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Development of Top Incomes in Germany since 2001

By Charlotte Bartels and Carsten Schröder

What share of total income in Germany is owned by the country’s top income earners and how has this share developed over the past decade? Answers to these questions can be found both in representative survey data such as the longitudinal Socio-Economic Panel (SOEP) study and in administrative data on income taxation. After the statistics have been harmonized accordingly, it becomes clear there remain systematic differences for the top one percent’s incomes—both in terms of the level of measured income concentration and in terms of changes over time. However, the two sets of data are very similar for the top ten percent excluding the top one percent as far as both level and trend of income shares are concerned.

In order to explain the recent history of inequality in Germany, we first need to answer several questions that deal with aspects crucial for the measurement of inequality: a) Should income be measured on the individual or household level? b) Should inequality be measured within the German population as a whole or only within a subgroup (taxpayers, for instance)? c) On which income concept (for example, gross or net) should the analysis be based? Then the empirical implementation can begin. In Germany, the empirical analysis can be based on both scientific survey data and administrative data from the tax authorities. A recent discussion suggests that the choice of data base will affect the development of the income share of the top income group.1

The following analysis describes income concentration in Germany using survey data from the SOEP study and income tax data. In the empirical implementation, we have chosen, for both sets of data, a uniform approach to the key questions raised above (congruence principle). This makes it possible to isolate the effect of the choice of data basis on the measured concentration of income.

Specifically, concentration indicators, for both sets of data, are based on taxable gross incomes of tax units, that is, both joint and individual assessments.

Our analysis focuses on top income recipients, i.e., a societal group with a potentially significant political and social influence. The fundamental question is, of course, to what extent the income share of the top one percent or the top ten percent is a measure of inequality in so-

1 M. Drechsel-Grau, A. Peichl, and K. D. Schmid, “Einkommensverteilung und gesamtwirtschaftliche Entwicklung in Deutschland Spitzeneinkommen – ein Missing-Link,” Wirtschaftsdienst 10 (1-5) (2015) use the German Federal Statistical Office’s Taxpayer Panel and the SOEP for an up-to-date inequality analysis. They found systematic differences in the time patterns. However, their study did not implement aforementioned aspects in a uniform manner.
ciety as a whole and its welfare development, or rather an indicator of the concentration of a country’s economic power.

**Harmonizing data sources for comparable results**

In order to generate comparable concentration measures from the income tax and SOEP data, definitions of the observation unit and income concept must first be harmonized according to the congruence principle.

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3 See also criticism in the latest annual report by the Council of Economic Experts on overall economic development, *Zukunftsfähigkeit in den Mittelpunkt*.


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We have used the total amount of gross income in a tax unit as the harmonized income concept in both datasets (see Box 1). We have also adjusted the income tax data in order to obtain a harmonized income concept over time, despite the introduction of the half-income assessment method and the flat rate withholding tax (see Box 2).

After harmonization, the concentration of income for the tax units can now be examined over time using the two sets of data. A comparison of dataset-specific findings allows us to assess the effect of the selected data on the measured concentration of income. Specifically, we examined the period from 2001 to 2011.

**Snapshot for 2007**

Figure 1 shows the different percentiles of top earners in 2007 (top ten percent of the income distribution) and the corresponding income limits based on SOEP and income tax data. Up to the 96-percentile, income levels are higher according to the SOEP than according
Both representative survey data and administrative data have potential advantages and weaknesses. Survey data record comprehensive characteristics in the household context which allow a detailed description of inequalities and their causes. In fact, they do not always succeed in attracting a sufficient number of households with very high incomes to participate. This leads to inaccuracies, particularly at the top of the income distribution.

When working with administrative data, an extensive knowledge of reforms during the period under observation is necessary to make the data comparable. Of particular note here are the introduction of the half-income system in 2001/2002 and the flat rate withholding tax for capital incomes in 2009. To obtain an intertemporally comparable time series on income concentration, incomes from the income tax data were adjusted for the effects of these reforms. As a result, following the introduction of the half-income system, only some of the dividends are visible in the income tax data. Since the size of the share (around 38 percent) comes from tax legislation, the underlying basis (100 percent) can be extrapolated. If the full dividend amount is used to calculate the income shares (see Figure 1), the decline due to cyclical trends is considerably lower. Since the introduction of the withholding tax in 2009, the tax liability on dividends and interest is deducted directly at source. This capital income no longer needs to be declared in the income tax return. Tax households whose tax rate is lower than the rate of withholding tax of 25 percent, however, have an incentive to declare this capital income. Since the incomes of high-income households in Germany consist mainly of business income and only around ten to 20 percent from dividends and interest and are subject to a high rate of income tax due to the high commercial income, these households in particular mostly have no incentive to declare their capital income in their income tax returns. External information on the development of capital income is used to correct for this (see Bartels and Jenderny (2015) for details on capital income calculations after 2009).

This finding can be attributed to a possible middle-class bias in the SOEP data. Civil servants, for instance, are overrepresented in the SOEP example.
The potentially taxable population is approximated using the total number of married couples and singles over 20 years. In 2007, there were approximately 48.3 million potential taxpayers—this is our basic population. This means the richest one per cent of all potential taxpayers includes precisely 482,969 tax units, while this number of cases corresponds to 1.3 per cent of actual taxpayers.

In this analysis, income shares from 2001 to 2008 are calculated on the basis of microdata from income tax, so no additional assumption about the income distribution is required. The income share of the richest one percent in 2007 is calculated as:

$$\text{Aggregated income of top 1%} \approx \frac{201 \text{ billion}}{1,432 \text{ billion}} \approx 14 \%$$

1 This age limit is used by many scientists who have calculated time series for the World Top Incomes Database (WTID). See also contributions on Germany, the US, and Canada in A. Atkinson and T. Piketty, *Top Incomes Over the Twentieth Century* (Oxford University Press, 2007).

2 These values can be taken from the Statistical Yearbook.

3 In order to construct long-term time series since the introduction of income tax in the nineteenth century, tables are required with the number of taxpayers in certain income groups and their aggregate income. These tables have been published in Germany since the mid-nineteenth century by the Statistical Offices of the Federal States.

Income in the SOEP data remains virtually unchanged since 2005 and the changes that were recorded are not statistically significant.

When the concentration ratios for 2005 and 2011 are compared, the tax data also show no clear increase since 2005. There are indications that the corporate sector increasingly retained profits and did not distribute them. If these retained earnings had been distributed to top earners, the measured concentration of income would probably be higher.

The lower level of income concentration in the SOEP data is largely due to the top earners in the SOEP data at the upper end of the distribution having considerably lower incomes on average: in 2007, the average income of the top one percent was approximately 258,000 euros (in 2010 prices) according to the SOEP data, but it was around 376,000 euros (in 2010 prices) according to the income tax data.
Conclusion

Both the income tax and SOEP survey data provide valuable information about the distribution of income in Germany. However, the two sets of data have differing underlying populations (taxpayers and total population), observation units (tax cases and households), and definitions of income (total income and gross household income). According to the congruence principle, these concepts must be harmonized before the income concentration measures from the two datasets can be compared meaningfully.
In fact, the harmonized SOEP and income tax data tell a similar story about the concentration of income in Germany since 2001: for the top ten to five percent and top five to one percent, there is a small increase in income concentration between the two datasets at a marginally diverging level. For the top one percent, both datasets show a parallel increase in income concentration for the first half of the 2000s, which is not statistically significant, however, in the SOEP data. According to the income tax data, the concentration continues to increase up to 2008 but remains at a lower level after the start of the financial crisis in 2009. Conversely, the concentration of income in the SOEP data has remained almost stable since 2005. The concentration levels for the top one percent are considerably higher according to the income tax data because average incomes in this range differ by more than 100,000 euros between the two datasets.

Overall, the income tax data has the obvious advantage that they contain many more cases of very high income in Germany. However, it should also be noted that there are three key drawbacks of this data source for inequality research. First, capital income has not been systematically recorded in income tax data since the introduction of the flat rate withholding tax introduced in 2009 which particularly affects the top income range where capital income is concentrated. If, as is currently being discussed by policy-makers, the flat rate withholding tax is in fact abolished and capital income is once again taxed as personal income tax, then income tax data would become a more reliable source for capital income again. Second, the income tax data do not provide a very full description of the income situation at the lower end of the distribution because individuals with low incomes do not usually need to declare their income and are therefore not included in the data. Third, no equivalent income can be determined using income tax data due to a lack of information concerning the household context. Equivalent income is needs-weighted incomes, incomes that take into account differences in needs between households with different compositions, such as number and age of household members, and are standard distribution analyses.

To obtain a full picture of the development of inequality in Germany since 2001 and not just of income concentration at the very top, incomes in the lower and middle income classes in the SOEP data must be combined with incomes among the top ten percent from the income tax data. Future studies should look at further developing relevant approaches to this.

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