Measuring Income Concentration: A Guide for the Confused

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- The work of Piketty, Saez, and Zucman suggests sharply rising income and wealth inequality, falling tax progressivity, and stagnant income growth for the bottom half of Americans.
- Other researchers have reported modestly rising income inequality, growth in wealth inequality that is less sharp, rising tax progressivity, and more robust income growth for lower-income Americans.
- The question of who is right in these debates hinges on a variety of technical measurement questions and assumptions and the quality of various data sources.
- This primer will show the progress that has been made in terms of inequality measurement, and the considerable challenges that remain.

Fiscal Income Concentration among Tax Units

- During the twentieth century, most inequality research focused not on the top one percent or on income concentration even higher up within this group but on inequality below the top.

- Researchers generally relied on easy-to-obtain household survey data, such as the Current Population Survey (CPS).

- The CPS has proven to be an invaluable data source for analyzing income inequality, however it badly understates income among the richest Americans.

- While not the first to have the insight, Piketty and Saez recognized the potential of using tax data to better measure top incomes.

- Piketty and Saez analyzed what they then called "tax return gross income" and now (with Zucman) call "fiscal income"—essentially adjusted gross income reported on individual income tax returns but with the adjustments added back to AGI.

Figure 1. Share of Fiscal Income (Excluding Capital Gains) Received by the Top One Percent of Tax Units

- The Piketty-Saez estimates indicate that the top one percent received 8 percent of fiscal income in 1979, 19 percent in 2012, and 18.5 percent in 2018.

- The Piketty-Saez estimates have been subjected to a number of criticisms over the years.

- For one, many categories of income include taxable and tax-exempt sources, and the latter are not included in fiscal income.

- More generally, tax policy changes can lead to artificial changes in fiscal income concentration.

- The difference between individual capital gains tax rates and ordinary income tax rates can lead to different investment allocations and to changes in executive compensation (such as greater use of stock options).

- If fiscal income estimates do not include capital gains in income, as in Figure 1, then those effects can artificially alter the level and distribution of fiscal income.

- To see how dramatically tax policy changes can affect fiscal income concentration estimates, consider the jump in the top one percent's share shown in Figure 1 between 1986 and 1988.
- That increase accounts for 40 percent of the 1979-to-2018 increase in income concentration.
- However, it is largely artificial, resulting from the Tax Reform Act of 1986.

- More importantly, tax policy changes affect the *long-term* trend in fiscal income concentration too.
- As different tax rates have changed, behavioral incentives have changed, and not just for a year or two.
- Some of those behaviors have produced new income and actually altered the income distribution.
- But others have simply shifted more income onto individual income tax returns instead of being invisible from the perspective of fiscal income.

- Piketty and Saez also have provided a second set of fiscal income concentration estimates that include realized capital gains in income.

- The thick green line in Figure 2 (extending to 2018) displays the share of fiscal income received by the top one percent according to this series.

Figure 2. Share of Fiscal or Market Income (Including Capital Gains) Received by the Top One Percent

- These three trends practically lie on top of each other, except that the Piketty-Saez-Zucman estimate for 2017 is unusually high.

- When capital gains are included, the trend in income concentration is more volatile than the trend excluding capital gains, and it indicates higher concentration at the top.

- The Piketty-Saez series show the top one percent share rising from 10 percent in 1979 to 24 percent in 2007 and then falling to 22 percent in 2018.

- The PSZ series indicate a rise from 10 percent to 24 percent in 2017.

- Clearly, the boom and bust of equities and housing markets affects this trend.
- Like the series that exclude capital gains, the estimates in Figure 2 also are affected by changes in top tax rates.
- This kind of artifact raises the concern that tax policy changes also can have longer-term effects in terms what shows up on individual tax returns—altering top income share series in ways that do not reflect real changes in inequality.

Market Income Concentration among Families and Households

- Fiscal income, however, misses some forms of income that are tax exempt or that are taxed away in corporate income taxes or business property taxes before they are ever enjoyed.

- It also misses underreported income.

- In response, researchers have tried to develop fuller measures of “market,” or pre-tax and -transfer, income.

- Further, the Piketty and Saez series have been criticized for their focus on tax units.

- The number of tax units significantly exceeds the number of families or households, and tax units tend to be poorer (because their incomes are not combined within families or households and because of young dependents with little income).

- Further, the distinction between tax units and families or households is empirically larger below the top one percent.

- That means that income concentration across tax units is larger than income concentration across families or households.

- Finally, the decline in marriage—greater below the top than in the top one percent—has increased the number of tax units and thus the number of tax units that are in the top percentile.
- Without any other changes in inequality, that would increase the top one percent's share.

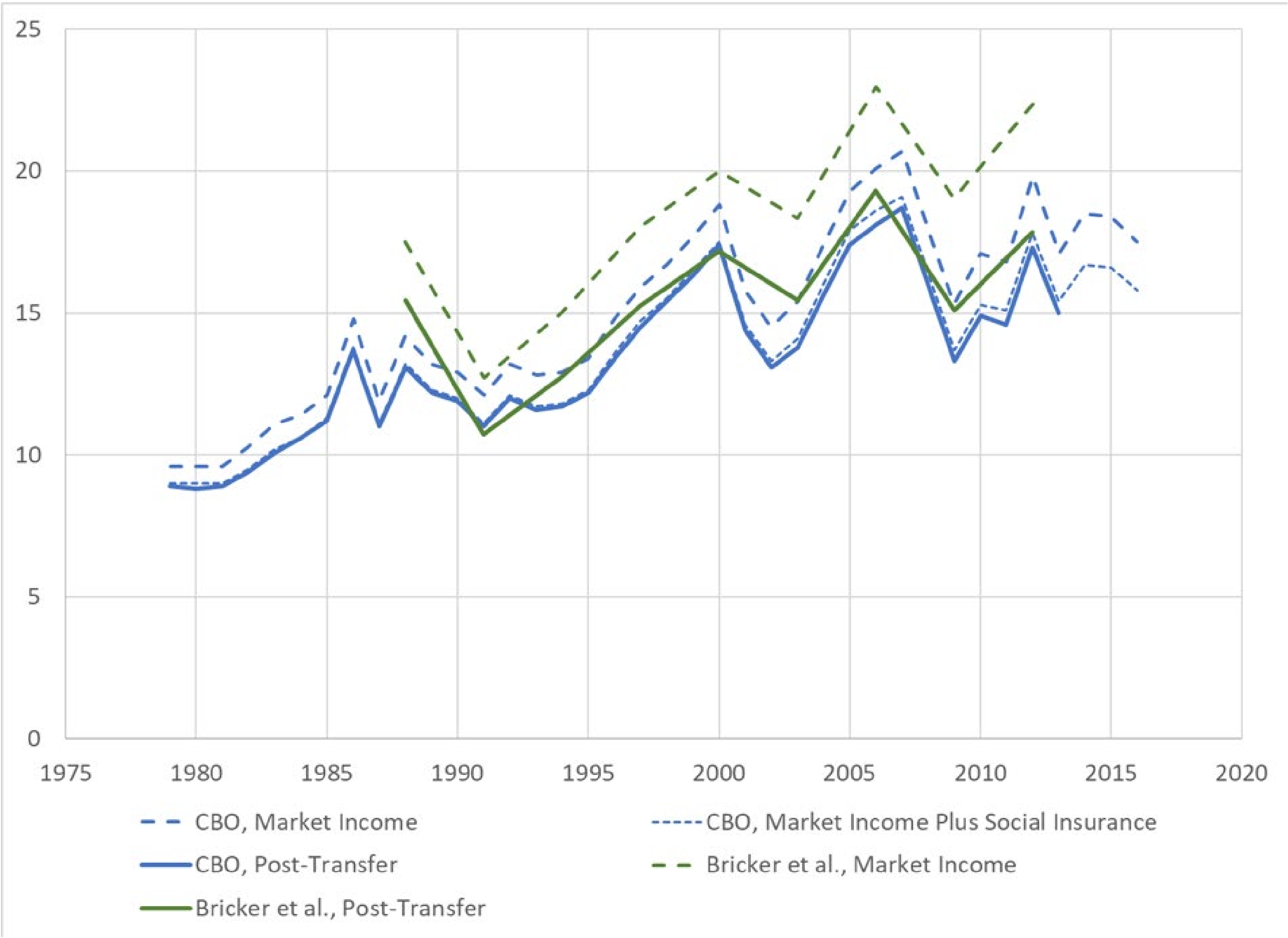
- Figure 2 includes other income concentration trends from the Congressional Budget Office (2019) and from a team of researchers at the Federal Reserve Board (Bricker et al., 2016).
- The Bricker et al. estimates examine inequality across families, and they include employer-provided health insurance in market income.
- Unlike the other estimates discussed so far, they come from the Survey of Consumer Finances rather than administrative income tax data.
- The trend the Fed researchers estimate, nonetheless, is similar to those for the tax unit estimates from tax data in Figure 2, except in 1988.
- The CBO trendline, however, indicates less income concentration and rises less steeply than the tax unit estimates.

Post-Transfer and Post-Tax & -Transfer Income Concentration among Families and Households

- Some researchers have criticized the Piketty and Saez series for not taking account of taxes and transfers.
- For many purposes, it is strange to consider inequality of fiscal or market income, since they take account of no redistribution.
- For other questions—such as how equally markets distribute income—fiscal or market income concentration is more sensible to analyze, though this rationale raises an issue when retirees are included in analyses.

- For these reasons, some researchers have estimated income concentration trends using either pre-tax, post-transfer income or post-tax and -transfer income.
- Figure 3 shows how incorporating transfers lowers the CBO and Bricker et al. income concentration levels, carrying over the market-income-based estimates from Figure 2 (dashed lines).

Figure 3. Share of Post-Transfer Income (Including Capital Gains) Received by the Top One Percent

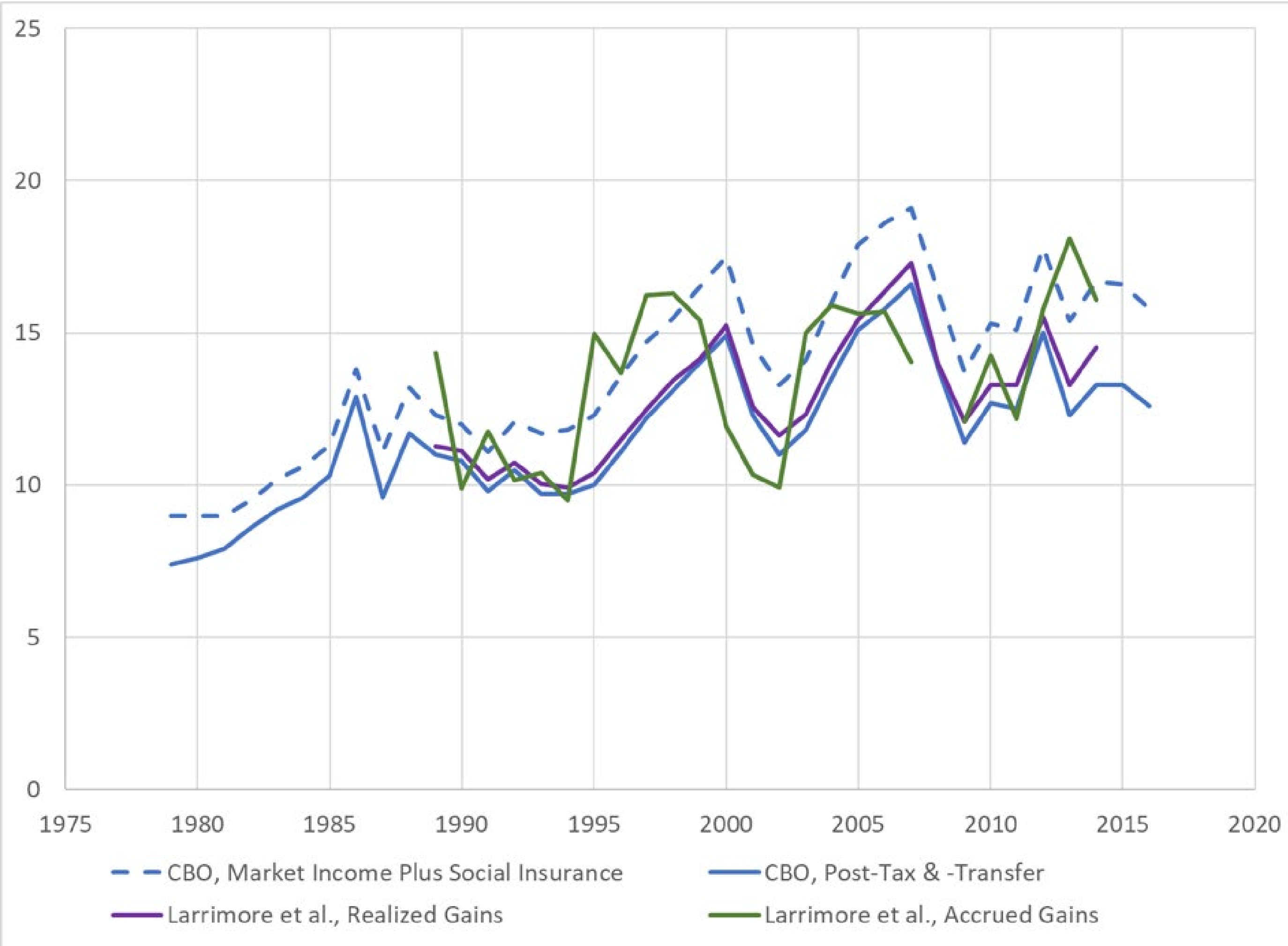


- Unsurprisingly, transfers reduce income concentration, and they reduce the increase in inequality over time (though only modestly in the CBO data).

- More surprisingly, essentially all the reduction in inequality from transfers appears to come from social insurance benefits rather than means-tested transfers.

- The dashed line in Figure 4 carries over the CBO post-social-insurance trend from Figure 3.

Figure 4. Share of Post-Tax and Transfer Income (Including Capital Gains) Received by the Top One Percent



- Taking taxes into account reduces income concentration more than accounting for transfers does, and it reduces the rise in inequality much more.

- The CBO market income estimates in Figure 2 indicate that between 1979 and 2016 the top one percent's share rose by eight points (from 9.6 to 17.5 percent).

- After transfers, the increase was seven points (9.0 to 15.8), but after both taxes and transfers, the increase was only five points (7.4 to 12.6).

- By contrast, the Piketty-Saez estimates for fiscal income in Figure 2 indicate an 11-point rise (10.0 to 20.7).

- Figure 4 sheds light on another criticism of income concentration series that include capital gains.

- Capital gains show up on tax returns only when they are realized.

- Gains that accrue as people hold assets are not included in the Piketty-Saez or CBO income estimates until the assets are sold.

- Another potential problem is that capital gains are included as income by Piketty-Saez and CBO only if they are taxable.
- Home ownership is a primary source of wealth for most Americans.
- However, capital gains from the sale of a home are taxable only above levels few Americans enjoy.
- The combination of taxable gains being counted in a single year when realized and non-taxable gains not being counted as income at all could very well overstate income concentration.
- This issue of when capital gains are counted turns out to affect the year-to-year pattern of inequality trends, but its impact on long-term trends is ambiguous.

National Income Concentration

- Moving from Figure 1 to Figure 4 documents researchers' attempts to create more meaningful income measures by which to consider inequality.
- The studies using expanded definitions of market income capture more of the resources that flow to people.
- Pre-tax, post-transfer income incorporates cash and non-cash transfers, and post-tax and -transfer income accounts for taxes too.

- However, even the studies reviewed above that look at market income miss a substantial share of it, and the studies accounting for taxes address only some of them.

- In recent years, Piketty, Saez, and Zucman (henceforth, PSZ) and Auten and Splinter (AS) have attempted to improve on the earlier work by distributing all national income across rich and poor.

- The studies include not just federal and state income taxes, but local income and property taxes, payroll taxes, estate taxes, sales taxes, and business taxes.

- They also account for government transfers.

- And the two papers allocate national deficits as negative income across Americans and government spending other than transfers as positive income.

- As should be clear, it is much more difficult to allocate many of these sources of income and taxes between poor, middle-class, and rich people than is the case for forms of income that are unambiguously received by taxpayers.

- While national income may represent a more coherent income concept in theory, in practice it presents enormous measurement challenges.

- In Figure 5, the two middle lines carry over from Figure 1 the income concentration estimates from the two research teams that examine the fiscal income of tax units.

Figure 5. Share of Pre-Tax National Income Received by the Top One Percent

- PSZ find that the top one percent’s share of pre-tax income was 12 percent in 1979 and 20 percent in 2015.
- The AS estimates suggest an increase from 9 percent to 13 percent in 2015.
- Thus, inequality is lower in the AS data than in the PSZ data, and it rises less (a four-point rather than an 8.5-point increase from 1979 to 2015).

What accounts for these differences?

- AS find that over half of the difference in the 1979-to-2014 increase between their paper and the PSZ paper (2.4 points of the 4.3-point gap) derives from differences in how underreported income and retirement income are treated.

- Discrepancies between how non-retirement corporate income and sales taxes are allocated explain another one point.

- Together, these four categories explain 80 percent of the gap in inequality growth between the two papers.

- That leaves the question of which team is closer to the truth.

- **Regarding underreporting**, both PSZ and AS allocate unreported income that is incorporated in the US national accounts.

- AS rely heavily on IRS audit studies, which they note are the basis for the national accounts estimates of underreported income.

- PSZ have argued that the audit studies fail to account for the underreported income of complex partnerships.

- **Regarding the discrepancies related to retirement income allocation**, in the online appendix to their paper, AS cite Devlin-Foltz, Henriques, and Sabelhaus (2016), who find the top one percent own 8 percent of retirement wealth—much closer to AS's estimate of the top's share of retirement income (6 percent) than PSZ's (16 percent).

- AS note a clear error on the part of PSZ in that they include rollovers on tax returns as income when they back into aggregate retirement wealth, to which they then apply a rate of return to estimate full retirement income.

- **Regarding sales tax allocation**, AS note that PSZ do so on the basis of labor and business income less savings, which takes no account of retirement income, taxes, or transfers and their impact on purchasing power.

- Arguably, however, rather than coming from the pockets of consumers, sales tax ultimately may come from the pockets of workers and business owners who would see higher pay or profits if not for the taxation.

- **Regarding nonretirement corporate income**, Smith, Zidar, and Zwick (2019) point out that PSZ likely overstate income concentration by allocating corporate retained earnings on the basis of dividends and realized capital gains (both forms of taxable income from C-corporations), since only some—perhaps a minority—of realized gains come from sale of corporate stock (real estate sales being a primary alternative source of gains).

- In effect, they are giving corporate retained earnings to well-off people who don't have ownership in corporations.

- In the online appendix to their 2018 paper, PSZ enumerated several issues with an earlier draft of the AS paper.

- First, they compare the aggregate amount of national income AS estimate going to the top one percent in 2015 to the amount of fiscal income Piketty and Saez (2003) estimate going to it.

- PSZ also conduct a back-of-the-envelope exercise suggesting that AS must be allocating untaxed income (as opposed to fiscal income) in ways that imply dramatically falling inequality in untaxed income over time.

- In their response to PSZ, AS show that the assumptions PSZ use in their back-of-the-envelope exercise about how untaxed income is distributed in the AS estimates are simply wrong.

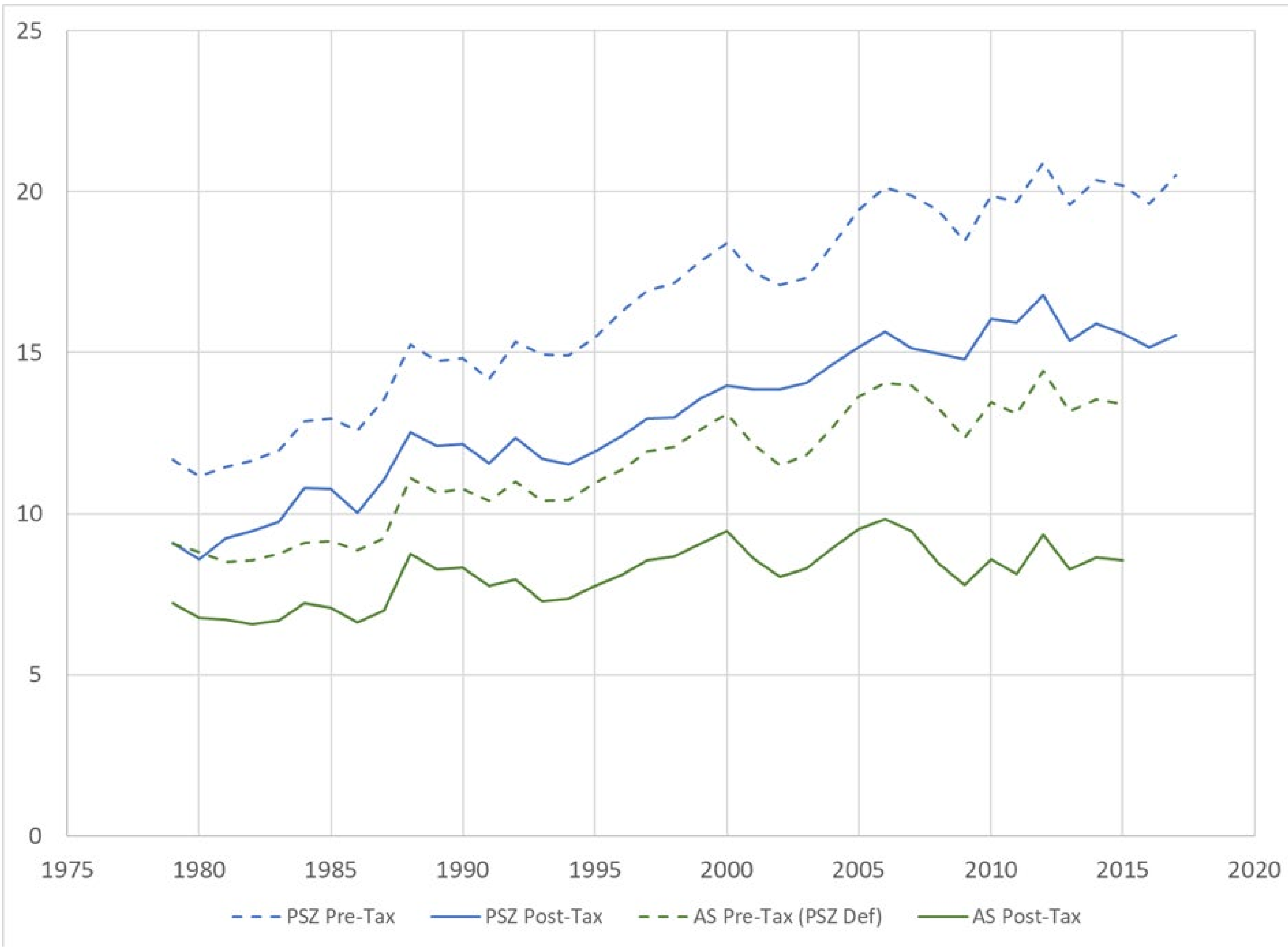
- PSZ have only shown one way to produce, from the distribution of fiscal income by tax unit, a national income concentration trend that happens to align with the AS trend based on ranking individuals by size-adjusted income.

- To close out this primer, Figure 6 carries over the pre-tax trends from Figure 5 and also displays the post-tax estimates from PSZ and AS.

- Most of the difference between the post-tax series, in terms of how much inequality rises, is due to the pre-tax estimates diverging.

- PSZ find the top one percent share rising 6.5 points, from 9.1 percent to 15.6 percent from 1979 to 2015. In contrast, AS report it increasing only from 7.2 to 8.5 percent.

Figure 6. Share of Post-Tax National Income Received by the Top One Percent



Conclusion

- The latest project of inequality measurement—attempting to allocate all national income—is ambitious.
- If it can be reliably achieved, we will be able to understand how economic growth is shared across poor, middle-class, and well-off Americans.
- However, it is simply inappropriate at this stage to make strong claims about the level or trend of income concentration, without heavy caveats.
- It is certainly inappropriate to justify preferred policies on the basis of national income distribution figures and tax distribution figures that are very much contested and under continual development.