the dependent variable as well as the grant from the federal budget to pension policy. Federal grant was linked not only – as before – to the development of earnings but also to the development of the contribution rate in pension insurance. Contribution rate and federal grant would be calculated in such a way that they are sufficient to finance the pension expenditure that are expected according to demographic, economic and other assumptions. An increase in the contribution rate as well as in other direct burden of the employees, however, would also reduce the increase of pensions via the net adjustment formula.[12]

Trying to characterise the social pension insurance, it has to be underlined that it is income-related with a high degree of intertemporal income redistribution over the life

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[12] The new adjustment formula was an important instrument in reducing the future development of pension expenditure. In addition it was also decided to introduce a deduction from the full pension in case of early retirement, which did not exist before and gave remarkable incentives to early retirement and by this increased the contribution rate of the PAYGO scheme. This was to be phased in, beginning in 2001, during a period of more than 10 years. The full percentage of the deduction is 3.6 per cent per year of retiring before the reference retirement age (this will be age 65). In the future age 62 will be the earliest retirement age (for old-age pensions), equal for men and women. 3.6 per cent as reduction per year was and is too low to eliminate the incentive for early retirement. In 1996 – among other measures – it was decided to start the phasing in of these deductions already in 1997 (and not in 2001) and to do this not during a period of ten but of only five years. See for details Schmähl (1996b).

cycle (i.e. a relatively close contribution-benefit link). The whole insurance period is taken into account for calculating pensions. Individual pension claims of the insured person from earnings or other activities are accumulated within an individual account managed by social insurance pension administration. Income and consumption smoothing over the life cycle is the main distributional objective of the statutory pension scheme and not primarily avoiding poverty.

For pensioners – at least for those with a longer insurance record – the pension shall be sufficient to maintain to a certain specified percentage during retirement the level of living that was financed before retirement from earnings.

Summing up the main objectives and characteristics of the social insurance pension scheme as realized by decisions in 1989 (1992 pension reform) and based on the 1957 reform are

— an explicit distributional objective: an individual pension should be a fixed percentage of average net earnings (the percentage depending on the accumulated sum of pension claims);

— a defined benefit scheme;

— a constant pension level over time by linking the development of pensions to the development of average net earnings;

— financing (by social insurance contributions and federal grant) as a dependent variable, a strategy that can be labelled as 'expenditure-oriented revenue policy';

— occupational pensions as a supplement to social insurance pensions. Financing by employers is dominating, pension are mainly of the defined benefit type. Occupational pensions in the private sector are voluntary.

— Voluntary private saving for old age (for example by life insurance contracts) was an additional means for old-age protection.

4.2   The '2001 pension reform' – a new strategy and major instruments used

The 2001 reform' changed several of the above mentioned characteristics:

–   A 'revenue oriented expenditure policy' in social pension insurance was established

    by declaring the development of the contribution rate to be the dominating objective

    and not a certain pension level. The benefit level becomes the dependent variable.

–   Employees now have a right of earnings conversion. Collective agreements are

    favoured. Instead of financing by the employer, financing by employees will be

    dominating.

–   Subsidised private saving becomes an explicit substitute to social pensions.[13] This

    is realised by a direct link of contribution rates for private pensions to the formula

    for adjusting social insurance pensions aiming at a reduction of the level of public

    pensions.

–   Capital funding shall substitute PAYGO financing partially.

A major instrument to reduce the benefit level in social pension insurance was a

reformulation of the pension (adjustment) formula. Beside this, changes in disability

pensions and widow(er)s' pensions were decided.

4.2.1 Changing the pension adjustment formula to reduce the benefit level in general

Changing the formula for adjusting pensions affects all pensioners, those who claimed a

pension in the past as well as those who will claim it for the first time. It affects

insurance pensions (retirement and disability) as well as survivors' pensions (for

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[13]   Although the government officially always labels it as supplementary or additional.

widow(er)s and orphans' pensions).[14] The basic structure of the social insurance pension formula is as follows:

The calculation of the individual (insurance) pension (P^i) is based on two elements:

(a) the sum of individual <u>Earnings Points</u> (EP^i) the insured person accumulates during his/her whole life. In case of covered employment the Earnings Point in one year is the ratio of individual gross wages (W^i) to average gross wages of all employees (W^a): W^i/W^a. If $W^i = W^a$ then EP in this year is one. There is also a crediting of Earnings Points for activities like child caring, caring for frail elderly, in case of unemployment[15] and for non-contributory periods like schooling. At time of retirement the sum of Earnings Points of the whole insurance period are accumulated and multiplied by the second factor,

(b) the <u>actual pension value</u> (ARW) which gives the amount in DM (now in Euro) per month for one EP.

$$P^i = \sum_{t=1}^{n} EP_t^i \cdot ARW_t$$

n = years of insurance

If the pension is claimed before the reference retirement age for the full pension, a deduction from the full pension becomes effective (3.6 per cent per year).

The growth rate of ARW is the rate for adjusting those pensions which were calculated in former years. Therefore, all pensioners with the same sum of EP have an identical pension benefit irrespective of the year of retirement.

For a so-called 'standard pension' with EP = 45, the target value of the pension according to the rules implemented in 1992 is 0.7 multiplied by average net earnings. A

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[14] The last-mentioned two types of pensions are based on the insurance pensions of the late insured person.

[15] Here other institutions are paying the contribution.

lower (higher) number of EP gives proportional lower (higher) pension benefit.[16] The

1992 reform linked the growth rate of ARW (pension adjustment rate) to the growth

rate of average net earnings.[17] Therefore – as already mentioned – the ratio of

(individual) pension to net average earnings remains constant over time for all

pensioners.

The new government finally abolished the link of ARW to net average earnings. The

main reason were the effects of a change in the strategy of tax policy on the financing of

social pension insurance by reducing income tax and shifting the tax burden more

towards more indirect taxes (VAT and ecological tax): The growth rate of net earnings

compared to gross earnings increases. Because of the net adjustment formula this

increases the pension adjustment rate, pension expenditure and the need for additional

revenue. The new pension adjustment formula is no longer based on the development of

average <u>net</u> earnings but only on average <u>gross</u> earnings (like in the 1957 pension

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[16] It has to be mentioned, that this pension level is not the replacement rate, because the pension is
based on the average of relative earnings over the whole earnings span and not linked to last earnings.
Only in case of an identity of last earnings of the employee and the average relative earnings position
over the insurance period, this also gives an information about the replacement rate.

[17] This, however, is a simplified version. Since pensioners pay themselves contributions to health and
long-term care insurance the effect of these contribution payments had to be eliminated in the
pension adjustment formula. For a detailed discussion of the net adjustment formula see Schmähl
(2001b).

reform in principle) and the contribution rate of only social pension insurance.[18] In addition government decided to introduce beside these two elements another factor, a ficticious contribution rate for saving in private pensions. The transparency of the formula in its original version became diluted by this additional element and will be open to manipulation. One reason is that the additional factor is independent of the empirical saving rate of contributors for private pensions. The factor is determined by the government as a certain percentage. This percentage can be changed, independent of the saving for private pensions of the employees. An increase in the percentage will reduce the pension adjustment rate.

It is important to realise that there is now a direct link between the 'determined' contribution rate for private pensions (as announced by the government) and the benefit level of public pensions. The new factor is introduced stepwise starting in 2002 and shall be four percentage points in 2008. In the period of increasing this factor, the development of ARW – and by this the adjustment rate for public pensions – will be reduced in eight steps of about 0.5 percentage points each. By this instrument the benefit level will be reduced for all present and future pensioners. This clearly underlines the character of the new (subsidised) private pensions as a <u>partial substitute</u>

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[18] The two elements of the pension formula had already been proposed by the author for about 20 years. The main idea of this proposal was, that the pension formula should only take into account such factors, which are direct elements of the social insurance pension scheme, gross earnings and the contribution rate to social pension insurance. If pensions become more costly (for example because of demographic ageing) this will not only burden employees (and employers) by a higher contribution rate but pensioners as well by a reduction in the pension adjustment rate. In 1999, this formula was introduced again into the public debate by the Social Advisory Council of the German government on pension policy. The government finally adopted this proposal, but added an additional element The author was chairing the Social Advisory Council (from 1986-2000). For a detailed analysis of the net adjustment formula and the proposed changes as well as its 'history' see Schmähl (1999a).

for public pensions. However, present pensioners as well as those employees near retirement age cannot compensate for the loss in public pensions by additional private saving for old age.[19]

Without going into details one can say that by the new formula it was intended to reduce the 'standard pension level' (pension based on 45 Earnings Points) from 70 per cent to 64 per cent compared to average net earnings.[20]

Such a reduction of the public pension level will result in a conflict with the design of the pension scheme and its underlying concept: On one hand there shall be a close contribution-benefit link in social pension insurance. The new government also underlines this. But on the other hand, the general reduction of the pension level may have the effect that even after long periods of paying contributions the individual pension benefit is no higher than a full (means-tested) social assistance benefit. This

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[19] A short remark seems interesting regarding the original version of the paradigm shift government had in mind. Proposals published in May 2000 show more clearly what government had in mind:. For future pensioners the PAYGO financed public pension should be reduced by half of the amount of the private pension which employees in principle could realise if they were saving four per cent of their earnings. The younger the employee is, the more time he has to save for old age. Therefore, the reduction of the public pension is the higher the younger the employee is. That means that the contributors receive different pensions in case of an identical sum of Earnings Points depending on the age of the pensioner. The reduction of the public pension takes place irrespective of the fact whether and how much the employee was saving in addition for a private pension. This approach would have changed the social pension insurance into a system of partial income testing based on the assumed possible amount of a private pension. The factor burdening future cohorts was eliminated during the reform debate and substituted by an additional factor integrated into the pension formula now affecting all pensioners.

[20] Officially government redefined net earnings by considering the voluntary private contribution like a mandatory levy which reduces net earnings. Government finally decided that the standard pension shall not fall below this percentage. This was a comprise especially with trade unions. Originally government planned to reduce the pension level much more, as already mentioned.

may undermine the willingness to contribute and the acceptance of this mandatory scheme that is based on earnings-related contributions.

This possible development will be illustrated by some figures. The public debate was focused on the 'standard pension' only (respectively on the net standard pension level). Regarding the reduction in the standard pension level one has to take into account that

(1) the standard pension is always based on 45 Earnings Points, independent of any changes in pension law which may affect the individual number of Earnings Points a contributor is able to accumulate;

(2) about 50 per cent of all male pensioners and even about 95 per cent of female pensioners have less than 45 Earnings Points (i.e. a pension below the standard pension). The distribution of pension benefits therefore matters a lot.

A further aspect relevant in judging the meaning of figures for pension levels is the following: The full pension without deduction will only be paid when claiming the pension at reference retirement age, i.e. (in the near future) age 65. Starting in 2012, the earliest retirement age will be 62, equal for men and women. Early retirement reduces the pension and the pension level by 3.6 per cent per year. Retiring at age 62 therefore reduces the pension benefit by 10.8 per cent. Disability pensions as well are calculated as if the pension is claimed three years before the reference retirement age.

An additional information is relevant: A full social assistance benefit is about 40 per cent of net average earnings today. If we assume that this social assistance level will remain also in the future, we can calculate for example how many Earnings Points are necessary to receive a pension just as high as social assistance (a) in case the standard pension level is 70 per cent of average net earnings or (b) 64 per cent.

It is obvious that if the pension level is reduced, a higher number of Earnings Points is needed to receive a pension just as high as social assistance:

(a) If the standard pension level is 70 per cent, a pensioner needs about 26 Earnings Points if he retires at age 65.

(b) In case of a standard pension level of 64 per cent about 28 Earnings Points are necessary. If retirement is at age 62, nearly 32 Earnings Points are needed.

One should bear in mind that a certain number of Earnings Points can be the result of quite different combinations of numbers of years of insurance and the relative level of earnings a contributor gained on average during his working life (i.e. the Earnings Point). For example, if the standard pension level is 64 per cent, an employee with an earnings position of 70 per cent on average over the lifetime (i.e. 30 per cent below the average earner) needs already 40 years of insurance for a pension as high as social assistance– if retirement is at age 65. An earnings position of 70 per cent is most often realised by women.

Not to be misunderstood: Even if the social insurance pension is below social assistance this does not necessarily mean that the pensioner is eligible for social assistance, because this depends on the total income of the pensioner and his spouse. But the result of such a development in public pension benefits might be a conflict with realising a strong contribution-benefit link of the public pension scheme. Such a close link will reduce negative effects on labour supply, reduces the 'tax wedge'[21], reduces attempts to avoid the contribution payment and gives public support to such a pension scheme. If, however, less and less pensioners receive a pension that is clearly higher

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21 Compared to direct levies without benefits based on the idea of reciprocity (some equivalence); see Schmähl (1998c).

than social assistance, this will erode the base for supporting such a mandatory scheme and will undermine its legitimacy and the willingness to contribute to such a scheme.

Beside the general reduction of social insurance pensions in case of old age as well as of disability, there were additional measures to reduce benefits regarding <u>disability pensions</u> and widows'/widowers' pension as well as the pension claims of (especially) long-term unemployed persons.

These three measures are affecting certain groups of the population in addition to the general reduction of the benefit level realised by the new pension formula. Up to now there is no differentiated analysis available showing the distributional effects of all these measures (also in a life cycle context). But all three measures are aiming at the same goal, reducing public pension expenditure and by this also the contribution rate necessary to balance the budget as well as the payments from the federal budget (federal grant).

4.2.3 Effect of the '2001 reform' on the development of contribution rates

The new rules in the social insurance pension scheme have only a modest effect on the development of the contribution rate in social insurance up to the year 2030. The political objective is that the contribution rate shall not exceed 20 per cent in 2020 and 22 per cent in 2030. According to official projections, the necessary contribution rate in 2010 or 2020 would be, however, only one percentage point and in 2030 1.6 percentage points higher according to the 'old' rules and the higher benefit level.

– Overview 1 –

Regarding the payment of contributions by employers compared to those of employees there will be a shift from equal divide because employees do not only have

to pay the employee's part of the contribution to social pension insurance[22] but in addition the full contribution rate for <u>private</u> pensions. The government expects this contribution rate to be paid by employees if they want to fill the gap in the benefit level that results from the reduction in public pensions. Even at the beginning, the sum of the two contribution rates is higher compared to the 'old law': For example, in 2010 and 2030 the contribution rate in old-age insurance will be three percentage points above the rate compared to the former conditions (i.e. without these reform measures).[23] While a contribution rate of about 24 per cent was declared by the government to be too high (and being an indicator for a 'demographic crisis'), a total of 26 (!) per cent now became politically acceptable.

But even the reduction of employer's contribution[24] is only very moderate: eleven per cent instead of twelve per cent in 2030. That means that the effect on non-wage labour costs is marginal. Although the burden for employees will be reduced by subsidies, the partial substitution of public by private pensions will impose an <u>additional</u> <u>burden</u> on private households for a long time. This is part of the well-known <u>transition</u> <u>costs</u> when shifting from PAYGO to capital funding.

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[22] That is half of the contribution rate.

[23] Taking into account the subsidies or tax incentives in case of saving in specific types for old age the direct burden is lowered compared to the rates mentioned especially for low-income households. But these subsidies have to financed, too, and can burden (above all if financed by indirect taxation) also these households. This will be discussed below.

[24] The question of shifting employer's contributions backwards to employees or forward into prices is not discussed here as well as the question whether trade unions will try to compensate increases in the private pension contributions in the process of wage negotiations.

In general, there are no very convincing <u>economic</u> arguments in favour of the reform measures, if looking at the officially mentioned objectives, for example the effects of contribution rates. It was mainly a political reaction to expectations created in the public debate by several actors. Therefore, it seems to be above all a <u>political</u> project. But the reform will have several economic effects, for example on personal income distribution. This will be discussed after having outlined the most recent further proposals.

<<<bis hier bearbeitet (im alten Text S. 43)<<<<

１０－２　研究レポートの別添資料

Auszüge aus Herzog-Kommissions-Bericht

Demographie und Leistungskraft der Beitragszahler berücksichtigen

62. Die Kommission empfiehlt, in die gesetzliche Rentenanpassungsformel einen erweiterten Demographiefaktor aufzunehmen, der das Verhältnis der Anzahl der Beitragszahler zur Anzahl der Leistungsempfänger abbildet und auf diese Weise sicherstellt, dass eine Rentenanpassung sowohl die veränderte Demographie wie auch die Leistungskraft der aktiven Beitragszahler insgesamt berücksichtigt:

$$\text{Bisherige Formel} \times \left(\left(1 - \frac{RQ_{t-1}}{RQ_{t-2}} \right) \times \alpha + 1 \right)$$

Eine solche Korrekturkomponente in der Rentenanpassungsformel hat zur Folge, dass mit steigender Lebenserwartung und/oder bei rückläufiger Erwerbstätigenzahl der Rentenanstieg langsamer verläuft.

[Anm. HV: das Alpha ist nicht näher spezifiziert. RQ soll wohl Rentnerquotient sein.]

...

Entwicklung der Einkommen

94. Künftige Rentnerinnen und Rentner dagegen profitieren von den Reformmaßnahmen in den gesetzlichen Systemen nicht. Für sie führt die Beitragssatzbegrenzung in der Renten- und Arbeitslosenversicherung zu keiner Erhöhung des verfügbaren Einkommens. Zu den geringfügig höheren Ausgaben für die Pflegeversicherung kommen steigende Ausgaben für Gesundheitsvorsorge hinzu, die sich aus dem Umstieg in ein kapitalgedecktes Prämienmodell ergeben, da die einkommensbezogenen Beiträge für die Krankenversicherung der Rentner heute sehr niedrig sind. Für einen Standardeckrentner reduziert sich das verfügbare Einkommen - d.h. nach Abzug der Beiträge zur Sozialversicherung - aus der gesetzlichen Rentenversicherung im Jahr 2030 um gut 260 Euro monatlich gegenüber dem Basisszenario. Dies liegt vor allem am Einbau des "erweiterten Demographiefaktors" in die Rentenformel, der die Rentenanpassungen dämpft. Die Rentenanpassungen liegen damit künftig unter denen der Lohnsteigerungen. Trotz dieser Entwicklung steigen die Renten (aus der gesetzlichen Rentenversicherung) im Zeitablauf aber real weiter an. So beträgt die Standardeckrente im Jahr 2030 nach Reformen 1.261 Euro. Sie liegt damit um rund 12 Prozent über dem heutigen Wert.

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107. Eine weitere deutliche Entlastungswirkung kann durch die Einführung eines erweiterten Demographiefaktors in der Rentenanpassungsformel erzielt werden. Ein solcher Korrekturfaktor, der die Relation von Beitragszahlern zu Leistungsempfängern berücksichtigt, würde im Jahr 2030 eine Absenkung um weitere 2,6 Beitragssatzpunkte ermöglichen. Im Jahr 2050 betrüge der zusätzliche Einspareffekt sogar 3,5 Beitragssatzpunkte.