Sustainable pension systems in times of structural changes in demography, economy and society: The case of Germany – Objectives, arguments and effects of the new German pension policy

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1. Introduction

Current pension policy in Germany as it has been realised since 2001 by the red-green coalition government – which was in power from autumn 1998 to autumn 2005 – can be characterised as a paradigm shift. One of the objectives is to realise sustainable pensions and intergenerational equity. Sustainability is focused on "fiscal sustainability". Whether this will also be politically sustainable over time may be questioned, because the new pension policy paradigm will affect old-age security arrangements in Germany remarkably – the role of different institutions as well as income in old age.

Germany's pension system is facing many challenges. There are not only structural changes in demography, household composition, in the economy and in particular in the employment system, but also problems resulting from political decisions. For example, since a long time, public pension schemes have been an instrument for labour market policy (early retirement options) resulting in higher expenditure and contribution rate. Also a new possibility for employees to opt out with part of their earnings from social insurance contribution payment to finance claims in an occupational pension scheme ("earnings conversion") reduces contribution revenue in the social pension insurance scheme and requires, ceteris paribus, a higher contribution rate. German unification necessitated also a higher contribution rate. Regarding the international environment, in particular decisions from the European level are influential, such as decisions by the European Court of Justice, but especially political decisions like the introduction of the Maastricht stability criteria, which put public budgets under pressure. The new "open method of coordination" on EU-level may become highly influential for decisions on national pension policy, the level of expenditure as well as the design of the schemes, in particular the role of private versus public, pay-as-you-go (PAYGO) financed versus capital-funded schemes.

This paper is structured as follows: it starts with a brief outline of the pension schemes in Germany as they were designed in 1989 (based on the fundamental pension reform of 1957 introducing a dynamic earnings-related pension). The focus will be mainly on the earnings-related (not flat-rate) social pension insurance. It is quantitatively by far the most important part of pension provision in Germany, covering the majority of employees and even part of self-employed persons (2.). In particular this scheme will undergo a fundamental transformation, if the present strategy in pension policy will not be changed in the near future. The reasons for the pension reform debate in recent years will be illustrated by a few examples (3.). The new political pension strategy of the (red-green coalition) government, the dominating objectives and major instruments to implement it in 2001 and 2004 are outlined. In order to fully understand the "paradigm shift", it is compared to the approach existing before (4.). In addition to the measures already implemented, it will be outlined what the new government of the "Great Coalition" of the Christian and Social Democratic Party (which came into power in autumn 2005) is planning. In general, the new strategy in pension policy – which started after the turn of the century by the former coalition government – will remain effective.

This paper does not attempt to explain the political process resulting in the decisions. The main focus is on possible (long-term) effects of a new strategy in pension policy. Major effects are discussed, focusing on changes of the "pension landscape" in Germany, the objectives to be realised by different elements of the pension schemes in Germany as well as effects on the type of the social insurance scheme and effects of the new pension policy on income distribution (5.)

2. An outline of the structure of pension schemes in Germany

In Germany, three tiers (often labelled as "pillars") of old-age security have existed since a long time:

- mandatory basic pension schemes for different groups of the population as first tier,
- supplementary occupational schemes as second tier and
- additional private voluntary arrangements for old-age provision as third tier.

Regarding the *first tier, social (statutory) pension insurance* is by far the dominating element. It covers in principle all blue- and white-collar workers (including miners) but also some groups of self-employed.[1] It is PAYGO-financed. The dominating source of revenue is from contributions paid in equal parts by employees and employers. Some revenue is also from the federal public budget, in particular covering those expenditures that are aiming at an interpersonal redistribution within the scheme. In 1999 nearly 93 % of those persons covered by mandatory first tier schemes were members of social pension insurance. In 2003 about 79 % of total pension expenditure was from this scheme (Table 1). This was 11.2 % of GDP (Table 2). Social insurance pensions are (at least on average) by far the most important source of (monetary) income in old age in Germany (Table 3). It is not surprising that this scheme is in the centre of the political debate in times of adapting pension schemes to changing conditions.

Table 1: Expenditure of different pension schemes: Germany 2003

Pension scheme	in % of total pension expenditure
social pension insurance	79
civil servants pensions	10
old-age pensions: farmers	1
old-age pensions: professions	1
occupational pensions	
private sector	6
public sector	3
total	100

Source: Bundesregierung (2006a), p. 89

Table2: Structure of official social budget: Germany 2003

	in % of social budget	in % of gross domestic product
social pension insurance	32.5	11.2
old-age security farmers	0.5	0.2
old-age security	0.3	0.1
occupational pensions		
private sector	2.2	0.8
public sector	1.2	0.4
pensions in total	41.6	14.4
health insurance	19.6	6.7
long-term care insurance	2.4	0.8
accident insurance	1.5	0.5
promotion of labour	10.0	3.4
others	24.9	6.8
total	100	32.6

Data are preliminary
Source: Bundesministerium für Gesundheit und Soziale Sicherung (2005a), table I-4.

Table3: Sources of (gross) income of persons 65 years or older: 2003

(in %)

Type of Income	all persons (West + East)	couples		single men		single women	
		West	East	West	East	West	East
social pension insurance	66	57	89	60	87	68	95
other pension schemes	21	26	2	26	5	22	2
others (e.g. labour and capital income, transfer	13	17	9	14	8	10	3
total	100	100	100	100	100	100	100

Source: ASiD03, Bundesregierung (2006b), p. 25.

Many of the basic elements to be found in the German *social pension insurance* date back to the end of the 19th century like
- not covering the total population in this scheme (although by far the majority of all employees),[2]
- the organisational structure (several regional schemes for blue-collar workers and one scheme for white-collar workers),[3]
- linking pensions[4] to number of years of insurance[5] and individual earnings (this link became much stronger after a major reform in 1957),
- financing above all from social insurance contributions based on gross earnings (wages and salaries) and paid in equal parts by employers and employees, but also from taxes (from the federal budget),
- financing on a pay-as-you-go (PAYGO) basis in principle, although up to 1957 officially capital funding was the guideline.[6]

The dominating objective of social pension insurance (up to the year 1957) was to avoid poverty in old age, but was for a long time not sufficient to save in general employees from poverty. In 1957 a real paradigm shift took place by implementing an earnings-related pension aiming at a replacement of former earnings (to a certain extent) and thereby realising income and consumption smoothing over the life cycle – in particular when retiring (as well as in case of disability and also in case of the death of the (male) spouse), see below.

Supplementary occupational pension schemes, the *second tier* of the German pension system, are in general voluntary in the *private sector.* A great variety exists in the design of these schemes. About 50 % of all employees are covered; coverage is very unequal according to the branch and size of the firm. Pensions are mainly defined benefit and employer-financed. Occupational schemes in the private sector are based on capital funding (Schmähl 1997, Deutsche Bundesbank 2001).

During the nineties, a decline in occupational pension arrangements took place by giving less favourable conditions for new employees or by closing schemes for newly hired employees. It can be assumed that – among other reasons – (employer-financed) occupational pensions became less important as an instrument of attracting qualified employees because of high unemployment. Collective agreements were an exception in the private sector,[7] quite in contrast for example to the Netherlands. After the “2001 reform” (see below) this has been in a process of change.

After the introduction of the social pension insurance (in 1889), voluntary occupational schemes (which existed in some big companies even before the start of the social pension insurance) became a *supplement* to social insurance pensions, mainly in bigger companies. That means that a number of employees receive also an occupational pension beside a social insurance pension.[8] While there exist some tax privileges[9] for occupational pensions, additional private saving for old age was not *specifically* subsidised by taxes or transfer payments up to the year 2001.

Occupational pension schemes for wage and salary earners in the *public sector* are based on collective agreements. These pensions were fully integrated with the social insurance pensions – that means that a reduction in social insurance pension will be compensated by higher supplementary pensions. Wage and salary earners in the public sector shall receive benefits from both types of pensions which are targeted at the level of civil servants’ pensions, a final salary scheme. After the “2001 reform”, trade unions and public employers agreed upon a new collective contract that will abolish this integrated approach. It will disentangle the supplementary pension from the development of the first tier schemes – i.e. from the development of civil servants’ pensions (and its replacement rate) as well as social pension insurance. It will also be changed from defined benefit to defined contribution.

As *third tier* there exists a great variety of *voluntary* capital-funded additional types of saving for old age, some with risk pooling (life insurance), others without such insurance elements, some types are tax-privileged. Empirically, it is very difficult to identify which part of the private saving is for old age.

A fundamental change in pension policy took place in 1957 regarding the aim of the social pension insurance as well as the distributional objective. This reform was the base for the development for several decades. Social insurance pension no longer should be only an additional element for financing one’s living, a scheme being mainly focused on the objective to avoid poverty in old age. Now it should *replace* to some extent *former earnings* (according to the number of years of insurance as well as wages earned on average during the whole earnings span) and *linking pensions to the development of average (at the beginning: gross) earnings of all employees* – not only at time of retirement but also during all the following years (“dynamic pension”). The (social insurance) pension claims – based on the relative amount of individual earnings[10] – were accumulated in individual pension accounts. The link between (individual) contributions and pension benefits became much stronger, for example by abolishing a flat-rate element in the pension formula that existed since 1889. The Federal Constitutional Court decided later that pension claims based on (own) contributions are assets that are protected by the constitution. This general opinion of the Constitutional Court, however, gives no firm restrictions for political changes. However, often measures to reduce pension claims were focused on those elements that are not or only to a relatively small degree based on former contribution payments, but are mostly transfer payments (or elements within the pension claim based on interpersonal redistribution).

Since 1957, the pension scheme has been adapted several times to changing conditions in economy and demography and because of differences in direct tax and contribution burden of employees and pensioners.

The borderline between the second and the third tier became more and more blurred over time because of using models of deferred compensation, financed only by employees.[11] Several collective agreements were tailored to maximise net labour income by avoiding tax and social insurance contributions on that part of labour income which is deferred for old-age security. The "2001 reform" introduced a *right* to the employee to use earnings up to a certain amount without paying income tax and social insurance contributions (the latter is at present limited up to the year 2008).[12] New subsidies for voluntary old-age provision were also introduced.

If we are looking at the financing method (PAYGO versus funding) in Germany, according to the official "Social Budget" of the federal government about 90 % of all pension expenditure were PAYGO-financed in 2003 (79 % social pensions, 10 % civil servants pensions, financed from general public budgets, 1 % pensions for farmers). Less than 10 % of all pension expenditure came from occupational pensions (Table 1).

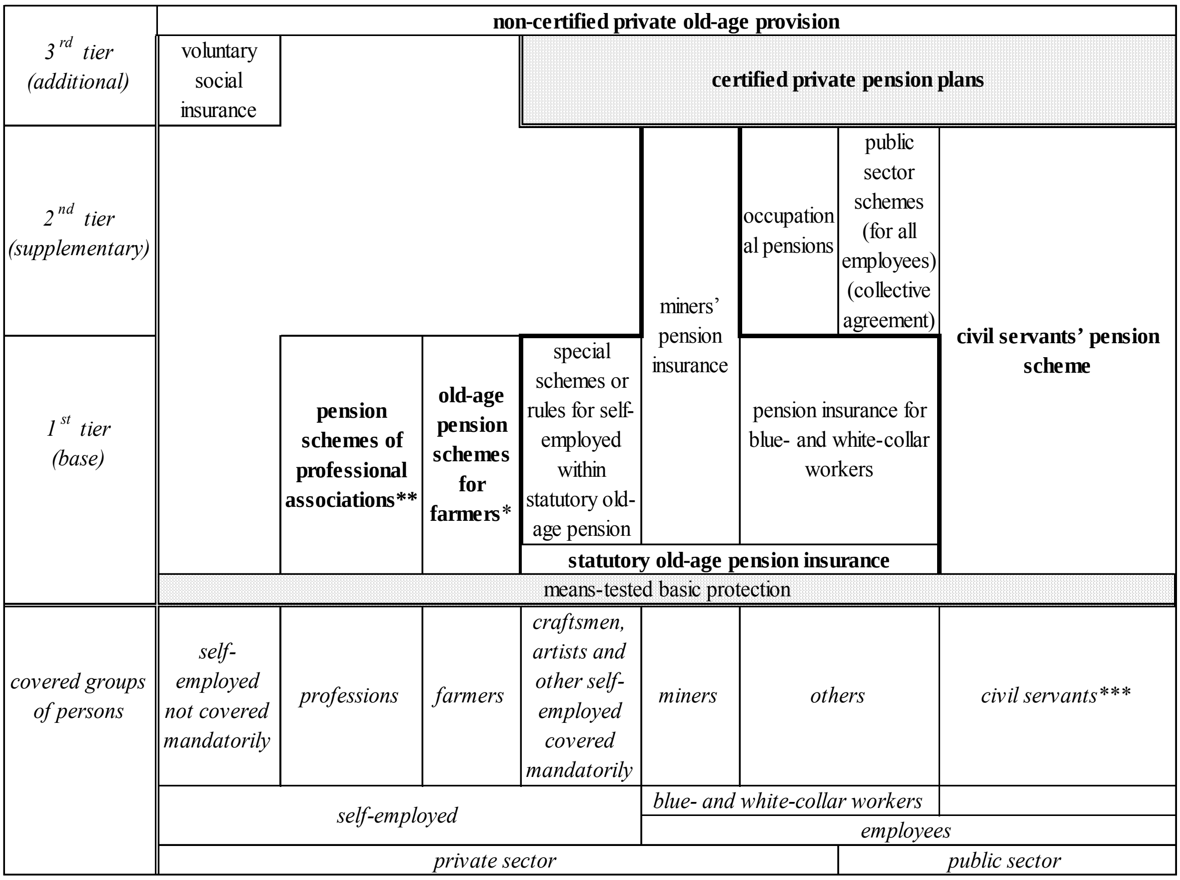
Taking into consideration private pensions, which up to now are not integrated in the official "Social Budget", as a rough estimate 10 % of total (public and private) pension expenditure are from the third tier and capital-funded (it is, however, difficult, to give exact numbers for private saving for old-age purposes). Pension schemes for professions are also capital-funded. So about 80 % of total pension expenditure are based on PAYGO financing and 20 % on capital funding. It is now an explicit political goal of the "2001 reform" to change the ratio of PAYGO versus funding – which can be estimated at about 80:20 today – towards more private pensions and capital funding. Some economists propose a ratio of 60 % PAYGO-financed pension expenditure and 40 % based on capital funding, in particular by reducing the expenditure level of PAYGO-financed schemes.

Germany had no general minimum pension. If household income was lower than a certain amount, means-tested social assistance could be claimed. Even if also those persons are included who may be eligible for social assistance but do not claim it, then even pessimistic estimates state that no more than about 4 % of pensioners have an income below the social assistance level.[13] Looking at the "poverty rate" as measured by the number of persons claiming means-tested social assistance for financing one's living, this rate is under average for "aged" persons (age 65 or higher): In 2002, for example, the ratio of persons claiming social assistance for the total population in Germany was 3.3 %, for the "aged" 1.3 %, a ratio that has been relatively stable during the last years. In 1969 – as an example for West Germany – this ratio for the total (West German) population was only 1.2 %, but for the "aged" above average (1.5 % for men, 3.1 % for women).

The 2001 pension reform introduced two new elements into the German pension system. The first one is a *means-tested transfer payment in case of insufficient income for persons age 65 and older as well as for disabled persons*. The benefit amount, however, is calculated in the same way as means-tested social assistance. But there is one major difference: in case parents claim social assistance, children are obliged to pay back the whole sum or part of it (depending on their own financial resources). This often was mentioned as a main reason for not claiming social assistance. This obligation of children was abolished in case of the new means-tested benefit, if the own income of children does not exceed 100.000€ per year. By introducing this means-tested transfer payment e.g. for aged persons Germany now has an additional tier within the pension system which can be labelled as a floor.[14]

The second new element is a *subsidy for contributions into a private pension scheme* that fulfils certain criteria. This approach – subsidising private pensions – was labelled as the "heart" of the 2001 pension reform by government.[15] There exist, however, other tax privileges for some types of private saving and occupational pensions. Therefore, one can distinguish between two different elements of the former third tier (voluntary saving for old age), one with targeted subsidies for private pensions and one without. There is now a tendency to reduce incentives for saving for other purposes and to concentrate incentives on saving for old-age pensions. Fig. 1 gives a stylised picture of the (institutional) structure of the German pension system.

Fig.1: Old-age pension schemes for various groups of the population in the Federal Republic



* Including family workers. This scheme is designed as partial old-age security beside income from the former farm.
** Partly also for employees of the respective branches.
*** Including judges and professional soldiers.
Source: Own chart (based on earlier versions).

For a long time, mainly social pension insurance was in the centre of the German public debates about social security, in particular its expenditure level and the financing burden linked to it. Recently – after measures to reduce the generosity of the social pension scheme – a debate about the financing of (social) sickness insurance got a prominent role in the public debate. Also long-term care insurance is on the political agenda, however, its quantitative dimensions are much smaller. Pension and sickness (including long-term care) insurance are – regarding their quantity – the two dominating parts in the German social security scheme. This becomes obvious when looking at the Social Budget (which does at present not cover private pensions as well as private sickness insurance): more than 63 % of expenditure of the Social Budget are belonging to these branches (Table 2), that means nearly 22 % compared to GDP.

3. Major arguments for pension reform in the German debate

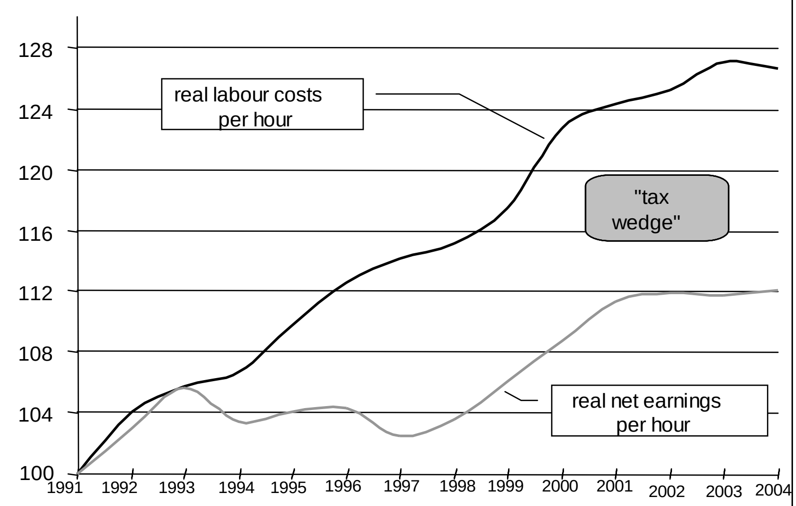
In the eighties of the last century as well as in the nineties following German unification, debates on further reform measures in particular regarding the PAYGO-financed social pension insurance – and to a minor extent also civil servants' pensions – were based on demographic and economic projections showing an increasing future economic burden of social security: increasing expenditure, rising taxes and contribution rates as well as an increase in non-wage labour costs. Labour costs became a highly important topic in the public debate, mainly focused on assumed negative effects regarding competitiveness. This had two dimensions, a national one –

competitiveness of the official sector compared to shadow work activities – and one focused on international competitiveness of the German industry. Despite the fact whether and how far the assumed effects are empirically well-founded or not, the arguments were and are highly important in the political debate.

Regarding labour costs, in particular employer's contribution to social insurance as part of non-wage labour costs are in the centre of the debate. Often it sounds as if these contribution payments are the only reasons for high and increasing non-wage labour costs. However, they are only part of labour cost – of course not negligible, but their weight is mostly overemphasized in the debate. Employers' contributions in 2004 (in the production sector of the German economy) amounted to about 16 % of total labour costs in West Germany and 17 % in East Germany.[16] For competitiveness, however, not only wage costs, but all costs compared to productivity are relevant (beside other factors). Although the government has declared since many years that a reduction in non-wage labour costs is high on the (political) agenda, political decisions often resulted in an increase of contribution rates to reduce the tax-financed federal public budget.[17]

Often the rising difference between total labour costs – which are an important factor for decisions of employers – and net wages of employees are compared, the difference is labelled "tax wedge". Fig. 2 gives some impression (in real terms) of what has taken place during recent years in Germany since 1991, comparing real labour costs per hour and real net wages per hour.

Fig.2: Development of wages and "tax wedge" in Germany



Based on Deutsche Bundesbank (2005), p. 24.

However, such a comparison overlooks that contribution payments may be linked to claims (even relatively close), especially for social insurance pensions, where the level of individual monetary claims is linked to the level of individual contribution payments (respectively wages the contributions are levied upon).[18] Insofar it is decisive in particular for future development, whether contribution payments are in fact more like a price for insurance claims or whether they get more and more the character of a tax. This can influence behaviour of workers as well as trade unions and the wage setting behaviour. (This will be discussed later as well as the question which part of pension expenditure should be financed by taxes instead of wage-related contribution payments.)

Already in the past, several changes within the system of social pension insurance took place to adapt the scheme to changing conditions. For example in 1989, it was projected that contribution rates for West Germany will rise to more than 36 % until 2030. That means a doubling of the contribution rate compared to the rate that existed at that time. The reform measures decided in 1989 were expected to reduce the "necessary" contribution rate in West Germany to 27 % instead of 36 % (in 2030). In 2000 the projections (being the basis for political decisions of the 2001 pension reform) showed an increase of the contribution rate from 19.3 % (2000) up to “only” 23.6 % in 2030 – for meanwhile unified West and East Germany.[19]

Regarding the demographic outlook, projections of the federal government are based on demographic scenarios of the Federal Statistical Office.[20] Central assumptions are:
- an increase in life expectancy (on average, i.e. at birth) from 2002 to 2030 of about 2.5 years,
- fertility will remain low as it is today (on average 1.4 children per woman),
- net migration of 200.000 per year.

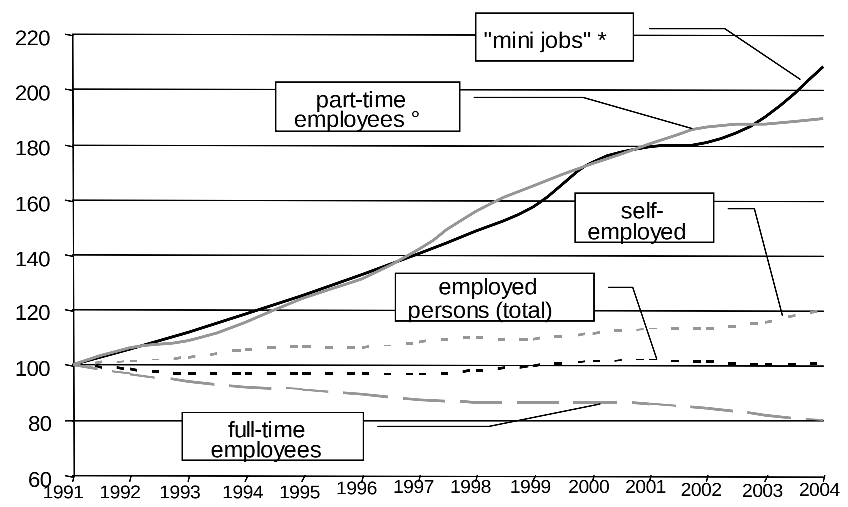
Regarding economic assumptions, among other things
- real growth of the economy of 1.7 % per year on average up to 2030, however, decreasing in the long run because of a shrinking potential of labour (after 2020 real growth rate 1.4 % per year).[21]

Beside demographic effects influencing the potential number of workers there is, however, assumed a remarkable increase of the labour force participation of women and older workers up to 2030 to a level which already exists today in Scandinavian countries or in the Netherlands. In the public debate too much emphasis is placed on the demographic development when discussing effects on social security. In particular, the development in employment is highly important.

Concerning social pension insurance, changes in the structure of employment have a remarkable influence on the financing conditions, the contribution revenue as well as – later – the expenditure because of changes in pension claims linked to individual contribution payments.

As Fig. 3 clearly demonstrates for the period of 1991 up to 2004, the number of full-time employees decreased remarkably (these are mostly employees covered by social insurance), while part-time employment and (mainly) not covered so called “mini jobs” (i.e. employment below a certain amount of wages, the floor) increased in absolute as well as relative terms.

Fig.3: The changing structure of employment



1991 = 100. — ° : without "mini jobs". — *: without "mini jobs" beside another occupation.

Source: Institut für Arbeitsmarkt- und Berufsforschung.
Overview based on Deutsche Bundesbank (2005), p. 18.

Between 1991 and 2004 the number of full-time employees decreased by nearly 6 million persons (5.9), while the number of part-time employees as well as “mini jobs” increased by 2.7 million each.[22] The number of self-employed also increased (0.7 million) – many of them are not covered by social insurance.[23]

If we look at employees covered by social insurance, there also a change took place from full-time to part-time employment (Table 4). But even the number of both together decreased (here for the period of 1993 respectively 1999 up to 2004), while the number of mini jobs increased. It can be expected that to some extent full-time jobs or jobs covered by social insurance are split into several mini jobs without (full) coverage in social insurance.

Table 4: Employment structure 1993-2004

year	employees covered by social insurance *) in 1000			mini jobs **) in 1000
	full-time	part-time	total	
1993	25,454	3,142	28,596	
1999	23,805	3,678	27,483	3,658
2004 p	22,213	4,311	26,524	4,803
change	-3,241	1,169	-2,072	
1993 - 2004	(- 12.7 %)	(+ 37.2 %)	(- 7.2 %)	
change	-1,597	639	-959	1,145
1999 - 2004	(- 6.7 %)	(+ 17.2 %)	(- 3.5 %)	(+ 31.3 %)

p = provisional
*) i.e. without civil servants, self-employed and helping family members
**) without mini jobs beside another occupation
Source: Bundesministerium für Gesundheit und Soziale Sicherung (2005b); Deutsche Bundesbank (2005), p. 19

These developments result in an increase in the pensioner ratio (number of pensioners compared to the number of contributors) and – assuming a constant pension level – in the need for higher financial resources in this area from contribution payments or taxes, because in the PAYGO-financed pension scheme former pension claims are based on full-time employment much more than today, while at present contribution financing is to a higher percentage from part-time employment (or there is a lack of contributors or contribution revenue because of employment not covered by social insurance).

An important factor for expenditure increase in the pension scheme was that on average pensions were received and paid for an increasing number of years. While in West Germany in 1960 the average duration of receiving a pension was 10.1 years and 12.1 years in 1980, it was already 15.4 years just before German unification, resulting from a policy of early retirement (that was supported by politicians, trade unions and labour organisations) based on several instruments (Schmähl 2003c). Meanwhile – in 2003 – this time-span was 16.8 years in unified Germany (16.7 in West Germany, 17.0 in East Germany). Such an extension of the period for receiving a pension is an increase in the generosity of the scheme, in particular, if there are no reductions from the full pension because of the extended period of receiving the pension (as it was the case for a long time in social pension insurance).

The expected effects of population ageing on social security in particular stimulated proposals for radical reform mainly in old-age security. To overcome the "crisis" of the PAYGO scheme, the by far most important measure was seen in shifting pension arrangements towards capital-funded private pensions.[24] Many economists, actors in the financial market, politicians and mass media recommended a strategy of rolling back the Welfare State[25] because of its assumed negative economic effects. Capital funding – some economists declared – is dominating PAYGO financing in nearly all aspects.[26] Therefore, it was argued that a shift towards funding will improve the well-being of the population – at least in the long run – in particular because of a higher rate of return.[27]

The public debate about the coming "demographic crisis" and nearly daily reports in the mass media prepared the ground for a major paradigm shift based on a broad informal coalition of actors aiming at a reduction of the public PAYGO-financed social pension insurance scheme by substituting it in part by private capital-funded pensions. The actors involved had different motives: the minister of finance, who became a major player in the pension policy arena, is particularly interested in reducing the burden for public budgets and public debt in line with the Maastricht convergence criteria of the European Union. Lower contribution rate also means lower federal grant to social pension insurance, because part of the grant is linked also to the development of the contribution rate of the pension scheme. Many mainstream economists are arguing in favour of only minimum protection which should mainly avoid poverty in old age by interpersonal redistribution. Pension provision above this level should remain a voluntary decision of the individual according to individual preferences, giving more choice. Employers' organisations are in favour of a reduction of the PAYGO public scheme because of lower contribution rates and non-wage labour costs. The actors of the financial market – like banks, pension funds, insurance companies – are of course highly interested in a reduction of public PAYGO schemes to attract a higher percentage of the growing amount of pension money in an ageing population.

The political debate was finally framed by the new government which came into power in autumn 1998: a contribution rate of about 24 % in 2030 in social pension insurance as it was the result of projections would be economically unbearable and would burden the younger generations too much. "Intergenerational equity" as well as "sustainability" became widely used catchwords in the political debate.[28] The development of the social insurance contribution rate became the decisive indicator. Therefore, cuts in the pension level were regarded as unavoidable. To compensate such cuts regarding income in old age, additional private saving would become necessary: The "stick" was the cut in public pension level and the "carrot" was a subsidy for private pension saving. During the boom period of the stock market this shift towards capital-funded pensions appeared to be very attractive and with low risk.

The permanent public debate about sustainability of the social pension insurance was stimulated also by the political decision to reduce the already low minimum reserve requirement (liquidity reserve) of the scheme to finally only 20 % of pension expenditure of one month! Just little differences between projected and realised economic variables cannot be adequately compensated by the reserves. In the public debate such short-term fiscal aspects were mixed up with long-term structural aspects, questioning in general the ability of this scheme to survive. Together with other reasons this eroded the confidence into the scheme remarkably (Rische 2006).

4. A paradigm shift by the 2001 pension reform

To illustrate why and how the reform measures decided in 2001 can be labelled as a "paradigm shift" it is useful to outline the main characteristics of the social pension insurance scheme as it existed at that time.

4.1 Main elements of the existing scheme before the reform

On November 9, 1989 (the same day when the Berlin Wall came down) a major pension reform act was decided in parliament and became effective in 1992 ("1992 pension reform"). It was adapting once more to changing conditions the scheme that had been implemented by the major pension reform act of 1957. In 1957 a dynamic, earnings-related pension scheme was introduced, linking pension calculation and regular pension adjustment to gross earnings. The 1989 reform measures tried to cope with the challenges of demographic ageing by using several instruments to reduce the growth rate of pension expenditure, e.g. by increasing the retirement age and linking pension adjustment to the development of average *net* earnings. These measures were based on a clear distributional objective: pensioners with a specific amount of pension claims (a certain number of Earnings Points, see 4.2.1) always should be entitled to a pension benefit equivalent to a specific percentage of actual average net earnings of all employees. This should not only be realised at the time of retirement but also during the whole phase of receiving a pension benefit. Linking the development of individual pensions to the development of the growth rate of average *net* earnings was an important instrument to realise the explicit distributional objective: a constant net pension level (pension compared to net average earnings). This underlines the character of the social pension insurance as a defined benefit scheme. The benefit level was the exogenous variable, financing (the contribution rate as well as the grant from the federal budget to pension policy) was the endogenous (dependent) variable. Linking the development of pension benefits to average net earnings reduced pension expenditure compared to a link to average gross earnings (as it was the concept of the formula introduced in 1957). This effect, however, only occurs as long as there is an increase of direct taxes and social insurance contributions (in relative terms). This was expected to be the case in the future.[29]

To characterise the social pension insurance, it has to be underlined that this earnings-related scheme realises a relatively high degree of intertemporal income redistribution over the life cycle, i.e. a relatively close contribution-benefit link. This allows to smooth income and consumption possibilities over time. The *whole insurance period* is taken into account for calculating pensions. Meanwhile, there has been a development in several countries (for example in Sweden and Austria) to consider not only some, but (in tendency) all years of insurance when calculating a pension. Individual pension claims of the insured person from earnings or credited in case of some other activities (like child care) are accumulated in the German social pension insurance scheme within an *individual account*.

Income and consumption smoothing over the life cycle is the main distributional objective of the social pension insurance scheme and not primarily avoiding poverty. For pensioners – at least for those with a longer insurance record – the pension shall be sufficient to maintain during retirement to a certain specified percentage the level of living that was financed before retirement from earnings.

To sum up main objectives and characteristics of the German pension schemes prior to the reform that was decided in 2001:

(a) regarding *social pension insurance:*

- an explicit distributional objective of the PAYGO-financed scheme: the individual pension should be a fixed percentage of average net earnings (the percentage depending on the accumulated sum of pension claims), the benefit (pension) level being the independent (exogenous) variable – a defined benefit scheme;
- a constant pension level (compared to average net earnings) over time by linking the development of pensions to the development of average net earnings; this is realised for new pensioners at time of retirement as well as for all pensioners during the phase of receiving a pension ;
- financing (by social insurance contributions and federal grant) is the dependent (endogenous) variable;

(b) regarding *occupational and voluntary private pensions:*

- capital funded occupational pensions being a *supplement* to social insurance pensions (financing by employers was dominating, pensions were mainly of the defined benefit type; occupational pensions in the private sector are voluntary, based on collective agreement in the public sector);
- voluntary private saving for old age (for example by life insurance contracts) was another supplementary instrument.

4.2 The 2001 pension reform – the new strategy in pension policy

The *2001 reform* changed several of the above mentioned characteristics of the social pension insurance scheme:

- The contribution rate became the dominating objective, the benefit level now is the dependent (endogenous) variable.
- Employees now have a right of "earnings conversion". Collective agreements regarding occupational (firm-based) pensions are favoured; financing by employees will become dominating instead of employer-financing of occupational pensions.
- Subsidised private saving became explicitly a *substitute* to social pensions, although officials labelled it still as "supplementary".
- Capital-funded private schemes shall *substitute* PAYGO-financed social insurance pension partially.
- A major instrument to reduce expenditure and the benefit level in social pension insurance to realise the intended shift towards private pensions was a change of the pension (adjustment) formula. Additional changes in disability and widow(er)s' pensions were also decided (Schmähl 2001, 2003a).

4.2.1 Changing the pension adjustment formula to reduce the benefit level

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 in the future. It affects insurance pensions (retirement and disability) as well as survivors' pensions (for widow(er)s and orphans).

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

(a) sum of individual *Earnings Points* (*EP*) the insured person accumulates during his/her whole life. In case of covered employment the Earnings Point of an employee in one year is the ratio of individual gross wages to average gross wages of all employees. If an employee just earns the average amount of earnings, he gets one *EP* in this year, if he/she earns only half of the average, he/she gets 0.5 EP etc. There is also a crediting of Earnings Points for activities like child caring, caring for frail elderly, in case of unemployment[30] and even for some non-contributory periods like schooling. At time of retirement the sum of Earnings Points of the whole insurance period is accumulated and multiplied by a second factor,

(b) *actual pension value* ("Aktueller Rentenwert", ARW) which gives the value in DM (now in Euro) per month of one *EP*.

If the pension is claimed before the age of a full pension, the full pension is reduced by 3.6 % per year.

The growth rate of ARW is the rate for adjusting those pensions which were calculated in the past. 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 was 0.7 multiplied by average net earnings. A lower (higher) number of *EP* gives proportional lower (higher) pension benefit.[31] The 1992 reform linked – as mentioned above – the growth rate of ARW (pension adjustment rate) to the growth rate of average *net* earnings,[32] and the ratio of (individual) pension to net average earnings remains constant over time for all pensioners.

In 2001, the new government abolished the link of ARW to net average earnings. The main reason was that an intended reduction in income tax and shifting the tax burden more towards indirect taxes (VAT and ecological tax) would increase the growth rate of net earnings compared to gross earnings. Because of the net adjustment formula then also the pension adjustment rate, pension expenditure and the need for additional revenue would increase.

The pension adjustment formula, as it was introduced in 2001, is no longer based on the development of average *net* earnings but on average *gross* earnings (like in the 1957 pension reform in principle) and the contribution rate only of social pension insurance[33] as well as a *fictitious* contribution rate for saving in private pensions. This rate is not the empirical saving rate for private pensions but a rate the government will subsidise in case there is saving in certain (certified) types of private pensions. This factor was introduced in 2002 at 0.5 % and will be increased in eight steps to 4 % up to 2008. By increasing this factor, the development of ARW – and by this the adjustment rate for public pensions – will be reduced as well as the benefit level for all present and future pensioners. This clearly demonstrates that the new (subsidised) private pension is intended to be a *partial substitute* for public pensions. Present pensioners and employees near retirement age cannot compensate for the loss in public pensions by additional private saving for old age.[34] The new formula was intended to reduce the standard pension level (pension based on 45 EP) from 70 per cent to 64 per cent compared to average net earnings.[35]

Beside this *general* reduction of social insurance pensions by redefining the pension formula in case of old age as well as of disability, additional measures were adopted to reduce *disability pensions* and *widows'/widowers' pensions* as well as pension claims in case of (long-term) unemployment. These measures are affecting certain groups of the population in addition to the general reduction of the benefit level.

Regarding "disability pensions" there existed two different types prior to the 2001 reform: Pensions in case of (general) disability and pensions because of vocational disability.[36] The first one was like old-age pensions to replace former earnings if the insured person was not able to work regularly (or could not earn more than a specific amount) because of health conditions. Therefore, this pension was calculated on the same level as old-age pensions, while in case of vocational disability it was assumed that the insured person was able to earn some money; therefore, the level of these pensions was 1/3 lower and was a supplement to labour income. However, there existed a special "protection" regarding the type of work that was looked upon as "reasonable" (in principle the occupation or one that was related to it). If such a job was not available on the labour market, the insured person received the (generally) higher disability pension.

This was changed into a disability pension with taking into account individual income. Relevant now is how many hours somebody is able to work – regardless of the type of work. That means that in principle all occupations are "reasonable". It is now decisive how many hours the insured person is able to work. If he (she) can work 6 hours or more per day, no disability pension is granted. If he (she) can work 3 up to 6 hours, a partial disability is paid (as a type of allowance), while in case of less then 3 hours the full disability pension is paid.

Regarding widow's/widower's pensions, it is linked to the amount of the pension of the deceased spouse. Before 2001, this was in principle 60 % (but taking into account certain types of own income of the widow/widower). This percentage was reduced to 55 % and all other types of income are now taken into account. However, if the widow/widower has children, then Earnings Points are granted: for the first child 2 Earnings Points, for all other children one Earnings Point. For all those couples having been married since 2001 (and born 1962 or later) they can choose whether they opt for this widow's/widower's pension or for a split of the pension claims the two partners earn together (a technique used also in case of divorce).

4.2.2 Additional decisions in 2004

Only two years after the decision on "the most important reform of the century" – as it was labelled by supporters – the government established a new ad hoc commission to work out proposals for a "sustainable development" in social security. Because economic conditions, in particular on the labour market, did not develop as expected, the contribution target (20 % in 2020) runs the risk of not being realised. This as well as short-term financial problems again stimulated a reform discussion. In particular, the Green Party favoured a new commission which should deal with demographic consequences for social security.[37]

The report of the "sustainability commission"[38] proposed several additional measures to reduce expenditure and to distribute financial burden between present and future contributors and pensioners. One of the measures proposed is a gradual increase of the retirement age for receiving the full pension (from age 65 to 67) and of the earliest age of retirement (from age 62 to 64) over a period of more than 20 years (one month extra per calendar year), to react to increasing life expectancy.[39] This proposal was, however, not realised by the red-green coalition government, while the new coalition government of Christian- and social-democratic parties (established in autumn 2005) announced to realise this in the future. Meanwhile, in early November 2006, the Ministry of Labour published a draft bill proposing a stepwise increase of the retirement age to take up a pension without deductions from the full pension, starting from age 65 in the year 2012 to age 67. For all those persons born after 1963 the "deduction-free" retirement age will be 67.[40]

Another proposal by the commission was adopted by the government in 2004, namely to introduce an additional "sustainability factor" into the pension (adjustment) formula. This factor is defined as a (standardised) ratio of pensioners to contributors (pensioner ratio, system dependency ratio), reflecting among other things changes in demography and labour market participation, but also changes in the coverage by the social pension insurance scheme. If the ratio increases, this will reduce the development of the "actual pension value" (ARW) and by this in general the benefit level. However, this "sustainability factor" is multiplied by another factor (α); α at present is set at 0.25. This number is chosen in such a way that the projected contribution rate of the pension scheme[41] is just as high as the contribution objective (2020 not above 20 %, 2030 not above 30 %). This underlines that the definition of the "sustainability factor" as such is not decisive, but shall give the impression of a well-defined element.[42]

The pension formula as it has been implemented is already now lacking transparency.[43] This will increase in the (near) future, if another additional "factor" – as it has already been announced by the coalition government – will be introduced into the formula (see below).

5. Some effects of recent reform measures

5.1 Reducing the benefit level

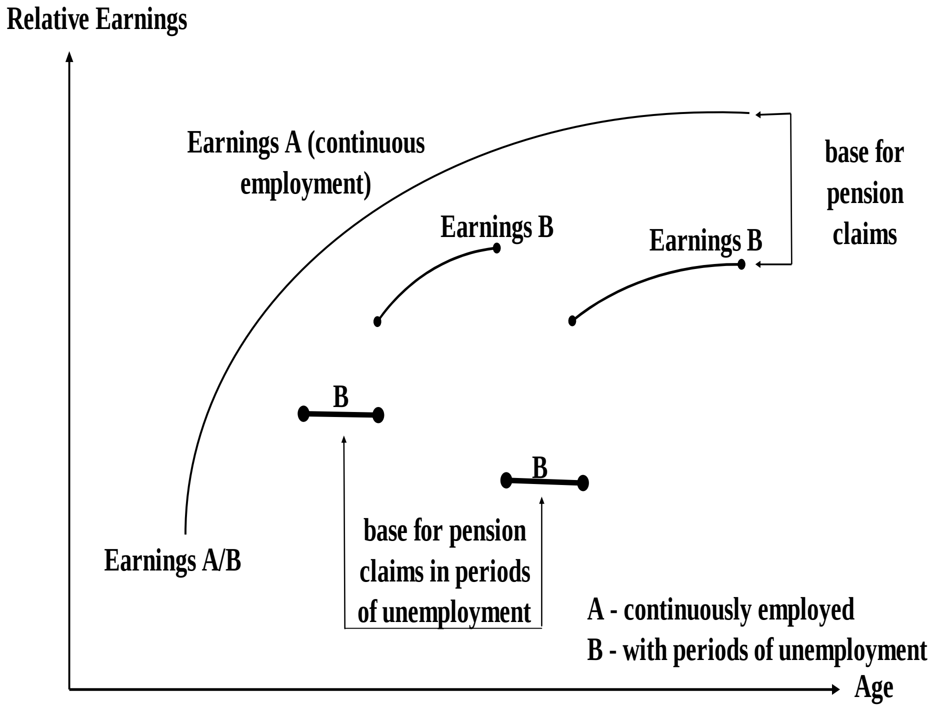
Regarding the effects of these reform measures, one has to take into consideration the *general* pension level, the *individual* pension claims, the *net income* of pensioners, the *contribution rate* and the *total financing burden* for old-age provision as well as *income distribution* in old age and the *fundamental features in particular of the social pension insurance*. This becomes obvious mainly in a long-term perspective.

Regarding the *net* pension benefit, (direct) taxes and contribution payments are relevant. Here, also changes took place: the income tax on pensions will be increased gradually[44] and the contribution rate in long-term care insurance now burdens in full the pensioner (while before half of the contribution was paid by social pension insurance on behalf of the pensioner as in case of health insurance).

Regarding the *individual* pension claims, it is decisive, how much claims can be accumulated during the working life from employment as well as in case of other circumstances (like caring for children) or "social risks" (like unemployment).[45] The high unemployment rate and the increase in long-term unemployment will reduce individual pension claims in the future remarkably. How long has an employee in principle the possibility to stay in the labour market? Will it be possible to remain employed up to the age, where the full pension is paid without any deduction? Labour market conditions are (beside e.g. health conditions) relevant in particular.

To illustrate some aspects in case of unemployment, two employees (*A* and *B*) are compared (Fig. 4). Both employees started with identical earnings, but while employee *A* is continuously employed, the working career of employee *B* is interrupted by unemployment. The contribution payment of the unemployment agency to pension insurance is based on the unemployment benefit which is linked to the employee's former earnings. According to the ratio of unemployment benefit to average earnings a pension claim is created during the period of unemployment.[46] If employee *B* finds a new job, his earnings may be lower compared to the earnings of employee *A*, who was continuously employed. Therefore, also the pension claims of employee *B* from gainful employment will be lower compared to *A*.[47] Therefore, two effects work together resulting in lower pension claims of *B*: because of lower claims based on the unemployment benefit and on lower earnings after the unemployment period.[48] If, for example, an unemployed person has exhausted the maximum length of unemployment benefit and is not employed again, he may receive a means-tested transfer payment. The maximum length of this contribution payment was reduced in 2006 to 12 months (18 months at maximum only for those 55 years and older). If, thereafter, a means-tested benefit is claimed, the pension claim in this case is at present 1/6 EP and shall be reduced (according to an announcement of the new coalition) to 1/12 EP. That means that if someone needs this means-tested benefit for 3 years, his/her pension claim is as high as the claim an average earner gets within 3 months. This illustrates how unemployment can reduce the individual sum of EP and therefore the individual pension benefit – beside the general reduction of the pension level.[49] All this demonstrates very clearly that unemployment can remarkably reduce the public pension claims an individual can accumulate during his working life.[50] But nevertheless, periods like unemployment or illness as well as disability are taken into account in *public* but not in private or occupational pension schemes. The more individual or occupational pensions replace public pensions the lower is the compensation-effect in case of illness, unemployment or disability which the public scheme provides.

Fig.4: Earnings-profile without and with periods of unemployment



Source: Schmähl (2005c)

In case of earlier retirement deductions reduce the monthly pension benefit. Early retirements may be a voluntary decision or an effect of labour market conditions. Even today the effects of unfavourable labour market conditions influence pensions (beside the low pension adjustment rate according to low earnings increase): In 2004, in West Germany 24 % of all new pensioners retired after unemployment or a specific part-time rule for older workers, in East Germany even 55 %. The deductions from the full pension were on average around 14 % (that was on average 175 € less per month) for West and East Germany. The effect of deductions can be expected to increase in the future even without the planned increase of the "normal" retirement age (for a pension without deductions) from 65 to 67.

Looking at the effect for income in old age, the general reduction in the pension level as well as the effect of changing conditions (on the labour market, in other areas of social security, in taxation) have to be taken into account.

The reduction in the pension level *in general* is closely linked to the concept of the social pension insurance scheme. A few figures shall substantiate this. The intended scaling down of the pension level – sooner or later – will transform this pension scheme fundamentally.[51] If we assume that all the changes, which were politically decided from 2001 to 2004, were already fully effective today, then the net pension of an insured person with 45 EP (which is often a point of reference in the German debate) would not be 70 % of average net earnings anymore (as was the dominating distributional objective of the "1992 Pension Reform Act"), but only 52 % – in case the pension is claimed at the "standard retirement age" (65 or even 67 in the future). A pension of 1000 € then would be only 750 €.[52]

How can this affect the fundamental feature of the German social insurance scheme? This becomes evident if one takes into account, how many pension claims are necessary to receive a pension benefit that is just as high as means-tested social assistance, which is about 40 % of average net earnings. At present, about 25 EP are necessary, but about 35 EP will be needed in case of a general reduction of the benefit level to 52 %.[53] That means, somebody who earned during his working life on average just as much as average earnings, has to pay contributions for about 35 years of insurance. Who earns less, e.g. only 86 (75) percent of the average, has to pay contributions for 40 (45) years to receive a pension just as high as means-tested social assistance – a benefit that can be claimed without any provision (saving, contribution payment) for old age.[54]

Today, about two third of all women and about one third of men have less than 35 EP. Even if we assume an increasing female labour force participation rate, the picture will not change fundamentally. If we take the labour market conditions of the past into consideration as well as changes in the institutional rules for accumulating pensions (for example the number of pension claims credited for periods of schooling that were reduced radically in recent years), we can expect that – even after long periods of contributing to the social insurance scheme – a remarkable percentage of pensioners will only have pension claims hardly above or even below the social assistance level. This would undermine fundamentally the political legitimacy and public acceptance of a scheme that intends to realise an insurance principle and a close link between (at least relative) individual contribution payments and (relative amount of) pension benefits. Even the federal government underlined this as an important objective of their reform. If the outlined development takes place, it will have (additional) negative incentives for contributors to finance such a scheme.

Meanwhile the "official" rhetoric is to say that the earnings-related social pension insurance cannot anymore finance the "standard of living" of pensioners, it can be no more than a "basic pension". However, it is not mentioned, what this will mean in reality: a basic pension that is *above* the social assistance level will not be realised by many of the pensioners – even if they have a long working career.[55] This becomes even more relevant, if the full pension (without deductions) can only be claimed at age 67 and the labour market conditions do not change fundamentally. Then a growing number of pensioners will have deductions from their full pension in addition to the lower general pension level and the effect of (an increasing number of) unemployment spells in their insurance record.

5.2 Shifting of burden and risks

A shift of financing burden from public budgets directly to private households takes place as well as a shift of burden (as well as of risks) from employers to employees. In addition, the total financing burden of private households will be increased compared to the previous pension mix because of the transition costs resulting from (partial) substituting PAYGO financing by capital funding.

The 2001 reform measures already showed this: a contribution rate of 24 % in the social pension insurance scheme was calculated for 2030 without the reform, the implemented measures are expected to reduce the contribution rate to 22 %. However, employees are expected to save 4 % of their earnings in private schemes to realise a benefit level comparable to the old rules. The total contribution rate in 2030 then would be 26 % instead of 24 %. However, now 15 % have to be paid directly by employees and 11 % by employers, instead of 12 % each. Even if a subsidy for saving in specific types of private pensions is taken into consideration, the economic burden for provision in old age will be higher compared to the financing of the same pension level only from social pension insurance instead of the assumed mix of PAYGO-financed social and capital-funded private pension insurance.

A lower social insurance contribution rate reduces the burden for the federal budget because federal grant is also linked to the development of this rate. Additional burden for the federal budget, however, results from subsidising private (as well as occupational) pensions.

The shift towards more private capital-funded pensions – which are at least today mainly fixed nominal amounts – and the increasing income tax on pensions can reduce the real value and the relative amount of pensions compared to general income development as well as compared to former (dynamic) social insurance pensions during the period of receiving pensions. On the other hand, the age-specific risk of illness or even need for long-term care and the need for income to cover costs linked to these risks increases with age.

It also has to be considered that within the social pension scheme several social risks (like unemployment) or socially relevant tasks (like caring for children) are taken into account, but not in private pension schemes. A reduction in the generosity of the social pension scheme reduces therefore also the effects of such redistributive (and mostly tax-financed) elements. If they are looked upon as being important, then the question remains how this should be realised. If private pension schemes become mandatory – as has been discussed in Germany for some time, in particular if private saving seems to remain too low –, it could be possible that private schemes have to take over such redistributive tasks.[56]

5.3 Effects on income distribution

The new German strategy in pension policy affects the distribution of income of different cohorts, of men and women, families with children and single households.[57] In principle, younger cohorts gain by the measures already implemented. However, the effect is very small, at maximum an increase in the rate of return by the 2001 reform (compared to the previous scheme) of less than 0.2 percentage points, for example, for those born in 2010 and retiring (at age 65) in 2075. These findings are based on calculations of the Bundesbank, referring for example to an average earner with 45 years of insurance, two children, retirement at age 65 and receiving a pension for 15 years and then a widow's pension for additional 5 years. These calculations show that for younger cohorts the rate of return will increase while for older cohorts it is the opposite effect. However, the difference in the rate of return with and without the 2001 reform measures is at maximum less than 0.2 percentage points. The "break-even point" where cohorts will be positively affected is around birth cohorts of 1975. For those born later the effect – measured by the rate of return – will be positive, however slowly increasing and – as already mentioned – at maximum less than 0.2 percentage points for those born around 2010 – that means retiring at 2075 or even later. This hardly can be taken as a convincing argument in favour of the reform.[58]

Persons with high income gain by tax subsidies for private pensions because of the progressive income tax schedule. From a social-policy point of view, one could argue that if private pensions are subsidised, this should be focused on those in the low and middle income brackets. This becomes especially important when taking into consideration that persons with low income may not have enough money to save in these subsidised types of saving. There is even a remarkable percentage of German households (at present about nine per cent) that cannot even meet their financial liabilities (their obligations to pay back the accumulated debt although they already reduced their living conditions). If they have some money left, it is preferable for them to reduce the debt instead of saving for old age in subsidised forms.

It is neglected in the present public discussion that fiscal incentives have to be financed, too. If tax expenditure for incentives to save are financed mainly by indirect taxes (like VAT or tax on petrol etc.), all households, including households with low income, have to finance the incentives, while not all households are able to profit from the subsidies. Households with many children are burdened relatively high by indirect taxation.

Concerning the development of saving, it is an open question whether and how much additional saving can be expected. Based on the experience of former attempts to stimulate saving,[59] there are severe doubts that the new financial incentives will increase total saving. It can be expected that there will often be a mere substitution within different types of saving, from non-subsidised to subsidised types or towards higher subsidies.[60]

It can be expected that income inequality in old age will increase. This can be the effect of

- different participation in private pension funds as well as in
- different amounts of saving, but also in
- different net rates of return[61] and as an effect of
- labour market conditions, interruptions in the working career and
- less equalising measures realised by social pension insurance. Such equalising effects (for example by crediting pension claims in case of unemployment, child care etc.) will be eroded because of the smaller role of this benefit as income source in old age.

The interaction of changes in the rules for public and private pensions, the increase in – often long-term – unemployment (unemployment spells in individual careers), changes in rules in case of unemployment (shorter duration of unemployment benefit as well as reduction in the pension claims in periods after receiving unemployment benefits and receiving a means-tested transfer payment) as well as an increase in inequality of wages that can be seen in Germany since a number of years,[62] are reasons for growing income inequality in old age.

Even today there is rising inequality regarding pension payments. This is shown in Table 5: Gini-coefficient – as an indicator of inequality – of pension payments from social insurance is increasing for newly calculated pensions. In addition, if we compare Gini-coefficient of newly calculated pensions with the "stock" of all pensions in a certain year, it is also obvious that over time inequality is rising.

Table 5: Gini-coefficient of old-age pensions in German social pension insurance

Year	New pensions in year …				All pensions in year …			
	Men		Women		Men		Women	
	West	East	West	East	West	East	West	East
1995	0.288	0.112	0.387	0.159	0.258	0.387	0.387	0.19
2000	0.306	0.132	0.391	0.16				
2005	0.346	0.157	0.403	0.202	0.273	0.143	0.369	0.187

Source: Original data from pension insurance, own calculation

Present pension policy will obviously affect the structure and design of pension schemes in Germany as well as living conditions of the elderly in the future. The effects of the new strategy in pension policy on income distribution in old age (which will become more unequal) and in particular on (income) poverty (which can be expected to grow in the future)[63] will stimulate the question of *political* sustainability – even if the social pension scheme seems to be *fiscally* sustainable.[64]

5.4 Further structural change

The present political strategy in pension policy is supported by the vast majority of political parties, by employer organisations, trade unions, banking and insurance companies and their organisations, newly established lobby groups financed in particular by employers' and industrial organisations (Lampert 2005) and by mainstream economists. It is not surprising that this strategy is not disputed at all in the media. The new strategy and its main elements can meanwhile be labelled as the *new pension orthodoxy* in Germany. Regarding social pension insurance it will cause a fundamental change in the dominating objective, from income and consumption smoothing of an earnings-related scheme with a strong contribution-benefit link back to the objective of avoiding poverty in old age – as it was the starting point of the scheme at the end of the 19th century.

A pressure towards further reducing *public* PAYGO pensions can be expected from the European level. One of the influencing factors are the Maastricht stability criteria, the demand for reducing public debt as well as to balance the public budgets. Arguments for this are the sustainability of fiscal policy in general and of pension policy in particular as well as the goal of intergenerational equity. The main instrument to realise this is seen in reducing PAYGO financing.

Another influencing factor coming from the European level is linked to the process of an "open method of co-ordination" in pension policy for EU member states. Decisions on common goals in pension policy and on a set of indicators will be the base for a process of benchmarking of national pension policies. This benchmarking will depend on the decision which indicators will be chosen as relevant. Taking into account the important role of the ministers of finance in the EU, it may happen that for example indicators like the percentage of public pension of GDP will become decisive in the process of evaluating different pension arrangements in the member countries. It is obvious that the ministers of finance are particularly looking at the "burden" for public households, not as much at the "burden" for private households in case of a shift from public budgets to private households and by this from PAYGO to capital funding. This process may become a highly important factor (by "blaming and shaming") in the national pension debate and may influence the mix of pension schemes on the national level (Schmähl 2002).

In Germany, those types of occupational pensions (in the private sector) that are based on book reserves (internal financing) – direct commitments by employers – are under high pressure, too. Changing accounting standards and activities of rating agencies push the financing of occupational pensions towards the capital market.

Regarding occupational pensions in the public sector, there, too, is a shift from PAYGO financing towards capital funding. And also in civil servants' pension schemes in the level of states as well as on the federal level capital funding shall substitute

PAYGO financing. We can see a "victory" of capital funding (and its supporters) nearly in every part of German pension schemes. Whether the expectations linked to this approach will come true, that is another – and open – question.

Although private pensions as a substitute for public pensions are voluntary at present, the topic of *mandating* private (or occupational) pensions will be on the political agenda at least in case of a low participation rate of employees in the new possibilities for saving (in certified pension products or in using the possibilities via collective agreements). Mandating may be based on industry-wide collective agreements (quasi-mandating like in the Netherlands) or by law (like in Switzerland).

While Germany today still is a country with an *earnings-related* public pension scheme as first tier (aiming at income smoothing over the life cycle) and with *voluntary* funded pensions (for example as a second tier of supplementary occupational pensions), it seems realistic to assume not only a changing mix of the schemes and of financing methods, but also a change in the division of tasks between public and private schemes: a shift in the public first tier towards primarily avoiding poverty, while a mandated second tier shall take over some income replacement. The "basic (social) pension" (as it is labelled very often now) may even become a benefit similar to the already existing means-tested scheme in case of old age or disability or will be merged with this scheme, because a general flat-rate pension (adequate to avoid poverty in old age!) would be much too costly.[65] The pattern of a low PAYGO-financed public pension and a mandatory second tier can be seen in countries like the Netherlands or Switzerland. The development in these countries often is mentioned in Germany as being an attractive model for pension policy especially by those actors aiming at an extended capital-funded part of pensions.[66]

In Table 6 a stylised picture is given, showing "typical" combinations in a typology of first and second tier pension arrangements. It is not unrealistic to assume that Germany will change its position in this matrix, if the present strategy in pension policy remains effective (as it looks like at present).

Table 6: Combinations of mandatory first tier and second tier pension schemes

mandatory 1st tier (PAYGO-financed)		2nd tier (capital funded)	
		voluntary	mandatory by law or collective agreement
not income-related flat rate means-tested low pension level dominating objective: avoiding poverty in old age			X 1)
income-related	defined contribution		X 2)
dominating objective: income and consumption smoothing over life cycle	defined benefit	X 3)	

Examples: 1) The Netherlands, Switzerland, Australia
2) Sweden, Latvia, Poland
3) United States, Germany
Source: Own compilation

If such a development takes place, this would be quite the opposite direction in Germany than in many other countries, where a low and insufficient first tier is supplemented by a mandatory second one. Germany now reduces its public first tier, which will become insufficient for many groups of the population. To realise a sufficient replacement level in old age, a mandatory second tier would then be added. If this takes place, the existing subsidies for private pensions have to be changed, too, because otherwise it would become much too costly for public budgets.

According to the present "Zeitgeist" and the remarkable influence of some actors on public pension policy, expectations were created that the increase of financial capital would be the decisive factor for coping with the challenges of an ageing population for social security, namely in pensions, but also in health care and long-term care. This is based on the assumption that an increase in financial capital (liquidity) does also result in an increase of real capital and productivity. This assumption, however, may be questioned. Beside this it can be argued that for future economic development in a country like Germany financing of human capital will be decisive in particular.[67] If this is a realistic assumption, subsidies should be focused more on investment in human capital (including further training of the growing number of older workers) instead of in financial capital (private capital-funded pensions). This could become an important precondition to realise high productivity and income.[68] Structural changes like those resulting from population ageing and its effects for social security can then better be coped with, as net income will increase despite unavoidable higher provision for old age because of the changing age structure.

Germany's pension policy seems to be beyond a crossroad at present. However, the long-term costs of the new development do not seem to be adequately realised in the public debate. During the last century, Germany introduced two important elements of pension policy – social insurance at the end of the 19th century and the dynamic earnings-related pension with a close contribution-benefit link for income and consumption smoothing over the life cycle in the middle of the 20th century. It seems that social insurance in Germany is on a way back towards its founding period in the late 19th century, when the public scheme was an element to avoid poverty in old age. The dismantling of the earnings-related pension scheme and its partial replacement by private pensions will have considerable effects on income distribution in old age but also on incentives to contribute to pension schemes. The long-term costs of this strategy seem to be neglected compared to assumed benefits from a lower social insurance contribution rate and the expectation of higher rates of return from capital-funded pension schemes. However, as long as the political decisions that were taken remain unchanged, Germany's old age security will pass through a radical transformation.

Although there seems to be no influential political power at present to change the development that has been introduced politically since 2001, the author do not share the opinion of the ruling political parties and many actors that there was and is no alternative.[69] In a report to the German federal government by a commission of the federal government, some corner stones and guidelines of an alternative approach are outlined.[70] This approach favours the idea of a close link between contribution payment and pension claims realising pensions, that are – for those with a relatively long earnings career – well above the poverty line (respectively means-tested social assistance). Then also an increase of the "normal" retirement age – which is much debated in Germany at present – can be accepted, even if retirement takes place earlier. Germany has – compared to many other countries – at present relatively low labour force participation rates of the elderly (Table 7). This is in part due to a long lasting strategy of political parties, employers' organisations as well as trade unions to support early retirement. To change retirement behaviour, however, also a bundle of additional measures is needed beside changes in social security. A specific problem is linked to the group of employees with low qualification. To discuss this is beyond the scope of this paper.

Table 7: Labour force participation rates 2004 (in %)

(in %)

country	age group					
	55-59			60-64		
	E	U	I	E	U	I
Germany	***61.3***	***9.7***	***29.1***	***25.3***	***3.2***	***71.6***
Sweden	78.1	3.4	18.5	57.8	3.8	38.4
Norway	74.8	1	24.2	54.2	0.5	45.4
Switzerland	77.5	2.3	20.2	50	2.1	47.9

E = Employed and Self-employed
U = Unemployed
I = "Inactive" at Labour Market
Source: Europäische Arbeitskräftestichprobe 2004.

Finally, it should be mentioned that a policy approach in old-age security cannot be concentrated on pension schemes (their financing, the benefits and taxation), but has to take into account additional elements that are relevant (decisive) for real income position in old age. This includes politically determined developments like social security rules in case of illness and long-term care, in particular how much from the individual budget elderly persons have to finance. This is highly relevant because in health and long-term insurance as well there is a tendency towards more privatising respectively to reduce the level of public activities. However, public – as well as academic – debates are highly fragmented. An integrated view in old-age security is missing. The "reform" measures are debated mostly irrespective of their cumulative effects on the individual/household level. The notion of "reform" in Germany at present is not seen as a chance, but more as a danger. What social security should also realise, a feeing of security, is more and more missing in the perception of the public. Therefore, "sustainability" should not – as it is done today – be focused in public expenditure and its financing, but should be viewed in a much broader sense, trying to realise "political sustainability". This, however, needs a policy approach that is far more comprehensive than usually.

[1] The rules for miners as well as for self-employed differ from the general rules relevant for employees. Civil servants have a separate scheme, financed from public budgets.

[2] Coverage was extended over time, even covering some groups of self-employed.

[3] This divide ended in autumn of 2005, after having discussed this several times since more than 50 years.

[4] No lump sum payments in contrast to many private life insurance contracts.

[5] Beside years of employment and paying contributions also some other periods are counted as insurance years.

[6] Already in the late 19th century this became necessary to finance pensions for those already old (or disabled) and not waiting about 40 years until capital accumulation has taken place. Economic crisis and inflation as well as – later German unification in 1990 – made pay-as-you-go financing necessary.

[7] This has existed in the building industry and for employed journalists.

[8] In tendency: the higher social insurance pension, the higher is also the occupational pension.

[9] Which differ according to the type of occupational pensions; but exact information on the amount of tax loss is still lacking.

[10] That means: individual gross earnings (up to a ceiling) were compared to average gross earnings of all insured employees during all the years of insurance.

[11] The support of the individual employer or even on a branch of industry, for example, is by negotiating group insurance contracts with a life insurer resulting in better conditions compared to individual contracts.

[12] This is up to now limited until the year 2008. But several (influential) actors are supporting the demand to retain this possibility.

[13] It can be expected that a high percentage of those people not claiming social assistance in old age would only receive a relatively small additional benefit; Becker and Hauser (2005).

[14] There was a long debate on how to introduce such an element. Originally government wanted to integrate such a tax finance transfer payment into the social pension insurance. There was a lot of resistance against this approach because of the fear of a mix of contribution- and tax-financed elements within the social pension insurance. On the other hand, government did not want to change for example rules within social assistance for older persons, which would have been an easy way. Therefore, in fact such a change took place, but the official political rhetoric was that this is quite different compared to means-tested social assistance. The two institutions got different names. But meanwhile this was silently merged with social assistance.

[15] Such pensions are meanwhile called "Riester pension", after Walter Riester, who was at that time minister of labour and social affairs.

[16] In absolute terms wages in East Germany were 66 % of those in West Germany. A detailed discussion is in Schmähl (2006a).

[17] See for example decisions for the "Haushaltsbegleitgesetz 2006" (for details see Schmähl, 2006a, p. 9-10).

[18] In contrast to health insurance in Germany where expenditure are mostly transfers in kind, which are not income-related.

[19] To evaluate such contribution rates it should be taken into consideration that German unification

increased the contribution rate in pension insurance by about one percentage point. This will continue for a long time.

[20] These are assumptions of the so called 10th coordinated population projection. In November 2006, the Federal Statistical Office published the 11th coordinated population projection. Here, three assumptions regarding fertility now are used. In all three cases it is assumed that the fertility rate will clearly remain below the replacement level. Two assumptions are used for the further increasing life expectancy. The trends regarding volume and structure of the population remain unchanged compared to the 10th projection.

[21] Bundesregierung (2006b), p. 13.

[22] These are numbers referring on to those "mini jobbers" that are not working in this type beside another regular employment contract (which is also possible). Mini jobs can replace employment covered by social insurance, for this of often done in companies which can split up easily the working load.

[23] A detailed analysis of old-age security of self-employed is given in Fachinger et al. (2004).

[24] For a detailed description of the coming "crisis" because of the population ageing see Wissenschaftlicher Beirat (1998), which is an Advisory Group of Scientists for the Federal Ministry of Economics. For a discussion of these findings see Schmähl (1998a) and regarding the financing methods in general Schmähl (2000). It is for example obvious that not only PAYGO but also capital-funded schemes will become more expensive in the process of demographic ageing, especially if life expectancy is increasing.

[25] Economic consequences are analysed by Atkinson (1999).

[26] For example Neumann (1998), also Siebert (1998).

[27] Advocates of a remarkable shift towards funding do not focus anymore mainly on assumed positive economic effects like a higher saving rate, increased investment and economic growth – arguments which were intensely debated and sometimes questioned and empirically not convincing (Schmähl 1998b). The debate is instead primarily focused on higher rates of return of funded schemes. These calculations often are neglecting differing costs for different amounts of saving as well as transition costs when substituting PAYGO by capital funding. These calculations are only for *old-age* pensions in case of private capital funded schemes, while in the social pension insurance also *disability* pensions and expenditure for *rehabilitation* are financed which reduces the rate of return.

[28] This framing of the public debate in Germany and the focus on "fiscal sustainability" and "intergenerational equity" is discussed in Schmähl (2005a).

[29] The new pension adjustment formula was one element within a concept to construct the social pension insurance scheme according to a self-regulating mechanism, Schmähl (1993). The new adjustment formula was seen as an important instrument to reduce 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. This did not exist before and gave remarkable incentives to early retirement in the past and increased the contribution rate of the PAYGO scheme. It was planned to phase-in the deductions from the full pension beginning in 2001, during a period of more than 10 years. The level of the deduction (3.6 % per year of retiring before the reference retirement age, that will be age 67 in the near future), however, is too low to eliminate the incentive for early retirement. In 1996 – beside other measures – it was decided to start the phasing-in of these deductions already in 1997 (and not in 2001) and not within ten but only five years; Schmähl (1999b).

[30] Here other institutions are paying the contribution.

[31] 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 his/her average relative earnings position over the insurance period, this also gives information about the replacement rate.

[32] 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 (2001).

[33] These two elements of the pension formula had already been proposed by the author about 20 years ago instead of the net adjustment formula. The main idea for this was that the pension for-

mula 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 author was chairman of this Council from 1986-2000), Schmähl (1999a). The government finally adopted in principle this proposal, but added an additional element.

[34] A short remark seems interesting regarding the original version of the paradigm shift government had in mind. In May 2000, it was proposed that for future pensioners the PAYGO-financed public pension should be reduced by half of the amount of a private pension which employees in principle could realise if they were saving 4 % of their earnings. This reduction of the public pension should take place irrespective of the fact whether and how much the employee was in fact saving for such private pensions. 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. During the reform debate this was substituted by integrating the fictitious contribution rate for private pensions into the pension formula.

[35] Government, however, redefined net earnings by considering the voluntary private contribution like a mandatory levy which reduces net earnings. It was finally decided in parliament that the standard pension shall not fall below a certain percentage of redefined earnings. This was a compromise especially with trade unions.

[36] For details see Verband Deutscher Rentenversicherungsträger (2002) and Viebrok (2003).

[37] However, there had been an intensified research on this topic since many years, e.g. by an Enquête-Commission of the Federal German Parliament (Bundestag), which published a final report in spring 2002 after 10 years of work (Enquête-Kommission 2002) – work that was obviously little recognised by those politicians who now made political pressure to take up the topic again in the political debate via the new commission.

[38] The commission (named “Rürup-Commission” after its chairman) published its report in 2003 (Nachhaltigkeitskommission 2003).

[39] For a general discussion of life expectancy and retirement ages as well as a concrete proposal to integrate this into the pension scheme see Schmähl and Viebrok (2000).

[40] Other retirement ages will be increased, too, but also exemptions for insured persons with a very long insurance record (namely at least 45 years of insurance, taking into account beside periods of own contribution payment also periods of caring for children or frail elderly as well as special credited periods for persons with children). A final parliamentary decision is planned for spring 2007.

[41] Together with other assumptions regarding demographic, economic and institutional development.

[42] Börsch-Supan et al.(2003) discuss several modifications of additional elements to be introduced into the pension formula for reducing pension expenditure. Börsch-Supan was one of the members of the sustainability commission.

[43] Government in addition redefined the calculation of average gross earnings which influences also the development of ARW.

[44] Only a certain percentage of social insurance pensions (like private life insurance pension) were taxable income. This percentage will be gradually increased up to 100 %. On the other hand employees will be able to deduct step by step a higher percentage of their contribution payments from taxable income.

[45] These effects are compared to private pension schemes in Schmähl (2005c).

[46] Pension claims in the social pension insurance in Germany in case of employment (covered by social insurance) are based on the relative amount of earnings, i.e. individual earnings compared to average earnings of all employees during a particular year.

[47] If there is no further interruption, earnings of B may approach over time the earnings level of employee A.

[48] If there is another spell of unemployment, the unemployment benefit and therefore also the pension claim is even lower because of the reduced earnings level of B after the first period of unem-

ployment (see Fig.4).

[49] The development in health and long-term care insurance is also highly relevant regarding the question whether income in old age will be adequate to cover costs of living and in how far the level of living (at least) during the last phase of the working life can be maintained. Here the benefit level is reduced, too, and it is necessary to spend more money in case of illness, not to speak in case of residential care for frail elderly.

[50] In Germany, all the years from the beginning of employment (even some years of schooling) up to the year when the employee retires are taken into account for pension calculation.

[51] For a detailed analysis see Schmähl (2003a and 2004).

[52] In the German debate there is some confusion regarding the definition of pension levels. Government decided to reformulate the definition of „net earnings" by regarding the voluntary saving for private pensions in certain subsidised types as if it is a mandatory duty (tax or social insurance contribution). Therefore, net earnings become lower and the pension level becomes higher (pension level defined as pension compared to net earnings). In addition, the tax treatment of pensions as well as of earnings changes over time: pensions will be taxed heavier and earnings less by deducting social insurance contribution payments more from the income tax base. All these effects work together in the process of lowering the ratio of pensions (net of direct burden, taxes and social insurance contributions) to coverage/net earnings.

[53] Parliament decided in 2004 that the two factors in the pension formula described above shall not become fully effective, if they would reduce the absolute amount of the pension benefit (negative adjustment rate). This becomes relevant, if the annual growth rate of average gross earnings is below (about) 1.3 % – as is already the case for the pension adjustment in 2006. Therefore, it is now demanded by many actors that those cuts should be compensated later by lower adjustment rates as calculated from the formula. For formulas of such additional factor see Bomsdorf (2005) and Gasche (2005). The new coalition announced already that such a procedure will be implemented. Therefore, the full effects of the already politically decided changes are taken into account in the following. Whether, however, several years of no pension adjustment and a reduction in the *real* value of pension benefits will be accepted politically or even by decisions of courts has to be seen. For example the Federal Court on Social Affairs (Bundessozialgericht) recently decided that pension adjustment has to compensate at least the inflation rate (Sodan 2005: 565).

[54] If the retirement age for the full pension is increased up to 67, but retirement still takes place at 65, then an "average earner" with 45 EP has a pension level of only about 48 % of average net earnings (and an average earner then needs more than 37 years to receive a pension just as high as a (full) social assistance benefit). Some actors (like the present chairman of the German Council of Economic Advisors, Bert Rürup) argued that the ratio of pensions to social assistance will not be changed because social assistance will be reduced by the same percentage as the pension level. Then, however, social assistance hardly could anymore be an instrument to fulfil its objective, namely to avoid (income) poverty.

[55] Federal government nevertheless declares: The pension of an average earner with a normal working life will also be much higher in the future than the level of "basic insurance" (that is the means-tested transfer payment in case of old age or disability); see Federal Ministry of Health and Social Security (2006), p. 17.

[56] This can already be seen in that part of mandatory long-term care insurance in Germany that is managed by private insurance companies.

[57] For a detailed discussion see Schmähl (2003b), Himmelreicher and Viebrok (2003), Viebrok et al. (2004).

[58] For more information see (Schmähl 2003b).

[59] See Börsch-Supan and Essig (2002: 93).

[60] Deutsche Bundesbank (2002) offers some reflections on this topic.

[61] For example, a recent study on life insurance contracts showed that the amounts received after 30 years of paying premiums could differ by about 30 % depending on the life insurance company, Frankfurter Allgemeine Zeitung, 18.8.2006 (Teurer Fehlgriff).

[62] See for example Gernandt and Pfeiffer (2006), Kohn (2006), Dustmann et al. (2006).

[63] This is analysed in detail in Bundesregierung

(2006c), Schmähl (2005b), Viebrok et al. (2004).

[64] A comprehensive evaluation of the effects of pension policy will also have to take into account other economic effects such as the negative incentives for saving and employment in the official labour market in particular for persons with low wages because of the growing probability to be affected by means testing either in case of unemployment or in old age.

[65] The chairman of the German Council of Economic Advisors, Bert Rürup, recently proposed to calculate widow(er)'s pension no longer on the pension claim of the deceased husband but purely on means testing.

[66] For example, it is neglected in the German debate that in the basic tier (AHV) in Switzerland the aim of avoiding poverty is realised much less compared to the earnings-related social insurance pension in Germany. Meanwhile also some former socialist countries established such a combination of two mandatory schemes. This is in line with a strategy the World Bank is proposing world-wide (World Bank 1994),
although now with some modifications depending on country-specific conditions.

[67] For a theoretical discussion see Kemnitz and Wigger (2000).

[68] "... a country's economic growth is closely tied to the human capital of its population. Countries that invest heavily in educating their citizens are also those that tend to experience high economic growth following such investments." Becker et al. (2003).

[69] For example Lamping and Rüb (2004: 170) state: "Our main argument is that the government had run out of policy options and no plausible concepts were available for an internal solution within the existing pension scheme."

[70] Bundesregierung (2006c), Schmähl (2005b), (2006b).

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