

Prepared Testimony for Joint Economic Committee Hearing
Hearing Title
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Eric Zwick

I. Executive Summary

Chairman Lee, Ranking Member Maloney, and members of the Joint Economic Committee, thank you for the opportunity to appear today to discuss my research and lessons for measuring economic inequality.

My name is Eric Zwick. I am currently Associate Professor of Finance in the Booth School of Business at the University of Chicago and a Faculty Research Fellow in the programs on Public Economics and Corporate Finance at the National Bureau of Economic Research. I study the interaction between public policy and corporate behavior, with a focus on taxation, fiscal stimulus, and housing. A central goal of this work is to inform policy design where prior knowledge is incomplete. In this research, in addition to working with academics at other universities, I have collaborated with staff economists across the government, including in the Treasury's Office of Tax Analysis (OTA), the Internal Revenue Service (IRS) Research and Statistics Division, the Federal Reserve, and the Congressional Budget Office (CBO).

I will make three points today that I first summarize here:

1. There is a significant scientific consensus that inequality in America has risen, however the academic literature is still learning about the causes of high end inequality. Specifically, top inequality is more human-capital intensive than previously thought.
2. The state of the art on implementing distributional national accounts remains a work in progress. The core issue is that distributional national accounts methods, especially when applied to study the top of the income and wealth distributions, are sensitive to imputation assumptions. These assumptions are in many cases well justified and defended. But they necessarily rely on incomplete data and convenient simplifications. As a result, alternative assumptions can be equally and in some cases better justified, with significant quantitative implications. It is also important to recall that what we observe in tax data is influenced by reporting responses to changing tax rules over time.
3. While the academic literature remains somewhat divided on the technical specifics of distributional accounts, these divisions are not philosophical or political. Rather they reflect an incomplete state of current knowledge. I strongly believe that we can reconcile these differences and continue to build toward a consensus method as time passes and

new data become available. My recommendations for a path forward are predicated on this belief. These recommendations include having the experts at the BEA take on this exercise, as well as several concrete suggestions for new information that can improve distributional national accounts while also aiding tax enforcement.

At the outset, let me also say that I admire Professor Zucman's work despite our occasional friendly disagreements. I also have tremendous respect for the work of his colleagues Thomas Piketty and Emmanuel Saez, who have been asking essential and fascinating questions about economic growth and inequality and who have pioneered methods to answer these questions. My work would not have been possible without theirs.

Furthermore, I want to be clear that my reading of the evidence is not that inequality in America is low or that it has not increased at all. Rather my reading is that the increase has been more modest and the nature of that increase—what factors contribute, who benefits—skews away from the passive capital highlighted in Piketty's (2014) book and toward human capital, labor, and entrepreneurial activity.

II. Top Inequality is More Human-Capital Intensive than Previously Thought

My research seeks to understand the nature of top income inequality and the drivers behind its recent rise. As a first step, I worked with Danny Yagan, Owen Zidar, and researchers at the OTA and IRS to assemble new data from de-identified administrative tax records on the population of businesses in the United States linked to their owners and workers. Our first paper documents the increasing role of pass-through businesses since the Tax Reform Act of 1986 and estimates the tax rate faced by different types of businesses in 2011. Though it may seem an arcane topic, the rise of pass-through business has implications for interpreting trends in income inequality and economic measurement.¹

Within the base of taxable income, nearly half of the rise since 1980 in the top 1% income share comes from pass-through business, which includes the ordinary income earned by partners in partnerships and the profits of S-corporation owners (Figure 1). In a paper with Yagan, Zidar, and Matt Smith, we present a comprehensive analysis of the nature of this income, with the goal of answering the question: how important is human capital at the top of the U.S. income distribution? We define human capital broadly to refer to all factors embodied in people, including labor supply, networks, reputation, and rent-seeking ability.

Combining rich descriptive analysis with natural experiments, we find that human capital, as opposed to financial capital, remains central to rising top incomes in the United States. This

¹Pass-through businesses, including S-corporations and partnerships, are taxed only at the owner level; in contrast, traditional C-corporations are taxed at the firm level and then again at the owner level if they receive taxable distributions.

finding depends crucially on how we think about pass-through income, which we estimate to have a human capital share of 75%. When ignoring pass-through income, a minority of top earners are human-capital rich. However, when defining labor income comprehensively to include that due to pass-through income, this assessment reverses: most top earners are human-capital rich, not financial-capital rich (Figure 2). Hence, the human capital component of pass-through income transforms one's view of the typical top earner.

This finding is bolstered by the basic facts that our new data reveal. Most top earners are pass-through business owners—a group that includes consultants, lawyers, doctors, and owners of large non-publicly traded businesses, such as auto dealers and wholesale distributors. In 2014, more than 69 percent of the top 1 percent of income earners and more than 84 percent of the top 0.1 percent of income earners accrued some pass-through business income. In absolute terms, that amounts to more than 1.1 million pass-through owners with annual incomes above \$390,000 and 140,000 pass-through owners with annual incomes of more than \$1.6 million. In both number and aggregate income, these groups far surpass that of top public company executives, who have been the focus of much inequality commentary (Figure 3). In terms of age, they more closely resemble the working-age distribution of top wage earners and not the older age distribution of top passive-capital-income earners (Figure 3).

III. The Tax Code Affects Economic Measurement

Another way of thinking about our results is that, while pass-through income is taxed as business profits, its underlying nature more closely reflects the labor income of business owners. This fact underscores a more fundamental issue facing those who use tax data to measure and study economic inequality. The nebulous boundary between labor and capital income, especially among business owners who can flexibly characterize their income to reduce tax, introduces uncertainty into the data. When we compare data from different points in time under different tax regimes, we must take into account how the tax code affects the income being measured.

For example, while we found that the majority of the growth since 1990 in entrepreneurial income reflects real economic growth, a significant share (approximately 30%) reflects businesses reorganizing to pass-through form (Figure 4). This reorganization effect occurs because pass-through owners report income in pre-tax form, whereas C-corporation owners report income after the corporate tax. It does not represent a real increase in pre-tax income inequality.

In preliminary follow-on work, we also find that tax-induced characterization of labor income can account for as much as one-third of the decline in the corporate sector labor share since the 1980s (Figure 5). In other words, neglecting how taxes influence income reporting

would lead us to overstate how much economic growth has accrued to capital instead of labor.

The issue is even more severe when comparing data across countries. For example, in many European countries (such as in France) where income inequality series based on tax data imply low and stable inequality, closely-held private businesses are even more important for economic activity than in the U.S. (Figure 6). These countries often have tax rules that encourage business owners to keep income within the firm and off their personal tax returns. Because of data limitations, research into how important this issue is for measuring inequality is less advanced outside the U.S.

IV. Distributional Accounts Have Tremendous Potential

This brings me to distributional accounts, which Piketty, Saez, and Zucman (2018, henceforth PSZ) developed to address this and other concerns with inequality measures derived from tax data alone. The most important concern is that income distributions from tax data do not fully capture the macroeconomic flows in the national accounts, because much of national income is not subject to personal tax. As mentioned above, the problem of missing income retained in firms is “solved” with distributional accounts, which use ownership information to allocate this missing income to people. In principle, this approach can also help reconcile estimates across years and countries. Beyond providing a full macroeconomically consistent inequality series, the distributional accounts also attempt to measure both pre-tax and post-tax-and-transfer distributions, which can be used to evaluate how government policy affects inequality.

Recently, economists at the Federal Reserve have released the results of an analogous project that attempts to distribute national wealth. The Distributional Financial Accounts layer detailed household wealth data from the Survey of Consumer Finances onto the official aggregates in the U.S. Financial Accounts, thereby integrating two alternative data sets that can teach us about wealth inequality. In addition, because the DFAs will be released quarterly and in “near-real-time,” we can now study how wealth evolves into and out of recessions and inform policymakers on the fly.

These resources have tremendous potential to further our understanding of economic activity. As an empirical researcher, I am always excited about the prospects of new data. But I believe a timely and well done distributional accounts product would have value well beyond the academic community.

It is worth noting that such series are most informative about inequality at a point in time, relative to what they tell us about the distribution of growth. Studying the latter will require panel data that allow us to follow the same people over time and adjust for life cycle forces

and temporary shocks.²

Vi. Distributional Accounts are a Work in Progress

In our investigation of human capital income, we implemented a full replication of Piketty, Saez, and Zucman's (2018, henceforth PSZ) distributional account series.³ In the process, we established that our conclusions about the human-capital rich hold even after accounting for this broader notion of income, which includes capital income missing from tax data.

This work has given me insight into the state of the art on implementing distributional national accounts. The methods in the Saez and Zucman (2016, SZ) and PSZ papers are based on strong assumptions that entail significant uncertainty, which could be made more salient. For example, PSZ's approach has been questioned in a recent paper by Gerald Auten at OTA and David Splinter at the Joint Committee for Taxation (JCT) (henceforth AS), who bring to the task an intimate awareness of the tax data and relevant legislative history. AS also attempt to construct distributional accounts, motivated as an improvement to the CBO's measures of broad market income. The takeaway from the AS paper is still that income inequality has risen, but the trend is less dramatic than in the PSZ series (Figure 7).

Why the difference between these papers? The specific details are fairly technical, but the core issue is that distributional national accounts, especially when applied to study the top of the income distribution, are very sensitive to imputation assumptions. The methods take components of national income not on tax returns and make educated guesses about who owns what. PSZ's imputation assumptions for capital income depend on SZ's method for estimating top wealth—they use these wealth estimates to allocate unobserved capital income. AS use a different approach: they combine surveys, tax data, and data from other sources to allocate this income. My reading of this back and forth is that PSZ's assumptions are in many cases well justified and defended. But they necessarily rely on incomplete data and convenient simplifying assumptions. As a result, alternative assumptions can be equally and in some cases better justified, with significant quantitative implications.

A new paper with Smith and Zidar uses our data to refine the wealth estimates of SZ and study implications for income and wealth taxation. This paper is still a work-in-progress, so the numbers are preliminary. We believe the conclusions are robust, but are still working to reconcile our findings and address questions Saez and Zucman have raised.

The wealth estimation method proposed by SZ scales up, or “capitalizes,” income observed

²See Auten and Splinter and Kopczuk, Saez, and Song for a discussion of the conceptual issues here.

³We refer to this series as “Imputed National Income” to contrast it with the tax income-based series because the distributional accounts impute missing components of national income to individuals based on observed tax income.

on tax returns to estimate wealth. This approach relies upon having an accurate mapping of income to wealth, or equivalently knowing the rates of return earned on different types of income by different groups of people. Currently, their estimates deploy the simplifying assumption for converting income flows to wealth that everyone gets the same return within an asset class. In contrast to recent estimates of wealth concentration based on the Survey of Consumer Finances or estate tax data, which show high levels of wealth concentration and modest increases, SZ's estimates show rapidly increasing concentration in recent years (Figure 8). They also show that fixed income wealth rapidly increased as a share of top portfolios, in contrast to the portfolio composition revealed in other data sets.

Several studies have raised concerns about these estimates, in particular, arguing that the equal returns assumption can bias wealth estimates toward the top when top wealth holders actually earn higher returns than average. Kopczuk (2015) suggests these adjustments are especially important when average returns are close to zero, such as was the case for interest rates in the wake of the Great Recession. Other papers, especially Bricker, Henriques and Hansen (2018) and Fagereng, Guiso, Malacrino and Pistaferri (2016), also emphasize that higher returns at the top affect these wealth estimates.

We follow these authors and consider the effect of allowing returns to differ across people. We draw on new data from a variety of sources to discipline our approach. We also correct for bias at the geographic level, which allows us to produce wealth estimates by state and metropolitan area. Our preliminary findings reveal that wealth concentration is lower and more dependent on private business ownership than previously thought (Figure 8). We stress that our results do not imply that wealth concentration is low or irrelevant from a policymaker's perspective: the top 1% in our preferred series has as much wealth as the bottom 90%.

Overall, we view our work as helping to clarify how capitalization works in practice, to emphasize the quantitative importance of relaxing the equal returns assumption, and to make more salient the uncertainty that remains. Acknowledging the uncertainty in current practice, the sensitivity to specific assumptions, and the need for additional data are especially important as statistical agencies consider adopting this approach to produce distributional national accounts (Figure 9).

Last, and this is really important, if SZ's wealth estimates are biased, this will bias their distributional income estimates. And if their distributional income estimates are biased, this will bias their estimates of average tax rates along the income distribution. Splinter has recently raised concerns about these tax rates, which largely correspond to concerns about distributional income estimates. It is important to keep in mind that, despite this debate about the current level of progressivity, there is nearly unanimous agreement that the tax-and-transfer system has become less progressive over the past few decades.

Vii. Additional Discussion

For the interested reader, I summarize four important outstanding issues in producing distributional accounts:

1. **Underreported income.** There is a large gap between pass-through income in PSZ distributional national income and in fiscal income, despite the fact that in principle all of this income should appear on tax returns. This gap owes primarily to the allocation of underreported income included in proprietors' income in the national accounts. AS identify this factor as the most important difference between their estimate of the top 1% share and imputed national income in PSZ.
2. **Retained earnings.** PSZ allocate the household share of aggregate retained earnings to individuals in proportion to the sum of the individual's observed dividends and realized capital gains. The rationale is that when C-corporation income does appear on personal tax returns, it appears as either dividends or realized capital gains. However, published IRS reports indicate that at least 25% and as much as 75% of realized capital gains are not from the sale of C-corporate stock and are instead gains from real estate and other asset sales or carried interest. Realized capital gains are much larger than dividends and much more concentrated among top earners. Hence, imputing retained earnings in proportion to each individual's sum of dividends and 100% of realized capital gains likely allocates too much retained earnings to the top.
3. **Pensions.** AS also raise concerns about the use of certain nontaxable pension distributions, which they argue reflect pension account rollovers. Because these rollovers capture the entire value of retirement accounts, they should not be mixed with taxable pension flows when being used to infer pension wealth and to allocate missing pension income.
4. **Fixed income.** The largest component of non-business capital income that differs from fiscal income and contributes to top 1% growth is interest income. With distributional national income ranks, the taxable interest series is substantially lower than the imputed national income series and fell as a share of national income in recent decades. I believe this is related to concerns about SZ's approach to estimating fixed income wealth.

VI. A Fact-Finding Mission is a Clear, High-Payoff Step Forward

While the academic literature remains somewhat divided on the technical specifics of distributional accounts, these divisions are not philosophical or political. Rather they reflect an

incomplete state of current knowledge. I strongly believe that we can reconcile these differences and continue to build toward a consensus method as time passes and new data become available. My recommendations for a path forward are predicated on this belief.

First, the academic literature will continue to make progress, but it is not too early to propose that the experts at the BEA, who have intimate knowledge of what goes into the national income accounts, take on the exercise as well. In doing so, I expect they will rely on the methods proposed by both PSZ and AS, along with other contributions to this debate. It would be natural for the BEA to follow a process similar to that of the Federal Reserve, which would include developing estimates, preparing a technical report, and distributing and presenting their findings to solicit feedback from the broader community.

Second, several outstanding areas of disagreement could be assessed through improved information reporting and collection. Requiring partnerships and closely held C-corporations to trace and report their ultimate owners would aid the production of distributional accounts and help improve tax enforcement.⁴

Third, expanding the IRS random audit programs, whose estimates form the basis of assumptions about the distribution of underreported income, would be extremely valuable.

Fourth, improving data collection on retirement account balances could help the BEA allocate undistributed pension income.

Of course, such additional information reporting requirements entail compliance and privacy costs that must be weighed in deciding whether they are worthwhile.

VII. Conclusions

A better understanding of the facts about inequality is important because we want to narrow the set of policy instruments to those most likely to work. The list of potential solutions is long and diverse, including those that target the top—such as taxes on wealth and high incomes, regulation of industry, charitable-giving reforms, and restrictions on political contributions and lobbying—and those that target the bottom—such as direct transfers, support for public education, affordable housing policy, and other expansions to the safety net. Whether a particular policy will have the desired effect depends on whether we correctly target the root causes and worst consequences of inequality.

Therefore, a clear next step is to continue the kind of fact-finding mission taking place here today. This committee could facilitate a substantive conversation about the following questions:

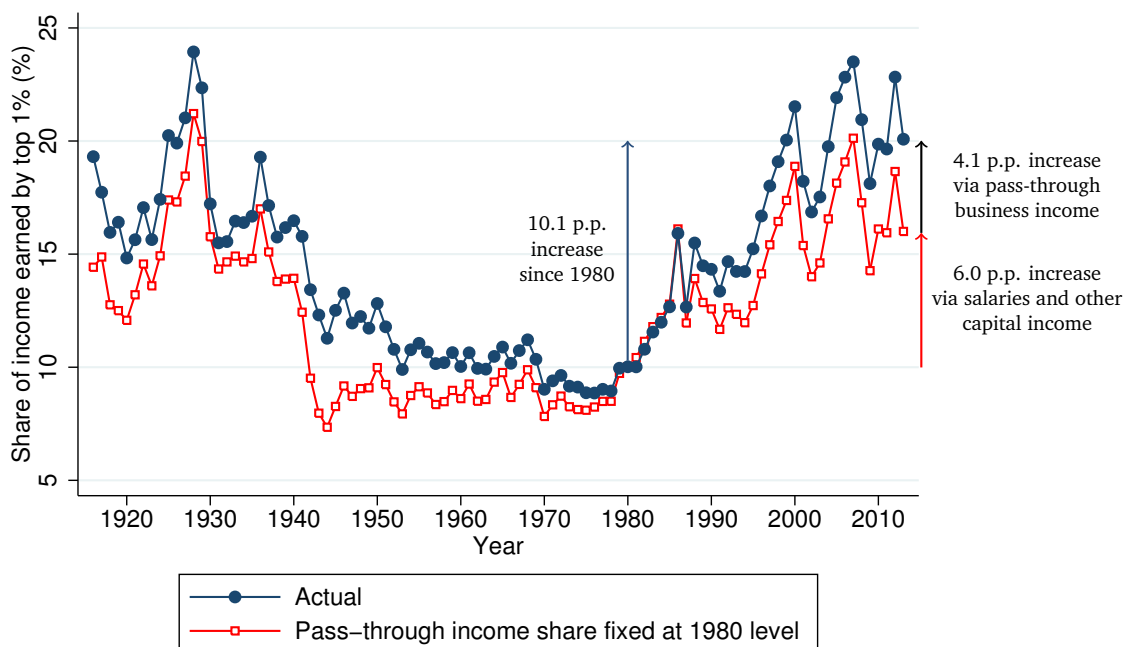
⁴Partnership ownership is especially opaque: in Cooper et al, we estimate that 20% of the income goes to unclassifiable partners, and 15% of the income is earned in circularly owned partnerships.

- What do we know about why inequality has risen?
- What role have demographic shifts and changes in the structure of the pension system played in measuring these trends?
- What are the consequences for disparities in economic opportunity, especially for children?
- What is the relative importance of multi-generational wealth as opposed to self-made wealth?
- What are the effects of inequality on the distribution of political influence?
- And is wealth inequality related to income inequality, for which human capital plays a significant role, or do wealth inequality trends represent a distinct phenomenon?

A fact-finding mission would serve three purposes. First, it would help inform policymakers and the public, moving everyone toward a common set of facts. Second, it would shed light on which policy ideas best suit the problem. Third, it would inject needed humility into the debate, given our current incomplete state of knowledge.

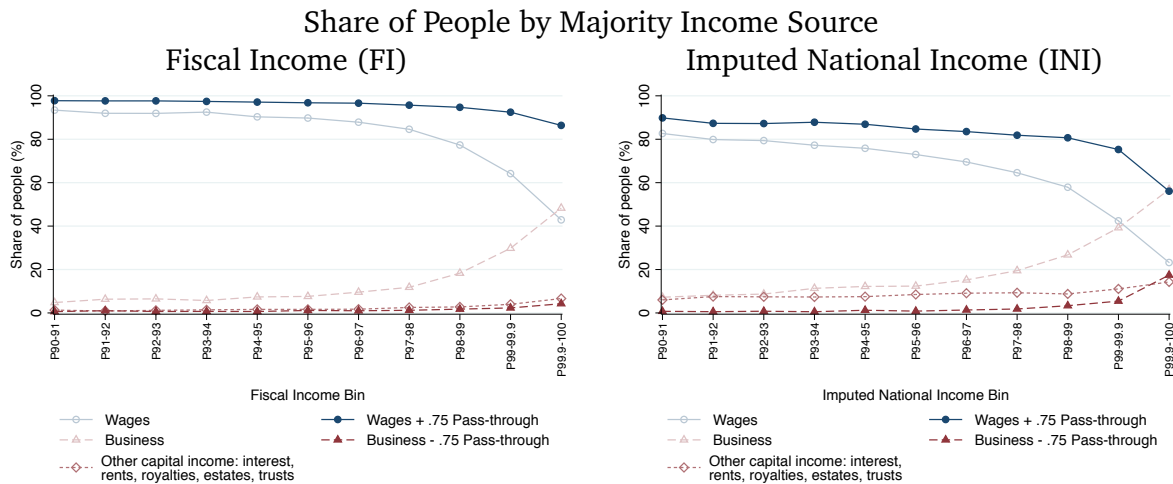
Thank you for your time and consideration of my testimony.

Figure 1: Role of Pass-Through Income in Rising Top-1% Income Share



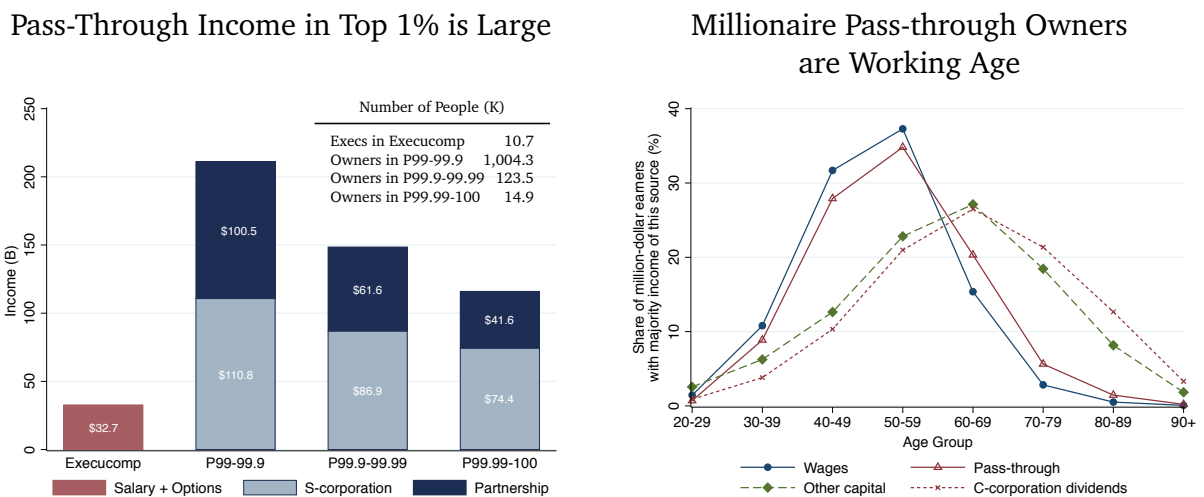
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Figure 2: Are Top Earners Human-Capital Rich?



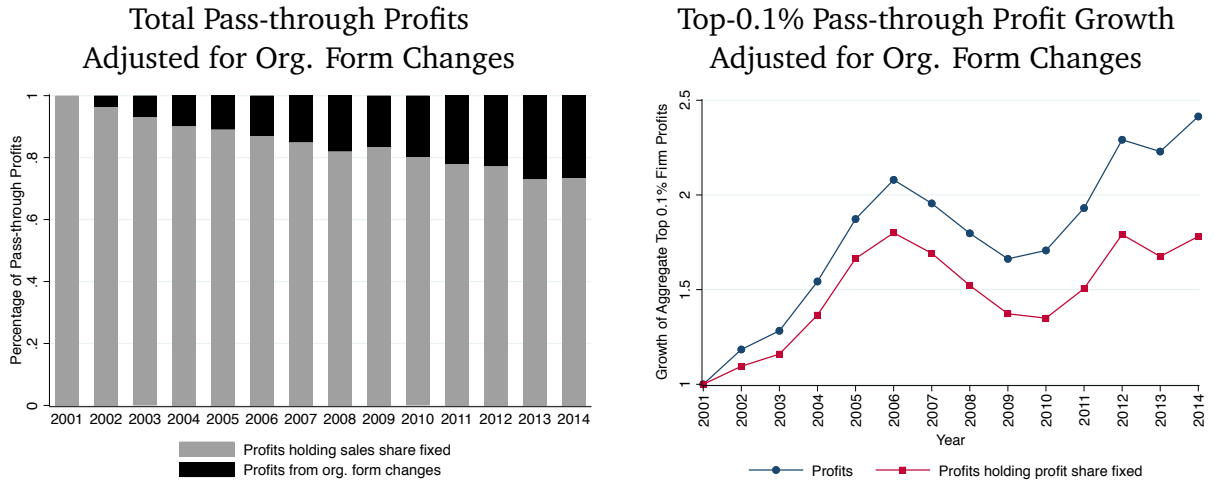
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Figure 3: Working-Age Pass-Through Owners Preval at the Top of the Income Distribution



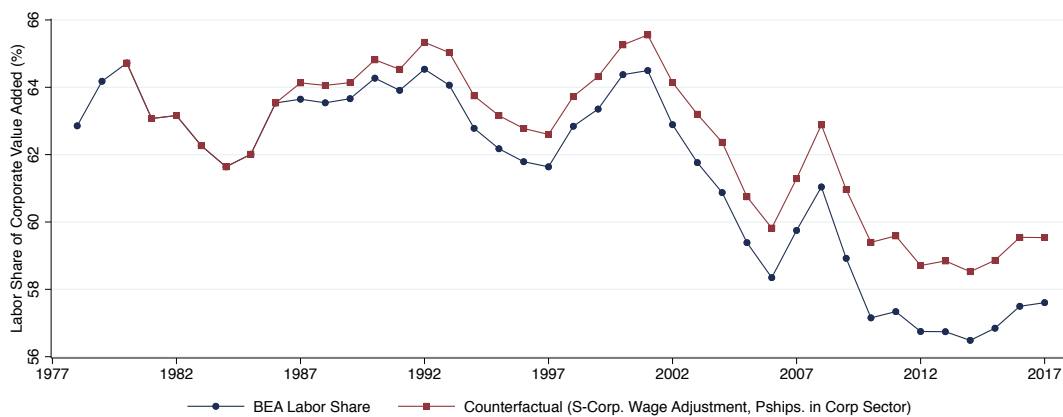
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Figure 4: Growth in Pass-through Profits Accounting for Organizational Form Changes



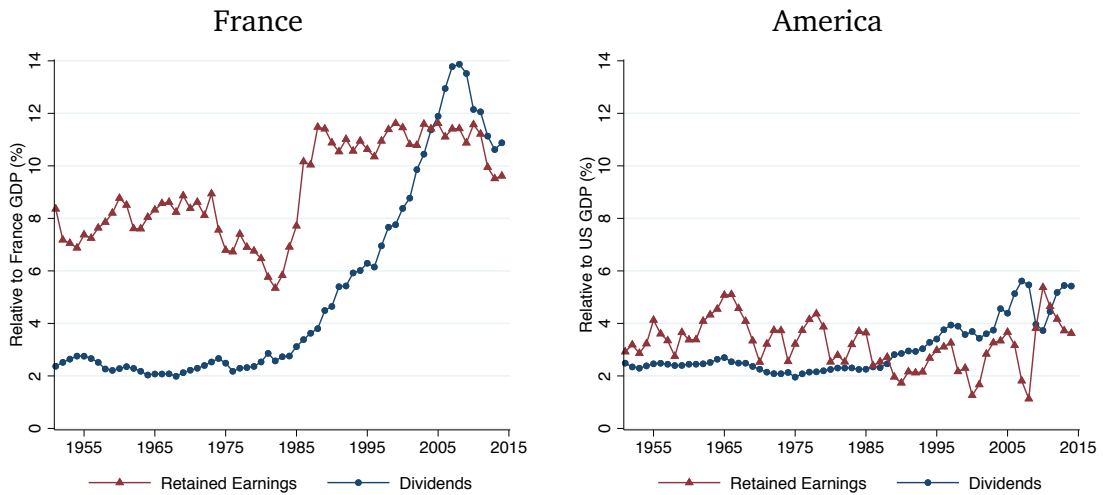
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Figure 5: Adjusted Corporate Sector Labor Share Accounting for Pass-Throughs (1978–2017)



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Figure 6: Inequality and Retained Earnings in France and America



Imputed National Income in France versus America

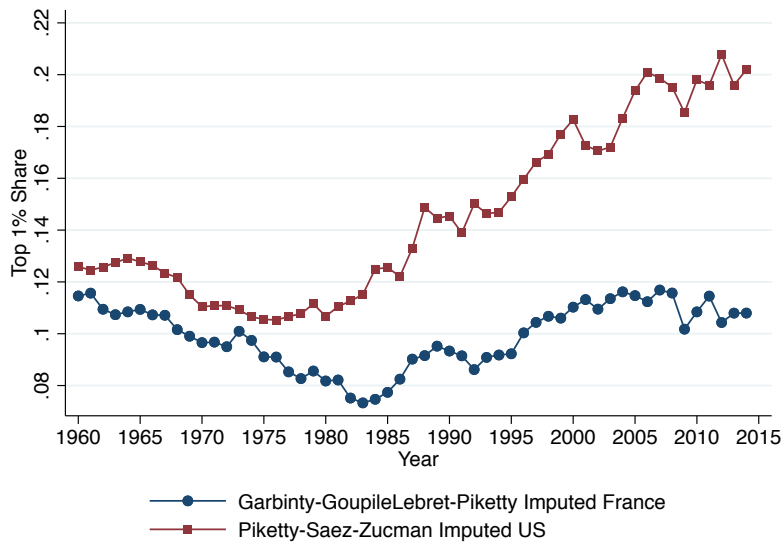


Figure 7: Comparing Fiscal and Alternative Distributional Accounts Series

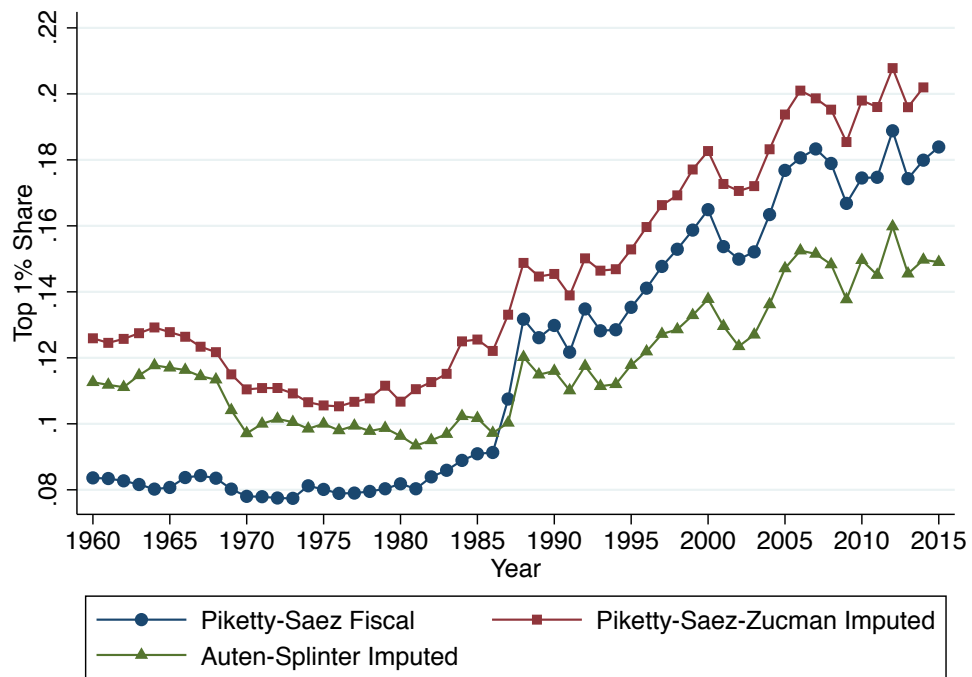
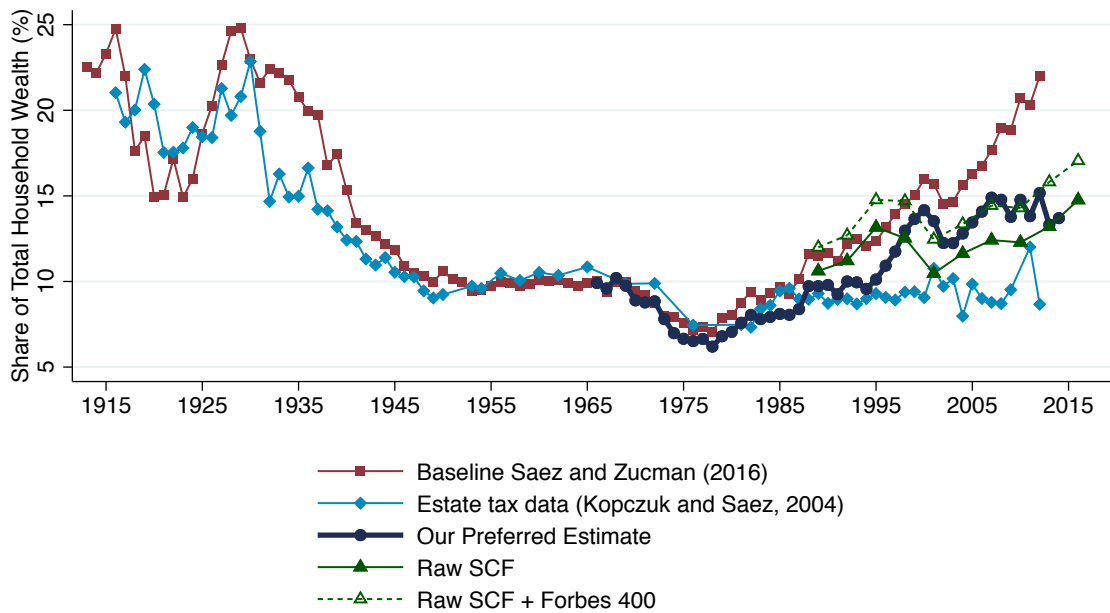
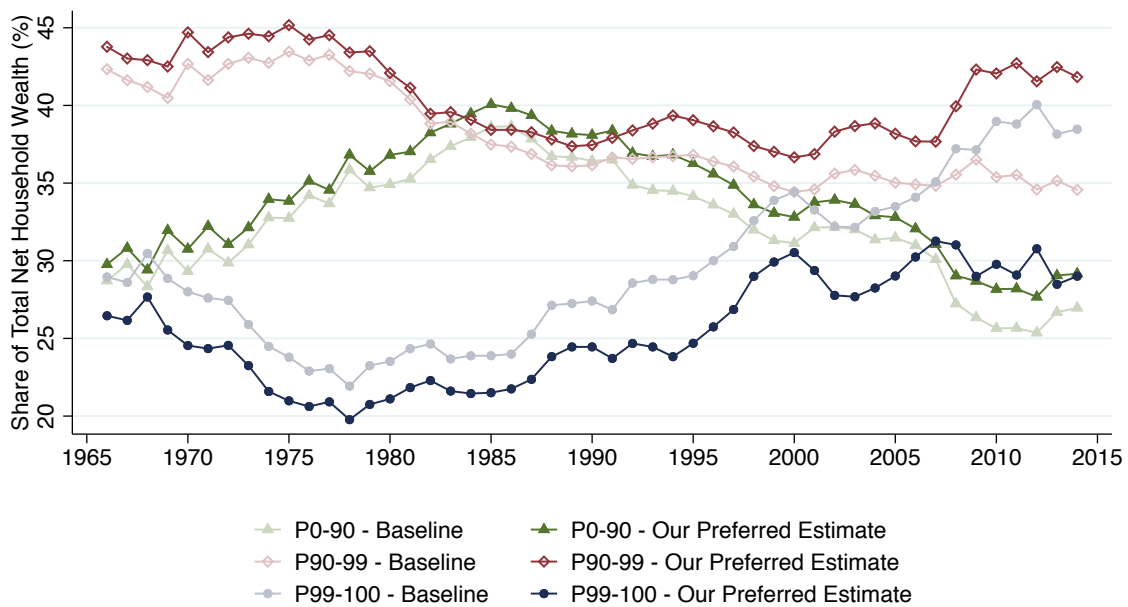


Figure 8: Wealth Concentration in the United States
 Top 0.1% Share of Total Wealth

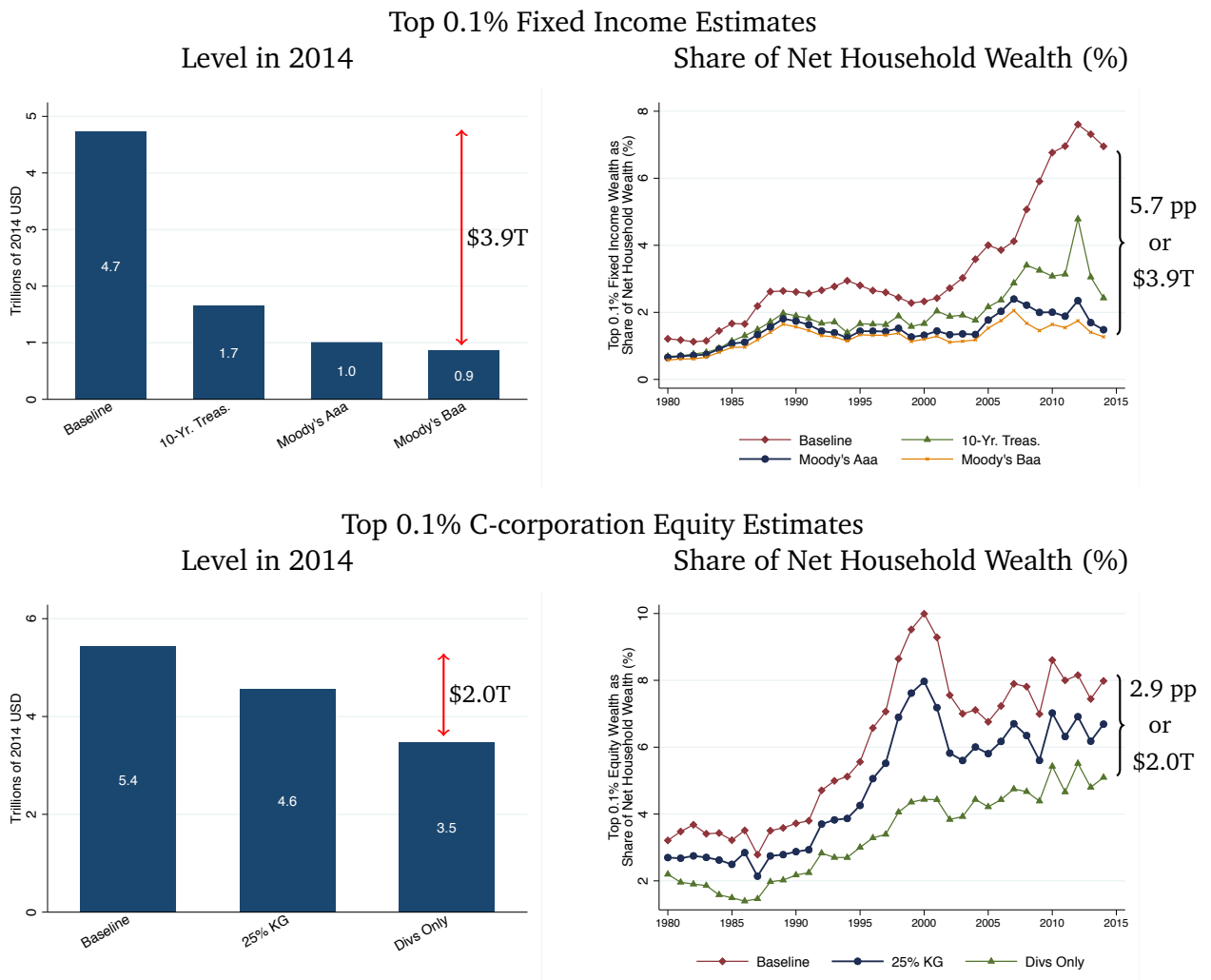


Wealth Shares of the Bottom 90%, P90-99, and Top 1%



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Figure 9: Sensitivity of Top Wealth Estimates to Assumptions



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