INCOME DISTRIBUTION DATA REVIEW –GERMANY

1. Available data sources used for reporting on income inequality and poverty

1.1. OECD reporting:

The OECD Income Distribution Data for Germany has been using data from the German Socio-Economic Panel Study (GSOEP) provided by the Deutsches Institut für Wirtschaftsforschung (DIW Berlin). Data available in the OECD database refer to the years 1985, 1990, 1995, 2000, 2008, 2008, 2009 and 2010. Data points for 1985 and 1990 refer to the old German Länder, data points for 1995 and thereafter to both new and old Länder. Summary data for 1985 and 1990 have been adjusted backwards to estimate an overall distribution, applying a splicing with the two available data points for 1995.

The German Socio-Economic Panel Study (SOEP) is a wide-ranging representative longitudinal study of private households, located at the German Institute for Economic Research, DIW Berlin. Every year, there were nearly 11,000 households, and more than 20,000 persons sampled by the fieldwork organization TNS Infratest Sozialforschung. The data provide information on all household members, consisting of Germans living in the Old and New German States, Foreigners, and recent Immigrants to Germany. The Panel was started in 1984. Some of the many topics include household composition, occupational biographies, employment, earnings, health and satisfaction indicators.

In 2009/10, GSOEP data provided by DIW have been revised backward till 1984 in order to take into account partial non response on the composition of income. Missing income data have been imputed. This change has led to an increase in the level of income and mostly for families with children therefore the poverty rate estimates for children have decreased.

1.2. National reporting and reporting in other international agencies:

1.2.1 National reporting:

Income distribution and poverty indicators for Germany are also available from:

- Einkommens- und Verbrauchsstichprobe (EVS): The Income and expenditure survey EVS is a large and detailed survey on income, expenditure and assets. The sample survey of income and expenditure (German abbreviation: EVS) provides important official statistics on the standards of living of households in Germany. Among other things, it provides statistical information on the households' equipment with consumer durables, on their income, property and debt situation as well as on their final consumption expenditure. The sample survey of income and expenditure is conducted at five-year intervals. Since there is no legal obligation for households to participate in the survey, any information is rendered on a voluntary basis.

- Microcensus: The microcensus provides official representative statistics of the population and the labour market in Germany. The Labour Force Survey of the European Union (EU Labour Force Survey) forms an integral part of the microcensus. Since 1957 - in the new Länder (including Berlin-East) since 1991 - the microcensus has supplied statistical information in a detailed subject-related and regional breakdown on the population structure, the economic and social situation of the population, families, consensual unions and households, on employment, job search, education/training and continuing education/training, the housing situation and health.

- Continuous household budget surveys (LWR): In the context of the continuous household budget survey, households in Germany are requested to provide annual information on household income and expenditure, housing conditions and possession of consumer durables. The current concept of the continuous household budget surveys that has been in use since 2005 is a sample survey covering 8,000 households all over Germany on an annual basis.

1.2.2 International reporting:

- Eurostat is also computing and publishingindicators on income distribution and poverty for Germany based on EU-SILC.

- Germany is also included in the Luxembourg Income Study Database (LIS) using the German Social Economic Panel Study (GSOEP) since 1984 and the Income and Consumer Survey (EVS) before.

Table 1. presents the main characteristics of the different sources:

Table 1. Characteristics of datasets used for income reporting, Germany

	German Socio-Economic Panel Study GSOEP (DIW Berlin)	Income and expenditure survey (EVS)	Continuous household budget surveys (LWR)	Mikrozensus	Eurostat (EU SILC)
Name	German Socio-Economic Panel Study	Einkommens- und Verbrauchsstichprobe			Survey on Income and Living Conditions
Name of the responsible agency	Deutsches Institut für Wirtschaftsforschung e.V. (DIW Berlin)	Destatis	Destatis	The microcensus is organised as a decentralised statistics, which means that the organisational and technical preparation is done at the Federal Statistical Office, while conducting the survey and processing the data are tasks of the statistical offices of the Länder.	Eurostat
Year (survey and income/wage)	Annual, Panel and crossectional.	Every five years	Every year	Since 1957 - in the new Länder (including Berlin-East) since 1991. Annual	Every year from 2003 onwards.
Period over which income is assessed					
Covered population	All private (non-group , non-institutional) households in Germany. The institutionalised population (persons living in hospitals, nursing homes, military installations) was not representatively included in the first wave; later, however, persons from the initial households who had taken up residence temporarily or permanently in institutions were followed.	Owing to the large number of households covered in the EVS and the wide range of plausibility checks carried out during the processing stage, the survey results are highly accurate and reliable. Representative data are obtained for almost all households since all social groups are covered by a quota plan and the results obtained are expanded on the basis of the relevant microcensus figures. However, the EVS does not provide data on persons living in communal establishments and institutions because they are not included in the household definition applied in the survey.			Private households.

Table 1. Characteristics of datasets used for income reporting, Germany *(cont.)*

	German Socio-Economic Panel Study GSOEP (DIW Berlin)	Income and expenditure survey (EVS)	Continuous household budget surveys (LWR)	Mikrozensus	Eurostat (EU SILC)
Sample size	2009: 10297 households with 23524 individuals / 2010: 9572 households with 21624 individuals / 2011: 9056 households with 20306 inidividuals	Approximately 60,000 households in Germany are covered by the survey, including nearly 13,000 households in the new Länder and Berlin-East. Hence, the sample survey of income and expenditure, which has been conducted in the former territory of the Federal Republic since 1962/63 and in the new Länder and Berlin-East since 1993, is the largest survey of its kind throughout the European Union.	Since survey year 2005, the sample size of the Continuous household budget surveys (LWR) has been 8,000 households . Prior to 1999 the continuous household budget survey with a sample size of 2,000 households was restricted to the examination of three exactly defined types of household. Since 1999 the sample has been drawn from among all households, excluding households of self-employed people and farmers. Until 2004 the survey was conducted annually in 6 000 households at federal level.	There is a general sampling fraction of 1% of the population for all variables.	Minimum sample size: 8 250 households for corss-sectionnal/6 000 for longitudinal; 14 500 individuals for 10 500 for longitudinal.
Sample procedure	*Initial samples*: there are 7 different samples, all multi-stage random samples, which are regionally clustered (around federal states, administrative districts and type of community). The respondents (households) are selected by randomwalk. *Follow-up concept*: old households with old and new persons (births and moved in) are followed up as well as new households with old (moved out) and new persons (births and split-offs).	The sample survey of income and expenditure is based on quota sampling. All households are selected for and included in the survey on the basis of a specified quota plan. The universe of households is subdivided into groups on the basis of specific quota variables. The quota for each group is specified as the number of households to be interviewed. As with the microcensus, the universe of households is first subdivided by Länder. In a second step, the total of households in each Land is grouped by the following quota variables: type of household, social status of the main income earner and net household income. The number of households to be interviewed is determined for each of the quota cells obtained in this way.		The microcensus is a random sample in which all households have the same probability of selection. Within the territory of the Federal Republic of Germany, areas (sampling districts) are selected in which all households and persons are interviewed (one-stage cluster sample). Every year, a quarter of the households (or sampling districts) included in the sample are exchanged. This means that each household remains in the sample for four years (partial rotation procedure).	
Response rate	Inititial response rate differ across subsamples ranging from 40% to 70%, longitudinal response rates are above 90%			Due to the obligation to provide information, the share of known non-response in households to be covered (unit non-response) is very small at about 5%. The share of non-response for individual questions or variables (item non-response) is generally well below 10%. It may however be considerably higher in individual cases, especially for sensitive variables with voluntary response. Compared with the microcensuses conducted up to 2004, item non-response has decreased. The main reason is probably the fact that, when changing over to the continuous survey, the use of laptops was introduced everywhere, which in turn resulted in a further standardisation of the interviews.	
Imputation of missing values	The Cross-National Equivalent File (CNEF) includes completely simulated taxes and contributions (on the basis of a microsimulation model – the Schwarze routine) and fully imputed missing income information due to item and partial unit non-response.all income components are imputed in case of item-non response and seven major income components are imputed in case of partial-unit-non-respone (see Frick, Grabka, Groh-Samberg 2012), all imputations are performed by using the technique described by Little and Su (1989), in case of lacking longitudinal information cross-sectional OLS-Regressions are applied. Taxes and social contributions are generated by making use of a micro-simulation program.				
Unit for data collection	Households				Individuals and households.
Break in series					
Web source:		https://www.destatis.de/EN/Meta/abisz/Einkommens_Verbrauchsstichprobe_e.html	https://www.destatis.de/EN/FactsFigures/SocietyState/IncomeConsumptionLivingConditions/InformationLWR.html	https://www.destatis.de/EN/Meta/abisz/Mikrozensus_e.html	

2. Comparison of main results derived from sources used for OECD indicators with alternative sources

2.1 Income

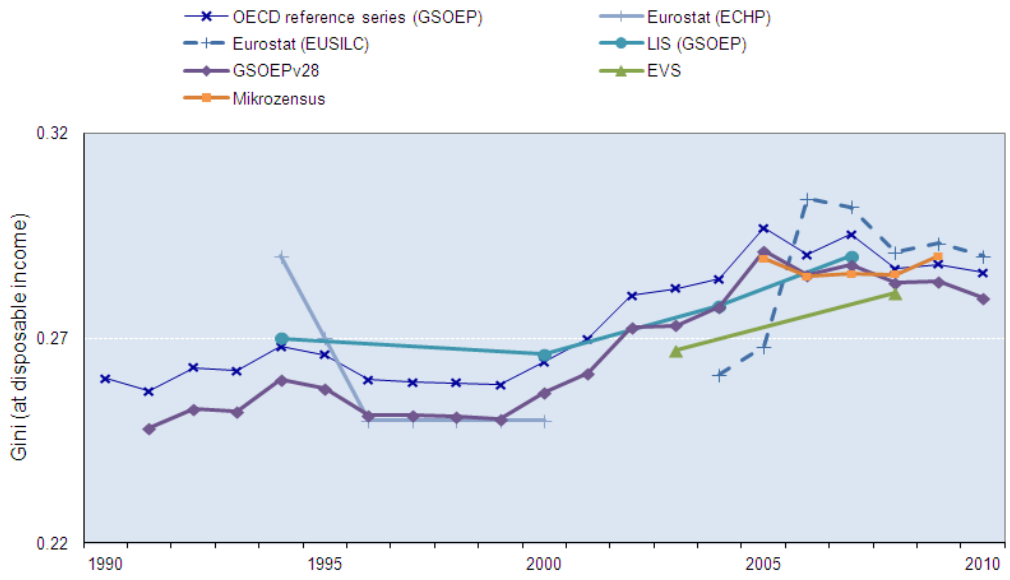
2.1.1 Time series of Gini coefficients and other inequality indicators

GSOEP data provided by DIW have been revised in 2009/10 backward till 1984 in order to take into account of partial non response on the composition of income. Missing income data have been imputed. This change has led to an increase in the level of income and mostly for families with children therefore the poverty rate for children has decreased. As LIS has not revised their data to account of partial non response, hence the data are not fully comparable to the OECD.

In the past, EU-SILC and GSOEP used to report different levels of inequality and poverty but have tended to converge. This may be linked to the fact that EU-SILC tended to undercover the immigrant population in the past which has resulted of an overestimation of income level and lower inequality.

OECD and (national) GSOEPv28 times series are very close and may differ because of a different equivalence scale. OECD uses the scare root definition whereas DIW (GSOPE) uses the so called "modified OECD scale:" where the head of household is assigned a weight of 1, children up to the age of 14 a weight of 0.3 and all other household members a weight of 0.5.

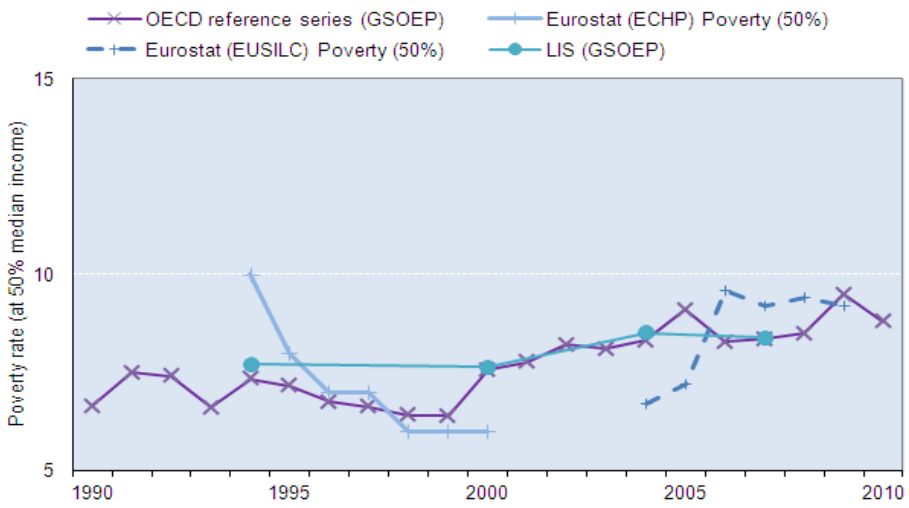
Figure 1.1 Trends in Gini coefficient (disposable income), Germany



Source: German Socio-Economic Panel Study GSOEP (DIW Berlin); Income and expenditure survey (EVS); Continuous household budget surveys (LWR); Mikrozensus; Eurostat; EU Survey on Income and Living Conditions (EU SILC), European Community Household Panel (ECHP), LIS: Cross national data center in Luxembourg http://www.lisdatacenter.org/.

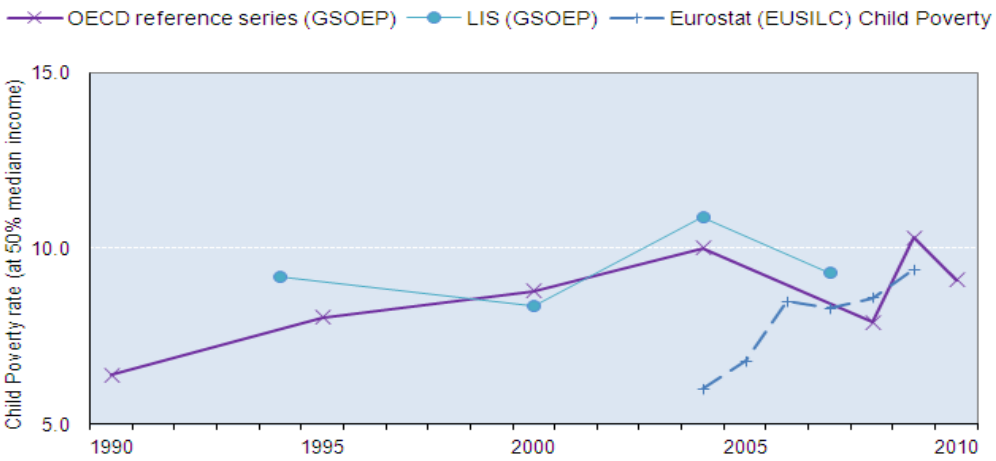
2.1.2 Time series of poverty rates

Figure 2.1 Poverty rates, 50% threshold, after tax and transfers, Germany



Source: German Socio-Economic Panel Study GSOEP (DIW Berlin); Eurostat; EU Survey on Income and Living Conditions (EU SILC), European Community Household Panel (ECHP), LIS: Cross national data center in Luxembourg http://www.lisdatacenter.org/.

Figure 2.2 Child Poverty rates, 50% threshold, after tax and transfers, Germany



Source: German Socio-Economic Panel Study GSOEP (DIW Berlin); Eurostat; EU Survey on Income and Living Conditions (EU SILC), European Community Household Panel (ECHP), LIS: Cross national data center in Luxembourg http://www.lisdatacenter.org/.

Poverty rates based on OECD and LIS differ due to the revision on the imputation of missing component of income as LIS has not revised their data to account for partial non response in income component. OECD and Eurostat estimates of poverty rates differ more largely.

2.2 Wages

See Part II of the present Quality Review.

3. Consistency of income components shares with alternative data sources

3.1. Comparison of main aggregates: earnings, self-employment income, capital income, transfers and direct taxes

Table 2 shows shares of income components for 2008, according to the OECD benchmark series (GSOEP) and according to EU-SILC. It can be seen that EU-SILC data reports a lower share of capital and in particular self-employment income with regard to the OECD benchmark series.

Table 2. Shares of income components in total disposable income, OECD reference series and EU-SILC

Survey	Year	Unit	EH	ES	EO	Wages	Capital	Self Employment	Transfers	Taxes	Disposable income (HDI)
OECD reference series (GSOEP)	2008	natcur	10 069	3 911	3 216	17 196	1 989	5 212	5 926	-8 049	22 276
		% av HDI	45%			77%	9%	23%	27%	-36%	
EU SILC	2008	natcur	14 465	5 498	6	19 969	1 200	2 229	6 924	-7 745	22 758
		% av HDI	64%			88%	5%	10%	30%	-34%	
		natcur	0.70			0.86	1.66	2.34	0.86	1.04	0.98
		% av HDI	0.71			0.88	1.69	2.39	0.87	1.06	

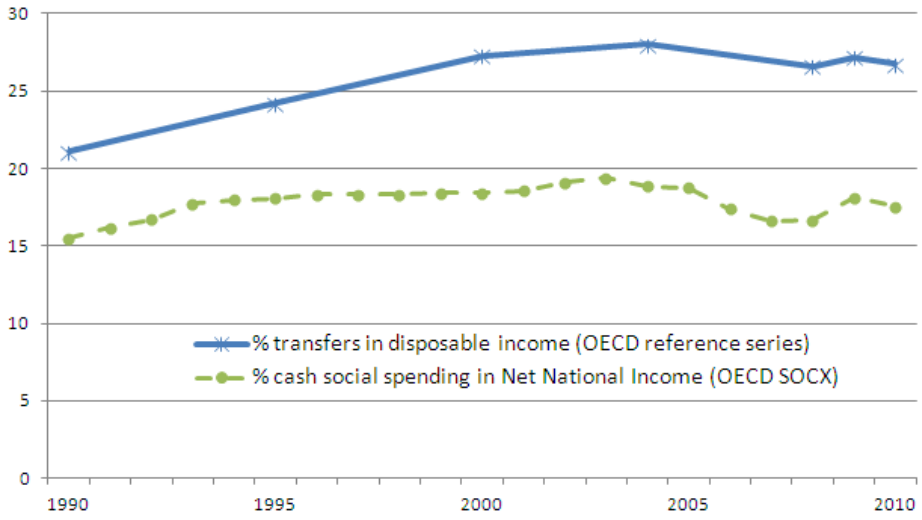
Table 3 below provides information on the definition and classification of income components including government transfers, provided by DIW (The German Institute for Economic Research).

Table 3. Definition and classification of income components in OECD benchmark series

Income components	
Wage and salary income (EH, ES, EO):	
- Wage and salaries (excluding employers' contribution to social security)	Yes
- Related bonuses and commissions	Yes
- Goods provided by employers	No
- Severance and termination pay	Yes
- Sick paid day paid by the government	No
- Other	
Self-employment income (SE):	
- Profit/looses from unincorporated enterprise	Yes
- Net values of goods and services produced for final consumption	No
- Other	
Capital income, including private pensions, private occupational pensions and all kinds of private transfers (K):	
- Income from financial assets, net of expenses	Yes
- Income from non-financial assets, net of expenses	Yes
- Royalties	No
- Pensions from individual private plans	Yes
- Pensions from occupational private plans	Yes
- Regular transfers received from/paid to other households	Yes
- Other private transfers	
Social security transfers from public sources (TR):	
- Accident and disability benefits	Yes (Gesetzliche Unfallversicherung = accident insurance, Gesetzliche Pflegeversicherung = nursing care insurance)
- Old-age cash benefits	Yes (Gesetzliche Rentenversicherung = statutory pension system)
- Unemployment benefits	Yes (Arbeitslosengeld 1 = unemployment benefit 1)
- Maternity allowance	Yes (Mutterschaftsgeld, Erziehungsgeld, Elterngeld = maternity allowance, child raising allowance, parents money)
- Child and/or family allowance	Yes (Kindergeld = child benefit)
- Housing benefits	Yes (Wohngeld = housing allowance, Wohneigentumsförderung = home buyer allowance)
- Other Income-tested and means-tested benefits (please specify)	Yes (Arbeitslosengeld 2 = unemployment assistance 2, Sozialhilfe = social assistance, Grundsicherung im Alter = social assitance for the elderly, Kinderzuschlag = childrens allowance)
- Other	BAFOEG, Stipendien = Student grants, Unterhaltsvorschusskasse = Guaranteed/Advance Maintenance Programs
Taxes and social security contributions paid by household (TA)	
- Income taxes	Yes
- Taxes on wealth	No (only relevant for owner occupiers but a rather small amount)
- Employees' social security contributions	Yes
-Other	

Figure 3 compares the trend in shares of public cash transfers in equivalised disposable income from the OECD reference series with the share of total cash social spending in net national income, reported from the OECD Social Expenditure database (OECD SOCX). OECD SOCX series include pensions, incapacity, family, unemployment, social assistance. Both series show broad similar trends throughout the period, even though the decline between 2006 and 2008 seems to be slightly more pronounced in the OECD Social Expenditure database (SOCX).

Figure 3 Trends in shares of public social transfers



4. Metadata of data sources which could explain differences and inconsistencies

Definitions, methodology, data treatment

Methodological differences between the OECD Terms of References and the methodology used by DIW on GSOEP: OECD uses the equivalence scale based on the square root of the household size whereas DIW uses the old OECD equivalence scale. Some of the nationally published series also include imputed rent as income component which is excluded from the OECD data.

As mentioned earlier, in 2009/10, GSOEP data provided by DIW have been revised backward till 1984 in order to take into account of partial non response on the composition of income and missing income data have been imputed. This change has led to an increase in the level of income and mostly for families with children therefore the poverty rate for children has decreased.

There are, however, larger differences in estimates between the OECD series and the Eurostat series based on EU-SILC, especially in the year 2004 - 2006.

5. Summary evaluation

The German Socio-Economic Panel Study (GSOEP) seems to be the most appropriate source for income distribution and poverty data in Germany due to the quality of the data. Differences of estimates which existed with data based on EU-SILC in the past tended to become smaller in the past years.

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Lebenslagen in Deutschland Entwurf des 4. Armuts- und Reichtumsberichts der Bundesregierung, Stand 17.09.2012 17:00