Income Inequality in the United States in the Late 1860s

MARK STELZNER

I utilize data from the Civil War income tax to calculate the income shares of the top 1 and 0.1 percent of the population in the United States in the late 1860s—extending Thomas Piketty and Emmanuel Saez's series back in time. As we will see, income inequality during this period represents a low comparable to the late 1970s.

Much of our understanding of the evolution of top incomes in the United States stems from research on modern income tax data. However, few scholars have analyzed data from the Civil War and Reconstruction income tax (1862–1871), the first income tax in US history. Creating national statistics for the income shares of the top 1 and 0.1 percent for this period would expand our understanding of the history of income inequality.

Lee Soltow (1969) used Civil War income tax data to estimate the inverse-Pareto curve of the income distribution. He concluded that inequality was greater during Reconstruction than during the 1910s. However, his analysis is problematic. Soltow used data only on the frequency of self-reported incomes in five different income groups, which comprised about two percentiles of the income distribution. In this article, I re-examine the data for the Civil War income tax to calculate the income shares of the top 1 and 0.1 percent of tax units from 1866 through 1869. Contrary to Soltow's results, I find that the income shares of these elite groups in the late 1860s represent a low in the history of the United States comparable to the 1960s and 1970s.¹

CALCULATION OF NATIONAL STATISTIC

Initially, the Civil War and Reconstruction income tax did not cover the states that made up the Confederacy. However, as these states were

The Journal of Economic History, Vol. 75, No. 3 (September 2015). © The Economic History Association. All rights reserved. doi: 10.1017/S0022050715001096

Mark Stelzner is Assistant Professor, Nazarbayev University – Economics, Block 8, 53 Kabanbay Batyr Ave, Astana 010000, Kazakhstan. E-mail: markstelzner@gmail.com.

I would like to acknowledge Paul Rhode, the two blind reviewers, Thomas Piketty, and Emmanuel Saez for their helpful comments on the paper.

¹Lindert and Williamson have shown that income inequality was even lower around the time of the American Revolution. See Lindert and Williamson (September 9, 2013). "American Incomes Before and After the Revolution." *Journal of Economic History* 73, no. 3 (2009): 725–65.

pulled back into the Union's fold, they became subject to the tax. For the years after the Civil War when the tax was still in operation, we can calculate the percent of total income accruing to the top 1 and 0.1 percent of tax units, which are defined as an adult male, 22 years of age or older, and all of his dependents. The formula is as follows:

Income share of top
$$1\% = \frac{\text{Total income of top } 1\% \text{ of tax units}}{\text{Total income of all individuals}}$$
. (1)

Due to data problems, a number of assumptions are required to calculate the statistic. We can calculate the number of tax units that made up the top 1 and 0.1 percent by estimating the adult male population. There are census figures in 1860 and 1870, and we can form estimates for the intervening years using a linear trend.² On the one hand, due to war-related deaths and decreases in immigration, a linear trend likely overestimates the adult male population in the middle of the decade. This creates an upward bias in the estimated number of tax units in the top 1 and 0.1 percent and in the estimated income share statistics. On the other hand, because of the tumultuous nature of Reconstruction, the 1870 population statistic could be lower than the actual population. That would bias the income share statistics downward.³

We also need to calculate the total income accruing to the top 1 and 0.1 percent. Collection of income tax depended on the source of income and types of employment. For civil, military, and naval personnel and all income derived from interest, coupons, and dividends from all banks, trust companies, savings institutions, insurance companies, and railroads, taxes were collected at the source.⁴ For all other incomes, individuals self-reported and paid taxes. The Commissioner of Internal Revenue published the total amount of revenue by year, which can be used to generate total self-reported income of all the US adult male taxpayers—about 3 percent of the adult male population. For the 1866 to 1869 period, the Commissioner also compiled figures that allow us to delineate the 97th, 98th, 99th, and 99.9th percentiles.⁵ Estimates for the total self-reported

² United States (1975). *Historical statistics of the United States: Colonial times to 1970*. Washington: U.S. Dept. of Commerce, Bureau of the Census.

³ The result is displayed in row (VII) of Appendix Table 1.

 $^{^{\}rm 4}$ In 1864, canal, turnpike, canal navigation, and slack water companies were added to this list.

⁵ See Appendix Table 1 for complete data from the Report of the Commissioner of Internal Revenue for 1872. In Appendix Table 1, I also delineate the percent of adult males with an income above \$2,000 and above \$11,000—which very nicely match up with the top 1 and 0.1 percent of the adult male population.

income of the top 1 and 0.1 percent of adult males and their dependents are displayed in the first and second rows in Table 1.

The Commissioner reported aggregate data on taxes collected from income from dividends, interest, and coupons by fiscal year.⁶ Because of the non-synchronization of collection after the act of 1867, the total amount collected during a given fiscal year covers parts of two calendar years. But as one can see from the calculations in Table 1, assuming that a given fiscal year represents the corresponding calendar years leads to similar income share statistics for the three years.

Unlike self-reported statistics, there is no way to identify what part of income deriving from dividends, interest, and coupons accrued to the top 1 and 0.1 percent. However, we can make rough estimates and give ranges for sensitivity. Because of the relatively low concentration of wealth in 1870 and the differences in portfolio holdings and earnings for upper income groups, it is likely that somewhere between 55 and 65 percent of income from dividends, interest, and coupons accrued to the top 1 percent of tax units.⁷ Using the middle of this range, I calculate the total amount of such income flowing to the top 1 percent. The result is displayed in the third row in Table 1. We can form upper bound estimates of the percent of income from dividends, interest, and coupons that accrued to the top 0.1 percent by assuming they received all of the income that flowed to the top 1 percent.

The sum of the total amount of self-reported income and income collected at the source accruing to the top 1 and 0.1 percent are displayed in the fourth and fifth rows in Table 1. To calculate the income shares, we need the nominal gross domestic product (GDP). Robert Gallman (1966) calculated nominal GDP figures for 1859 and 1869, and Louis Johnston and Samuel Williamson (2013) interpolated values for the intervening years. To convert GDP to total national income, we need to deduct capital depreciation and non-taxable incomes, which account for

⁶ For data on income deriving from dividends, interest, and coupons from banks, railroads, and insurance companies, see United States (1868–1872), *Report of the Commissioner of Internal Revenue on the Operations of the Internal Revenue System*, Washington: G.P.O. and Hill (1894). "The Civil War Income Tax." *Quarterly Journal of Economics* 8, no. 4 (July 1894). Appendix pp. 491–2.

⁷ From Thomas Piketty and Daniel Zucman's extensive work on wealth data, we know that the top 1 percent of adult males held around 30 percent of national wealth in 1870. In 1913, the top 1 percent held around 40 percent of all wealth. Saez and Zucman (2014) estimate that 80 percent of income from dividends accrued to the top 1 percent in the early 1910s. If we assume everything else equal and used the relative level of wealth inequality, we would get a figure of 60 percent of income from dividends, interest, and coupons from banks, railroads, and insurance companies, and other transportation companies flowing to the top 1 percent of the population. For wealth figures, see Piketty and Zucman (2014). *Wealth and Inheritance in the Long Run*. London: Centre for Economic Policy Research.

	1866	1867	1868	1869
-	Millions of Current Dollars			
Self-reported income + \$1,000 deduction for top 1 percent	\$565	\$495	\$542	\$546
Self-reported income + \$1,000 deduction for top 0.1 percent	\$144	\$59	\$125	\$133
Income from dividends, interest, and coupons of top 1 percent	\$101	\$110	\$115	\$126
Total income of top 1 percent	\$666	\$605	\$657	\$672
Total income of top 0.1 percent	\$244	\$169	\$240	\$259
Net national income	\$7,719	\$7,160	\$6,990	\$6,733
Income share of top 1 percent	8.63	8.45	9.40	9.98
Income share of top 0.1 percent	3.17	2.37	3.43	3.85

TABLE 1 CONSTRUCTION OF INCOME SHARE OF TOP 1 PERCENT AND TOP 0.1 PERCENT OF TAX UNITS

Source: See text.

somewhere between 10 and 20 percent of GDP.⁸ The results are shown in the sixth row in Table 1.

The income shares of the top 1 and 0.1 percent of tax units are displayed in the last two rows in Table 1. The top 1 percent received 8.63 and 8.45 percent of all income in 1866 and 1867, respectively. The income share of the top 1 percent increased to 9.4 percent in 1868 and 9.98 percent in 1869. If we assume a much larger percent of income from dividends, interest, and coupons accrued to the top 1 percent, say 80 percent, their share of total income would change to 9.1 percent in 1866, 9.0 percent in 1867, 9.9 percent in 1868, and 10.6 percent in 1869. The statistic for the top 0.1 percent followed a similar trajectory starting at 3.17 percent

⁸ As written in the Revenue Act of 1864, individuals were allowed to deduct "the amount paid out for ordinary or usual repairs, provided that no deduction shall be made for any amount paid out for new buildings or permanent improvements or betterments made to increase the value of any property or estate." Under the Act of 1867, individuals were allowed to deduct "amount paid out for usual or ordinary repairs, not exceeding the average paid out for such purposes for the preceding five years." I assume capital depreciation and non-taxable incomes account for 15 percent of GDP. Piketty and Saez (2003) follow the same method: "For the 1913–1943 period, our total income series (excluding capital gains) is equal to exactly 80% of total personal income (minus transfers)." For more information on deductions, see the longer updated versions of Piketty and Saez (2003) published in A.B. Atkinson and T. Piketty eds., Oxford University Press, 2007. Furthermore, I subtracted out 2 percent of GDP to account for net transfers abroad. See Piketty and Goldhammer (2014). *Capital in the Twenty-First Century*. P. 112.

in 1866, falling in 1867, and increasing to 3.85 percent by 1869. If we assume that 80 percent of the income from dividends, interest, and coupons accrued to the top 0.1 percent, their share of total income would change to 3.60 percent in 1866, 2.88 percent in 1867, 3.98 percent in 1868, and 4.47 percent in 1869.

COMPARABILITY OF STATISTICS

Four points need to be clarified. First, salaries of federal government employees were taxed at the source and are not included. This exclusion does not seem to be a significant problem, as the federal government was *much* smaller during this period and it is unlikely that federal salaries made up a significant portion of income of the top 1 and 0.1 percent. Second, only capital gains from assets held less than three years are included in self-assessments. Thus this series is awkwardly in the middle of Thomas Piketty and Emmanuel Saez's series (2003), which neatly include and exclude capital gains. Third, individuals who owned their houses were allowed to estimate what rent would be and deduct it from their income, which biases the statistics downward.

Fourth, to the degree that the top 1 and 0.1 percent of the population under reported their incomes, the total income of these groups would be less and thus our calculations for the percent of total income accruing to these groups would be downwardly biased. Undoubtedly, this is the case to some degree. However, what is important here is the relative level of tax fraud in 1866, 1867, 1868, and 1869, compared to present-day tax fraud. I will focus on refuting arguments that income tax fraud was exceptionally large from 1866 to 1869.

Some contemporaries identified fraud and evasion as a significant and growing problem. Such arguments were especially popular with politicians who opposed the income tax and saw it as a cause of dishonesty and corruption (Hill 1894). "Complaints continue to be received at this office that many persons liable to income tax fail to make full returns," explained Joseph Lewis, commissioner of the Bureau of Internal Revenue, in early 1865.⁹ "American ingenuity was never more strikingly illustrated - not even by the exhibits of the patent office," insisted David Wells, who Congress appointed to investigate the federal tax system, "than it was [from 1867 to 1872]... in devising and successfully carrying out methods for evading the taxes on income and distilled spirits" (Wells

⁹ Quoted in the New York Times, "The Special Income Tax." 29 January, 1865, p. 2.

1874). For the second half of the 1860s, this conclusion was based on a falling nominal value of self-reported income.

Total self-reported income did decrease almost every year after 1864, except in 1868 and 1869. Some of this decrease was a result of an increase in the minimum amount exempted. From 1862 to 1865, \$600 was exempted from taxation, whereas from 1866 to 1869, the amount exempted was \$1,000. In addition, there was deflation averaging 6.5 percent per year between 1866 and 1868 (Johnston and Williamson 2013). Thus nominal self-reported income would be expected to decrease unless we assume income inequality was increasing. In Table 2, I display the real value of self-reported income of the top 1 and 0.1 percent of tax units in 1866 dollars.

In addition, income deriving from dividends, interest, and coupons increased in both nominal and real terms (see Tables 1 and 2). Thus, if we take these two factors together and look at the total real income of the top 1 and 0.1 percent of tax units, we see that although incomes for these groups decreased in 1867, they increased more dramatically in 1868 and 1869.¹⁰

Other contemporaries thought that tax fraud was minimal. "[T]he most signal pecuniary success has attended the operations of the bureau" to stamp out income tax fraud, explained the *New York Times* (2 June 1865, p. 1). The *American News Company*, which published a the list of New Yorkers' reported taxable income in 1863, wrote "In England, it is estimated by an able writer on taxation that the government is defrauded of full one third of the taxes due ... We do think that in this county it will amount to no more than one tenth, and much of that results from ignorance rather than a desire to defraud."

Over the decade, the Bureau of Internal Revenue received increased powers to fight fraud. The Revenue Act of 1865 empowered the assistant assessor to increase any individual's self-reported income, even if the individual had taken an oath as to the verity of the amount reported. The Act also created fines for non-compliance. For failure to file a return, taxpayers were charged a penalty of 25 percent of taxes due. The Revenue Act of 1867 increased the penalty to 50 percent of taxes due; for false returns, taxpayers were charged 100 percent of taxes due (Ratner 1942). To detect fraudulent returns, revenue officials were given "the right to enter premises, take books, examine accounts, shut

¹⁰ Note: There is evidence that tax fraud increased in 1870 and 1871. See Hill (1894). "The Civil War Income Tax." *Quarterly Journal of Economics* 8, no. 4 (July 1894).

	1866	1867	1868	1869	
-	Millions of 1866 Dollars				
Self-reported income of top 1 percent	\$565	\$539	\$620	\$654	
Self-reported income of top 0.1 percent	\$144	\$64	\$143	\$159	
Income from dividends, interest, and coupons of top 1 percent	\$101	\$120	\$131	\$151	
Total income of top 1 percent	\$666	\$659	\$751	\$805	
Total income of top 0.1 percent	\$244	\$184	\$274	\$310	
Total national income	\$7,719	\$7,678	\$7,650	\$7,693	

 TABLE 2

 REAL INCOME OF TOP 1 PERCENT AND TOP 0.1 PERCENT

Source: See text.

up shops, swear witnesses, and send for persons and papers and exact fines through the medium of the courts" (*New York Times*, 2 June 1865, p. 1).

While some contemporaries identify the Civil War income tax with substantial fraud, it does not seem that tax fraud was exceptional in 1866, 1867, 1868, and 1869. The decrease in the nominal value of self-reported income was at least partially a result of the fall in the price level, and income collected at the source increased substantially both in real and nominal terms.

COMPARISON WITH CURRENT DATA

In Figure 1, I display Piketty and Saez's data (2003) for the income share of the top 1 and 0.1 percent between 1913 and 2012 with the statistics calculated here. The double solid line represents Piketty and Saez's series that excludes capital gains and the checked line includes capital gains. The light double lines in the left edge of the graphs are the statistics for the income share of the top 1 and 0.1 percent of tax units from 1866 through 1869; the hard dash line are the upper bound estimates. As we can see, the income shares of the top 1 and 0.1 percent of tax units during the late 1860s were significantly lower than during the 1910s. Indeed, they represent lows in US history comparable to the late 1960s and early 1970s. Even assuming a much larger percent of income from dividends, coupons, and interest accrued to the top 1 and 0.1 percent, the findings do not change fundamentally.



Panel B: Income Share of Top 0.1% of Tax Units



Source: See text.

These results are contrary to Soltow (1969). However, they fit with both our contemporary understanding of inequality and economic turmoil and our impressionistic view of inequality during the Gilded Age-the decades spanning from Reconstruction to the end of the nineteenth century. In terms of the first point, the low levels of inequality could be the result of short-term fluctuation stemming from economic turmoil resulting from the Civil War and Reconstruction. Several studies on income inequality in the twentieth and twenty first centuries have shown that economic turmoil and business downturns cause high incomes to fall disproportionately and thus reduce income inequality, at least in the years immediately after a crisis (Piketty and Saez 2003; Goldin and Margo 1992). The years after 1865 were plagued by recession and deflation. Real GDP fell by 4.6 percent between 1865 and 1866. Not until 1868 did real GDP surpass its 1865 peak. Between 1864 and 1868, the price level fell 18.2 percent. If we look through the lens of current studies, we would expect these developments to lead to low levels of income inequality. At the same time, it is not clear that wealth holdings were the same during the 1860s as during the twentieth and twenty-first century. A different wealth structure could mean that capital income responded differently to economic downturn and thus a potentially different relationship between recession and inequality.

It could also be that these low levels of inequality were a result of the immense institutional change of the 1860s. The Civil War led to the destruction of slavery. Its effects can be seen through an examination of wealth statistics. In 1860, southern men made up 59 percent of the wealthiest 1 percent of adult males in the United States; ten years later, their share had fallen to 18 percent. Average real wealth of white southern males decreased from \$3,978 in 1860 to \$1,440 in 1870 (Soltow 1976, pp. 65 and 101). The planter class was decimated by the destruction wrought on Southern land and animals and the liberation of its most prized asset, slaves. To the degree that bondage was destroyed and African Americans experienced an increase in economic freedom, income inequality would have changed. Indeed, in 1866, Congress abrogated the nascent Presidential Reconstruction system, which allowed white southerners significant freedom in re-subjugating the newly freed slaves. In its place, Congress empowered African Americans through the Freedman's Bureau and other institutions leading to unheard of economic freedom. Laws were put in place to shift risk from fluctuation in crop yields to

creditors and landlords, to allow farmers to sell crops to the highest bidder, and much more (Foner 1988).

Furthermore, during the 1860s, the federal government was taxing the rich more than ever before. In 1862, for the first time in the history of the United States, individuals had to pay a federal tax on income earned. Dividends, interest, and coupons were taxed. In the same year, the federal government passed a tax on inheritance. Even business gross revenue was taxed. Indeed, there is ample evidence that these laws were adopted with the intent to equitably distribute the tax burden.¹¹

If the low levels of income inequality in the late 1860s were a result of institutions change, then inequality would have increased more slowly throughout the final decades of the nineteenth century. This understanding is in line with our impressions of increasing inequality during the Gilded Age and works like Stelzner (2015), Forbath (1991), Woodword (1951, 2001), Blackmon (2008), and a number of other authors that argue that institutions became increasingly more regressive during the late nineteenth century.

In this article, I cannot say with certainty what created these low levels of inequality during the late 1860s. Future studies will have to enlighten this debate. However, whether short-run economic turmoil or long-run institutional change, it make sense that the income share of the top 1 and 0.1 percent of tax units reached such low numbers in 1866, 1867, 1868, and 1869.

Appendix

To calculate the self-reported income of the top 1 percent, I subtract the product of the middle income and the total number of adult males that populate each of the two income groups that make up the 97th and 98th percentiles. To calculate the self-reported income of the top 0.1, I use the same method to subtract out the 99.0th to 99.8th percentile from the top 1 percent figure. Also, for both the top 1 and 0.1 percent, I correct the total figures to the degree that the raw income groups as shown in rows (IX) and (X) of Appendix Table 1 differs from 1 and 0.1 percent, respectively, by adding the necessary number of boarder incomes. Lastly, because each tax unit was allowed to deduct \$1,000 in 1866 through 1869, I add \$1,000 for each tax unit in each group.

¹¹ See Congressional Globe, (37/1), Pp. 248, 282, 306, 314; and Hill (1894). "The Civil War Income Tax." *Quarterly Journal of Economics* 8, no. 4 (July 1894).

		1866	1867	1868	1869
	-	Number of Persons Assessed			
(I)	Number of incomes of more than \$1,000 and not more than \$1,400	101,219	100,588	107,997	112,874
(II)	Number of incomes of more than \$1,400 and not more than \$2,000	68,680	55,949	69,184	68,900
(III)	Number of incomes of more than \$2,000 and not more than \$3,000	40,899	38,957	41,196	40,839
(IV)	Number of incomes of more than \$3,000 and not more than \$11,000	46,055	51,188	45,002	44,732
(V)	Number of incomes of more than \$11,000	9,282	7,965	9,464	9,316
(VI)	Total	266,135	254,617	272,843	276,661
(VII)	Adult male population (AMP)	9,076,811	9,265,056	9,453,301	9,641,546
(VIII)	Percent of AMP paying income tax	2.93	2.75	2.89	2.87
(IX)	Percent of AMP with self- reported incomes of more than \$2,000	1.06	1.06	1.01	0.98
(X)	Percent of AMP with self- reported incomes of more than \$11,000	0.102	0.086	0.100	0.097

APPENDIX TABLE 1 DATA ON SELF-REPORTED INCOME

Source: Report of the Commissioner of Internal Revenue, Annual Report of 1872, p. VI.

REFERENCES

- Blackmon, Douglas A. Slavery by Another Name: The Re-Enslavement of Black Americans from the Civil War to World War II. New York: Doubleday, 2008.
- Foner, Eric. Reconstruction: America's Unfinished Revolution, 1863–1877. New York: Harper & Row, 1988.
- Forbath, William. E. *Law and the Shaping of the American Labor Movement*. Cambridge, Mass: Harvard University Press, 1991.
- Gallman, Robert E. "Gross National Product in the United States, 1834-1909." In Output, Employment, and Productivity in the United States after 1800, Dorothy S. Brady, editor, 3–76. New York: Columbia University Press (for NBER), 1966.

- Goldin, Claudia, and Robert A. Margo. "The Great Compression: The Wage Structure in the United States at Mid-Century." *Quarterly Journal of Economics* 107, no. 1 (1992): 1–34.
- Hill, Joseph A. "The Civil War Income Tax." *Quarterly Journal of Economics* 8, no. 4 (1894): 416-452.
- Lindert, Peter. H., and Williamson, Jeffrey. G. American Incomes Before and After the Revolution. *Journal of Economic History* 73, no. 3 (2013): 725–65.
- Piketty, Thomas, and Goldhammer, Arthur (translated by). *Capital in the Twenty-First Century*. Cambridge: Harvard University Press, 2014.
- Piketty, Thomas and Saez, Emmanuel. "Income Inequality in the United States, 1913– 1998." *Quarterly Journal of Economics* 118, no. 1 (2003): pp. 1–39. For data up to 2012, see http://elsa.berkeley.edu/~saez/#income.
- Piketty, Thomas, and Zucman, Gabriel. *Wealth and Inheritance in the Long Run.* London: Centre for Economic Policy Research, 2014.
- Ratner, Sidney. *American Taxation: Its History as a Social Force in Democracy.* New York: W.W. Norton & Company, Inc., 1942.
- Saez, Emmanuel and Gabriel Zucman. "The Distribution of Wealth, Capital Income, and Rates of Returns in the U.S. Since 1913", 2014, working paper.
- Soltow, Lee C. "Evidence on Income Inequality in the United States, 1866–1965." *Journal of Economic History* 29, no. 2 (1969): 279–86.
- Soltow, Lee. *Men and Wealth in the United States, 1850–1870.* New Haven: Yale University Press, 1975.
- Stelzner, Mark. *Economic Inequality and Policy Control in the United States*. London: Palgrave Macmillan, 2015.
- Internal Revenue." Tax Notes 93, no. 13 (2001): 1739-60.
- Wells, David Ames. *The Theory and Practice of Local Taxation in the United States: A New Chapter of Progress.* Boston, 1874.
- Johnston, Louis D., and Williamson, Samuel H. "What Was the U.S. GDP Then?" *MeasuringWorth*, August 2013. Available at http://www.measuringworth.com/ datasets/usgdp/result.php.
- Woodward, C. Vann. Origins of the New South, 1877–1913. Baton Rouge: Louisiana State University Press, 1951.
- United States. *Historical Statistics of the United States: Colonial Times to 1970.* Washington: U.S. Dept. of Commerce, Bureau of the Census, 1975.
- United States. *Report of the Commissioner of Internal Revenue on the Operations of the Internal Revenue System for the Year Ending*. Washington: G.P.O., 1868–1872.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.