

# Weekly Report

## Old-age pension entitlements mitigate inequality—but concentration of wealth remains high

*Entitlements from old-age pension schemes—statutory, company, and private—represent a considerable source of wealth. For data-related reasons, analyses of the personal wealth distribution have so far failed to take this into account, however. According to recent calculations based on the 2007 data of the German Socio-Economic Panel (SOEP), the present value of total pension and state annuity entitlements (not including entitlements to provision for dependants) amounted to roughly 4.6 trillion euros. This corresponds to an average of 67,000 euros per adult. When this is combined with individuals' financial and material assets, which amount to an average of 88,000 euros, the result is a more comprehensive total net worth of more than 155,000 euros. Civil servants and retired civil servants fare better than average if this larger view is taken.*

*This more comprehensive measurement shows considerably less inequality of wealth than traditional analyses, which refer only to financial and material assets. This is not least because of the very widespread existence of entitlements under the various old-age pension schemes with simultaneous capping based on the contribution assessment threshold for statutory pension schemes. Nevertheless, wealth continues to be highly concentrated, and the mitigating effects of old-age pension assets will likely become less important in the future. Here the effects of falling pension levels as a result of reforms in the old-age pension systems and growing gaps in earnings histories will be felt—with the risk of increasing poverty among the future elderly.*

This report expands on the previous analyses of the German Institute for Economic Research (DIW Berlin) concerning the amount, composition and distribution of individual private assets in 2007.<sup>1</sup> It is based on a research project supported by the Hans Böckler Foundation that examined the distribution of financial and material wealth.<sup>2</sup> To the financial and material assets of private households it adds assets in the form of future entitlements expected from old-age pension schemes. Its empirical basis consists primarily of the German Socio-Economic Panel (SOEP) datasets collected by DIW Berlin for the survey year 2007 in collaboration with Infratest

<sup>1</sup> Cf. Frick, J. R., Grabka, M. M., Gestiegene Vermögensungleichheit in Deutschland. Wochenbericht des DIW Berlin No. 4/2009.

<sup>2</sup> Erstellung und Analyse einer konsistenten Geld- und Sachvermögensverteilungsrechnung für Personen und Haushalte 2002 und 2007 unter Berücksichtigung der personellen Einkommensverteilung. Project number S-2006-835-4; Project directors Joachim R. Frick and Markus M. Grabka. The final report of this research project is in publication.

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## Box 1

**The asset nature of pension entitlements**

Although the very widespread existence of pension entitlements and of entitlements to civil servants' annuities suggest that these components should be considered in a comprehensive analysis of wealth,<sup>1</sup> acquired entitlements of old-age pension benefits to be granted once the standard age threshold has been reached represent only a notional asset. In addition, simply adding them to financial and material assets is problematic because financial and material assets have specific functions that pension entitlements largely fail to fulfill.<sup>2</sup> For example, no (further) income can be gained from pension entitlements, they lack the usage function

of real estate, and the possibility of bequeathing them takes only the severely limited form of provision for dependants (in the form of widow/er pensions). The power, socialization and prestige functions associated with great monetary wealth are also not relevant in the case of old-age pension assets. Premature liquidation of entitlements, for example to purchase real estate, is barred, as is taking an advance. What remains, then, is merely the security function. But even this function is limited to that phase of the individual's life that follows entry into retirement, to occupational disability, and to provision for dependants.<sup>3</sup>

**1** For the distribution and scope of different forms of old-age insurance, cf. Bundesministerium für Arbeit und Soziales (BMAS): Ergänzender Bericht der Bundesregierung zum Rentenversicherungsbericht 2008 gemäß § 154 Abs. 2 SGB VI (Alterssicherungsbericht 2008).

**2** Cf. Frick, J. R., Grabka, M. M., loc. cit.

**3** Instead of considering social insurance claims as assets it might also be mentioned that, although they represent protected private-sector capital stock, the state could change the value of assessment-financed entitlements at any time.

Sozialforschung.<sup>3</sup> Wealth data in the SOEP are collected through interviews with individual household members. The individual assets discussed below are those of persons who are at least 17 years of age.

The SOEP covers the following asset components: owner-occupied and other real estate holdings, financial assets, assets from life assurance policies and pension schemes, building society savings agreements [Bausparverträge], business assets, valuables, and consumer and mortgage loans. Total net worth—the relevant criterion when discussing social welfare matters and the subject of the analyses of personal wealth distribution—are determined by subtracting liabilities from gross assets.

Conventional analyses of wealth are confronted with the problem that there are some fundamental differences among occupational groups in terms of the structure of their old-age pension schemes and in terms of saving behavior, differences that have very dissimilar effects on the amount and structure of the measured assets.<sup>4</sup> For example, the self-employed

are especially likely to provide for old age privately through (life) assurance policies and real estate ownership—even business assets provides security for old age in many cases. Asset components such as these are typically recorded in surveys in terms of their value. By contrast, wage earners and salaried employees provide for their old age through their status as persons with compulsory insurance under the German statutory pension scheme [Gesetzliche Rentenversicherung] (GRV) and through company pension schemes. Entitlements from these old-age pension schemes are acquired that represent assets in themselves, even if they differ in many respects from financial or material assets (Box 1). Because respondents as a rule are unable to quantify their pension entitlements, pension entitlements have in the past been largely ignored in surveys and therefore neglected in wealth analyses as well.<sup>5</sup>

Below, this paper describes the scope and distribution of financial and material assets with and without consideration of already acquired pension and state annuity entitlements. Only individuals' own

**3** The SOEP is a representative panel survey of private households that has been conducted annually since 1984 in West Germany and since 1990 in East Germany; cf. Wagner, G. G., Frick, J. R., Schupp, J., The German Socio-Economic Panel Study (SOEP)—Scope, Evolution and Enhancement. In: Schmollers Jahrbuch, Journal of Applied Social Studies, Vol. 127(1), 2007, 139–169.

**4** This problem of comparability is considerably greater in the case of international comparisons. Cf., by way of example, Frick, J. R., Headey, B.: Living Standards in Retirement: Accepted International Comparisons are Misleading. In: Schmollers Jahrbuch, 129(2), 2009, 309–319. The initial results for internationally harmonized wealth measurement may be found in Sierminska, E., Brandolini, A., Smeeding, T.: The Luxembourg

Wealth Study—A Cross-Country Database for Household Wealth Research. In: Journal of Economic Inequality, 4(3), 2006, 375–383.

**5** For example, information on entitlements from old-age pension schemes is collected in neither the Einkommens- und Verbrauchsstichprobe ("Income and Consumption Survey") (EVS) of the German Federal Office of Statistics nor in the SOEP. An exception is Hober, R.-J., Versorgungsvermögen in der Vermögensverteilung. Die Kapitalisierung der Versorgungsansprüche mit Vermögenscharakter und ihre Einbeziehung als Versorgungsvermögen in die personelle Vermögensverteilung der Haushalte in der Bundesrepublik Deutschland im Jahr 1973. Tübingen 1981.

Table 1

### Individual net financial and material assets and present value<sup>1</sup> of old-age pension assets by occupational position in 2007

In euros

	Individual net financial and material assets	Present value of pension and state annuity entitlements	Extended individual net worth	Present value of pension and state annuity entitlements as percentage of net financial and material assets	Age in years (median)	Population share in percent
Trainees, apprentices, those in military service, those in community service in lieu of military service	9874	2866	12740	29	20	7.8
Unskilled and semi-skilled workers, salaried employees without an apprenticeship	34367	40193	74560	117	43	9.7
Trained and skilled workers, salaried employees in low qualification positions	45950	40594	86544	88	41	10.8
Foremen, masters, supervisors, salaried employees in qualified positions	81746	49093	130839	60	41	20.4
Salaried employees with extensive management responsibilities	308367	78614	386981	26	47	0.7
Civil servants in the sub-clerical or clerical service class	63364	80683	144047	127	40	1.3
Civil servants in the executive or administrative class	140339	128026	268365	91	48	3.0
Self-employed persons without employees <sup>2</sup>	174618	46047	220665	26	47	3.6
Self-employed persons with 1 to 9 employees	345571	23222	368793	7	44	2.0
Self-employed persons with 10 or more employees	1109367	22600	1131967	2	44	0.5
Persons of working age not gainfully employed	86536	26458	112994	31	43	6.2
Unemployed	16702	39521	56223	237	40	6.6
Pensioners	108129	125093	233222	116	71	24.3
Retired civil servants	195857	306856	502713	157	68	1.6
No information as to occupational position	69668	106094	175762	152	60	1.8
<b>Total</b>	<b>88034</b>	<b>67302</b>	<b>155336</b>	<b>76</b>	<b>47</b>	<b>100</b>

<sup>1</sup> With a discount rate of three percent, without provision for dependants.<sup>2</sup> Including family members helping out.

Source: SOEP 2007.

DIW Berlin 2010

entitlements from old-age pension schemes will be included; rights to provision for dependants will be disregarded here. Entitlements from company pension schemes and the pension schemes of professional associations can be considered only for persons already in retirement, because individual information on the scope and distribution of these two branches of the old-age pension system is not available for those who are still gainfully employed.<sup>6</sup>

<sup>6</sup> Entitlements from the agricultural pension fund are not considered separately because of the low number of cases in the data underlying this analysis; this applies also to the social security insurance for artists. For the sake of simplicity, these are treated like persons insured by the GRV. Any entitlement to a pension from a statutory accident insurance fund is added to the GRV, since an occupational disability pension is usually converted into an old-age pension once the standard retirement age threshold has been reached.

### The self-employed come out ahead in terms of financial and material assets

In addition to inheritances and gifts, current or earlier gainful employment represents an important source for the accumulation of wealth. Savings are determined largely by professional position and, accordingly, by the income level achieved.<sup>7</sup> While unskilled or semi-skilled workers and salaried employees (without an apprenticeship [Ausbildungsabschluss]) had roughly 34,000 euros in financial and material assets in 2007, the figure for qualified skilled personnel (such as foremen and masters) was more than 80,000 euros (Table 1). Salaried employees with extensive management responsibilities had an average net worth of more than 300,000 euros. It is known from earlier analyses

<sup>7</sup> In what follows, persons are differentiated by occupational position as measured in the SOEP survey year 2007. One person may nevertheless have been active earlier in another occupational position, which may affect both the amount of financial and material wealth and old-age pension entitlements.

that civil servants are above the average in their net worth.<sup>8</sup> This can be confirmed on the basis of individual wealth data from SOEP. These show that civil servants in the sub-clerical or clerical service class have an individual net worth of at least 63,000 euros and therefore have considerably more wealth than skilled workers and simple salaried employees. Civil servants in the executive or administrative class achieve on average an individual net worth of

more than 140,000 euros in financial and material assets. That puts them at least 60,000 euros above salaried employees in qualified positions, foremen or masters.

The self-employed have the highest level of financial and material wealth. For one thing, self-employed persons must save more to private old-age pension plans; for another, their business capital itself makes

## Box 2

### Methodological problems in the capitalization of pension entitlements

The possibilities for estimating the amount and distribution of individual wealth with the inclusion of pension entitlements have been limited up to now owing to the unavailability of adequate micro-data. With the micro-datasets provided by the research data center of the Deutsche Rentenversicherung Bund (FDZ-RV) it is now possible<sup>1</sup> to conduct an analysis of individual entitlements from the GRV. Directly merging the personal data of identical observations from survey data such as the SOEP and corresponding information from pension data is, however, prohibited by data protection law and, in addition, not technically feasible, since the available micro-datasets have been thoroughly anonymized. For the present work, therefore, the data banks of the SOEP and the random sample of the accounts of insured persons of the FDZ-RV are merged with the aid of a statistical matching procedure. This means that observations can be identified as similar on the basis of characteristics that are available in both data sets and are as comparable as possible.<sup>2</sup> Based on this, information from the pension insurance data is assigned to the SOEP survey data.

In addition to the entitlements from the GRV, entitlements from company pension funds and from supplementary public sector pensions (VBL) may exist in the case of wage and salary earners. Entitlements under other old-age pension schemes, such as the pension scheme of a professional association, exist in the case of independent professionals (such as architects or physicians) or tradesmen (for example, the pension plans of trade guilds). In the SOEP, persons who are already retired are asked directly about the amount of current payments from these different old-age pension schemes, which means that the corresponding present value of these entitlements can be determined. However, there is no data available about the amount of the entitlements

for insured persons who are still active because, for one thing, information on the amount of acquired entitlements from these old-age pension schemes is not asked for in the SOEP, owing to the fact that respondents are by and large unable to provide specific answers, and, for another thing, because there is as yet no other external data source comparable to the GRV's random sample of the accounts of insured persons that could be used to generate this missing information through statistical matching. For the cohorts prior to entry into retirement, therefore, the entitlements under these old-age pension systems have been underestimated.

The SOEP contains information on the amount of civil service pensions for persons already pensioned. For active civil servants the amount of the entitlements is approximated based on the career path and the length of service.

Already acquired pension entitlements are assessed through capitalization, hence by calculating the discounted present value of recurring future payments. For the payout period the average further life expectancy (according to the 2005/2007 mortality charts of the German Federal Office of Statistics, separated by East and West Germany and by sex) is considered and, in addition, a retirement entry age that varies between 65 and 67, depending on the age cohort, is used as a basis. With the additional assumption that future pension increases and inflation will balance each other out,<sup>3</sup> the calculations are simplified in such a way that the real value of the entitlements is preserved.<sup>4</sup> An interest rate of three percent is assumed for discounting purposes.<sup>5</sup>

<sup>3</sup> Cf. Wagner, G. G., *Umverteilung in der Gesetzlichen Rentenversicherung—Eine theoretische und empirische Analyse zum Versicherungsprinzip in der Gesetzlichen Rentenversicherung*. Forschungsreihe des Sonderforschungsbereichs 3, vol. 58, Frankfurt and New York 1984.

<sup>4</sup> Because of the pension reform of 2004 and the sustainability factor introduced with it, future pension entitlements will decline from birth cohort to birth cohort for the same number of payment points. For reasons of simplicity, however, this aspect is ignored here.

<sup>5</sup> In alternative specifications the interest rate varied between zero

<sup>1</sup> We are grateful to the Deutsche Rentenversicherung Bund for providing anonymized micro-data from the *Versicherungskontenstichprobe*.

<sup>2</sup> This is done by taking into account a "Mahalanobis distance function".

a significant difference. The larger a business is—as measured in this instance by the number of its employees—the higher the value of net worth. For self-employed persons without employees, this figure was approximately 175,000 euros in 2007, about twice that for those with up to nine employees, and rose to more than 1.1 million euros for the self-employed with more than ten employees.

Furthermore, tax-relevant differences among various status groups must be taken into account to determine the net value of old-age pension assets. For example, life annuities and other benefits such as GRV pensions, agricultural old-age funds, or pension schemes organized by professional associations are not fully taxed; rather, a taxable income share, which varies in amount according to when one begins to draw on a pension, applies (§22 of the German Income Tax Act [Einkommensteuergesetz]). For example, the taxable share of pensions received for the first time in 2007 is as high as 54 percent. With each further calendar year the income share for new pensions increases, to 80 percent by the year 2020 and to 100 percent by 2040.<sup>6</sup> Civil servants' annuities, by contrast, are already fully taxable now. To determine the net value of social wealth, the tax rate for individuals applicable in 2007 is used here and is also differentiated according to civil servants and recipients of other pensions.<sup>7</sup>

No present value is determined for entitlements from private pension insurance schemes, since data on these wealth components are already collected directly in the SOEP questionnaire as part of the effort to collect data on net financial assets.

and five percent; the choice of interest rate influences, by definition, the amount of the present value but changes little in the relationships according to occupational groups as described here.

<sup>6</sup> Under the German Retirement Income Act [Alterseinkünftegesetz], the principle of deferred taxation of pensions has been applied in Germany since 2005. Under this act, all old-age income will be gradually made fully taxable by the year 2040. In return, old-age provision expenses can be deducted from one's taxes, reducing the progressive effect and the tax burden during the period in which income is earned from employment.

<sup>7</sup> By applying the current individual tax rate, a relatively high tax burden is assumed for active insured persons. The actual tax burden would, however, have to be simulated separately for each age cohort at the time of entry into retirement. Because of the recently introduced deferred taxation, however, such a simulation is combined with major assumptions about the future income situation of the persons in question.

With assets of just under 17,000 euros, unemployed persons are far below the average. Among the (long-term) unemployed, 63 percent are also without means or indebted, the highest percentage of any group. Pensioners, on the other hand, enjoy greater-than-average, life-cycle-related wealth (108,000 euros) since, compared to those still in gainful employment, they have been able to accumulate wealth over a long period and in many cases have already fully paid off loans for their residential property. The more favorable net asset position of civil servants continues on into retirement. The average total net worth of retired civil servants is, at just under 200,000 euros, far above the average.

### **Civil servants have the highest entitlements from old-age pension schemes**

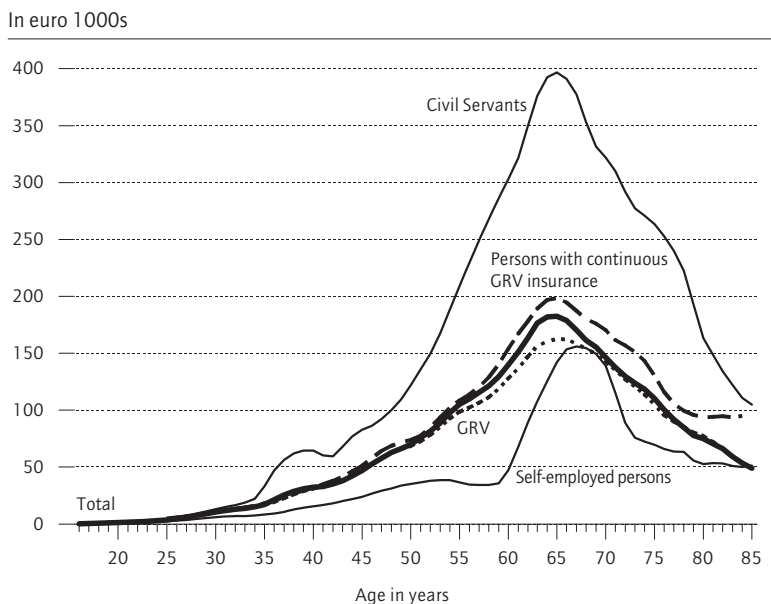
Old-age pension schemes differ widely according to occupational position in the way they are organized and in the level of benefits they provide. Accordingly, large differences are seen also in the present value of pension entitlements individually acquired to date (Box 2). Civil servants achieve by far the greatest entitlements. At retirement age (in this case, approximately the 63-to-67 age bracket), the corresponding present value is approximately 400,000 euros. Other employed persons (wage and salary earners) of the same age can expect roughly 160,000 euros, which represents only about 40 percent of the value of the entitlements of civil servants (Figure 1).

It should be noted, however, that the category comprising workers and salaried employees also includes persons in training, retraining, or their child-rearing years who have acquired entitlements from the GRV. For this reason, wage earners and salaried employees who have been continuously employed will be considered separately here. Their employment careers have been largely uninterrupted, and when they reach retirement age they will have at least 40 years of insurance coverage to their credit. The present value of pension entitlements for this group is roughly 200,000 euros, at least 40,000 euros higher than the figure for all wage earners and salaried employees; this is, however, only half as much as the figure for civil servants.

The marked difference between employees subject to social insurance and civil servants is largely due to the uninterrupted employment history and the higher level of benefits for civil servants. The amount of a civil servant's pension depends mainly on his final pensionable earnings and not, as in the case of those

Figure 1

### Present value<sup>1</sup> of pension and state annuity entitlements by age and occupational group in 2007



GRV: Members of the statutory public pension system.

<sup>1</sup> Based on a discount rate of 3 percent.

Source: SOEP 2007.

DIW Berlin 2010

insured by the GRV, on income subject to social insurance contributions that has been earned so far through all the years of employment.<sup>9</sup> In addition, any company pensions that might accrue to employees subject to social insurance generally represent a voluntary benefit from the employer.

Although insurance by the GRV is usually not compulsory for the self-employed,<sup>10</sup> there may be, apart from voluntary contributions, existing pension entitlements from an earlier period in a dependent employment relationship. As a result, it becomes apparent that the present value of the pension entitlements up to the age of retirement is in many cases considerably lower for the self-employed than for wage earners and salaried employees. This of course

<sup>9</sup> Moreover, civil servants represent a positive selection because of the health examination required under civil service law. In addition, the educational level of civil servants is in general somewhat higher than for all wage and salary earners, which in turn helps explain the higher civil service pay. One might counter this, however, by pointing out that the average gross pay of civil servants turns out to be somewhat lower in a long-term comparison with the private sector.

<sup>10</sup> In 2007, some 290,000 self-employed persons were subject to compulsory insurance in the GRV. They included, for example, self-employed persons working as tradesmen, teachers, marine pilots, or midwives; cf. Deutsche Rentenversicherung Bund: Aktuelle Daten 2009. Berlin 2008.

also reflects the fact that the self-employed as a rule use the saved social insurance contributions to build up private assets, which are generally associated with a higher rate of return. Therefore, only by considering all wealth components together (financial, material, and wealth in the form of old-age pension entitlements) can one form a comprehensive picture of wealth distribution.

From the age of 60 on, the present value of the pension entitlements of self-employed persons increases considerably and, at roughly 150,000 euros, reaches approximately the same level as that for wage earners and salaried employees. This is attributable to, among other things, voluntary and subsequent contributions paid in to the GRV, for example to achieve the minimum coverage periods required to justify payment of a GRV pension.

In 2007, the present value of individuals' own entitlements from the GRV came to a total of 3.52 trillion euros. Civil servants' pensions added up to 790 billion euros and company pensions (including supplementary pensions for the public sector from the Versorgungsanstalt des Bundes und der Länder (VBL)) to another 220 billion euros. All of this adds up to pension entitlements (including pensions worth about 50 billion euros from professional associations) with a total present value of 4.59 trillion euros for the entire population.<sup>11</sup>

### Civil servants are also at the top of the total net worth hierarchy

In 2007, the present value of entitlements from pensions and state annuities amounted on average to 67,000 euros for all current and future pensioners or retired civil servants 17 years of age or older. It therefore accounts for a considerable portion of individuals' total net worth. This came to roughly 155,000 euros—76 percent more than the financial and material assets amounting to an average of 88,000 euros. The median of wealth in the extended sense comes to more than 80,000 euros; this, too, is considerably more than the median of financial and material assets, which amounts to roughly 15,000 euros.

<sup>11</sup> Entitlements of still active insured persons from company pensions and pension plans of professional associations are not taken into account for data-related reasons. The present value of entitlements from provisions for dependants, also not included, comes to less than 180 billion euros. These amounts are arrived at with a discount rate of three percent. Alternative assumptions result in distinctly different present value figures (one percent: 3.6 trillion euros; five percent: 6.1 trillion euros). Nevertheless, the main statements presented here concerning the distribution effects of old-age pension assets are largely stable irrespective of the choice of interest rate.

Within the group of wage earners and salaried employees, the differences in the present value of pension entitlements is considerably less marked than in the case of individuals' financial and material assets. For the unskilled, skilled workers, and salaried employees in qualified positions, for example, they varied between 40,000 and 49,000 euros. This comparatively narrow range is caused by, among other things, compulsory membership in the GRV, whereby pension entitlements accrue for all wage and salary earners. In addition, the contribution assessment threshold, according to which both pension entitlements and contributions are capped above a certain income level, has a leveling effect. Nevertheless, the present value of the pension entitlements of salaried employees with extensive management functions reaches a level of just under 80,000 euros, which may be explained not only by their above-average earned income but also by the greater age of this group (median age: 47) and the correspondingly longer period during which their contributions are paid into the old-age pension schemes. The relative expansion of individuals' financial and material wealth that results when wealth in the form of pension entitlements is included is, at 117 percent, most pronounced in the case of unskilled workers and salaried employees, and falls—despite higher absolute values—to 26 percent in the case of salaried employees with extensive management responsibilities.

Civil servants in the sub-clerical or clerical service class can on average count on entitlements, primarily from pensions, amounting to 80,000 euros; civil servants on higher career paths may expect just under 130,000 euros. The relative increase compared to individuals' financial and material assets turns out to be above average at just under 130 percent and 91 percent respectively. Thus the already relatively favorable position of civil servants in terms of financial and material assets improves even further when entitlements from pensions or state annuities are added in.

The self-employed—particularly if they manage businesses with several employees—are only entitled to little from the old-age pension schemes. The present value of pension entitlements in this case is a little more than 20,000 euros. For self-employed persons working alone it is considerably higher. At 46,000 euros it is more than the figure for unskilled and moderately-skilled workers and salaried employees. This is explained partly by the somewhat higher age of these self-employed persons. In addition, many of them may have been employed earlier in an occupation subject to social insurance and received earned income that was

above the average.<sup>12</sup> The solo self-employed make up an extremely heterogeneous group. It includes family members who help out—their pension entitlements are presumably negligible—and freelancers or professionals whose pension entitlements may be considerably greater.<sup>13</sup>

The pension entitlements of the non-gainfully employed, i.e., of persons of working age who were not available to the labor market during the survey year, are, at 26,000 euros, only modest. The reason for this may be that these persons pursued an occupation subject to social insurance for a brief period only. The corresponding values for the unemployed, on the other hand, are, at just under 40,000 euros, at the same level as for slightly and moderately qualified wage earners and salaried employees. Here one notices the function of unemployment insurance, with which contributions continue to be paid into the GRV in the event of officially registered unemployment—albeit with certain reductions. Only with lasting unemployment and receipt of Unemployment Benefits II [Arbeitslosengeld II] do pension entitlements stagnate, since a monthly pension entitlement of just 2.19 euros is granted for each year one draws on Unemployment Benefits II. But this provision has been in effect only since 2005, so that it has had as yet no lasting effect on the calculations presented here, which apply only up to 2007. The pension entitlements of future (long-term) Unemployment Benefits II recipients will be considerably poorer. All in all, the present value of pension entitlements is the most important asset component for the unemployed; it constitutes 70 percent of their total net worth. But with 56,000 euros, the unemployed are at the lower end of the wealth hierarchy.

For pensioners and retired civil servants, pension scheme entitlements are far above the average, a fact that, in the case of these cohorts, is also explained by the comparatively short interruptions in gainful employment. For pensioners the present value of the entitlements is 125,000 euros, while it is more than 300,000 euros for retired civil servants because of the considerably better level of protection. The net worth of retirees in the extended sense amounts to 230,000 euros, that of retired civil servants, on the other hand, comes to more than 500,000 euros, owing also to their already favorable position in terms of their financial and material assets.

<sup>12</sup> Cf. Pannenberg, M., Zunehmende Selbständigkeit in Deutschland von 1990 bis 1996. Starke Veränderungen im Bestand. Wochenbericht des DIW Berlin No. 38/1998.

<sup>13</sup> However, it should be noted here that, for still active freelancers in the approximation undertaken here, entitlements under the pension plans of professional associations - distinctly greater than those of the GRV - are not included.

### Not everyone has assets—but practically everyone has pension entitlements

For financial and material assets, the Gini coefficient, used to measure inequality of wealth, shows a very high value of approximately 0.8.<sup>14</sup> When old-age pension entitlements are considered, this measure drops to 0.64, a decline of a good 20 percent (Table 2). The lower concentration of old-age pension entitlements—the Gini coefficient amounts to 0.617—results from the fact that virtually every gainfully employed person acquires entitlements from a security scheme. In contrast to that, more than a quarter of adults have no net financial and material assets. As a result, extending the concept of wealth means that the ratio between the lowest level of wealth of the top ten percent of the distribution and the median is reduced by about 14.6 to roughly 4.4—a clear indication of a substantial suppression of inequality as the result of wealth in the form of old-age pension entitlements.

The very widespread existence and more even distribution of old-age pension entitlements become clear if one compares the two wealth components to one another directly (Figure 2). Divided by decile in the distribution of financial and material wealth, it becomes apparent that, from the first to the fifth decile (i.e., among the lower half of persons sorted by net worth), an entirely similar level of pension and state annuity entitlements, averaging roughly 40,000 to 50,000 euros, is accumulated. From the sixth decile on, old-age pension entitlements increase and, in the tenth decile, reach a present value of more than 120,000 euros. Contributing to this is the principle of equivalence applied in the old-age pension schemes, whereby the amount of the indi-

<sup>14</sup> The Gini coefficient is a statistical measure used to represent inequality. It is expressed as a value between 0 and 1. The closer to 1 the value is, the greater the inequality.

vidual's earned income (and thus the derived social security contributions) and the amount of the old-age pension entitlements are closely linked.

### Growing gulf between East and West Germany

The average of individuals' net financial and material assets was roughly 70,000 euros higher in West Germany than in East Germany in 2007. Around retirement age (63 to 67) the difference was far greater at roughly 110,000 euros (Figure 3). Although, among existing GRV pensioners, the average payment amounts are currently slightly higher in East Germany than in West Germany, particularly because of the traditionally higher rate of labor force participation by women in East Germany,<sup>15</sup> when all entitlements from pensions and state annuities in this age group are considered, the average wealth of individuals in the West increases by more than 190,000 euros to nearly 350,000 euros. In the East the increase by roughly 140,000 euros to 190,000 euros is clearly smaller.<sup>16</sup> The stronger effect in West Germany is attributable primarily to company pensions and civil servants' annuities, which are not widespread in East Germany.

One is also struck by the fact that the differences in wealth in the extended definition become distinctly greater from the 40-year-old age group on. While the wealth of West Germans continues to grow here, it stagnates among East Germans between the ages of 40 and 45. Periods of (long-term) unemployment in particular may be having a detrimental effect among this cohort. The combination of individuals' low

<sup>15</sup> For the trend in payment amounts for new GRV retirees, cf. Himmelreicher, R., Stuchlik, A., *Entwicklung und Verteilung von Entgeltpunkten in der gesetzlichen Rentenversicherung*. In: *Deutsche Rentenversicherung* 6, 2008, 532–547.

<sup>16</sup> Because of the lower net financial and material wealth in East Germany, old-age pension assets are of relatively greater importance there.

Table 2

### Influence of old-age pension entitlements on the distribution of wealth<sup>1</sup> in Germany in 2007

Distribution parameters	Individual net financial and material assets	Present value <sup>2</sup> of pension and state annuity entitlements	Extended individual net worth
Mean value in euros	88 034	67 302	155 336
Median in euros	15 288	32 835	81 426
Gini coefficient	0,799	0,617	0,637
p90:p50 ratio <sup>3</sup>	14,547	5,362	4,375

<sup>1</sup> Study population: persons in private households aged 17 or older.

<sup>2</sup> With a discount rate of three percent, without provision for dependants.

<sup>3</sup> Lowest value for the top ten percent in the wealth distribution in relation to the median (50 percent).



financial and material wealth and pension entitlements that on average are lower for future cohorts of pensioners in East Germany poses the risk of increasing poverty among the elderly, since the opportunities for providing for oneself are obviously fewer there than in West Germany.

### Conclusions and outlook

In 2007 the present value of all pension and state annuity entitlements in Germany, with an assumed discount rate of three percent, came to roughly 4.6 trillion euros (not including the pension entitlements of still gainfully employed insured persons under company pension schemes and pension schemes of professional associations and not including provision for dependants). On average, this corresponds to an individual entitlement amounting to 67,000 euros. This figure varies widely according to the length of gainful activity and occupation position. Civil servants and retired civil servants hold wealth in the form of pension and state annuity entitlements that is far above the average. If pension entitlements are taken into consideration, the dominant position of the self-employed in the net financial and material wealth hierarchy is relativised. For example, retired civil servants have a net worth, in the extended sense, of more than 500,000 euros (including pension entitlements) and, therefore, more than self-employed persons with moderately large businesses. Recipients of a GRV pension, on the other hand, do not achieve even half this figure.

In view of current developments in statutory pension schemes, the vast exemption of civil servants from contributions to old-age pension funds during the active phase<sup>17</sup>—with correspondingly improved opportunities for accumulating financial and material wealth in comparison to other wage and salary earners<sup>18</sup>—and the above-average benefit level during the passive phase call for discussion.

A significant limitation of the present analysis is that only acquired entitlements are shown, while contribution obligations are not considered.<sup>19</sup> The financial position of wage and salary earners would appear to be considerably less favorable if payment obligations were taken into consideration and might even result in a negative asset balance as far as the

<sup>17</sup> The higher taxation of state annuities compared to pensions is already taken into account in the observations of net results presented here.

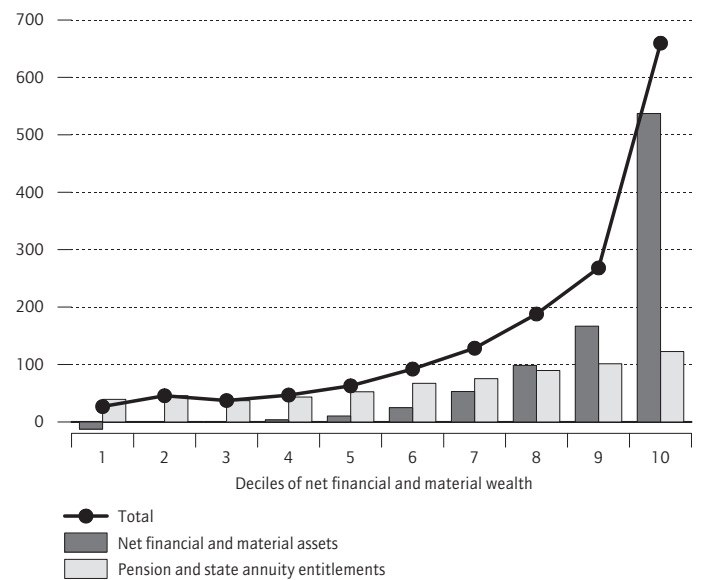
<sup>18</sup> This is amplified by the fact that civil servants are subject to virtually no risk of unemployment.

<sup>19</sup> Precise quantification of the liabilities to old-age pension systems is extremely complex. It requires, among other things, simulating cohorts as yet unborn, all of whom would already have negative wealth by the time they are born.

Figure 2

### Distribution of individuals' financial and material wealth and the present value<sup>1</sup> of old-age pension entitlements in 2007

In euro 1000s



<sup>1</sup> Based on a discount rate of 3 percent.

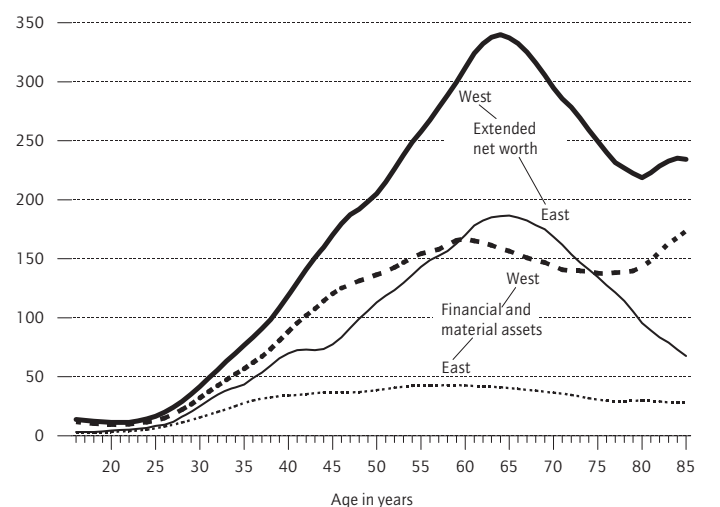
Source: SOEP 2007.

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Figure 3

### Individuals' financial and material wealth and present value<sup>1</sup> of old-age pension entitlements by age and region in 2007

In euro 000s



<sup>1</sup> Based on a discount rate of 3 percent.

Source: SOEP 2007.

DIW Berlin 2010

middle age groups. At the same time, the privileged position of civil servants based on their wide exemption from contributions would become even more noticeable. The discrepancy is mitigated somewhat by the fact that the German federal supplement to the statutory pension scheme is financed through general tax revenues, to which all persons contribute.

Although the risk of income poverty is below average for current retirees, for future cohorts of pensioners an increase in the risk of poverty among the elderly must be expected, owing in particular to interruptions in earnings caused by unemployment. This effect will be magnified by the generally falling level of pensions under statutory pension schemes. In this regard, the trend in individual wealth (with pension entitlements taken into account) among the middle age groups in East Germany is cause for concern. Distinct gaps in provisions for old age are already detectable there today.

The present analyses refer to 2007 and, accordingly, to the situation before the financial crisis. The effects of this crisis, particularly on the financial assets<sup>20</sup> of private households, are, however, likely to be rather negligible in the long run. The findings presented here emphasize the great relevance of pension and state annuity entitlements for the distribution of wealth and its macroeconomic stabilizing function in Germany.<sup>21</sup> A contribution-based old-age pension scheme such as the statutory pension scheme is, in the short term, considerably more crisis-proof than a purely capital-based old-age pension system. This stabilizing function is limited however by reforms of old-age pension schemes that, because of demographic trends, are to some extent unavoidable. Some of these effects will become noticeable only after a delay. The lowering of the pension points to be earned by those receiving Unemployment Benefits II might be mentioned as an example. This, if received over a long period, results in a considerable increase in the risk of relative income poverty or greater dependence on a safety net in old age. All in all, it is to be assumed that the trend, observed since about 1993, towards increasing inequality of wealth in Germany<sup>22</sup> will be further magnified by the old-age pension reforms.

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**20** Thus even though the entire financial wealth of private households declined by 2.4 percent from 2007 to 2008, this followed a long phase in which there was a virtually continuous, sharp increase. Between 2001 and 2007 total financial wealth grew by more than 32 percent, or 1,120 billion euros; cf. Deutsche Bundesbank: Zeitreihe CEBO01: Geldvermögen insgesamt. Information correct as at 4/11/2009, [www.bundesbank.de/statistik/statistik\\_zeitreihen.php?func=row&tr=ceb00i&year=](http://www.bundesbank.de/statistik/statistik_zeitreihen.php?func=row&tr=ceb00i&year=).

**21** For the stabilizing function of pension insurance, cf. Faik, J., Köhler-Rama, T., Konjunktur und gesetzliche Rentenversicherung. In: Sozialer Fortschritt 58(6), 2009, 129–136.

**22** Cf. Stein, H., loc. cit.