

# Comments on Smith, Zidar and Zwick (2021)

Emmanuel Saez and Gabriel Zucman, January 7, 2022.

In NBER Working Paper #29374 (October 2021),<sup>1</sup> Smith, Zidar and Zwick (henceforth SZZ 2021) revise their previously circulated estimates of top wealth shares in the United States, building on Saez and Zucman (2016, 2020; henceforth original and updated Saez-Zucman). The 1978–2016 rise of top wealth shares in these revised SZZ 2021 series is now similar to the one in Saez-Zucman. The main difference is that top wealth shares are lower in SZZ 2021 than in Saez-Zucman throughout the period.<sup>2</sup> This note shows that this difference is due to a larger total wealth denominator used by SZZ 2021, primarily reflecting the choice to include unfunded pensions in wealth and to exclude some debts. Once the definition of wealth is harmonized, top wealth shares in SZZ 2021 are close to those in Saez and Zucman.

From SZZ 2021’s Table 2 (pasted below), it is apparent that the wealth of the rich in 2016 is nearly identical in SZZ 2021 and original Saez-Zucman. As reported in columns 3 and 4, the top 1% owns \$11.5 million on average in SZZ 2021 (up from \$9.4 trillion in SZZ’s previous draft of April 2020) vs. \$11.6 million in original Saez-Zucman. Zooming into the top 1%, the top 1% to 0.1% (i.e., the group from the 99<sup>th</sup> to the 99.9<sup>th</sup> percentile) owns \$6.7 million on average in SZZ 2021 vs. \$6.3 million in original Saez-Zucman. The top 0.1% to 0.01% owns the same amount in both studies, \$32.2 million. The only non-trivial difference is in the average wealth of the top 0.01% (\$255 million vs. \$301 million).

Table 2: Thresholds and Average Wealth in Top Wealth Groups (2016)

| Wealth group                               | Count       | Pref. Threshold | Average wealth |               | Wealth share |               |
|--|-------------|-----------------|----------------|---------------|--------------|---------------|
|  |             |                 | Preferred      | PSZ 2018 Ext. | Preferred    | PSZ 2018 Ext. |
| <b>Panel A. Top wealth groups</b>          |             |                 |                |               |              |               |
| Full population                            | 238,657,000 |                 | \$364,000      | \$317,000     | 100.0%       | 100.0%        |
| Top 10%                                    | 23,866,100  | \$717,000       | \$2,392,000    | \$2,259,000   | 65.7%        | 71.3%         |
| Top 1%                                     | 2,386,700   | \$3,730,000     | \$11,469,000   | \$11,584,000  | 31.5%        | 36.6%         |
| Top 0.1%                                   | 238,700     | \$17,800,000    | \$54,491,000   | \$59,005,000  | 15.0%        | 18.6%         |
| Top 0.01%                                  | 23,900      | \$84,300,000    | \$255,397,000  | \$300,580,000 | 7.0%         | 9.5%          |
| <b>Panel B. Intermediate wealth groups</b> |             |                 |                |               |              |               |
| Bottom 90%                                 | 214,790,900 |                 | \$139,000      | \$101,000     | 34.3%        | 28.7%         |
| Top 10-1%                                  | 21,479,400  | \$717,000       | \$1,383,000    | \$1,223,000   | 34.2%        | 34.7%         |
| Top 1-0.1%                                 | 2,148,000   | \$3,730,000     | \$6,688,000    | \$6,317,000   | 16.5%        | 18.0%         |
| Top 0.1-0.01%                              | 214,800     | \$17,800,000    | \$32,160,000   | \$32,189,000  | 8.0%         | 9.2%          |

*Notes:* This table provides summary statistics on the distribution of wealth across individuals in 2016. Average wealth and wealth shares are calculated under our preferred specification and following the equal-returns capitalization approach in Saez and Zucman (2016) applied at the individual level using the definitions and aggregates in Piketty, Saez and Zucman (2018).

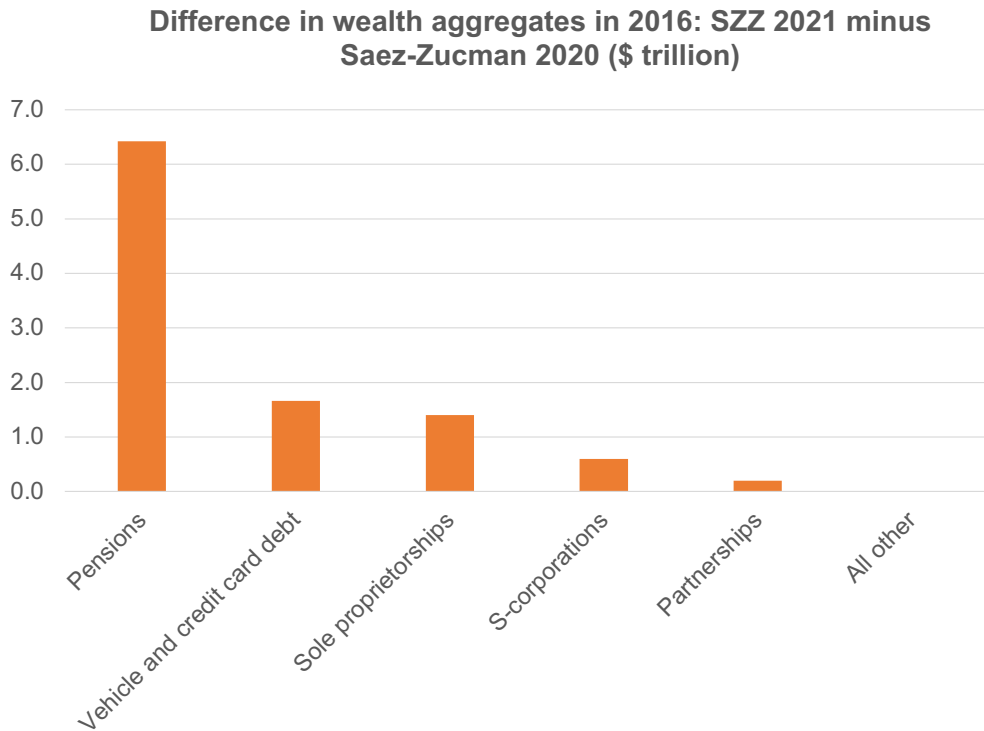
Looking at columns 5 and 6, one can see that despite the similarity of top wealth levels, top wealth *shares* are lower in SZZ 2021 than in original Saez-Zucman. How can this be?

<sup>1</sup>“Top Wealth in America: New Estimates and Implications for Taxing the Rich,” NBER Working Paper #29374, October 2021.

<sup>2</sup>Between 1978 and 2016, the top 0.1% wealth share (among equal-split adults) rises from 6.5% to 18.6% in original Saez-Zucman, 7.1% to 18.4% in revised Saez-Zucman, and 5.7% to 15.0% in SZZ 2021. Revised Saez-Zucman and SZZ 2021 thus both agree that the top 0.1% wealth share has increased by around 10 points, give or take 1 point, since the 1978 nadir, in both cases a multiplication by a factor of 2.6. The main difference is

The reason is that the bottom 90% is much wealthier in SZZ 2021 than in Saez-Zucman (average wealth of \$139,000 vs. \$101,000: a difference of 38%). As a result total wealth is larger in SZZ 2021 (\$86.9 trillion, up from \$75.7 trillion in SZZ’s previous draft) than in Saez-Zucman (\$75.6 trillion in original Saez-Zucman, \$76.7 trillion in revised Saez-Zucman). Because the total wealth denominator is larger, top groups have lower shares of total wealth in SZZ 2021 despite having similar absolute amounts.

Why is total wealth larger by about \$10 trillion in SZZ 2021 relative to Saez-Zucman and SZZ’s previous draft? Both SZZ and Saez-Zucman use the Federal Reserve Financial Accounts as source for wealth aggregates. SZZ 2021 and revised Saez-Zucman use the same release of the Financial Accounts. The Figure below shows the difference in wealth aggregates between SZZ 2021 and revised Saez-Zucman, asset class by asset class.



- By far the most important difference in aggregate wealth is for pension wealth: SZZ 2021 include unfunded defined benefit pensions in wealth (\$6.4 trillion in 2016). This is in contrast to Saez-Zucman and to SZZ’s previous draft which exclude unfunded defined benefit pensions. Unfunded defined benefit pensions are promises of future pensions that are not backed by actual wealth. In 2016, 89% of unfunded defined benefit pensions involve government employees (e.g., school teachers), hence primarily go to the bottom of the distribution. Negligible amounts belong to the top 1%.<sup>3</sup>
- SZZ 2021 exclude vehicle debt and part of credit card debt. This is also in contrast to Saez-Zucman and to SZZ’s previous draft. These liabilities are negligible at the top.
- SZZ depart from the Financial Accounts aggregate for sole proprietorships. They assume that sole proprietorship wealth is \$3.2 trillion while the Financial Accounts value is around

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that the top 0.1% wealth share is lower by 2–3 points in SZZ 2021 throughout the period.

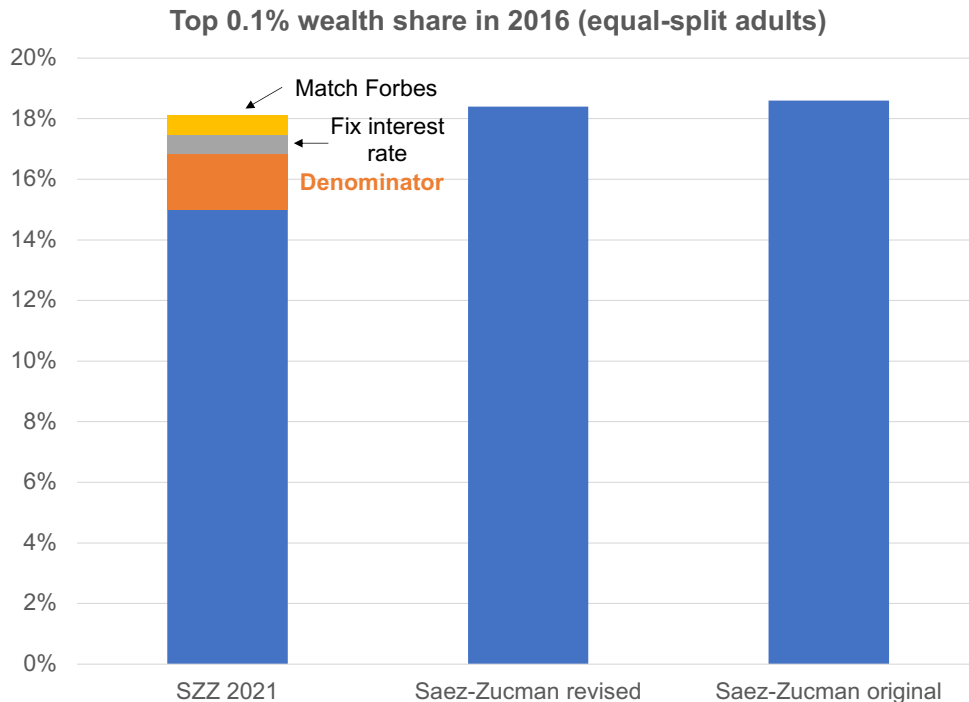
<sup>3</sup>Both SZZ and Saez-Zucman include funded defined benefit pensions, i.e., defined benefit pensions for which there exists actual assets (stocks and bonds) in a pension fund.

\$1.8 trillion.<sup>4</sup> Sole proprietorship wealth is negligible in the top 0.1%.

In addition, SZZ depart from the Financial Accounts aggregate for S-corporations and partnerships. This departure is minor (difference of \$0.7 trillion on aggregate, less than 1% of total wealth). For all other asset classes, SZZ and Saez-Zucman have identical aggregates.

In sum: SZZ 2021 choose to treat unfunded defined benefit pensions as assets and exclude some debts. These choices have no impact on the wealth of the rich, but boost the wealth of the bottom and hence reduce top wealth shares. Whether unfunded defined benefit pensions, vehicle loans, and credit card debt should be included in wealth is a matter of perspective. If unfunded pension claims are included, it would seem conceptually logical to also include the present value of Social Security unfunded claims, as in Sabelhaus and Volz (2020) and Catherine, Miller, and Sarin (2020). As they show this would further add \$22-\$33 trillion in wealth to the denominator, dramatically reducing top wealth shares. If the goal is to simulate wealth tax revenues (cf. SZZ's title: "implications for taxing the rich"), none of this is relevant: including these assets and liabilities does not affect the wealth of the rich, since unfunded pension claims are negligible at the top. Moreover, SZZ inflate the value of sole proprietorships by a factor of around 2. Altogether, these choices boost aggregate wealth by \$9.7 trillion, or 13% of the Saez-Zucman aggregate. Because this added wealth primarily goes to the bottom 90% (and to some extent top 10% to 1%), it reduces top 1% and above wealth shares by close to 13%.

Once the total wealth denominator is harmonized by using the same definition of wealth and the Financial Accounts aggregate for sole proprietorships, the SZZ top shares are close to Saez-Zucman. The Figure below illustrates this fact for the top 0.1%, the focus of SZZ.



<sup>4</sup>The Financial Accounts do not isolate sole proprietorships from partnerships. Saez and Zucman (2020) go back to the raw sources used by the Financial Accounts and show that the underlying Financial Accounts aggregate for sole proprietorships is around \$1.8 trillion. SZZ use the updated Saez and Zucman (2020) aggregate for their study, except for sole proprietorship wealth (no justification is provided).

In SZZ, the top 0.1% wealth share is 15.0% in 2016. Most of the difference with Saez-Zucman (both original and revised) is due to the different total wealth denominator. Excluding unfunded defined benefit pensions, adding back vehicle and non-revolving credit card debt, and matching the Financial Accounts aggregates for sole proprietorship wealth, the SZZ top 0.1% wealth share is 16.8%, close to the revised Saez-Zucman share of 18.4%.

The residual gap is only within the top 0.01% (as we saw the top 0.1%-to-0.01% is identical in SZZ 2021 and Saez-Zucman) and is due to two reasons. First, SZZ 2021 benchmark the very top using the Forbes 400 but not all the way, so that they under-shoot the Forbes 400 wealth by about 20%. This is in contrast to other studies, including original Saez-Zucman (which matched close to 100% of Forbes wealth) and revised Saez-Zucman (which by construction captures 100% of it). The fact that SZZ 2021 under-shoot Forbes is not supported by evidence that Forbes estimates are too high. Rather, it is an artifact of their methodology to match Forbes.

Second, SZZ assume that the top 0.01% earns a very high interest rate of about 6% on their interest-bearing assets owned via partnerships and S-corporations. This interest rate is inconsistent with the interest rate earned by S-corporations (which is no higher than 3.6%), with the asset composition of hedge funds (as reported in SEC-PF forms, suggestive of a rate of 2%–3%), and with matched estates-income tax data; see Saez and Zucman (2020). It is also inconsistent with evidence provided in SZZ 2021 (Appendix Table B1) that partnerships that only pay interest have an interest rate of about 3.25%. The heterogenous interest rates assumed by SZZ only affect the top 0.01%; they have no effect on the rest of the top 1%.<sup>5</sup>

If one uses the actual Forbes estimate for the top 400 and a more reasonable rate of 3% to capitalize interest earned via pass-through businesses, then the SZZ methodology delivers almost the same top 0.1% wealth share as Saez-Zucman.

The important point is that even if the pass-through interest rate of the rich really is 6% and Forbes really over-shoots by 20%, the implications for the top 0.1% wealth are small. The very many deviations that SZZ implement end up having small net effects on top wealth levels, showing that the Saez-Zucman capitalization methodology and results are robust.

To conclude: In Saez and Zucman (2020), we identified two key issues with previous estimates of wealth inequality by Smith, Zidar and Zwick (2020): the use of a too high interest rate to capitalize interest income of the rich (the interest of top-interest earners, when the interest of top wealth-holders should be used), and a large under-estimation of billionaire wealth. We wrote: “Once the conceptually correct interest rate is used to capitalize interest and the SZZ estimates are fixed to match the estimates of billionaire wealth from Forbes, the SZZ estimates are very close to the benchmark Saez and Zucman (2016) series.” SZZ 2021 implements valuable revisions to Smith Zidar and Zwick (2020) along the lines we suggested, for which the authors are to be commended. As predicted, these revisions bring SZZ close to Saez and Zucman (2016). However, at the same time they implemented these corrections, SZZ also enlarged their total wealth denominator by more than \$8 trillion in 2016 by including unfunded defined benefit pensions, removing vehicle loans and some credit card debt. This explains why their new headline top wealth shares remain below Saez-Zucman. But this should not obscure the key fact that SZZ now pretty much agree with Saez-Zucman on the wealth level of the rich (hence on potential wealth tax revenue), and on the dramatic increase in US wealth concentration.

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<sup>5</sup>See SZZ 2021 Appendix Table B.10 Panel A: the top 0.01% wealth share rises by 1.4 point when moving from SZZ to equal returns; the top 1% wealth share also rises by 1.4 point, hence the top 1% excluding the top 0.01% wealth share does not change. The quantitative effect of equal vs. heterogeneous returns is large in Table B.10 because the top 400 is not kept constant. This quantitative effect is much smaller when the top 400 is benchmarked to the Forbes 400.