

Employee Ownership and Wealth Inequality: A Path to Reducing Wealth Concentration

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Working Paper 22-021



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Abstract

This paper examines the impact of an economy-wide shift to broad-based employee ownership on wealth concentration in the United States. Relying on government data, we show that if all private firms became 30% employee-owned, the wealth distribution would be profoundly altered. Those currently in the bottom 90% of the wealth distribution would see substantial gains, with many of these gains going to traditionally marginalized communities. Only the top 1% of wealth holders would see a significant decrease in their wealth, although the decline would still be only 14% of their net wealth, on average.

1. Introduction

For more than a decade, growing wealth inequality in the United States has been a focus of politicians, regulators, and business leaders. This issue has become increasingly salient in the business world, where investors and other stake-holders continue to increase pressure on management to take into account the external consequences of operating decisions such as pay practices. For example, Amazon announced pay increases for more than 500,000 U.S workers in 2021 after intense pressure from employees, unions, and investors amid growing concerns about the working conditions of frontline workers.¹ While U.S. policy makers have focused on two remedies to reduce inequality — a wealth tax and an inheritance tax — we identify a way to directly impact wealth inequality while also potentially increasing the productivity and profitability of American businesses: broad-based employee ownership. We conduct an empirical exercise to document how an economy-wide shift to greater employee ownership would impact the wealth gap. Using data from the Survey of Consumer Finances, the distribution practices of the most common form of employee ownership, and the standards created by Certified Employee-Owned, we examine how the wealth of various populations would change if all businesses were to become 30% employee-owned.

The results are stark, providing robust evidence that this shift — or even a less dramatic shift in employee ownership — would offer great gains in wealth for those at the bottom of the wealth spectrum while having a small, negative impact on the wealthiest people in the United States. The Gini coefficient would decrease nearly 10% from 0.85 to 0.77, lower than any point measured by the Survey of Consumer Finances since its inception in 1962². The wealth share of those with below-median wealth increasing from 1% to 6% of total wealth. Among populations

¹ <https://www.ft.com/content/99f39826-aeff-4d39-a799-5554647ee6a4>

² Wolff, Edward N. *A Century of Wealth in America*. Belknap, 2017. Page 56

most represented at the lower end of the wealth spectrum, the net wealth of the average black family would increase more than 400%, from \$24,100 to \$106,271, and those with no high school diploma would see similar gains. Overall, all demographic groups would see gains to their median wealth. On the other end of the spectrum, the decline in wealth would be concentrated among the top 1%. Those in the 90th to 99th percentile of wealth would see an average decline in net worth of 1%, while the wealth of the top 1%, who currently have an average of \$28.4 million in assets, would see a 14% decline to \$24.4 million, on average.

While this paper focuses narrowly on the quantifiable impact of employee ownership on the wealth gap, there have also been documented positive spillover effects of employee ownership to capital owners. Employee-owned companies have been shown to be more productive³ and to grow faster,⁴ and are less likely to go out of business.⁵ In this way, broad-based employee ownership can offer a win-win solution to wealth inequality that improves the fortunes of those who have gained the least from our current system while also benefiting managers and businesses.

This paper proceeds as follows. Section 2 provides background on wealth inequality and asset ownership in the United States. Section 3 describes the methodology used in our empirical study. Section 4 reports the results. Section 5 concludes.

³ https://www.researchgate.net/publication/228248987_The_ESOP_Performance_Puzzle_in_Public_Companies

⁴ https://www.researchgate.net/publication/286471693_Firm_Survival_and_Performance_in_Privately_Held_ESOP_Companies

⁵ https://research.upjohn.org/up_press/241/

2. Background

Wealth inequality in the United States has been steadily increasing since the late 1970s.⁶ In 2019, the share of wealth controlled by the top 1 percent of wealth holders is about 37%, just below the record of 36% set in 2015. Meanwhile, the middle 40 percent of wealth holders has seen its share decline during this period, bottoming out at 26% in 2014 by rising slightly. The largest driver of this inequality is ownership in businesses.⁷ Among the top 1% of wealth holders, the largest asset holdings are ownership stakes in private businesses, accounting for \$10.8 million, or 38%, of their entire portfolio. Their second-largest holdings are directly held stocks and stock mutual funds, at \$5.1 million, or 18% of their portfolios. The same holds for those in the top 10% of asset owners, with 29% of their assets being composed of direct business ownership. In terms of the wealth share, the numbers are economically meaningful. The wealthiest 10% of Americans own 94% of business wealth, 92% of directly held shares of public companies, and 93% of stock mutual funds. On the other hand, for households with below-median wealth, the amount held in businesses is inconsequential. On average, they own \$825 in private company stock and \$522 in public shares, representing only 0.25% of all business ownership.

Table 1 – Mean of Selected Assets, Debt and Net Worth by Wealth Percentile

	<25	25 - 49.9	50 - 74.9	75 - 89.9	90 - 98.9	Top 1%
Total Assets	\$32,733	\$129,089	\$346,901	\$845,781	\$3,510,845	\$28,472,658
Stock Mutual Funds	\$63	\$260	\$1,888	\$19,559	\$216,701	\$2,447,539
Combined Mutual Funds	\$1	\$2	\$34	\$1,359	\$24,349	\$237,947
Directly held stocks	\$81	\$639	\$4,081	\$18,898	\$241,336	\$2,645,509
IRAs/Keoghs	\$250	\$1,531	\$13,528	\$84,700	\$426,330	\$1,003,742
Businesses	\$270	\$1,380	\$9,854	\$47,519	\$544,554	\$10,758,949
Total Debt	\$46,361	\$70,882	\$110,564	\$141,980	\$252,798	\$660,628
Net Worth (Status Quo)	-\$13,628	\$58,208	\$236,338	\$703,800	\$3,258,047	\$27,812,030

Note: Data in this table are from the 2019 Survey of Consumer Finances (SCF), Top 1% does not include Forbes 400.

⁶ Inequality data are obtained from <https://wid.world/country/usa/>.

⁷ The statistics in this section are from the Surveys of Consumer Finances, accessed at <https://www.federalreserve.gov/econres/scfindex.htm>.

Table 2 – Selected Assets, Debt and Net Worth Distribution by Wealth Percentile

	<25	25 - 49.9	50 - 74.9	75 - 89.9	90 - 98.9	Top 1%
Total Assets	0.96%	3.78%	10.15%	14.84%	36.97%	33.31%
Stock Mutual Funds	0.03%	0.14%	0.99%	6.18%	41.09%	51.57%
Combined Mutual Funds	0.01%	0.01%	0.18%	4.26%	45.81%	49.74%
Directly held stocks	0.04%	0.31%	1.95%	5.43%	41.60%	50.67%
IRAs/Keoghs	0.10%	0.59%	5.21%	19.56%	59.09%	15.46%
Businesses	0.04%	0.21%	1.48%	4.28%	29.42%	64.58%
Total Debt	10.77%	16.47%	25.69%	19.79%	21.14%	6.14%
Net Worth (Status Quo)	-0.46%	1.95%	7.91%	14.13%	39.25%	37.22%

Note: Data in this table are from the 2019 Survey of Consumer Finances (SCF), Top 1% does not include Forbes 400.

Given this concentration in business ownership, it seems likely that more broadly distributing the ownership stakes in companies could have significant implications for the wealth gap. The general concept of broad-based property ownership has a long history in America. Founding Fathers such as Thomas Jefferson saw broad-based land ownership as an essential aspect of a functional republic. The Homestead Act of 1862 created 4 million family farms that provided a generational source of wealth⁸. The notion of broad-based employee ownership itself appears early on in industrialization, for example in the late 1800s and early 1900s, companies like Procter & Gamble and Pillsbury had extensive profit-sharing programs⁹.

The most substantial recent development in broad-based employee ownership came with the creation of the Employee Stock Ownership Plan (ESOP) as part of the [Employee Retirement Income Security Act \(ERISA\)](#) in 1974. In the 47 years since the passage of ERISA, employee-owned companies have become a quiet but growing part of the economy. Today there are [over 5,500 employee-owned companies](#) employing over 2 million Americans. While most employee-owned companies are ESOPs, there are several alternative structures including Worker

⁸ Blasi, Freeman and Kruse. *The Citizen's Share*. Yale University Press, 2014. Page 37.

⁹ Ibid Pages 65 & 137.

Cooperatives, Employee Benefit Trusts, and even companies implementing broad-based ownership through stock options or direct share ownership.

3. Methodology and data sources

Demonstrating that employee ownership represents a viable remedy to wealth inequality requires answering the following question: what would happen to wealth inequality in America if every company were employee-owned? We take the following two-step approach to estimating the impact of this shift. First, we calculate the currently existing joint distribution of household net worth, wage income, and U.S. business ownership (both public and private) in the United States. Second, we reallocate a portion of the U.S. stock holdings in line with the distribution rules used by the ESOP, the most common form of employee-owned company, and the definition of employee-owned set by Certified Employee-Owned. Finally, we look at the change in wealth inequality from before and after the reallocation to understand the potential impact of transitioning to an employee-owned economy.

3.1 Data sources

We use two data sources to calculate the joint distribution of household net worth, wage income, and U.S. business ownership. The primary data source is the [2019 Survey of Consumer Finances](#) (SCF), a triennial survey of the finances of American households run by the Federal Reserve Board. The SCF is nationally representative with a sample of over 5,000 Americans (details on survey design can be found [here](#)). We downloaded the data used in our analysis on November 24, 2020, from the Federal Reserve Board [website](#). We used the Summary Extract Public Data file because it defines key concepts like net worth in line with existing research. The

only variables required for our analysis that are not in the Summary Extract Public Data file are the occupation variables (x7402, x7412), which we added from the full data extract.

To ensure alignment with existing work, we first replicated key tables from the [September 2020 Federal Reserve Bulletin](#)¹⁰. Specifically, we looked at income by demographics (p. 7) and net worth by demographics (p. 11), as well as income and wealth quantiles (p. 37). Our tables are generally aligned (+/- 1%) but did not always match exactly, possibly due to minor data updates.

Because the sampling design of the Survey of Consumer Finances explicitly excludes the wealthiest households, we supplement the SCF data with information about the Forbes 400, an annual list of the 400 richest households in America. Specifically, we add an observation to the SCF to represent the combined wealth of the Forbes 400. According to [this press release](#), the aggregate net worth of the 2019 Forbes 400 was \$2.96T. Because this observation represents 400 households (many on the list are families, others on the list are related but listed separately) we gave this row a weight of 400. [Bricker, Hansen, and Volz \(2019\)](#)¹¹ present a method for adjusting the SCF weights when adding the Forbes 400 to the SCF. We follow their methodology, but because the minimum wealth to be included in the 2019 Forbes 400 is greater than the maximum wealth recorded in the 2019 SCF, the SCF weights are unchanged.

3.2 Calculating business ownership and wage income

After supplementing the SCF with the Forbes 400, the next step is to estimate domestic business ownership and wage income for each observation in our combined data set. At the highest level, domestic business ownership can be broken down into companies that are traded on public

¹⁰ Bhutta et al. *Changes in U.S. Family Finances from 2016 to 2019: Evidence from the Survey of Consumer Finances*, 2020.

¹¹ Bricker, Hansen and Volz. *Wealth concentration in the U.S. after augmenting the upper tail of the survey of consumer finances*, 2019.

exchanges (i.e., public companies) and companies that are closely held (i.e., private companies). In the SCF, each household's ownership of private businesses is recorded directly in the "BUS" variable. We assume that 100% of this variable is privately held U.S. companies. Unlike private business ownership in the SCF, the ownership of U.S. public companies is spread across multiple variables including:

- STOCKS - directly held stocks
- STMUTF - stock mutual funds
- COMUTF - combined mutual funds
- IRAKH - individual retirement accounts/Keoghs

Adding further complication, these variables likely contain assets other than U.S. public company stock, for example, ownership of foreign corporations. To estimate U.S. public company ownership, we make the following assumptions:

- 70% of stock holdings in these variables are U.S. stock and 30% are foreign stock
 - 70/30 is the ratio of total U.S./foreign stock holdings for U.S. citizens calculated in [Rosenthal & Burke \(2020\)](#) based on the Federal Reserve Z1 data.
- For variables that likely contain more than just stock (COMUTF, IRAKH), we assume that 60% of the value is in stock and use the above assumption regarding the U.S./foreign breakdown
 - In the SCF there are \$6.7T in directly held stocks and \$897B in directly held bonds, so this ratio feels conservative.

- A portfolio with a 60/40 combination of stocks and bonds is a common recommendation among financial planners, so this assumption aligns with industry practice.

Finally, to calculate wage income, we use the SCF variable WAGEINC, which is the total wage income of the household.

Details on asset ownership are not available in the public release of the Forbes 400. We contacted Forbes to get this information but we did not get a response, so we assumed that 56% of the \$2.96T of Forbes 400 wealth was held as ownership of U.S. businesses (public or private). 56% is the portion of assets observed in the top 1% in the SCF held in private businesses (BUSS), directly held stocks (STOCKS), and stock mutual funds (STMUTF). We think this is a conservative estimate because in the SCF business ownership as a percent of net worth increases with wealth. If anything, we think the Forbes 400 would have a higher portion of their wealth in business ownership than even the top 1%. We are not able to determine the wage income of the Forbes 400, but this can be solved with a simple assumption. Our method for handling this is described below in section 3.4.

3.3 Verifying our assumptions about U.S. public company ownership

To verify that our assumptions are reasonable, we check to see how our estimate of the total value of public business ownership in the United States aligns with an alternative approach using a different data source. Specifically, we compare our estimates with [Rosenthal and Burke \(2020\)](#)'s¹² analysis of U.S. public equity ownership by tax status. Rosenthal and Burke use the

¹² Rosenthal and Burke, Who's Left to Tax? US Taxation of Corporations and Their Shareholders, 2020.

Federal Reserve Z1 data set and accounts for pass-through and foreign direct investment to calculate the following ownership values (all values from page 14):

Tax Category	US Public Equity (\$B)
Defined Benefit (DB) plans	\$3,102
Defined Contribution (DC) plans	\$3,220
Foreigners	\$15,988
Government	\$368
IRAs	\$4,690
Life insurance separate accounts	\$1,065
Nonprofits	\$1,955
Taxable accounts	\$9,498
<i>Total</i>	<i>\$39,886</i>
<i>Note: Data in this table are from Rosenthal and Burke (2020)</i>	

For comparison, a summary of the total value of our estimate of the value of public company stock in the relevant SCF variables is presented in Table 4.

Variable	SCF Totals (\$B)	% U.S. stock	U.S. Equity (\$B)
STOCKS	\$6,713	70%	\$4,699
STMUTF	\$6,103	70%	\$4,272
COMUTF	\$615	42%	\$258
IRAKH	\$8,352	42%	\$3,508
<i>Total</i>	<i>\$21,782</i>		<i>\$12,737</i>

In total, we estimate \$9.2 trillion in the SCF that would be held in taxable accounts (STOCKS, STMUTF, and COMUTF), as well as \$3.5 trillion held in IRAs. These values are roughly aligned with the \$9.5 trillion in taxable accounts and \$4.7 trillion in IRAs in Rosenthal and Burke (2020). The alignment between our estimate and a third-party analysis drawing on different data sources gives us confidence that our assumptions are reasonable.

3.4 Calculating the wealth distribution under employee ownership

Combining the SCF and the Forbes 400 datasets gives us an estimate of the joint distribution of household net worth, business ownership, and wage income in 2019. To go from this distribution to the hypothetical wealth distribution if every business in America were employee-owned requires us to define what we mean by employee-owned and articulate a specific methodology for reallocating business ownership.

Among the employee ownership community, the generally accepted definition for when a company can be called “employee-owned” is when 30% of the company is owned by non-founder employees in a broad-based manner (access is open to everyone and concentration of ownership is limited). This standard, as well as the specific criteria required to verify it in practice, were established by [Certified Employee-Owned](#) in 2017. As of September 2021, [more than 330 companies](#) have joined Certified Employee-Owned and it is the only national certification program for employee-owned companies. For these reasons, we have chosen 30% as our standard.

Today, more than 95% of employee-owned companies use an Employee Stock Ownership Plan (ESOP). While the specifics vary from company to company, the most common method for allocating shares given to employees in an ESOP is that shares are granted to (not purchased by)

employees in proportion to their wage income up to a maximum value set annually by the IRS. For 2019, this maximum value was [\\$280,000](#).

With these two precedents in place, our analysis is straightforward. We first calculate the total value of U.S. businesses that would be owned by employees if every company in America was employee-owned. In total, this amounts to \$16.7 Trillion of public and private business equity, arrived at by adding together 30% of:

- SCF variable BUS (\$23.1 Trillion)
- The estimated U.S. public equity portions of SCF variables STOCKS, STMUTF, COMUTF, and IRAKH (\$12.7 Trillion)
- The estimated Forbes 400 wealth in U.S. businesses (\$1.7 Trillion)
- The value of U.S. public companies owned by foreigners, governments, and non-profits as estimated by [Rosenthal and Burke \(2020\)](#) (\$18.3 Trillion)

Next, we distribute this business ownership in line with the ESOP distribution rules. Because we do not know who works for which firm, we treat all private sector workers as if they were participating in one large ESOP (the implications of this are discussed in our assumptions section). Specifically, we calculate the eligible income (`wage.eo`) for each SCF data point using `WAGEINC` and the occupation variables added from the full data extract. These occupation variables are 8-level factors, with level 0 corresponding to unemployment, levels 1 through 6 roughly corresponding to private sector employment, and level 7 roughly corresponding to government employment. Because only private sector employees are eligible for employee ownership, and

each private sector employee in a household is eligible only up to the 2019 ERISA max of \$280,000, we calculate wage.eo as follows:

- If the household has 0 private sector employees, wage.eo = \$0
- If the household has 1 private sector employee, wage.eo = min(WAGEINC, \$280,000)
- If the household has 2 private sector employees, wage.eo = min(WAGEINC, \$560,000)

As mentioned in section 3.1, we do not have the wage income for the Forbes 400, so we set their wage.eo at the maximum value of \$560,000 (twice the ERISA max for 2019).

Next, we calculate the total eligible income across the entire dataset by summing the product of wage.eo and the SCF weight variable WGT, which is adjusted to sum to the total number of households in America. Employee ownership wealth is then allocated to each data point in proportion to eligible wage income:

$$EO.tot * (wage.eo * WGT) / \text{sum}(WGT * wage.eo)$$

Because each data point represents a group of households, the total wealth due to employee ownership must be adjusted by the WGT variable, so the actual allocation is calculated as:

$$\text{wealth.eo} = EO.tot * wage.eo / \text{sum}(WGT * wage.eo),$$

where the denominator represents the weighted total of all eligible wage income in the data. Finally, we must adjust the prior wealth categories to reflect a reduction in wealth. We reduce all variables mentioned above proportional to their contribution to wealth.eo.

4. Empirical results

Tables 5 and 6 examine the average wealth shares of different wealth quantiles and contrasts current data with wealth shares should all businesses become 30% employee-owned. Those in the bottom quartile of wealth ownership currently have a negative wealth of -0.4%. Under a broad-based employee ownership regime, they would see their wealth increase to 1.5%. Among all households with wealth below the 90th percentile, their wealth would increase with employee ownership. Those in the 90th to 99th percentile would see a decrease in their share from 38.1% to 35.8%, while those in the top 1% would see a decrease from 36.1% to 29.1%. Historically, this redistribution would lead to a wealth share for the top 1% not seen since 1995.¹³

Table 5 – Mean Net Worth By Wealth Percentile Before & After EO

	< 25	25 - 49.9	50 - 74.9	75 - 89.9	90 - 98.9	Top 1%	Forbes 400
Net Worth (Status Quo)	-\$13,628	\$58,208	\$236,338	\$703,800	\$3,258,047	\$27,812,030	\$7,400,000,000
EO Wealth Allocation	\$63,238	\$100,284	\$119,084	\$175,702	\$287,291	\$335,927	\$1,278,840
Change From EO	\$63,095	\$99,488	\$113,165	\$142,527	-\$29,048	-\$4,117,750	-\$1,241,921,160
Net Worth (EO)	\$49,467	\$157,696	\$349,503	\$846,327	\$3,228,999	\$23,694,279	\$6,158,078,840

Note: Top 1% does not include Forbes 400.

Table 6 – Net Worth Share By Wealth Percentile Before & After EO

	< 25	25 - 49.9	50 - 74.9	75 - 89.9	90 - 98.9	Top 1%	Forbes 400
Net Worth (Status Quo)	-0.4%	1.9%	7.7%	13.7%	38.1%	36.1%	3.0%
Change With EO	2.0%	3.0%	3.1%	1.9%	-2.3%	-7.0%	-0.6%
Net Worth (EO)	1.5%	4.9%	10.8%	15.6%	35.8%	29.1%	2.4%

Note: Top 1% does not include Forbes 400.

¹³ Inequality data were obtained from <https://wid.world/country/usa/>.

Table 7 further disaggregates net wealth by various demographics and compares current net wealth with what net wealth would be under broad-based employee ownership. The median household would see its net wealth nearly double, from \$121,760 to \$230,076. The average (mean) household would see a much smaller increase, given that wealth is concentrated and highly left-skewed. Those in the bottom 20 percent of the income distribution would see the greatest gains, with their mean wealth increasing roughly four-fold from \$10,060 to \$40,000. In addition, all

Table 7 – Mean Wealth by Demographics				
	Status Quo		Employee Ownership	
	Mean	Median	Mean	Median
All	\$769,828	\$121,760	\$812,530	\$230,076
Percentile of usual Income				
Less than 20	\$112,781	\$10,060	\$120,434	\$40,000
20 - 39.9	\$138,577	\$46,300	\$179,814	\$113,856
40 - 59.9	\$222,384	\$93,640	\$296,793	\$200,600
60 - 79.9	\$425,566	\$203,200	\$543,752	\$371,552
80 - 89.9	\$861,042	\$384,000	\$1,044,697	\$671,202
90 - 98.9	\$2,970,265	\$1,361,150	\$3,071,986	\$1,793,352
Top 1%	\$21,720,284	\$10,228,000	\$18,843,960	\$9,776,250
Age of reference person				
Less than 35	\$76,338	\$14,000	\$187,175	\$114,580
35 - 44	\$437,773	\$91,105	\$567,453	\$244,152
45 - 54	\$833,793	\$168,800	\$942,290	\$332,451
55 - 64	\$1,176,515	\$213,150	\$1,190,917	\$315,910
65 - 74	\$1,215,917	\$266,070	\$1,145,853	\$282,500
75 or older	\$958,447	\$254,900	\$880,931	\$259,133
Education of reference person				
No high school diploma	\$137,578	\$20,780	\$177,817	\$83,955
High school diploma	\$304,589	\$73,890	\$367,040	\$165,601
Some college	\$374,014	\$89,280	\$439,357	\$194,948
College	\$1,516,914	\$308,800	\$1,539,918	\$456,450
Race or ethnicity of respondent				
White	\$980,549	\$189,100	\$1,005,359	\$311,626
Black or African-American	\$142,330	\$24,100	\$223,232	\$106,271
Hispanic or Latino	\$165,541	\$36,050	\$252,095	\$132,171
Other or multiple race	\$656,603	\$74,500	\$750,948	\$189,731

Note: Data in this table are from the 2019 Survey of Consumer Finances (SCF), demographic analysis does not include Forbes 400.

earners making less than those in the top 1 percent of income would see wealth gains. The top 1% of earners would see a 4.4 percent decline in average net wealth, from \$10,228,000 to \$9,776,250.

Similarly, when examining the data by age cohorts, education cohorts, and race cohorts, the shift to broad-based employee ownership would result in gains for all cohorts, with those at the lower end of the wealth distribution seeing the greatest gains. The median wealth of families without a high school diploma would increase fourfold, from \$20,780 to \$83,955. The median wealth of black families would increase even more, from \$24,100 to \$106,271.

5. Conclusion

In this paper, we have presented an argument that a transition to broad-based employee ownership could reduce wealth inequality to historic lows by granting all private-sector employees an ownership stake in their workplace. This transition would increase the average net worth for the bottom 90% of the wealth distribution while only having an impact on the top 1%. There are many practical considerations that must be considered regarding such a transition, but our analysis demonstrates the transformative potential of this idea and makes the case that a transition to employee ownership should be considered alongside options like a wealth tax and an inheritance tax.

Appendix: Major assumptions and their possible impacts on our findings

As with all hypotheticals, our analysis makes assumptions about the world. In making assumptions, we attempted to capture all first-order effects of a transition to an employee-owned economy on the distribution of wealth. This section discusses the most important assumptions in our work and their likely directional impact on our findings.

A.1 The total value of U.S. businesses does not change moving to an employee-owned economy.

Research on employee-owned companies over the past 40 years suggests they are more productive and grow faster due to increased cultural buy-in from employees. For example, academic research has found that employ-owned companies have seen faster revenue growth, headcount growth, productivity growth, and increased profitability compared to non-employee-owned companies. The [National Center for Employee Ownership](#) provides a nice summary of this work¹⁴.

If employee-owned companies are more profitable and grow faster, then we should expect a switch to an employee-owned economy to increase the total value of U.S. companies. Not only would this magnify the wealth increase of those benefiting in our analysis — generally the bottom 90% of the wealth distribution — but this would also mitigate the wealth lost by those who are worse off in our analysis, principally households with an average net worth in the top 1%, as they would own a smaller piece of a larger pie.

If the productivity gains are large enough, it is possible that everyone would be better off switching to an employee-owned economy. This might sound hyperbolic, but today there are sophisticated, profit-maximizing actors who are implementing broad-based employee ownership

¹⁴ <https://www.nceo.org/article/key-studies-employee-ownership-and-corporate-performance>

plans based on this very argument, for example, the industrials division of [private equity firm KKR](#). The authors do not know the exact portion of KKR portfolio companies granted to employees, but it is likely much smaller than 30%.

For the above reasons, we feel our assumption regarding the unchanging value of U.S. businesses under a switch to an employee-owned company is conservative in terms of our findings.

A.2 Employee ownership does not involve wage substitution.

In our analysis, we make no changes to household income based on an assumption that the increase in wealth for private sector workers does not come with a corresponding decrease in wage income. Standard industry practices justify this assumption. First, ESOPs, the most common legal structure, are typically created through leveraged transactions with loans financed by banks or sellers. Loan payments are made from company profits, not from employee contributions.

Second, wage concessions were part of some high-profile employee ownership failures in the 1990s, for example, United Airlines. As a result, standard practice in the industry for 20+ years has been to advise against wage substitution. Finally, anecdotes collected by the authors from employee-owned companies report that job seekers or even current employees will switch from an employee-owned company to a non-employee-owned company to make 25 to 50 cents an hour more in wages, despite receiving several thousand dollars a year more in ESOP contributions.

For the above reasons, we feel it is reasonable to assume that employee ownership wealth does not come with a corresponding decrease in wage income.

A.3 We ignore firms.

Employee ownership is fundamentally a firm-based approach to ownership where the ownership benefit is distributed only to active employees at a firm. However, accounting for firms in a hypothetical analysis would require understanding the joint distribution of wage income, business ownership, and corporate relationship at the individual level as well as the value of every business in America. Such data are certainly not publicly available, if they exist at all.

Instead, we use the SCF to determine the joint distribution of wage income and business ownership and treat all private sector employees as if they work for one large employee-owned firm that distributes ownership in line with the rules of the most common structure used by employee-owned companies, the ESOP. If all businesses in America had the same value per employee, ignoring firms would produce the same result as accounting for them. However, if firms have varying value per firm, which is likely the case today, then we would be overestimating the reduction of wealth inequality.

We are not sure about the magnitude of this effect, but we suspect this is a second-order effect. Ultimately, we justify the decision to make this assumption on the grounds of necessity.

A.4 We ignore time

Our analysis takes a one-shot approach to reallocating wealth to employee-owners that includes all private-sector employees. In reality, benefits are allocated over time with employee-owners receiving a share grant each year, often with an eligibility period that excludes employees that have been at the company for less than a year. If turnover is higher among lower-wage employees, then ignoring the impacts of time would cause us to overestimate the reduction in wealth inequality.

We are not sure about the magnitude of this effect, but we suspect this is a second-order effect. Ultimately, we justify the decision to make this assumption on the grounds of necessity.

A.5 We ignore defined benefit (DB) pension plans

According to the [Department of Labor](#), “a defined benefit plan promises a specified monthly benefit at retirement.”¹⁵ Strictly speaking, switching to an employee-owned economy would not impact the benefits that employees are to receive from these plans because they have been defined ahead of time. At the same time, many, if not all, DB pensions plans hold the stock of U.S. companies and if switching to an employee-owned company were to result in a large reallocation of assets away from DB pension plans, that could impact their ability to meet future obligations to participants. This is not guaranteed to happen, for example as outlined in A.1 switching to an employee-owned economy could actually result in an increased value of the stock held by DB pension plans, but it’s certainly an important practical concern to be understood further before attempting an economy-wide transition to employee ownership.

While DB pension plans are not included in the Survey of Consumer Finances, there are [methods](#) for allocating DB wealth across SCF data¹⁶. Figure A in Bricker, Goodman, Moore, and Volz 2020 charts the impact of including DB wealth on various wealth percentiles. It’s clear from the chart that the largest increase is on households in the 50th – 90th (approximately \$200k increase in mean wealth) ~and 90th – 99th wealth percentiles (approximately \$800k increase in mean wealth). While it appears as though DB wealth is much more broadly held than business ownership, the amounts shown for the wealth percentiles in Bricker, Goodman, Moore, and Volz 2020 appear to be much more concentrated than our distribution of wealth from employee

¹⁵ <https://www.dol.gov/general/topic/retirement/typesofplans>

¹⁶ Bricker, Goodman, Moore and Volz. *Wealth and Income Concentration in the SCF: 1989 – 2019, 2020*.

ownership calculated in Table 5. Therefore, including DB pension plans would likely have a small but positive impact on the concentration of wealth.

For the above reasons, we feel our assumption regarding DB pensions plans is conservative in terms of our findings.

A.7 We ignore the distribution of income within the household

Employee ownership allocates share ownership based on individual income. Our data are at the household level, and for the sake of convenience when reallocating ownership in our analysis, we simply look at total household income and number of workers in the private sector. For households with two private sector wage earners where one wage earner is above the ERISA maximum eligible salary of \$280,000 and the other is below, our methodology would overshoot the correct maximum eligible income and consequently the correct employee ownership allocation. However, the tendency here would be to benefit high-income households and penalize low-income households, but wealth is increasing with income on average. Therefore, this is conservative regarding our finding of a reduction of wealth inequality.

A.8 We ignore the TRUST, CASHLI, ANNUIT, THRIFT, FUTPEN, and CURRPEN variables in the SCF

Several SCF variables could contain stock in U.S. companies including TRUST (Trusts), CASHLI (cash value of whole life insurance), ANNUIT (annuities), THRIFT (account-type pensions on current job), FUTPEN (future pensions), and CURRPEN (currently received account-type pensions). However, reading through the SCF documentation we were not able to determine reasonable assumptions for these concepts, so we chose to exclude them from our analysis. Each

of these variables is more concentrated among higher-income percentiles than our EO Wealth Allocation variable from Table 5, so including any of the above variables would most likely reduce the concentration of wealth found in the SCF, and therefore we feel this assumption is conservative regarding our findings.