Survey and income tax data are two frequently used sources of information for research on inequality and the measurement of top incomes respectively. This paper makes use of a large representative sample of personal income tax returns provided by the Greek Ministry of Finance. The sample contains more than one million tax returns submitted to the authorities in 2018 and has the unique characteristic that it also contains the richest 1% of taxpayers. Using the Greek version of the European Union’s Statistics on Income and Living Conditions (EU-SILC Production Database), we derive income concepts and units of analysis that are as comparable as possible to the tax data. We are thus able to estimate measures of income concentration at the bottom, middle and top parts of the SILC distribution and systematically compare them to those derived from the income tax returns. Our initial estimates suggest that the Gini coefficient for disposable income is significantly lower in the survey data compared to the income tax returns. The aim of the paper is threefold: first, we investigate the sources of income that are mostly responsible for the divergence between the two data sources as well as the income thresholds where this divergence becomes most apparent. Having understood the sources of divergence, we aim to adjust the distribution of the SILC dataset, using the top and bottom-tail information coming from the administrative dataset. Then, by applying state-of-the-art microsimulation techniques we recalculate income taxes and provide refined estimates of income inequality and poverty using the adjusted survey data. Finally, we illustrate the socioeconomic profile of the richest 1% of the Greek population and measure its human and financial capital shares. Our analysis carries important implications for tax policy-making when the extreme tails of the income distribution are accounted for.