

Appendix to “Taxing Across Borders: Tracking Personal Wealth and Corporate Profits”
by Gabriel Zucman, *Journal of Economic Perspectives*, 2014

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This Appendix presents additional discussion of the computations made for this article. The Appendix is supplemented by an [online Excel file](#) containing all the raw data used and detailing each step of the computations.

Corporate tax rates as a fraction of total capital taxes

For the European Union, the key source is the yearly Eurostat publication, “Taxation Trends in the European Union”.

I report data from for year 2012 (the latest year available) as printed in the [2014 edition of taxation trends](#). Unless otherwise notes, the figures below are EU-28 weighted averages:

- Total tax revenue / GDP = 39.4%
- Consumption taxes / GDP = 11.2% (= about 30% of total taxes)
- Labour taxes / GDP = 20.1% (= about half of total taxes = about 70% of non-consumption tax revenue)
- Capital taxes/ GDP = 8.2% (= about 20% of total taxes = about 30% of non-consumption tax revenue)
- Implicit tax rate on labour = 36.1%
- Implicit tax rate on capital = 33.4% (arithmetic average of Germany, UK, France, Italy, Spain. NB: smaller States tend to have lower capital tax rates so EU-wide average would be lower).
- Capital taxes = corporate income tax (2.6% of GDP = about 1/3 of capital taxes) + households & self-employed capital income taxes (2.9% of GDP = about 1/3 of capital taxes) + wealth taxes: property, estates... (2.8% of GDP = about 1/3 of capital taxes)
- Corporate income tax revenue / total tax revenue = $2.6 / 39.4 = 6.6\%$

For the US I use a variety of sources.

First, the [OECD data](#) for year 2012 are as follows:

- Total tax revenue / GDP = 24.3%
- Consumption taxes/ GDP = 4.4% (= about 18% of total taxes)
- Corporate income taxes / GDP = 2.6% (just like in Europe), but actually 2.1% only once one Fed profits are removed, see below.
- Property and other wealth taxes / GDP = 3.0% (of which property taxes (OECD code 4100) 2.8% + estate, inheritance, gift: 0.2%)
- Households capital income tax / GDP = about 2.5% (i.e., individual income tax = 8.5% of GDP, and I assume that 30% is attributable to capital. In practice it is not easy to obtain an exact figure for the capital share of individual income tax rates,

but since on aggregate the share of capital in national income is about 30%, it's reasonable starting point).

- Capital tax revenue = $2.6 + 3 + 2.5 = 8.1\%$ of GDP (just like in Europe) = about 1/3 of total tax revenue (= equivalently $7.6 / 23.8$ when Fed profits removed)

Then I've checked this information with various domestic sources. US GDP 2012 (as per BEA's NIPA, August 2014) = 16.2tr. So property taxes = 2.8% of 16.2tr = about 455bn, which is in line with [Census data](#).

However, the 2.6% of GDP that the OECD reports in corporate tax (= 425bn) is higher than the 335bn paid to the Federal government (about 285bn on a calendar year basis, as implied by NIPA Table 7.16) and to the States (50bn) probably because it includes the \$90bn of Federal Reserve Bank payments (which are oddly enough treated as corporate taxes in the NIPAs, see NIPA Table 7.16). In this paper I always remove Fed profits from corporate profits (and taxes).

The bottom line is that in the US capital taxes account for 1/3 of total taxes rather than 20% in Europe because of the smaller role of consumption taxes. But then in both Europe and the US, capital taxes can roughly be split in 3 equal parts = corporate tax (1/3) + property (and wealth) taxes (1/3) + personal capital income taxes (1/3). If anything the corporate tax plays a smaller role in the U.S. (30-40-40 rather than 1/3-1/3-1/3).

NB: The first draft of the paper (May 2014) reported that corporate tax revenues account for 60% of corporate taxes. I used the Piketty-Zucman 2014 computations of labor and capital tax rates (Table US.13, FR. 13 etc.). In these computations, property taxes are not capital taxes, but "production taxes" (like VAT), because this is how they are recorded in the national accounts (e.g., the property tax is a tax on the production of housing services). Since property taxes are typically as big as the corporate tax, this makes a sizable difference. Conceptually, whether the property tax is closer to a factor income tax or to a production tax like VAT is not entirely clear (e.g., this depends on the extent to which it's shifted to prices or borne by property-owners). But it's more common in the literature to treat property taxes as capital taxes (e.g., that is what [Mendoza, Razin and Tesar, 1994, p. 305](#) do) and in the end it is more meaningful to do the same here.

The share of profits made abroad in US corporate profits (Figure 1)

I follow the national accounts conventions that (i) foreign profits included in national income are net of foreign corporate taxes paid; (ii) profits from corporations in which the US has a stake of 10% or less are included in national income only to the extent that they are distributed (= portfolio investment), not if they are retained. In both cases, these conventions imply that the share of profits made abroad is actually a bit higher than reported in Figure 1.

It could be interesting to compute the share of (net-of- taxes) foreign profits in (net-of- taxes) corporate profits, but in this paper I keep (pre-domestic taxes) corporate profits as a denominator so as to be able to compare all the figures to (pre-tax) national income.

The share of tax havens in U.S. corporate profits made abroad (Figures 2-3)

Technically we only know the country allocation of foreign profits for direct investment (74% of all foreign corporate profits in 2012, and more than 80% prior to 2007), not for portfolio investment. End of 2012 TIC / CPIS data on portfolio assets show that 30% of foreign corporate equities held by the US are from the Caymans, Bermuda, the British Virgin Islands, Luxembourg, Ireland, Switzerland, Singapore and Hong Kong, less than the share of USDIA assets in these tax havens (47%). To simplify matters, I disregard this issue, i.e., assume that the share of PI income from tax havens is 54% in 2012 just like for DI income. Since portfolio investment income is only 15-25% of total foreign corporate profits, the error here is small. For instance, assuming that only 40% of portfolio investment income comes from tax havens, then the share of tax havens in US corporate profits made abroad in 2012 would be $54\% \times 74\% + 40\% \times 26\% = 50\%$ instead of the 54% figure I report, and the gap would be lower prior to 2007. Note on the other hand that I only consider the top havens throughout the paper, disregarding in particular Puerto Rico, where apparently 5% of US foreign profits are booked. So in the end the 54% I report in Figure 2 may, if anything, be slightly on the low-end.

The fraction of offshore money that evades taxes

The Swiss tax administration reports data on European account-holders who chose to voluntarily declare their holdings to their home country tax authority against the backdrop of the EU saving tax directive. The data is publicly available online at <http://www.estv.admin.ch/intsteuerrecht/themen/01319/01328/index.html?lang=fr>. Data up to end of 2011 were analysed in Johannesen and Zucman (2014, Section V). End of 2013 data reveal the following patterns:

- The total amount of interest income self-reported by European account holders in 2013 is 1,325mn CHF.
- Assuming a 2% interest rate, this corresponds to a fixed income wealth of 66.3bn CHF.
- This figure only concerns interest (as the EU saving tax directive only applies to interest income). We know from the SNB's securities under custody data that the offshore portfolio in Switzerland is about 1/3 interest generating and 2/3 dividend (or capital gains) generating on aggregate.
- Assuming that people who report their fixed income wealth also report their equity wealth, the total amount of wealth (equity + fixed income + mutual fund shares) reported by European depositors to their home country tax authorities comes to about 200bn CHF for 2013.
- From the SNB's securities under custody data and fiduciary bank deposits country-by-country breakdowns, there's about 1,000bn euros (= 1,200bn CHF) of European wealth in Switzerland, as of the end 2013.
- So under the above assumptions, $200/1200 = 16.7\%$ of European wealth held in Switzerland is voluntarily declared by European account-holders.
- On top of this, one has to add the small amount of European wealth that pays the saving directive withholding tax. As of end 2013, according to the Swiss tax authority, $383 / (0.75 \times 0.35) = 1,458$ mn CHF of interest income was subject to the withholding tax,

which, again applying a 2% interest rate, corresponds to 72bn CHF of fixed income wealth.

- So the total amount of European wealth that is either declared or pays the STD withholding tax amounts to about 270bn CHF, or 22.5% of the 1,200bn CHF likely held by Europeans in Switzerland.

- This figure should be seen as an upper bound, as the reporting rate may be lower for non-interest generating assets than for interest-generating assets.

- In any case, the saving tax directive data make it clear that:

- (i) The wealth that Europeans choose to voluntarily declare is small compared to the total amount of offshore wealth held in Switzerland;

- (ii) The fraction of European wealth that is voluntarily reported is rising since 2009, particularly so since 2012.

Supplementary Figures:

Supplementary Figure S.1.



Corporate profits (net of interest payments) are rising as a share of national income, despite the fact that a growing fraction of US activity has been originating from the non-corporate sector (partnerships in particular) since the 1980s. This is due both to the rise of the corporate capital share and the fall of interest rates. Source: author's computations using BEA data.