Tax and Transfer System: Considerable Redistribution Mainly Via Social Insurance

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Overall monetary redistribution via the tax and transfer system leads to net incomes being much more evenly distributed in Germany than market income. As a result, in 2011, the Gini coefficient decreased from 0.5 for market income to 0.29 for household disposable income. The social security system has a significant share in total income redistribution by the government, making up more than half of the inequality reduction. As far as there are equivalent insurance contributions for social security benefits, there is, however, no redistribution between individuals or generations over time.

This shows that, in terms of how well public transfers are targeted, the most financially needy households are benefitting most from means-tested basic social security payments. Other public benefits such as the child benefit, however, are granted to all income groups. It was primarily the upper income brackets that benefitted from the now expired housing support for owner-occupiers *(Eigenheimzulage)*.

The German tax and transfer system redistributes citizens' income effectively. Taxes and social security contributions redirect a share of generated income into government coffers, a substantial portion of which is given directly to citizens in the form of monetary government benefits. In international terms, Germany is regarded as a country with a high level of income redistribution by the government.[1] This is primarily due to its broad-based social security systems that lead to intra- and intergenerational redistribution. Social security benefits, for which equivalent insurance contributions are levied (retirement pensions from statutory pension insurance *(gesetzliche Rentenversicherung, GRV)*, unemployment benefit), however, are not ultimately redistributed between individuals or generations over time.

In this study, we examine the redistributive effects of the German tax and transfer system on individual households. First, the study will show the overall economic dimensions of all social security benefits based on Germany's national accounts from 2005 to 2013.[2] Then, the impact of monetary social benefits on personal income distribution is analyzed using data from the Socio-Economic Panel (SOEP) study collected on behalf of DIW Berlin by TNS Infratest Sozialforschung.[3]

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1 See OECD, Growing Unequal? Income Distribution and Poverty in OECD Countries (2008); Scientific Advisory Board at the Federal Ministry of Finance, Besteuerung von Vermögen – eine finanzwissenschaftliche Analyse (2013); Judith Niehues, "Staatliche Umverteilung in der Europäischen Union," IW-Trends, no. 1 (2013); OECD StatExtracts, Income Distribution and Poverty, 2014.

2 Here, calculations of the national accounts from May 2014 are used, prior to German national accounts being revised in line with the European System of Accounts 2010 (ESA 2010).

3 SOEP is a representative longitudinal survey of individual households conducted annually in West Germany since 1984 and in eastern Germany since 1990, see G. G. Wagner, J. Göbel, P. Krause, R. Pischner, and I. Sieber, "Das Sozio-oekonomische Panel (SOEP): Multidisziplinäres Haushaltspanel und Kohortenstudie für Deutschland – Eine Einführung (für neue Datennutzer) mit einem Ausblick (für erfahrene Anwender)," AStA Wirtschafts- und Sozialstatistisches Archiv, vol. 2, no. 4 (2008): 301–328.

Government Redistribution from a Macroeconomic Perspective

Social spending plays a dominant role on the expenditure side of Germany's national budget. In 2013, monetary and non-monetary social benefits provided by the government made up 24 percent of gross domestic product (GDP), a total of 665 billion euros. This represents more than half of all government spending. Monetary social benefits alone total 16 percent of GDP or more than one-third of all government expenditure.

In Germany, taxes and social security contributions make up 90 percent of government revenues (see Table 1). In international comparison, the aggregate tax rate is rather low at 23.5 percent of GDP (2013).[4] In contrast, social security contributions paid to the government amounting to almost 17 percent of GDP (2013) are instrumental in financing social security in Germany. Including social security contributions to private funded social security schemes (see below), social security contributions actually make up 20 percent of GDP.

In addition, Table 1 shows the direct monetary redistribution of income via social security benefits, direct taxes, social security contributions, and other transfers at the individual household level. The present study considers solely monetary redistribution and its distributional effects, rather than non-monetary social benefits, i.e., primarily public health services provided by government authorities and public health insurance.

Monetary social benefits in the national accounts include both government benefits and social security payments made by employers and private funded security systems. Overall, they increase household income by 18 percent of GDP (2013), equivalent to 490 billion euros.

The largest item is monetary social security benefits at almost 11 percent of GDP. The majority of this share is spent on public pensions, the remainder goes on wage-replacement benefits for unemployment and health insurance, and statutory accident and nursing benefits, which are included in the item "Other". Since 2005, the share of monetary social security benefits in GDP has declined by two percentage points from 12.9 percent to 10.9 percent.

Monetary social security benefits from government authorities include means-tested basic social security benefits, including housing benefits and training grants.

These also include family-related benefits, such as child benefit and parental allowance.[5]

The national accounts record the following employer-side and private funded security scheme benefits: benefits from company pension schemes, additional funded pensions (Riester pension), the civil pension scheme, pension plans for the self-employed, as well as private health and long-term care insurance. These benefits account for a good four percent of GDP.

The share of total monetary social security benefits in GDP fell slightly during the observation period 2005 to 2013. This development was largely due to the relative decline in pension spending. Unemployment benefits have also dropped considerably in line with this trend. Here, the significant decrease in unemployment since 2005 comes into play. These developments were only briefly interrupted by the impact of the financial and economic crisis of 2009/10 and the unemployment and short-time working benefits that had to be paid as a result. The disposable incomes of individual households are reduced by income tax and other direct taxes and contributions, which, most recently (2013), accounted for 9.4 percent of GDP and have increased in recent years. At the same time, total social security contributions (including employer contributions, contributions to private funded social security systems, and imputed social security contributions for civil servants) have remained constant at 20 percent of GDP, with employer-side social security contributions and those to private funded social security systems gaining in importance somewhat .

Including other paid and received transfers, which, in addition to private transfers such as life insurance payments and premiums or cross-border credit transfers, encompass other government grants and support programs or fines, the disposable income of individual households in 2013 was just under 63 percent of GDP. Notwithstanding a brief interruption by the economic crisis of 2009/10, this proportion has declined in recent years, because social security benefits (in particular, pension and unemployment insurance payments) have fallen and direct taxes have increased.

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4 See OECD, Revenue Statistics 1965-2013, Paris (2014).

5 In the national accounts, child benefit is only recorded as a social security benefit to the extent that it exceeds the fictitious tax relief effect of allowances for dependent children in income tax assessment. Here, total child benefit (2013: 38.5 billion euros) is divided into family support components (18 billion euros) and a tax exemption component (20.5 billion euros), which reduces income tax revenues; see Norbert Räth i.a., "Revision der Volkswirtschaftlichen Gesamtrechnungen 2011 für den Zeitraum 1991 bis 2010," Federal Statistical Office, Economic and Statistics (September 2011): 862 ff.; Federal Ministry of Finance, Datensammlung zur Steuerpolitik 2013 (2011): 49.

Table 1

Revenue and expenditure of general government and primary income, disposable income of households in national accounts
as percent of gross domestic product (GDP)

	2005	2006	2007	2008	2009	2010	2011	2012	2013
Revenue and expenditure of general government									
Expenditure	46.9	45.3	43.5	44.1	48.3	47.9	45.2	44.7	44.5
Social benefits other than social transfers in kind	18.5	17.7	16.5	16.3	18.0	17.2	16.3	16.1	16.1
Social benefits in kind	7.5	7.4	7.3	7.5	8.3	8.1	7.9	8.0	8.2
Subsidies	1.1	1.1	1.0	1.0	1.2	1.2	1.0	0.9	0.9
Other	19.7	19.1	18.6	19.2	20.8	21.3	19.9	19.6	19.3
Revenue	43.6	43.7	43.7	44.0	45.2	43.7	44.3	44.8	44.7
Taxes	21.9	22.6	23.5	23.7	23.5	22.4	23.1	23.6	23.6
Taxes on products	10.8	10.8	11.3	11.2	11.8	11.3	11.5	11.4	11.3
Taxes on income, other current taxes	11.1	11.9	12.2	12.4	11.8	11.2	11.7	12.1	12.4
Social contributions	17.9	17.3	16.5	16.5	17.3	16.9	16.7	16.8	16.8
Other	3.9	3.7	3.7	3.8	4.4	4.4	4.5	4.4	4.3
Primary income of housholds and redistribution by social benefits of the goverment and private funded security systems, current taxes on income and wealth, social contributions									
Primary income	73.7	73.4	72.0	73.3	74.7	73.1	73.4	74.1	74.1
Compensation of employees	51.1	50.0	48.9	49.7	51.9	50.9	50.8	51.7	51.7
Property and entrepreneurial income	22.6	23.5	23.2	23.6	22.8	22.2	22.6	22.4	22.3
Social benefits other than social transfers in kind, recieved	19.8	19.0	17.7	17.6	19.9	19.1	18.1	18.0	17.9
Social security benefits of statutory social insurance	12.9	12.1	11.3	11.1	12.2	11.6	11.0	10.9	10.9
Pensions	10.2	9.8	9.4	9.4	10.0	9.6	9.3	9.2	9.1
Unempoloyment benefit	1.3	1.0	0.7	0.6	0.8	0.7	0.6	0.5	0.6
Cash benefits of health insurance	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4
Other	1.1	1.0	0.9	0.9	1.1	1.0	0.9	0.8	0.8
Social benefits of government bodies	3.3	3.3	3.0	2.9	3.3	3.2	2.9	2.8	2.8
Social assistance	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
Social assistance for unemployed	1.1	1.2	1.0	0.9	1.0	0.9	0.8	0.7	0.7
Other	1.3	1.2	1.1	1.1	1.4	1.3	1.3	1.2	1.2
Private funded social benefits and unfunded employee social benefits	3.6	3.6	3.4	3.5	4.4	4.3	4.2	4.2	4.2
Company pensions	1.3	1.3	1.2	1.3	1.3	1.3	1.2	1.2	1.2
Civil servants' pensions	2.0	1.9	1.9	1.9	2.1	2.1	2.0	2.0	2.1
Other	0.3	0.3	0.3	0.3	1.0	0.9	0.9	0.9	0.9
Current taxes on income, wealth, etc., payed	8.3	8.6	8.9	9.3	9.4	8.6	8.7	9.1	9.4
Taxes on income	8.0	8.2	8.6	9.0	9.1	8.3	8.4	8.8	9.1
Other current taxes	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Social contributions, payed	20.1	19.7	18.9	19.1	20.8	20.3	20.1	20.2	20.1
thereof: payed to private funded social benefits	2.2	2.4	2.3	2.6	3.4	3.4	3.3	3.3	3.2
Balance of other transfers payed and received	−0.1	−0.1	−0.2	−0.2	0.2	0.1	0.1	0.2	0.2
Disposable income	65.1	64.0	61.9	62.3	64.6	63.4	62.9	63.0	62.7
For information:									
Revenue of statutory pension insurance	10.7	10.2	10.1	10.1	10.6	10.3	10.1	10.0	9.8
thereof:									
Actual social contributions	7.0	6.8	6.8	6.8	7.2	7.0	6.9	6.9	6.7
Tranfers from the government	3.6	3.4	3.3	3.2	3.4	3.3	3.1	3.1	3.0
Revenue of statutory unemployment insurance	2.4	2.3	1.8	1.6	1.5	1.8	1.5	1.5	1.3
thereof:									
Actual social contributions	2.2	2.1	1.4	1.1	1.0	1.0	1.0	1.0	1.1
Tranfers from the government	0.2	0.2	0.4	0.5	0.5	0.7	0.5	0.4	0.2
Gross domestic product, billion euros	2 224	2 314	2 429	2 474	2 374	2 495	2 610	2 666	2 738

Source: Federal Statistical Office, national accounts, calculations of May 2014.

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Current income tax and social contributions account for 90 percent of government revenue

Overall, around 11 percent of GDP are redistributed at individual household level through the balance of public and private transfers, direct taxes, and social security contributions. For the most part, this is down to the government's tax and transfer system, since the transfer relationships between individual households and

Income Concepts and Components

The following income components have been identified in the analysis of personal income distribution and redistribution outlined here:

- *Market income* includes all earned and capital income. This includes profits from self-employment, capital income including the rental value of owner-occupied dwellings, and compensation of employees including employer-side social security contributions.[1]

- *Gross income* also includes government and private transfers. These are divided into the following:
  - *Private pensions and private transfers* comprise private pensions and company pensions as well as maintenance payments between individuals and other private transfers.[2]
  - *Monetary social benefits* from the government are subdivided into insurance benefits, means-tested basic social security transfers and other transfers.

  - *Insurance benefits* consist of government and private pension income and wage replacement benefits. This includes statutory pensions, civil servants' pensions, private pensions, company pensions, income replacement benefits from social security insurance and from private insurance, i.e., unemployment benefit and nursing allowance. What these benefits have in common is that, in the past, they were mostly paid for by contributions, whereas benefits from statutory social insurance are also partly financed by taxes.
  - *Other transfers* comprise government transfers not including social security. This covers family benefits, such as child and parental allowance as well as student grants, scholarships, and housing support for owner-occupiers.
  - *Means-tested basic social security transfers* incorporate basic social security benefits (unemployment benefit II, social assistance, social assistance for elderly, income support, additional child benefit, maintenance allowance) and housing benefit. These benefits are intended to secure material livelihoods and are only paid out in case of need.

- *Net income* or disposable household income is derived by deducting income tax and social security contributions from gross income.

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1 Social security contributions to private funded social security systems and imputed lied social security contributions for civil servants' have been disregarded.

2 Military and community service pay is allocated to private transfers.

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companies (as part of private funded security systems, or non-life insurance) or transfers from abroad carry far less weight quantitatively, and received and paid transfers are broadly balanced. Since 2005, total net redistribution has increased in relation to GDP because social security benefits have declined, while the income tax burden has risen and social security contributions have remained constant.

Impact of the Tax and Transfer System on Personal Income Distribution

The effects of the tax and transfer system on personal income distribution were analyzed on the basis of survey data from the Socio-Economic Panel (SOEP) study for the income year 2011. Only monetary transfers, not non-monetary benefits of social security or other government services were analyzed here.[6] In the SOEP

study, household income is recorded in a detailed form, broken down into individual components. Statements made by respondents in the 2012 SOEP study refer to the previous year's income, i.e., to 2011. To process the data, burdens from personal income tax and social security contributions are estimated using a differentiated microsimulation model based on data set information.[7]

The most significant components of monetary government benefits are recorded in the SOEP study (see Box). These are subdivided into insurance benefits, mean-tested basic security transfers, and other transfers in order to analyze the redistributive effects of the various social and economic policy functions. Social security contributions to employer-side and funded security systems and imputed social security contributions for civil servants have been disregarded.

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6 Representing the effects of non-monetary transfers is difficult due to the challenges of quantifying these different types of transfers and attributing them to individuals. Additionally, the corresponding data in the SOEP study relating to these types of transfers is not available in full.

7 See J. Schwarze, "Simulation German income and social security tax payments using SOEP," Cross-National Studies in Aging Program, project paper no. 19 (Syracuse, 1995).

Table 2

Income of private households and redistribution by the tax and transfer system 2011

Decile net household equivalent income	Market income[1]	Private pension and transfers[2]	Monetary social benefits			Gross income	Social security contributions	Personal income tax	Net income
			Insurance benefits[3]	Other transfers[4]	Means-tested transfers[5]				
billion euros									
1. Decile	19.9	2.7	16.7	5.5	13.0	57.0	7.5	0.1	49.4
2. Decile	43.8	2.6	29.1	6.3	6.6	86.8	17.5	1.2	68.0
3. Decile	63.3	2.6	35.9	5.2	4.0	110.0	25.0	3.4	81.6
4. Decile	87.1	3.1	32.8	5.6	2.2	129.7	32.5	6.5	90.7
5. Decile	103.5	3.3	34.0	4.9	2.1	149.2	37.3	9.7	102.2
6. Decile	142.5	3.0	26.4	5.6	1.9	178.8	47.6	16.0	115.2
7. Decile	170.6	4.3	27.7	5.0	0.7	207.7	54.7	21.9	131.1
8. Decile	203.2	4.6	30.0	4.9	1.2	245.2	62.6	31.1	151.5
9. Decile	269.4	5.2	29.9	3.9	0.5	303.9	73.4	48.1	182.5
10. Decile	447.0	13.2	33.2	4.1	1.0	495.2	76.4	113.2	305.5
Total	1 550.3	44.6	295.9	50.9	33.4	1 963.4	434.5	251.2	1 277.8
structure in percent									
1. Decile	1.3	6.1	5.7	10.8	39.0	2.9	1.7	0.0	3.9
2. Decile	2.8	5.9	9.8	12.3	19.8	4.4	4.0	0.5	5.3
3. Decile	4.1	5.8	12.1	10.2	12.1	5.6	5.8	1.3	6.4
4. Decile	5.6	7.0	11.1	11.0	6.7	6.6	7.5	2.6	7.1
5. Decile	6.7	7.4	11.5	9.7	6.4	7.6	8.6	3.8	8.0
6. Decile	9.2	6.6	8.9	10.9	5.8	9.1	11.0	6.4	9.0
7. Decile	11.0	9.6	9.4	9.7	2.2	10.6	12.6	8.7	10.3
8. Decile	13.1	10.4	10.2	9.6	3.6	12.5	14.4	12.4	11.9
9. Decile	17.4	11.7	10.1	7.6	1.5	15.5	16.9	19.1	14.3
10. Decile	28.8	29.6	11.2	8.1	3.0	25.2	17.6	45.1	23.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Income distribution measures[6]									
Gini	0.50	*0.49*	*0.38*	*0.37*	0.35		*0.35*	0.29	
GE(1) (Theil)	0.46	*0.43*	*0.26*	*0.24*	0.22		*0.23*	0.16	
GE(0) (mld)	0.65	*0.57*	*0.27*	*0.24*	0.21		*0.20*	0.14	

1 Wage income + bussiness income + capital income including imputed rent of owner-occupied dwelling.
2 Private pension + company pension + alimony and other transfers + military and community service pay.
3 Statutory pension + social miners insurance/civil servant/farmer/statutory accident insurance.
4 Child allowance + parental allowance + student grants and scholarships + housing support for owner-occupiers.
5 Unemployment benefit II + unemployment assistance + social assistance + housing benefit + additional child benefit + maintenance allowance.
6 Based on equivalized measurements. italic intermediate results refer to income including the foregoing transfers respectively taxes.

Source: Calculations based on wave 2012 of the Socio-Economic Panel (SOEP), Distribution v29.

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Income concentration is the highest for market income.

Table 2 shows the personal income distribution and redistribution (see Box for detailed income components) from market income to gross income (including transfers) to net income (less income tax and social security contributions) by income decile. The population is arranged in ascending order according to net household equivalent income[8] and divided into ten equal groups (deciles). Distribution measures are additionally calculated for the individual income components.

As expected, market income has the highest concentration. The lower income deciles mostly comprise unemployed persons with no or only limited earned or capital income. Equally, 29 percent of total market income

is found in the upper income decile. The (equivalized) Gini coefficient of market income is 0.50. The income share of the bottom two deciles is higher for private pensions and transfers than for market income. This is because the lower deciles are largely populated by individuals of retirement age. If private pensions and transfers are added to market income, the measured inequality is only slightly lower.

As already demonstrated, insurance-related benefits have a dominant weighting in the government's transfer system. Unlike market income, these transfers are largely evenly distributed across the needs-weighted household net income deciles; only in the lowest decile is their share below average. Due to the extensive equivalence principle in social security insurance, the amount of benefits received largely depends on contributions paid, so higher contributions mean larger pensions. However, benefits are restricted due to the contribution assessment ceiling. Accordingly, compared to market income, insurance-related social security benefits are far lower in the upper deciles than in the lower income groups. As a result of this "progressive" redistributive effect and the high volume of insurance-related social security benefits, the Gini coefficient of market income, which is higher due to insurance benefits and private pensions and transfers, decreases to 0.38.

As far as there are equivalent insurance contributions for social security benefits, there is, however, no redistribution between individuals or generations over time. Nevertheless, a significant degree of statutory social security benefits are financed through federal grants. In recent years, in fact, these grants made up just under one-third of revenue from pension insurance, and a good tenth of unemployment insurance (see Table 1). As a result, a corresponding proportion of benefits is financed by taxes and must therefore be attributed to the core areas of the tax and transfer system.[9]

Other transfers are considerably lower in volume. Since they are not means-tested, they do not trigger strong redistributive effects. They are also distributed fairly equally across the deciles, with slightly higher shares in the lower income groups and lower shares in the higher income deciles. This is mainly due to the high importance of family-related benefits among these transfers, particularly for child benefit. A high redistributive impact from top to bottom, on the other hand, can be seen in basic social security benefits granted in needy cases only. This occurs predominantly in the lowest in-

come decile and has no appreciable significance above the median income.[10]

Thanks to these transfers, the distribution of gross income is considerably more uniform than the distribution of market income. The Gini coefficient is reduced to 0.35. These transfers substantially increase market income in the bottom half of the income distribution. This effect is lessens as income increases. For middle income groups and above, income shares for gross income are lower than for market income.

Social security contributions and income tax reduce the disposable income of individual households. While social security contributions do not cause any appreciable redistribution as these tend to be regressive once the contribution ceiling is reached, personal income tax, in particular, is highly progressive. For this reason, higher incomes are subject to greater income tax burdens. The top decile accounts for 45 percent of total income tax revenue. Overall, the Gini coefficient is reduced to 0.29 for net income.

The redistributive effects of the tax and transfer system lead to a far more uniform distribution of net income compared to market income. While the lower income groups' income share increases up to the sixth decile, in the upper deciles it decreases progressively. In other words: the lower 60 percent of income distribution receive money on balance from the government, whereas the top 40 percent pay money to the government on balance. This does not include non-monetary transfers by the government, although their distribution impact is not likely to be fundamentally different from the effects observed here.[11]

Additionally, our breakdown of the individual components shows that the redistributive effect of the German tax and transfer system is reduced considerably if only basic security benefits, social security contributions and income taxes are included. This is because, insurance benefits from statutory social security are especially important to the redistribution of market income. The Gini coefficient of market income extended to include corresponding insurance benefits is only 0.38, compared with

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10 Shares in the upper deciles are either measurement errors or refer to individuals who only drew benefits in the previous year on a monthly pro rata basis. Additionally, a differentiation must be made between communities of dependence that are eligible for means-tested basic social security benefits and individual households, because a community of dependence may exist within an individual household, for instance an elderly person eligible for basic social security who lives in a household with his or her adult children.

11 The situation is quite different with public assistance, e.g., for cultural institutions that disproportionately benefit upper income earners. The last comprehensive quantification of the various government transfers was conducted under the direction of DIW Berlin President, Hans-Jürgen Krupp, as part of the Transfer Enquete Commission (1981).

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9 See the in-depth analysis by I. Stolz, Einkommensumverteilung in der Bundesrepublik Deutschland. Eine theoretische und empirische Untersuchung (Campus, 1983).

Table 3

Insurance benefits of statutory social security and civil servant pensions 2011

Decile net household equivalent income	Statutory pension[1]		Civil servant pension (own pension)	Unemployment benefit	Nursing allowance	Other[2]
	Own pension	Widow/orphans pension				
billion euros						
1. Decile	13.29	2.39		0.64	0.10	0.30
2. Decile	23.28	4.18		0.67	0.36	0.52
3. Decile	28.64	4.97	2.45	0.98	0.70	0.28
4. Decile	25.58	3.84		1.23	0.40	0.75
5. Decile	27.52	3.38		0.75	0.67	0.80
6. Decile	19.63	2.26	2.05	0.54	1.26	0.69
7. Decile	17.82	2.88	4.75	0.66	0.29	1.33
8. Decile	17.41	1.72	8.63	0.89	0.56	0.84
9. Decile	14.21	1.52	11.75	0.50	0.65	1.28
10. Decile	14.98	0.82	14.98	0.75	0.50	1.13
Total	202.36	27.97	44.61	7.59	5.49	7.91
structure in percent						
1. Decile	6.6	8.6		8.4	1.9	3.7
2. Decile	11.5	14.9		8.8	6.6	6.5
3. Decile	14.2	17.8	5.5	12.8	12.7	3.6
4. Decile	12.6	13.7		16.1	7.2	9.4
5. Decile	13.6	12.1		9.8	12.1	10.1
6. Decile	9.7	8.1	4.6	7.2	23.0	8.7
7. Decile	8.8	10.3	10.7	8.6	5.3	16.8
8. Decile	8.6	6.1	19.3	11.7	10.2	10.6
9. Decile	7.0	5.4	26.3	6.6	11.9	16.2
10. Decile	7.4	2.9	33.6	9.9	9.2	14.3
Total	100.0	100.0	100.0	100.0	100.0	100.0

1 Including social miners insurance pension and farmer pension.
2 Statutory accident insurance pension (including widows/orphans statutory accident insurance) + subsistence allowance + widows/orphans civil servant pension.

Source: Calculations based on wave 2012 of the Socio-Economic Panel (SOEP), Distribution v29.

Statutory pensions mainly paid to lower and middle class households, civil servants' pensions to high incomes.

0.50 for market income only. Total redistribution up to net income, with a Gini coefficient of 0.29, is therefore reduced by 0.12 points of the Gini coefficient, which corresponds to 58 percent based on the total redistribution of 0.21 points of the Gini coefficient from market income up to net income. The redistribution of the remaining 0.09 points of the Gini coefficient, or 42 percent of the total redistribution volume is mainly due to means-tested basic social security transfers and the progressive income tax. Other transfers and social security contributions, for their part, barely affect relative income distribution.

Civil Servants' Pensions Primarily in the Top Third of the Distribution

The structure of insurance benefits indicates that statutory pensions benefit the middle and lower half of the income distribution because older people are located primarily in these areas of the income hierarchy (see Table 3). In contrast, civil servants' pensions are found mainly in the upper third of the income distribution. This is explained by the fact that average civil servants' pensions are considerably higher than statutory insurance pensions. Other insurance benefits, such as unemployment benefit, nursing allowance, and other additional transfers are distributed much more evenly across the entire population.

Child Benefit Widespread Throughout the Population

Child benefit is assigned to other government benefits (see Table 4). It is granted regardless of the financial means of the parents and is distributed correspondingly evenly across all income groups.[12] Conversely, the amount of parental allowance is dependent on the in-

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12 The share is slightly higher in the first four deciles because there are many family households in these deciles.

Table 4

Other transfers 2011

Decile net household equivalent income	Child allowance	Parental allowance	Students grants	Housing support for owner-occupiers	Other[1]
billion euros					
1. Decile	4.15	0.31	0.88	0.07	0.10
2. Decile	4.80	0.32	0.92	0.01	0.22
3. Decile	4.02	0.35	0.66	0.13	0.04
4. Decile	4.15	0.68	0.43	0.12	0.24
5. Decile	3.77	0.50	0.16	0.24	0.24
6. Decile	3.94	0.82	0.45	0.32	0.03
7. Decile	3.48	0.62	0.51	0.22	0.12
8. Decile	3.41	0.58	0.37	0.45	0.08
9. Decile	3.02	0.30	0.18	0.36	0.04
10. Decile	3.12	0.57	0.06	0.34	0.03
Total	37.86	5.05	4.60	2.26	1.13
structure in percent					
1. Decile	11.0	6.1	19.0	3.2	8.4
2. Decile	12.7	6.2	19.9	0.5	19.2
3. Decile	10.6	7.0	14.3	5.9	3.9
4. Decile	11.0	13.4	9.4	5.1	21.2
5. Decile	10.0	10.0	3.5	10.6	21.2
6. Decile	10.4	16.2	9.8	14.1	2.6
7. Decile	9.2	12.2	11.0	9.8	10.8
8. Decile	9.0	11.6	8.0	19.8	6.7
9. Decile	8.0	5.9	3.9	15.8	3.6
10. Decile	8.2	11.4	1.2	15.3	2.3
Total	100.0	100.0	100.0	100.0	100.0

1 Advanced child maintenance payment + widows/orhans wavictim pension.

Source: Calculations based on wave 2012 of the Socio-Economic Panel (SOEP), Distribution v29.

Middle class households mainly benefit from the parental allowance.

come earned before the birth of a child;[13] accordingly, the middle class profits from this benefit above average. In contrast, student grants *(BaföG)* and scholarships primarily benefit the lower half of the income distribution. For *BaföG*, this is due to means testing. The grant scheme for housing support of owner-occupiers *(Eigenheimzulage)*, which expired in 2006 but which can still be drawn by entitled households for up to eight years, is found mainly in the upper half of the income distribution. Means-testing was carried out for these transfers to a limited extent only, since married couples with positive income of up to 140 000 euros (plus 30 000 euros per child) were also eligible for these grants.

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13 Parents with a taxable income of 500 000 euros or more are no longer entitled to parental allowance.

Basic Social Security Benefits Targeted to the Needy

Means-tested basic social security benefits are only granted once the financial circumstances of the individuals or households (communities of dependence) have been suitably checked and those individuals or households are deemed eligible for social assistance. Hence, more than 40 percent of housing benefit or unemployment benefit II, for instance, is found in the first income decile (see Table 5). If we look at the first three deciles, almost 80 percent of these transfers were made to this population group. Despite the majority of social assistance and social assistance for the elderly being paid out to the lower half of the income distribution, a number of transfer recipients can also be found in the upper half. This can probably be explained by the fact that individual households may comprise various communities of dependence that do not have a direct financial obligation towards one another, such as adult children who live in the same household with needs-entitled parents.

Conclusion

Monetary and non-monetary social security benefits paid by the government made up 24 percent of GDP (2013), a total of 665 billion euros. Compared to 2005, this share has fallen by two percentage points. Since 2005, total income redistribution has increased in relation to GDP because monetary social security benefits have declined, while the income tax burden rose and social security contributions remained constant in relation to GDP.

Overall, the monetary redistributive effects of the tax and transfer system have led to a far more uniform distribution of net income compared to market income. As a result, in 2011, the (equivalence-weighted) Gini coefficient fell from 0.5 for market income to 0.29 for household disposable income. The social security system makes up a considerable share of overall government redistribution because more than half of the reduction in inequality is due to social security benefits. Although there are equivalent insurance contributions for these benefits, there is, however, ultimately no redistribution between individuals or generations over time. This does not apply to "non-contribution-backed benefits", i.e., social security benefits for which no corresponding contributions were levied. These are financed for the most part by government grants that, in turn, are funded by general tax revenues. Overall, the redistributive effect of the German tax and transfer system is reduced considerably if only basic social security benefits, social security contributions and income taxes are included.

Government redistribution measures in the form of non-monetary transfers and indirect taxes are not included in the net incomes analyzed here. Since the latter have a regressive burden effect on current income, i.e., the lower income groups are burdened relatively more than the upper income groups,[14] the redistributive impact of the tax and transfer system is reduced slightly.

In addition to the overall redistributive effect, there is also the issue of how accurately government transfers are targeted. If these only benefit the financially needy, only the lowest deciles are likely to receive these transfers. Child benefit, however, is widespread across the entire population. It was primarily the upper income groups that benefitted from the (now expired) housing support for owner-occupiers *(Eigenheimzulage)*.

Attention should be focused on the aspects of accurately targeting social mobility and equal opportunities, since these objectives may not necessarily be achieved by purely monetary means. In fact, child care and the education system play an important role in increasing equal opportunities long-term, promoting upward mobility, and reducing inequality.

Table 5

Means-tested transfers 2011

Decile net household equivalent income	Housing benefit	Social assistance	Social assistance for elderly	Unemployment benefit II + additional child benefit
billion euros				
1. Decile	0.85	0.39	0.96	10.80
2. Decile	0.53	0.23	0.41	5.42
3. Decile	0.21	0.43	0.36	3.02
4. Decile	0.14	0.18	0.52	1.41
5. Decile	0.17		0.52	1.08
6. Decile			0.55	1.06
7. Decile			0.14	0.44
8. Decile	0.13	0.99	0.48	0.54
9. Decile			0.90	0.51
10. Decile				
Total	2.02	2.22	4.83	24.29
structure in percent				
1. Decile	41.9	17.8	19.8	44.5
2. Decile	26.1	10.5	8.4	22.3
3. Decile	10.5	19.2	7.5	12.4
4. Decile	6.7	7.9	10.8	5.8
5. Decile	8.3		10.7	4.4
6. Decile			11.5	4.4
7. Decile		44.6	2.9	1.8
8. Decile	6.6		9.9	2.2
9. Decile			18.6	2.1
10. Decile				
Total	100.0	100.0	100.0	100.0

Source: Calculations based on wave 2012 of the Socio-Economic Panel (SOEP), Distribution v29.

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Means-tested basic social security payments benefit the low income households.

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14 B. Beimann, R. Kambeck, T. Kasten, and L-H. Siemers, "Wer trägt den Staat? Eine Analyse von Steuer- und Abgabenlasten," RWI position, no. 43 (April 1, 2011); OECD, "The distributional effects of consumption taxes in OECD countries," OECD Tax Policy Studies, no. 22 (2011).

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