The Revenue Act of 1924: Publicity, Tax Cuts, Response

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March 25, 2014

Abstract

The elasticity of taxable income (ETI) with respect to the marginal net-of-tax rate is an estimate of the aggregate response to tax rate changes. It is estimated without attributing cause to avoidance, evasion, or changes in economic growth. Historical ETI estimates in the public finance literature often rely on assumptions about income dynamics. A provision in the Revenue Act of 1924 for publicity of income tax returns allowed major newspapers to run lists of names, addresses, and tax payments in their pages. From these records, I constructed a dataset of very high income taxpayers. Over 10,000 individuals can be easily matched between the two years. In addition, the Revenue Act of 1924 sharply cut marginal tax rates. These changes can be used to estimate the ETI without distribution or rank preservation assumptions. Preliminary estimates indicate a positive ETI around 0.3 to 0.6, consistent with previous research.

*Acknowledgements: Paul Rhode, David Albouy, Martha Bailey, and Josh Hausman for serving on my committee, seminar participants at Michigan, the Midwest Economics Association, the Economics and Business History Society, the World Cliometric Congress, and Nic Duquette for various helpful comments. Funding: SRA, OTPR, Rackham, EHA, MITRE

"I wish it to be understood that I have not the slightest prejudice against multi-millionaires. I like them. But I always feel this way when I meet one of them: You have made millions—good; that means you have something in you. I wish you would show it." Theodore Roosevelt (Atwood, 185)

Part I

Background: The 1920s Tax Structure and Environment

1 Introduction

The United States Revenue Act of 1924 heavily altered the federal personal income, estate, and gift tax system of the interwar period. While there were many changes to individual income tax rates, and the introduction of the gift tax, the most unique aspect of the law was its new publicity provision. The law required each Collector of Internal Revenue to prepare reports listing the name, address, and tax payment of each tax filer in their district (districts ranged from covering only parts of major cities to covering entire small states), and to make that report open to public inspection. Compliance with that requirement certainly varied, but many collectors released the list to all visitors, regardless of reason, and some major newspapers responded by printing the lists in their city. While the legality of printing the list in the newspaper was questionable, the records exist to this day on microfilm because of that choice.

This chapter seeks to explain how that publicity provision came to be enacted. It also provides a comparison for the tax system of 1924 and 1925 to the tax system that we know today. Additionally, this chapter explores income inequality. The federal individual income

tax of the 1920s is sometimes called a "class tax" rather than a "mass tax," meaning that the tax was collected only from very high earners.

2 Inequality

While the tax system has undergone numerous changes since the period covered in this study, there is still hope for applicability. In particular, income inequality in the 1920s and today are frequently noted to be similar.

A monograph from the US Temporary National Economic Committee gives a multitude of figures on concentration of income from 1918 to 1937. From 1918 to 1924 and 1930 to 1937, the share of income held by the top 1 percent fluctuated between 12 and 14 percent. However, from 1925 to 1929, this share fluctuated between 16 and 19 percent (Concentration 16). The minimum net income to be in the top 1 percent was $7,045, and 429,280 people were in that class. To be a member of the top 1/100 of 1 percent, the minimum net income was $118,400, and a total of 4,293 people ranked there (Concentration 28-29).

In "Striking it Richer: The Evolution of Top Incomes in the United States," Emmanuel Saez provides evidence that the shares of income accruing to the top percentiles of US families are similar to the levels seen in the 1920s. The top decile, both including and excluding capital gains, hovers between 40 and 50 percent both now and in the 1920s, but stayed between 30 and 35 percent for almost the entire span from 1940 to 1980. Meanwhile, around 20% of total income accrued to the top 1 percent in the 1920s and today, while that figure was below 15% from the early 1940s to the late 1980s. The top 0.01% has an even more stark difference, with 3 to 6% of total income accruing to them in the 1920s and today, but only around 1% between 1940 and 1980.

Lynn Karoly (1994) examines the link between changing inequality and tax policy that may accelerate changes in "Trends in income inequality: the impact of, and implications for, tax policy." Karoly uses data from the US Census Current Population Survey to analyze

changes in the Gini coefficient of pre-tax income. Karoly finds, however, that tax policy did not contribute very much to changes in income inequality in the USA from 1970 to 1990. In addition, she finds that attempts to institute a more progressive tax system could not be enough to offset the gains in inequality.

Writing in 1937, Ferdinand Lundberg explored the "golden dynasties" who wield power and influence in "America's 60 Families." Similarly, in "Dynastic America and Those Who Own It," Henry Klein notes the sizes of large estates in the years preceding 1921. Klein concludes that the majority of wealth in America is inherited, not earned. If true, these books argue against the applicability of the lessons of the 1920s to current tax policy if today's fortunes are self-made (certainly true for Gates, Buffett, and numerous corporate executives).

3 Debate and Passage

3.1 Tax Rhetoric

At the time of its inception, the income tax had revenue goals as well as social goals. In the opinion of W. E. Brownlee, Cordell Hull (D-TN), the author of the income tax, found that "revenue goals were far les important than the desire to use the tax to advance economic justice" (Brownlee 2000, 41). After enactment, Ways and Means Chairman Claude Kitchin (D-NC) and "the Democrats attacked concentrations of wealth, special privilege, and public corruption" (Brownlee 2000, 43). Other Democratic social goals sought through the income tax were to "break the hold of monopoly power on the stimulating forces of competition" (Brownlee 2000, 45), to pursue the "ideal of using taxation to restructure the economy according to 19th century liberal ideals" (Brownlee 2000, 46), and to structure "wartime public finance based on the taxation of assets that democratic statists regarded as ill gotten and socially hurtful" (Brownlee 2000, 46-47).

These early Democratic achievements occurred just five to ten years before the Republicans

began their tax cut plans and some Progressives began pushing for tax publicity. Frequently, the rhetoric surrounding taxes from the Democrats and Progressives in the Republican Party reflects the same vision of using the income tax to advance social goals.

Though nearly ninety years removed from these political battles, the Republican justifications for tax cuts in the 1920s are the same as today's. Treasury Secretary Andrew Mellon was a leading voice for tax cuts within the Coolidge administration. His book, Taxation: The People's Business, written in 1924 during his tenure at the Treasury, lays out the case for steep tax rate cuts. Mellon uses the familiar arguments that tax cuts may increase revenue, and that government should be run like a business:

> It seems difficult for some to understand that high rates of taxation do not necessarily mean large revenue to the Government, and that more revenue may often be obtained by lower rates ... The same rule applies to all private businesses ... The most outstanding recent example of this principle is the sales policy of the Ford Motor Car Company. Does any one question that Mr. Ford has made more money by reducing the price of his car and increasing his sales than he would have made by maintaining a high price and a greater profit per car, but selling less cars? The Government is just a business, and can and should be run on business principles (Mellon 1924, 16-17).

Mellon also imagined that high tax rates increase the attractiveness of tax avoidance or evasion. He argues this while asserting that the country sat on the right side of the as-yet-unnamed "Laffer curve", coupled with an appeal to common sense:

> Experience has shown that the present high rates of surtax are bringing in each year progressively less revenue to the Government. This means that the price is too high to the large taxpayer and he is avoiding a taxable income by the many ways which are available to him. What rates will bring in the largest revenue to the Government experience has not yet developed, but it is estimated that by

> cutting the surtaxes in half, the Government, when the full effect of the reduction is felt, will receive more revenue from the owners of large incomes at the lower rates of tax than it would have received at the higher rates. This is simply an application of the same business principle referred to above, just as Mr. Ford makes more money out of pricing his cars at $380 than at $3,000 (Mellon 1924, 17).

Exactly who estimated the effect of a surtax slash, and how, is not known. But despite writing decades before the advent of rigorous empirical public finance analysis, Mellon grasped the theory of tax incidence and its weak relation to tax remittance quite well:

> High taxation, even if levied upon an economic basis, affects the prosperity of the country, because in its ultimate analysis the burden of all taxes rests only in part upon the individual or property taxed. It is largely borne by the ultimate consumer. High taxation means a high price level and high cost of living. A reduction in taxes, therefore, results not only in an immediate saving to the individual or property directly affected, but an aultimate saving to all people in the country. It can safely be said, that a reduction in the income tax reduces expenses not only of the income taxpayers but of the entire 110,000,000 people in the United States (Mellon 1924, 21).

Economists were not in unanimous agreement with Secretary Mellon. Roy Blakey, Professor of Economics, University of Minnesota, covered each new tax bill in the American Economic Review. While Mellon argued that surtaxes were just a hair too high and if cut, evasion would swiftly cease, Blakey countered,

> The maximum rate would probably have to be cut to zero before stilling the energetic ingenuity of some legal minds searching for holes, and even then the mere game of it might continue to lead them on (Blakey 1924, 498).

And when tax rates were up for yet another cut in 1926, Blakey sarcastically noted that

> All in all, the Revenue act of 1926 seems to be in line with what the majority of the electorate voted for in the last election, not that all of them knew just what they voted for as well as what they voted against... Mr. Mellon appears to have got himself and us into a vicious circle from which there is no logical escape. The more we reduce tax rates the greater prosperity and the greater the revenue for the government. After the tax rates all reach zero, our revenues will be so great that we can wipe out our billions of debt in a single year,- or could if Mr. Mellon would quit tying us up with long-time maturities, -and our prosperity will be even more than ever the envy of the rest of the world (Blakey 1926, 425).

The Senate was well aware of Mellon's arguments, even in 1921, the first year of Mellon's tenure at the Treasury. Mellon testified to the Finance Committee that high rates do not raise as much as low rates, and some Senators read this into the record from the floor days later:

> Mr. SIMMONS. Mr. President, I wish to ask the Senator- and I did not follow him, perhaps, accurately-did the Secretary, or did he not, advise that we refrain from certain taxes because of these evasions?
>
> Mr. LA FOLLETTE. He advised that we not only cut the surtaxes down to 32 per cent, but he said we had better cut them down to 25 per cent–
>
> Mr. SIMMONS. Exactly.
>
> Mr. LA FOLLETTE. Because wealth will not pay. We will collect more-that is what it meant-we will collect more at 25 per cent than we will at 32 per cent. There is no question about what he said. I will read his testimony. The Senator from California is anxious that I should take it up a little sooner than I had intended. I was coming to it in an orderly way.

...

> Mr. REED. Not only was the suggestion made that the taxes should be reduced in many respects, but the chief reason advanced was that more money would be raised by a lower tax than by the present rates.
>
> Mr. LA FOLLETTE. Yes; because they would not stand the higher tax; they would not pay it. (Record 1921, 7368)

Not only did the senators know that Mellon had this view, but some believed this early supply-side argument to be a "fundamental truth":

> Mr. PENROSE. Mr. President, if the Senator will permit me, I do not want to interject myself into this controversy, but I do not hesitate to state that the Secretary of the Treasury will be entirely willing to stand by any statement he has made; that he stated fundamental truths, admitted by every economist and student of these questions, and with a mind undistorted by hysteria or swayed by demagogism; and any statement that he has made before the Finance Committee-and I think I heard all of them-he will doubtless be willing to repeat or reaffirm anywhere that the occasion may call for. (Record 1921, 7368)

3.1.1 Tax-exempt securities

In the early years of the federal income tax, there was concern over investment in tax-free securities as a vehicle to escape income taxation. Progressives thought that very wealthy citizens would invest nearly all of their money in state or municipal bonds, and by doing so, avoid the effect of any income tax. It certainly seemed unfair to the progressives that wealthy people could avoid tax; whether they had already paid a hefty tax bill on the income that they were now investing, or the effect of high demand on the return of these bonds, were both irrelevant.

La Follette proposed an amendment to the Revenue Act of 1921 that would begin to attack the problems he saw in tax-free securities. The amendment required each person with tax-free bonds to report the number and amount that they held, as well as interest on those bonds, on their tax return. The Commissioner of Internal Revenue would then be required to compile this information both in the aggregate as well as classified by type of bond or net income of the owner.

La Follette felt that it was "a fundamental principle of any just system of taxation that wealth shall pay its proportionate share of the burdens of government" (Record 1921, 7364). He stated that so little was known about tax-exempt bonds; that the amount of them in circulation was not known, but estimated to be between $14 and $20 billion.

Nobody in opposition chose to debate this amendment, and it passed, 38-11, with 47 not voting[1].

Andrew Mellon did not debate La Follette's arguments regarding fairness. He supported efforts to know more about who holds tax-exempt bonds, but doubted that the rich were holding them in large numbers:

> Generally what is referred to as the chief factor is the investment in tax-free securities. That is not so. The investment in tax-free securities is a large factor, but it is not the leading factor. There are many other methods. For instance, from my knowledge of incomes in business, etc., of individuals, I do not know among them any who to any large extent invest in tax-free securities, for the reason that they have not the free cash with which to do it. They are generally people who are in industrial line of business, and they have to carry on their business, and they need their capital. They can not get it out to invest it in tax-free securities. I do not think that is the largest item.
>
> For instance, I know of a man who has a large income, a very high income. He

[1] Of course, in the Senate, the majority is the majority of those who are voting, so only 25 votes are needed for passage if 49 are voting (38+11) and the 47 not voting are irrelevant.

> invested in a piece of real estate. It was coal property. It cost about $4,000,000.
>
> But the point is that in the meantime the Government has relieved him. Instead of paying 6 per cent he is paying 2.5 per cent to carry that property, because the interest he pays is deductible from income, and he gets that deduction which relieves him to that extent.
>
> Senator REED. He does not work his coal field?
>
> Secretary MELLON. No; It is just standing there.
>
> Senator REED. Why could not that be reached by a proper clause in the law?
>
> Secretary MELLON. That could be reached- but you can keep on putting proper clauses in and reaching something and then something else. That is just one instance. There are all kinds of ways, and the people who resort to them are within their rights in doing it. They avoid taxes by making investments. It is human nature, and you can not change human nature. (Record 1921, 7369)

La Follette's reply was that Mellon and Congress should at least try to stop tax avoidance through tax free securities or other means.[2]

3.2 Congressional tax rate debate

The early income tax featured both a normal tax and a surtax. The surtax was an additional tax upon net income at specified rates; it was not an extra tax upon the amount of the normal tax. Most deductions counted against the normal tax obligation but not the surtax obligation. Due to the need for revenues to fund the war effort, the War Revenue Act of October, 1917 greatly increased surtax rates from a maximum of 13 per cent to a maximum of 63 per cent. This increased surtax was placed most heavily upon incomes in excess of

[2] "That attitude, if carried throughout the field of legislation, would mean the end of law and the beginning of anarchy. It would mean that wherever we find an individual or corporation strong enough or cunning enough to evade a law, that law should be repealed, or made so ineffective in its restrictions that the violator would not object to its existence" (Record 1921, 7369)

$100,000, and in 1918, the surtax rates were increased across the board, but the increase in surtax rates across incomes was made much more linear. The Revenue Act of 1921 was a first attempt at cutting high wartime surtax rates. By 1923, when the Revenue Act of 1921 was still in force, the top surtax rate was 50 per cent, and normal tax rates were 4 per cent on the first $4000 and 8 percent on incomes above that.

On November 10, 1923, Treasury Secretary Andrew Mellon sent a letter to William Green, chairman of the House Ways and Means Committee. The letter outlined Mellon's proposed changes to tax law for what would become the Revenue Act of 1924. Mellon called for a cut in normal tax rates from 4 and 8 per cent to 3 and 6 per cent, and a cut in surtax rates from 50 per cent at the top to 25 per cent at the top. Mellon also wanted the surtax rates to start at $10,000 rather than $6,000. Mellon's ideology on taxation was publicly laid out in his 1924 book, Taxation: The People's Business.

Date in 1924	Event and coverage
Jan. 4	Chairman Green releases Mellon letter; front page coverage
Feb. 5	House Ways and Means Committee approves Mellon plan, front page
Feb. 11	Ways and Means Committee presents four reports on bill, front page
Feb. 15	House Republicans drop Mellon plan, adjust max. surtax rate to 35%, front page
Feb. 29	House passes bill (408-8) with 37.5% surtax maximum (25% cut of all surtax rates), publicity to certain congressional committees (Ways and Means, Finance, and special congressional committees), front page
March 12	Mellon speaks on bill, mentions his opposition to committee publicity, page 4
April 12	Senate Finance Committee Chairman Smoot brings Mellon plan to Senate floor, front page
May 2	Senate votes for complete publicity (Norris amendment), 48-27, front page
May 10	Senate passes bill with 40% surtax maximum, front page
May 16	Conference underway, members sworn to secrecy, publicity debated, front page
May 21	Conference agrees on publicity to take the form of lists posted in each collection district of name, address, and payment, and agrees on Senate tax rates, front page
May 22	Mellon disapproves of bill, rumored to encourage veto, Congressional leaders dismiss possibility, front page
May 24	Senate approves conference bill 60-6, front page
May 26	House passes conference bill 376-9, Mellon indicates reluctant acceptance, front page
June 2	Coolidge signs the bill while asking future sessions of Congress to repeal publicity, front page

Table 2: Newspaper Coverage of Bill in Congress
Source: The New York Times, dates in 1924, January 5, February 6, February 12, February 16, March 1, March 13, April 13, May 3, May 11, May 17, May 22, May 23, May 25, May 27, June 3

On January 5, 1924, the New York Times devoted three pages, including part of the cover, to explaining Mellon's proposed tax law changes. Also on the cover was a story that Calvin Coolidge, then president, would refuse to accept any compromise on the surtax rates proposed by Mellon. It seems that his negotiating skills left a little to be desired, as he eventually signed a compromise bill that only reduced surtax rates from 50 to 40 per cent (maximum). The same article provides a briefing on the deliberations of the House Ways and Means

Committee on the previous day. In fact, the New York Times frequently covered proceedings in the Congress and occasionally ran the text of proposed new or amended sections in the legislation. Due to this coverage, it seems that high-income taxpayers would have been very aware of proposed tax law changes from early 1924 until the signing of the bill on June 2, 1924. Coolidge had threatened a veto, but it should be noted that the conference bill passed each house of Congress with more than a 2/3 majority.

Perhaps surprisingly, Coolidge issued a statement along with his signature of the bill that indicated his displeasure with both the surtax rates and "the failure to pass a resolution for a Constitutional amendment to abolish tax-exempt securities" (Blakey and Blakey 246). Throughout the postwar era, there had been a debate over whether tax evasion was due to high rates or the sheltering of income in tax-exempt securities (it was generally agreed that evasion was rampant). The position of Coolidge's own party and his Treasury secretary was that high rates alone were the cause of evasion. For more on this debate, see Smiley and Keehn (1995).

3.3 Publicity debate

Some progressives felt that income tax publicity might lessen income tax evasion. Blakey notes that "[t]he usual discussion of publicity of income tax returns was injected into the debate by Frear. His amendment to make returns public records was defeated" in the House (Blakey and Blakey, 1940 234). The placement of the word "usual" indicates that this was not the first attempt at publicity. While publicity was a feature of the 1909 corporation excise tax, the law also specified that anyone who shared tax return information without authorization from the President would face a fine or jail time (Blakey 54). Robert La Follette Sr. introduced an amendment "to make returns open to public inspection" during the debate over the Revenue Act of 1921 in the Senate, but it was defeated (Blakey and Blakey, 1940 216). However, "the Senate adopted without any objection the amendment of Norris to provide publicity of income tax returns" (Blakey and Blakey, 1940 242). The

Norris amendment called for each return to be a public record. Since the House did pass an amendment "to permit certain committees of Congress to call on the Secretary of the Treasury for returns or for data contained in returns," (Blakey and Blakey, 1940 234) and the Senate bill contained the Norris publicity amendment, the differences had to be resolved in committee. The conference committee bill "followed the House bill for the most part, but added that each collector should prepare and make available for the public a list containing the name, address, and tax of each person making an income tax return" (Blakey and Blakey, 1940 245). Despite veto threats, President Coolidge did sign the bill enacting the tax rates for 1924 and beyond on June 2, 1924.

La Follette felt that tax publicity would have a real and upward effect on the number of tax returns and the amount of income returned. He used the Civil War-era tax system, which featured publicity, as his example, as well as state level evidence from North Carolina:

> In 1870, when the returns were published, the number showing incomes over $2,000 were 94,887. In 1871, when publicity was prohibited, the number fell to 74,000-that is, from 94,000 to 74,000; then to 72,000 in 1872, and this in spite of the fact that, as shown by individual bank deposits, bank clearings, and so forth, 1871. and 1872 were more prosperous years than 1870. Similarly in North Carolina, when the income-tax returns under the State law were published by the Hon. Josephus Daniels in his paper, the News and Observer, the tax collections imnmediately more than doubled.
>
> With the secrecy of returns, it is impossible to collect the tax efficiently without an extravagantly expensive army of revenue agents and the creation of a system of espionage that would be extremely distasteful to the American people (Record 1921, 7372).

La Follette also pointed out that a high-ranking Treasury official had recently been arrested for accepting a bribe. Senator Augustus Stanley (D-KY) argued that tax secrecy gave

bureaucrats power that would certainly be abused[3]. La Follette agreed, even going on to say that publicity "makes the law almost self-administrative" (Record 1921, 7373). There were not many arguments against publicity presented by opponents in 1921. Nonetheless, La Follette's 1921 amendment for tax returns in their entirety to be public records went down, 33-35, with 28 not voting.

In 1924, Senator George Norris (R-NE) led the charge for publicity of tax returns, as Senator La Follette was absent due to illness. The majority of discussion in support was that publicity would root out those who were evading taxes, while the majority of discussion in opposition claimed that publicity would cause suspicion, snooping, and general harassment for those with high income taxes. Additionally, opponents argued that publicity would reveal trade secrets and expose vulnerabilities in businesses.

Kenneth McKellar (D-TN) offered a similar amendment, and went immediately on the attack against opponents of publicity. One of McKellar's first remarks was to point out that seven (then eight, then nine) senators who previously voted against publicity lost re-election, while only who voted in favor of publicity lost (Record 1924, 7682). McKellar and Senator George McLean (R-CT) differed on whether other states or nations had publicity of tax returns; both McKellar and McLean offered contradictory information on which nations or US states had publicity (Record 1924, 7683).

McLean argued that since Wisconsin had recently allowed for secrecy in state tax returns, that the votes of the senators of Wisconsin should be a measure of the popularity of publicity in Wisconsin. A reference to the Record from 1921 showed that the Wisconsin senators split their votes on publicity. Norris claimed that due to floor statements, it could be assumed that both Wisconsin senators supported publicity, though both were absent for illness that day (Record 1924, 7687). Senator Royal Copeland (D-NY) summarized the thoughts of

[3]To give to any bureau of the Government the right to know and to keep the political sins of powerful citizens is to place in the hands of any man who is desirous or ambitious enough to do it an instrumnent of political blackmail that in times past has been used by men almost as high in office as the President of the United States himself. That is an open secret (Record 1921, 7373).

several senators when he said that "every official act performed by any governmental body should be an open and public act... there is no reason why any exception should be made as regards income taxes" (Record 1924, 7688). After a long, puzzling, and often nonsensical debate, the Norris amendment for every return to be a public record passed, 48-27, with 21 not voting (Record 1924, 7692).

While the Senate bill made all returns public records, the conference committee bill only allowed for the revelation of names, addresses, and tax payments. This is what allowed for the printing of this information in newspapers, and chapters two and three of this dissertation can be thought to occur at this point in the timeline.

The question of publicity was again revisited in 1926. As the Revenue Act of 1926 did not contain publicity when it came out of committee, Senator Norris again floated his public records amendment in identical form. Norris, Clarence Dill (D-WA), and David Reed (R-PA) openly considered the idea that the conference committee included name-address-payment publicity in order to come up with the most unpopular form of publicity possible (Record 1926, 3484). Norris again asserted that publicity would increase revenue, arguing that the amount of taxable income would rise as the number of eyes reviewing the claim rose (Record 1926, 3491). Furthermore, if somebody was not evading taxes, they supposedly had nothing to hide, and that complete public records would help those honest taxpayers to receive refunds where they had made mistakes (Record 1926, 3492). Norris and allies even conceded that the present law of name-address-payment publicity served "no useful purpose[4]" (Record 1926, 3495). Senator Dill spoke at length that the country had "not had real publicity," that "publicity has done no harm," and that "lowering surtaxes lowers receipts from [the] wealthy"

[4]Mr. NORRIS: Mr. President, I want to say a word on that subject. It did not give any real information. I think that is the only objection to it. If the Senator made his return and it showed on the face of it that he paid an income tax of $1,000, that would not be any real information. There is nothing in that information to indicate whether he has covered up anything or whether he has been dishonest or honest. In other words, the information that was given could be used for the purpose of bringing about a misunderstanding on the part of the public because it did not give sufficient information to really tell anything. A man may be a very wealthy man and his income may be very small. He may be perfectly honest and his return will show that he is perfectly honest and square. On the other hand, he may not return nearly all of his property, and if nobody ever has an opportunity to find it out, that situation will never be corrected. That is what I am trying to cure by my amendment. (Record 1926, 3489)

(Record 1926, 3512-3513). After another very lengthy debate, the Norris amendment failed by a vote of 32-49, with 15 not voting.

In the end, the Revenue Act of 1926 contained a provision for publicity that was nearly identical in wording to the 1924 provision, except that it no longer allowed for payments to be publicized. Name and address remained available, but were much less interesting on their own. Therefore, tax publicity was effectively repealed with the Revenue Act of 1926.

3.4 The Tax Code in 1924

The early federal personal income tax system featured both a normal tax and a surtax. Despite connotations, the surtax collects orders of magnitude more revenue than the normal tax. The normal tax had three brackets: $0 to $4,000, $4,000 to $8,000, and over $8,000, all in amounts over total deductions and credits. The marginal tax rates for these brackets were 2, 4, and 6 percent, respectively. The surtax, however, began at $10,000 with a marginal tax rate of 1%, and increased incrementally to a top rate of 40% on net incomes over $500,000. Surtax brackets up to $100,000 are usually $2,000 apart, with an increase of 1% for each bracket. The surtax rate at $100,000 is 37%. Additional bracket lines are drawn at $200,000, $300,000, and $500,000.

Net income, defined as gross income minus credits and deductions, is used to compute the tax liability. Gross income includes a laundry list of sources, ending with "or gains or profits and income derived from any source whatever" (Revenue Act of 1924). Gross income does not include life insurance, the value of gifts or bequests, interest upon state or local government bonds, or a few other small exemptions. Section 214 of the Revenue Act lists a number of deductions, including charitable contributions, business expenses, interest on debts, percentage depletion for oil and gas wells, depreciation, and government contributions. Section 216 allows additional credits[5] for the normal tax only; these include dividends,

[5]The term "credit" here has the same connotation as today's "deduction"; in other words, it is not subtracted from the tax liability, but subtracted from the taxable income.

	Number, 1923	Number, 1924	Net income, 1923	Net income, 1924
Joint returns or separate returns of husbands	4,505,729	3,991,551	16,762,983, 344	16,695,378,477
Men, head	413,682	394,201	1,191,732,079	1,227,022,356
Women, head	157,669	153,279	449,677,714	445,184,828
Men, other	1,697,031	1,865,258	3,633,625,088	4,223,496,529
Women, other	718,080	773,314	1,690,728,371	1,883,756,919
Separate returns of wives	170,573	173,225	849,072,012	955,000,745

Table 3: Tax returns and income by filing status

interest on federal bonds, and a personal exemption. The personal exemption was $1,000 for a single person, or $2,500 for married couples or heads of households. There was also a $400 credit per dependent. The following table shows the breakdown of returns and net income by family filing status.

The gift tax was introduced in 1924, but repealed in the next tax bill in 1926. Levied over fifteen brackets, the gift tax started at 1% for gifts up to $50,000, slowly increased to a marginal rate of 6% on gifts over $250,000, and increased from there to a marginal rate of 40% on gifts over $10 million. In addition to a repeal in 1926, the Revenue Act of 1926 retroactively refunded about half of the gift taxes paid.

The estate tax featured the same rates in 1924 as the gift tax, but with a $50,000 exemption. Similarly to the gift tax, the estate tax is greatly reduced and rebated in 1926. The brackets of this ex-post rebate are also the same as the gift tax's ex-post revision. However, the estate tax continues to be levied into the future from 1926, unlike the gift tax.

Taxes are due on March 15 of the following year, so in this case, 1923 and 1924's taxes would have been due on March 15 of 1924 and 1925, respectively. Additionally, taxpayers were allowed to pay in four quarterly installments, without interest. There was no withholding in this period, except for a small number of nonresident aliens.

3.4.1 Tax Complexity

The IRS form 1040 of today bears a striking resemblance to the 1040 collected by the Bureau of Internal Revenue in 1924 and 1925. The familiar numbered lines and sometimes unexplained arithmetic manipulation are ubiquitous. The first page (of two) appears in the appendix.

However, the key insight into the complexity of the tax code in 1924 and 1925 is the length of the instructions. While today's 1040 has over 200 pages of instructions, with frequent references to IRS publications for even further explanation, the instructions in 1924 were only two pages. Those two pages were certainly typed with small font, but the clarity of the language is hard to dispute. The first of two pages appears in the appendix.

4 Publication

The Revenue Act of 1924, section 257(b) reads that

> The Commissioner shall as soon as practicable in each year cause to be prepared and made available to public inspection in such manner as he may determine, in the office of the collector in each internal-revenue district and in such other places as he may determine, lists containing the name and the post-office address of each person making an income-tax return in such district, together with the amount of the income tax paid by such person.

while section 3167 reads that

> it shall be unlawful for any person to print or publish in any manner whatever not provided by law any income return, or any part thereof or source of income, profits, losses, or expenditures appearing in any income return; and any offense against the foregoing provision shall be a misdemeanor and be punished by a fine

> not exceeding $1,000 or by imprisonment not exceeding one year, or both, at the discretion of the court.

Interpretation and compliance with these provisions varied by local Bureau of Internal Revenue collection offices. In October 1924, several local Collectors of Internal Revenue (heads of local offices of the Bureau of Internal Revenue, predecessor to the IRS) ordered their staffs to make their records available for public inspection. Some other Collectors forbade their staffs from opening books to inspection, while others required a legitimate reason for inspection. A frequent method of enforcing the "good reason" standard was to require the inquirer to provide both a name and a correct address for any income tax payer that they sought information on. In this way, inquiries for "all names with over $1,000 in tax payments" and the like could be easily refused. In some cases, lists were allowed to be copied in their entirety, while in others, copying any information whatsoever was prohibited.

The legality of newspaper publishing remained unclear until May 1925, after the books for 1923 had closed to public view. Commissioner of Internal Revenue David Blair did not order the local Collectors to either open or close their books to public inspection. Attorney General Harlan Stone, along with Assistant Attorney General James Beck, stated that they would take a test case on publicity to the federal court system, and that in the meantime, newspapers publishing tax payment information did so at their own risk. This was enough of a scare to keep many newspapers from publishing information.

The Justice Department chose the Kansas City Star and Baltimore Post as their targets, despite many better funded newspapers volunteering to be defendants. The Supreme Court sided with the newspapers, 8-0, with Harlan Stone, at this point elevated to Associate Justice, recusing himself from both cases. In brief, the Court's argument noted that obtaining tax information at the Collector office was in fact a "manner provided by law," and that arguments about the relative wisdom of publicity or secrecy were to be settled by Congress. This case, argued April 16 and 17, 1925, and decided May 25, 1925, came too late to allow newspapers which had played it safe to run any names from 1923, as the books were

BALTIMORE DAILY POST 3

How Returns Were Gathered

An elaborate organization was built by The Post to give its readers the most complete list of income tax payments published in Baltimore. Photo shows a temporary office, with special telephone wires running directly to The Post Building, which was opened at 35 S. Gay-st. Sheets of payments copied from the U. S. internal revenue books by a staff of Post reporters were rushed to this office by messenger boys and then, after inspection, relayed to The Post Building by telephone and messengers.

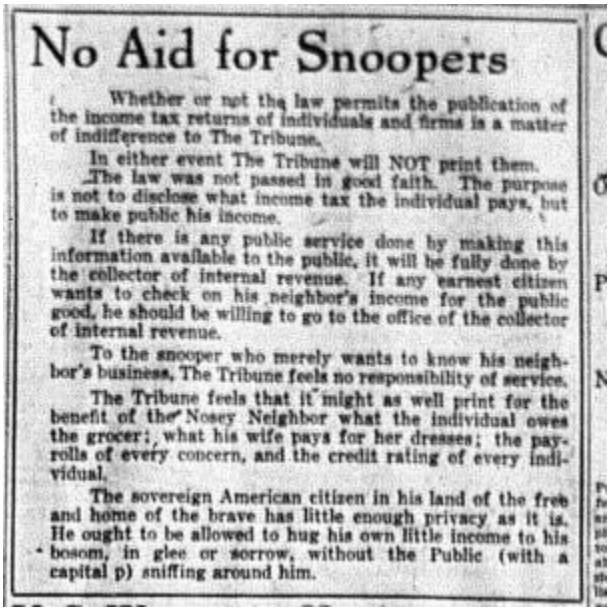
The Post published more returns and published them earlier than any other Baltimore paper yesterday.

This service will be continued for several days.

Figure 1: Baltimore Post reporters in the collector's office.

no longer open. But there was certainly far more newspaper printing of tax information in September 1925 than the previous year. In addition, the Collector offices were under pressure to cooperate with journalists seeking names. The picture below from the Baltimore Post of September 2, 1925, succinctly shows the new attitude toward newspaper publication in 1925[6].

[6]The caption reads: "An elaborate organization was built by The Post to give its readers the most complete list of income tax payments published in Baltimore. Photo shows a temporary office, with special telephone wires running directly to The Post Building, which was opened at 35 S. Gay-st. Sheets of payments copied from the U. S. internal revenue books by a staff of Post reporters were rushed to this office by messenger boys and then, after inspection, relayed to The Post Building by telephone and messengers. The Post published more returns and published them earlier than any other Baltimore paper yesterday. This service will be continued for several days.



No Aid for Snoopers

Whether or not the law permits the publication of the income tax returns of individuals and firms is a matter of indifference to The Tribune.

In either event The Tribune will NOT print them.

The law was not passed in good faith. The purpose is not to disclose what income tax the individual pays, but to make public his income.

If there is any public service done by making this information available to the public, it will be fully done by the collector of internal revenue. If any earnest citizen wants to check on his neighbor's income for the public good, he should be willing to go to the office of the collector of internal revenue.

To the snooper who merely wants to know his neighbor's business, The Tribune feels no responsibility of service.

The Tribune feels that it might as well print for the benefit of the Nosey Neighbor what the individual owes the grocer; what his wife pays for her dresses; the payrolls of every concern, and the credit rating of every individual.

The sovereign American citizen in his land of the free and home of the brave has little enough privacy as it is. He ought to be allowed to hug his own little income to his bosom, in glee or sorrow, without the Public (with a capital p) sniffing around him.

Figure 2: Minneapolis Morning Tribune states that they will not run names to avoid helping the "snoopers."

While the first year of inspection was marked by confusion and an inconsistent national interpretation of the publicity clauses, the experience with publicity in 1925 was much smoother. This may provide an explanation for why more taxpayer names appeared in newspapers in 1925 than 1924, though the number of taxpayers paying above certain thresholds used by the newspapers was lower.

Not all newspapers were eager to print names. The Minneapolis Morning Tribune was one which fervently opposed publicity. On their front page of October 25, 1924, a box appeared at the top with the heading, "No Aid for Snoopers." Stating that legal permission for printing tax payments is "a matter of indifference", they boldly note that the Minneapolis Morning Tribune "will NOT print them."

The Tribune held to its moral high ground in 1925 and refrained again from printing names. However, it is certainly curious that the Tribune printed the names and contribution amounts of many local charitable givers just mere inches to the left of its "No Aid for Snoopers" box. Not only that, but the Tribune and papers like it would often run information on the dates, locations, and attendance of private high society parties, the dates that young students would

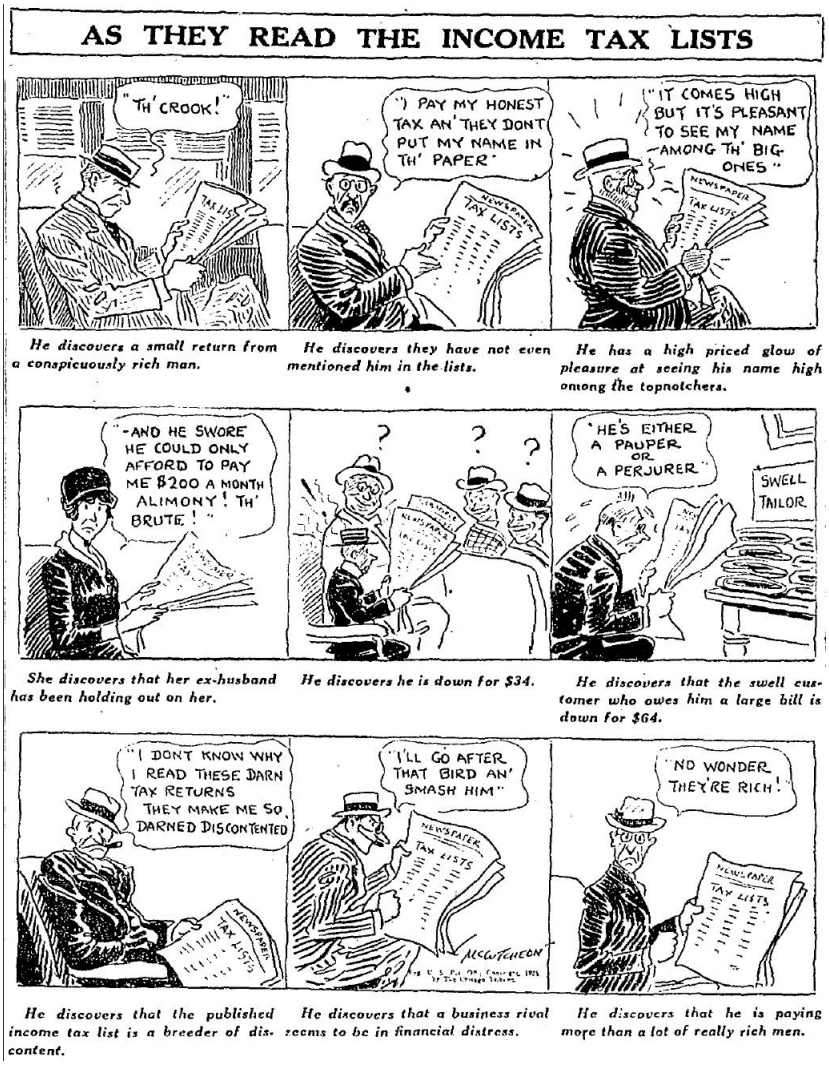


Figure 3: One of many cartoons appearing in the Chicago Tribune, a paper which ran thousands of names. (Chicago Tribune, 9/2/1925)

leave for college, every marriage license filing, and the passengers arriving and departing in local harbors. Certainly newspapers provided plenty of information for "snoopers" aside from tax payments.

4.0.2 Who Goes?

*This is where I'm going to talk about the reports of businesspeople, salespeople, young engaged women, etc. showing up to the offices, and also the reports of "nobody" (!) aside from newspaper staff showing up to record names. Differences in 1924, 1925, etc.

5 The Effect of Disclosure

The literature on the effect of disclosure of income tax information is not very deep. A 2012 paper by Hasegawa, Hoopes, Ishida, and Slemrod (HHIS) noted that "the academic literature has extensively examined tax disclosure and privacy... However, this analysis... has proceeded in the complete absence of empirical evidence about what the effects of income tax disclosure might be... we know essentially nothing about the impact of tax disclosure rules on taxpayer behavior" (HHIS 2012). The paper analyzes the distribution of taxpayers around a disclosure threshold in Japan, before and after the phaseout of disclosure rules. The results show that there is bunching immediately beneath the disclosure threshold, meaning that individuals and corporations underreport their tax liabilities to avoid disclosure. A review of financial statements shows no evidence of a decline in corporate income over the same period. Of course, this underreporting of income is the exact opposite outcome than what is claimed earlier by LaFollette and others. This result is, in the opinion of the authors, "the first evidence regarding taxpayer response to a system of income tax disclosure" (HHIS 2012).

HHIS fit the distribution of income tax returns to a Pareto distribution. They compare the predicted and actual numbers of taxpayers just above and below the threshold for disclosure. In doing so, they find that there are certainly "missing" taxpayers above the threshold for disclosure.

This approach is certainly duplicable with the data that exists in the 1920s. One approach would be to take states with disclosure in both years (or the first year) and compare them to states with disclosure in neither year (or not the first year). The Statistics of Income data make this easy to do at the state level. Another approach would be to take all states and to compare the period pre disclosure with the period post disclosure. I plan to attempt both.

5.1 Evidence of Income Shading

The Kansas City Star of September 2, 1925 mentioned a Treasury statement from the previous day. According to the Star, the Treasury

> pointed out that the amounts shown on the tax lists are the amounts of tax declared to be due by taxpayers... and may be subject to adjustments and revisions. In an effort to escape widespread publicity, many corporations and large individual taxpayers are submitting "minimum returns" until after the time limit for publicity has expired, when they will amend their claims with additional taxes.

While I have not been able to find this Treasury statement in print, it is unclear if the Treasury knew precisely how many taxpayers were doing this at the time. Given that the time period for publicity had started only the previous day, nobody would have filed their amended return yet if this was the plan. The previous year also may not provide much guidance, as newspaper publicity was a surprise for many in late October of 1924, and certainly publicity was not even law at the time the first tax payment was due. Thus, 1923's taxpayers would most likely not have revised their payments downward to begin with, and 1924's may have, but the number who adjusted upward would not have been known yet.

Part II

Who are the rich?

6 Introduction

The Revenue Act of 1924 provided for publicity and open inspection of income tax returns in the United States. While only in effect for two years, this provision gives us a window into the identities of high-income individuals. Major newspapers ran name, address, and tax payment for tens of thousands of high-income individuals. I link this data to the 1920 and 1930 Census, as well as five lists of high-income and high-wealth Americans. In doing so, I offer descriptive statistics of the high-income group that are rarely, if ever, publicly available.

The previous chapter describes the Revenue Act of 1924, how it came to be, the context of its passage, and the tax system that it implemented. This chapter describes data on the highest tax payments appearing in public lists, and the identities of those who paid them. I attempt to determine how many of the fortunes were self-made or inherited by consulting lists of families with large estates in the preceding decades.

7 Literature

Data on high-income Americans may be hard to come by, but the literature is rich with studies on their identities and demographics.

BC Forbes, in Men Who are Making America, compiles a series of short biographies of extremely successful men (Forbes 1926). While the sample is certainly not scientific, Forbes praises all of the men as extremely industrious. He notes that they are nearly all over the age of 50, and says this implies that vast fortunes must be earned through hard work over decades. This argues against the work of Klein and Lundberg noted in the previous

chapter; Forbes argues for self-made fortunes while Klein and Lundberg assert inherited wealth, power, and privilege (Klein 1921, Lundberg 1939).

Edward N. Wolff, in "Who Are the Rich? A Demographic Profile of High-Income and High-Wealth Americans," uses Federal Reserve survey data to provide demographic data on the rich (Wolff 2000). The Survey of Consumer Finances, administered to a representative sample, plus a high-income supplement, allows Wolff to describe both the high-income and high-wealth group. Wolff provides information on age, education, marital status, race, employment, industry, and occupation. He is able to do this for both 1983 and 1992, and to view changes between those two surveys. He finds that the high-income and high-wealth groups are much more highly educated than the general population, and that 98% of the rich are non-Hispanic whites, despite only 75% of the population fitting that category at the time. Employment dropped sharply among the non-elderly wealthy, from 86 to 77 percent over the time period studied, and retirement increased from 4 to 10 percent. Employees in finance, insurance, real estate, farming, mining, and business services were overrepresented among the rich, while other occupations including manufacturing and transportation were underrepresented. Wolff presents many fascinating statistics on the rich that can be duplicated with Census data on the large taxpayers of the 1920s.

Jon Bakija, Adam Cole, and Bradley Heim used confidential US Treasury data to determine the occupations of the top 1% of the income distribution in "Jobs and Income Growth of Top Earners and the Causes of Changing Income Inequality: Evidence from U.S. Tax Return Data" (Bakija et al. 2012). The authors find that in 2004, nearly 20% of the top 0.1% by income have occupations in finance or are executives at financial firms. About 6% are lawyers and 3% are in entertainment. When analyzing data from 1979 to 2005, they find that the share of occupations in finance grew dramatically, but other occupations remained mostly stable.

A recently growing literature examines income inequality and social mobility in the United States over the 20th century. A recent study by Chetty et al. studies American intergenera-

tional mobility in the latter part of the 20th century (Chetty et al. 2014). Using de-identified tax data, the authors compute the correlation between parent and child income percentile ranks. They conclude that there is no difference in mobility, but that the stakes are higher in the "birth lottery" since income inequality has increased. Clark et al. use the rarity of surnames in lists of people of high status to compute social mobility across nations and centuries (Clark et al. 2014). They find a relatively constant correlation between parent and child high status of about 0.75 to 0.85, regardless of country or time period.

The IRS makes data tables available on top wealthholders by size of net worth, age, and state with data from the Personal Wealth Study[7].

8 Data

I use the New York Times list of 1923 and 1924 taxpayers described in chapter one. I link this to several new sources. First is the 1920 and 1930 US Federal Census. Though match rates are fairly low for this time period, there are advantages to searching for high-income taxpayers. Due to their enormous fame, these people often appear in encyclopedias with birth dates and locations. Additionally, the 1920 and 1930 Census have occupation information, as well as the number of servants living in the household. The 1930 Census also has the value of the home. Due to these additional pieces of information, I can match around 70% of the top 400 taxpayers to their Census records.

I also link to a list of large estates up to 1921. The list that I use claims to be a complete list of estates over $10 million and a partial list of estates over $5 million (Klein 1921). I match on last name only between the newspaper tax dataset and this list of large estates.

I link to BC Forbes's Men who are Making America (Forbes 1926) which contains a list of 50 wealthy industrialists, giving information on age, parents' social status, and industry sector of chief success. I also use the first Forbes "rich list" (Forbes 1918), which also gives industry

[7] http://www.irs.gov/uac/SOI-Tax-Stats-Personal-Wealth-Statistics

sector, as well as an indication of who is both wealthy and famous[8].

I link to "Wealth by Reputation," a Treasury report prepared by Samuel Klaus under the supervision of Robert Jackson (Klaus 1935). Jackson sought to know how much income was controlled by powerful corporate executives, so he had Klaus prepare a report of about 200 taxpayers with net income and tax from 1928 to 1934. These taxpayers represent some combination of who is thought to be powerful and who has high income. It is not explained how these specific 200 came to be included, but certainly they are among the elite. They almost certainly are not the precise top taxpayers in any year from 1928-1934 or even the combination of those years.

I also link to a memo prepared by Treasury Secretary Henry Morgenthau in 1941 (Tax Notes 1996). During a debate over the treatment of 1941's taxes when bringing witholding into existence, President Franklin Roosevelt wanted to know which taxpayers would most benefit from a partial or complete forgiveness of 1941's taxes. He asked for a memo without names, but got a memo with the names and incomes of the top 10 salaried employees in 1941. Morgenthau included another table with the top 100 net incomes in 1941, with net incomes also given for 1940. For the top 10 on this list, he included net incomes back to 1936.

The linking of these datasets to the newspaper tax lists provides a unique look at incomes and mobility across decades and generations. At the earliest end, I see whose last name matches the last name of a large estate in recent times, which gives an idea of who is inheriting wealth from an earlier generation (but not necessarily who is not). Going in the other direction, I start with tax paid in 1923 and 1924, and add net income and tax paid from 1928 to 1934, as well as 1940 and 1941, with a few observations of 1936 to 1939. John D. Rockefeller Jr. appears in every one of these years, and Edsel Ford appears as well with income too low to be reported from 1932 to 1934. Many others that were not in 1941's top ten were in the top 100 and so span the entire period, including Doris Duke and Henry Ford.

[8] As I will show later, some names in the newspapers are surprising to editors and readers. It is possible that some high-income people might be relatively anonymous. I try to show that this is rare.

	in top 100	in top 200	in top 400	total
number	100	200	400	40411
1920 census	73	152	291	293
1930 census	69	133	266	270
1920 and 1930	54	110	217	219
Klein estates	26	44	87	3759
Forbes MMA	8	12	16	31
Forbes Rich	9	12	15	20
1928-1934 Treasury	27	36	53	39
1940-41 Salaried	0	0	0	2
1940-41 Top 100	7	11	17	111

Table 4: Number of observations matched across data sources

9 The Top Taxpayers

9.1 The Top Ten

I present the top ten taxpayers in both 1923 and 1924 in order, with the industries that they are most well known for, and amassed their fortunes in, as well as a small amount of biographical information. Not surprisingly, most of the top ten remain famous to this day, and seven appear on both top ten lists.

9.2 The Top Hundred

The top one hundred taxpayers in each year are also presented in the appendix, with their tax payments and their rank in the other year. While the rest of the top 100 may not be household names to this day, at the time, they were certainly extremely well known as wealthy people.

9.3 The Top 400

I provide summaries of Census data for the top 100, 200, and 400 taxpayers for 1924. The 1920 and 1930 Census contained information on age, gender, race, children, servants, immigration status, marital status, homeownership, occupation, and industry. The 1930 Census

Rank, 1923	Name	Tax	Industry	Short Bio
1	John D. Rockefeller, Jr.	$7,435,169	Oil	Head of Standard Oil, son of JD Rockefeller, founder
2	Henry Ford	$2,467,946	Auto	Auto exec
3	Payne Whitney	$2,041,951	Oil	full name William Payne Whitney, partial heir to Payne and Whitney fortunes
4	Edsel Ford	$1,984,254	Auto	Son of Henry
5	Edward Harkness	$1,755,259	Oil	Son of Stephen, original partner in Standard Oil
6	Anna Harkness	$1,422,676	Oil	Wife of Stephen, mother of Edward
7	Andrew Mellon	$1,173,988	Banking, aluminum	Secretary of Treasury, financed Alcoa
8	William Wrigley, Jr.	$1,154,420	Gum	Chewing gum manufacturer
9	T. W. Lamont	$847,820	Banking	JP Morgan partner, advisor to Wilson, Hoover, FDR
10	Julius Fleischmann	$827,384	Yeast	Inherited Fleischmann's Yeast, later Mayor of Cincinnati

Table 5: Top ten taxpayers, 1923

also provides information on veteran status, home value, and whether the household owns a radio or lives on a farm. This information can be compared against averages found in New York and the country in the 1920 and 1930 Census.

As noted previously, I can link 73 of the top 100, 152 of the top 200, and 291 of the top 400 to the 1920 Census. I can link 69 of the top 100, 133 of the top 200, and 266 of the top 400 to the 1930 Census. I can link 54 of the top 100, 110 of the top 200, and 217 of the top 400 to both. I can also establish from other biographical information that 43 of the top 400 died before 1930 and another 3 had left the country.

9.3.1 Age, gender, race

The mean and median ages in 1920 are around 50 years old for the top 100, 200, and 400. Doris Duke is the youngest member at 6 years of age, while there are 5 over the age of 80. In 1930, the mean and median are again relatively constant around 58 years, for each of the

Rank, 1924	Name	Tax	Industry	Short Bio
1	John D. Rockefeller, Jr.	$6,277,669	Oil	Head of Standard Oil, son of JD Rockefeller, founder
2	Henry Ford	$2,608,808	Auto	Auto exec
3	Edsel Ford	$2,158,055	Auto	Son of Henry
4	Andrew Mellon	$1,882,600	Banking, aluminum	Secretary of Treasury
5	Payne Whitney	$1,676,626	Oil	full name William Payne Whitney, partial heir to Payne and Whitney fortunes
6	Edward Harkness	$1,351,708	Oil	son of Stephen, original partner in Standard Oil
7	R. B. Mellon	$1,180,099	banking	brother of Andrew
8	Clinton H. Crane	$1,066,716	naval architecture, mining	Naval architect and head of family mining business
9	Anna Harkness	$1,061,537	Oil	Wife of Stephen, mother of Edward
10	Anna Thompson Dodge	$993,028	Auto	widow of Horace Dodge, auto executive

Table 6: Top ten taxpayers, 1924

		in top 100	in top 200	in top 400
age, 1920	mean	49.9	49.4	50.3
	median	49	49	50
age, 1930	mean	57.7	57.0	58.4
	median	58	57.5	58
gender, 1920	female	15	27	53
	male	58	125	238
gender, 1930	female	14	21	45
	male	55	112	220
color, 1920	white	73	152	291
color, 1930	white	69	133	265

Table 7: Demographic statistics, 1920 and 1930

top 100, 200, and 400. Doris Duke is again the youngest, at 17, while three others, all heirs (Timken, Vanderbilt, Harkness) are in their 20s. The next youngest in the top 100 is Edsel Ford, who is 36. Ellen Browning Scripps is oldest at 93, and Henry C. Phipps and George F. Baker, are also 90 or older.

In all divisions of the top 400, the vast majority are male. All persons are white in each year.

9.3.2 Marital status, children, servants, homeownership

Most of the top taxpayers are married. The next most prevalent status is single, then widowed, then divorced. Each of these appear in very few records compared to those indicating marriage. They overwhelmingly claim status as the head of household, with a moderate number reporting as the wife of the head of household. Very few are daughters or sons of the head of household, and one is an insane patient (Stanley McCormick). The top taxpayers also predominantly own homes, rather than renting. They usually own their homes rather than having a mortgage.

The age at first marriage is also reported in 1930. The median is 27 years for the top 100, 200, and 400, and the mean age hovers around 28 in each set.

The mean home value in the top 100 is over $400,000, while just above $350,000 and $275,000

for the top 200 and 400, respectively. The median home value is $250,000, $200,000, and $150,000 for the top 100, 200, and 400 respectively. Fifteen of the top 400 live in homes valued at $1 million or more, with Richard B. Mellon leading the way in a $3 million house on Fifth Avenue in Pittsburgh.

The average number of children is less than one son and less than one daughter per entry (about 0.8 for each in 1920, and about 0.6 for each in 1930). However, this certainly does not imply that the wealthy have that many children. To be recorded, the children had to be in the household at that time. As the individuals observed are usually older, they may have much older children who do not live in the household any longer.

The wealthy did not hold back in hiring servants. The top 400 had over 5 servants on average in both years, and Eleanor W. Dixon had 44 servants in 1930. The most servants in 1920 worked for Otto H. Kahn, who employed a total of 22.

9.3.3 Birthplaces and Immigration

By far, most of the top 400 were born in New York, with 76 claiming it as their birthplace in 1920 and 67 in 1930. Pennsylvania, Illinois, Massachusetts, and Ohio each have more claiming that as their birthplace than the leading foreign countries, England and Germany. 9 and 11 people claim birth in England and Germany respectively, and in 1930, those numbers are 9 and 7. Germany is certainly a leader among the birthplaces of parents. There were 33 fathers and 32 mothers born in Germany in the 1920 Census, and in 1930 these numbers are 30 and 26. 39 fathers and 37 mothers were reported with German as a first language in 1920; this question was not asked in 1930.

Of those identifying as immigrants in 1920, 23 report being naturalized, and 2 are aliens. In 1930, 18 are naturalized and 2 are aliens. In 1920, of the top 400, regardless of immigration status, 14 report German as their mother tongue, 1 reports Scotch, and the rest do not report or report English. In 1930, 7 chose German as their language before living in America, and the rest report English or do not report.

		top 100	top 200	top 400
marital, 1920	divorced	2	3	4
	married	61	130	247
	single	6	11	21
	unknown	1	1	1
	widowed	3	7	18
marital, 1930	divorced	2	2	4
	married	54	110	211
	single	4	8	19
	unknown	0	0	0
	widowed	9	13	31
household status, 1920	boarder	0	0	1
	brother	1	1	2
	brother-in-law	0	0	1
	daughter	1	2	3
	head of household	58	127	241
	insane	1	1	1
	lodger	1	1	3
	son	0	1	4
	wife	11	19	35
mortgage, 1920	free	48	93	175
	mortgage	3	9	19
	unknown	3	5	10

Table 8: Marital status, household status, homeownership

9.3.4 Occupations

Occupations and industries are self-reported in each year of the Census, with little to no standardization by the enumerator. The data, without any adjustment, clearly shows that banking is the most common response to both industry and occupation. Based on the responses to each question, I assign each member of the top 400 a "sector" variable in each year. I report these results in tables below. The most common occupation sector is "none", presumably by those who are retired, while banking and finance (counted separately for those who indicated work in finance, stocks and bonds, or brokerages), manufacturing, and retailing are other large sectors.

9.3.5 Veterans

Veteran status is somewhat rare among the high-income. Among the top 100, four are World War veterans, four are wife of a World War veteran, and one (Bernard Baruch) reports working on the Peace Conference. Another seven World War veterans appear in ranks 101-200, and two Spanish-American war veterans are in ranks 201-400, along with eighteen more World War veterans and another wife of a World War veteran. Overall, there are 5 wives of World War veterans, 2 Spanish-American war veterans, one Peace Conference worker, and 29 World War veterans.

9.3.6 Persistence over time

The existence of Treasury memos for 1928-1934 and 1936-1941 gives an opportunity to look at persistence of high income over time. There are 207 records of high net incomes and tax payments from 1928-1934 in a memo by Samuel Klaus (Klaus 1935). These are not necessarily the top 200 incomes or taxes in any particular year, nor the sum of those years. Therefore, I will refer to them as the "elite 200" rather than the "top 200" for this period. These 207 records represent 197 individuals, after trust funds are removed. Of these 197, I

Sector	1920	1930
Architecture	1	2
Art	0	1
Auto	10	9
Banking	39	39
Business	1	0
Capitalist	1	2
Communications	1	1
Education	1	2
Engineering	2	3
Entertainment	2	1
Executive	0	1
Farming	3	2
Finance	15	14
Food Processing	13	8
Government	4	4
Housewife	1	0
Lawyer	14	12
Lumber	1	2
Management	2	1
Manager Of Estate	1	0
Manufacturer	40	33
Medical	4	2
Mining	5	5
None	68	70
Oil	4	4
Publishing	7	6
Railroad	4	4
Real Estate	6	4
Religion	1	1
Retail	20	15
Textiles	9	7
Tobacco	4	3
Transportation	1	0
Utilities	4	3

Table 9: Occupation Sectors

can find 27 in the top 100, 36 in the top 200, and 53 in the top 400, and 111 overall. 86 of them cannot be found in 1923-1924 data.

There are 11 names reported among the top 10 (two are married and filed jointly) salaried workers for 1941. Of these, only two match to 1923/1924, and neither one in the top 400. These two are Eugene Grace and Nicholas Schenck. Eugene Grace was president of Bethlehem Steel but apparently worked his way to the top from working as a crane operator (need to cite). Nicholas Schenck was a movie entrepreneur who also seemed to build his business empire from scratch (need to cite).

Of the top 100 net incomes in 1941, regardless of salary, seven can be found in the top 100, 11 in the top 200, 17 in the top 400, and 39 overall. Of course, this means that 61 can not be found in 1923/1924. Again, the result must be carefully stated: about 40% of the top 5% in 1924 were also in the top 100 (much more exclusive than the top 5%) in 1941.

Unsurprisingly, persistence appears higher for time periods that are closer together. A majority of those in the Klaus data can be found in 1923-1924, but only about 40% can be found in 1941's top 100. However, if the data was more comparable, i.e., if the 1941 data was 1941's top 200 (to be closer to 197) instead of the top 100, perhaps the match rate would be substantially higher.

9.4 Surprising Members

Certainly, the press had some idea of the famous and wealthy names that they might come across in the tax lists. There were also names that surprised them. On September 2, 1925, the St. Louis Post-Dispatch provided a list of 159 individuals with over $25,000 in income[9] who paid no federal income tax. The New York Times and Chicago Tribune also made note of nontaxable returns found in the collectors' books, but did not ever devote an entire section

[9] While the collectors were not supposed to let income information be seen, I believe that they did organize their books by level of income. My best guess is that the collector's office had a book composed entirely of individuals with over $25,000 in income, but did not disclose the amount of income for any particular one of them.

to listing them all together.

On Tuesday, October 28, 1924, the Seattle Post-Intelligencer mentioned that the leading Northern California taxpayer was a complete unknown:

> much to the surprise of bankers and newspapers, Leonard Howarth, of Tacoma and Santa Rosa, Calif., was revealed as leading the ranks ... with an income tax payment of $116,061.78.
>
> Inquiry further revealed the fact yesterday that Howarth's business associates are chiefly in Tacoma, that they are few, and that these few are the only people who know Howarth, his history, and his remarkable financial genius.
>
> Howarth... retains his mastery over finance and divides his time between a bachelor life of no social activities in his two sumptuous homes and his many corporate affiliations.

The Seattle Post-Intelligencer was perhaps equally surprised (enough to run an article in both years) that a woman was the top Seattle taxpayer in each year; Mrs. Harriet W. Rhodes paid $85,327.05 in 1923 and $24,683.58 in 1924.

Garland Kent provides the best rags-to-riches story in the dataset. In the 1920 Census, he appears as a poor unmarried farmer in Justice, Texas. After not appearing in tax data for 1923, he appears for 1924 with the second highest tax in the Dallas district (there are only two districts in Texas). By 1930, he is married with a son and daughter, and lives in a $50,000 house with a servant. His self-reported occupation and industry has changed from general farming to a producer in the oil business. It seems that Mr. Kent struck oil on his farm and quickly turned into a millionaire.

9.5 Inheritance or earning

I attempt to determine which taxpayers attained their status by their own fortune or by the fortune of their ancestors. I link the taxpayer list to a list of large estates until 1921. I

merge only on last name. This creates some problems among the top 400 for the Fords (the auto fortune and the plate glass fortune are separate), and throughout the dataset for those with common last names (Smith, Davis, Green, Brown). In the top 400, though, some last names that are rare do indicate an inherited fortune (Vanderbilt, Guggenheim, Harkness, Juilliard).

26 in the top 100, 44 in the top 200, and 87 of the top 400 can be matched on exact last name to a large estate. This rate is fairly constant around 20-25%. However, seven of the top ten are linked to a large estate[10]. The most common occurring of these names is Ford, from Edward Ford's plate glass empire, but he is incorrectly linked to Henry and Edsel Ford. He is, however, correctly linked to other Fords in the Toledo area who are involved in the plate glass industry. The Whitneys appear 4 times in the top 400, but no other last name appears more than 3 times, with most occurring just once.

29 of the 239 large estates do not match to anybody in the data (even outside the top 400) on exact last name. But 3,759 of 40,411 total observations can be linked to a large estate, and very frequently each estate is linked more than once. Overall, just over ten percent of large estates do not seem to appear in the next generation, and just under ten percent of next generation observations can be linked back to a large estate in a previous generation. This does seem to indicate a large amount of turnover at the very top, but many people could be linked to wealthy families without an estate crossing the $10 million threshold for inclusion in Klein. Klein's list should be interpreted carefully, as a measure of estates that are extremely large, and only inclusive of those with ancestors who died in the time period before 1921. For example, John D. Rockefeller, Jr., is not linked to any large estate, though he owes his fortune to his still living and still earning father. The others in the top ten who cannot be linked to any past large estate are brothers Andrew and Richard Mellon, who definitely came from wealthy origins. Really, the only person in the top 10 who made their

[10]The seven are Henry and Edsel Ford, Payne Whitney, Anna and Edward Harkness, Clinton Crane, and Anna Thompson Dodge. Of these, the Fords are self-made (though Edsel is wealthy due to his still-living father's fortune), but the Harknesses and Anna Dodge are widows and/or heirs.

own fortune is Henry Ford.

9.6 Wealthy families

The top end of the 1924 tax list gives some indication of intermarriage between wealthy families. Certainly the Rockefeller daughters married into other rich families like the McCormicks and the Prentices. But many women in the data appear to be wealthy only from inheriting from their parents or husbands. Some, like Kate Wilson (Taylor) Winthrop, have higher incomes than their still-living husbands. However, if married taxpayers filing jointly only appear in the newspaper under one spouse's name, this may obscure marriages between wealthy families. Overall, the data does not lend itself to determining the heritage of each taxpayer and their spouse.

It is much easier to use this data to determine the family relationships between those in the top 400. Several father-son pairs appear, including the Rockefellers, Fords, and Harknesses. There are also sets of siblings. The Havemeyer siblings, Electra Webb, Adaline Frelinghuysen, and Horace Havemeyer, occupy spots 47, 49, and 51 in 1924. Brothers Stephen and Jesse Metcalf are in 69th and 70th place. It is not clear whether such similar incomes result from an inheritance in that tax year, a dividend, or income from a family business.

9.7 A Superstar Economy?

Entertainers do not occupy many spots at the top of the list. The only actor in the list seems to be Douglas Fairbanks, at rank 150. George Herman "Babe" Ruth paid $3,433 in 1924 taxes, good enough to place him behind about 10,000 other wealthy New Yorkers. He does not appear in 1923. Boxer William Harrison "Jack" Dempsey paid $90,831 in 1923, but only $267 in 1924[11]. He ranked around 350th in 1923, which is quite high, but still lower than many lawyers, bankers, and inheritors.

[11] It seems Dempsey boxed in 1923, but did not box in 1924, so his income would have been much lower.

10 Conclusion

Despite privacy issues surrounding individual tax payments, at least three lists of high-income taxpayers exist in the period 1923-1941. I find 1924's top 400 taxpayers in the 1920 and 1930 US Federal Census, with a relatively high match rate for the period, though this is aided by the fame of the individuals. This chapter presents demographic statistics from those Censuses. Unsurprisingly, the rich are rich, and they own expensive houses and employ several servants each on average. They have an average age in their 50s through the 1920s. They usually did not serve in wars, but this may be have been limited by their ages. They also frequently work in banking and finance, with executives in automotive-related businesses and other manufacturers also making large fortunes.

The rich enjoy some level of persistence of high incomes over time. Nine of the top ten in 1924 came from wealthy parents, and sometimes built even larger fortunes. About ten percent of individuals in the 1923 and 1924 tax lists share a last name with somebody who died and left a large (over $10 million) estate. About 90 percent of individuals who died leaving a large estate share their last name with somebody in the 1923-1924 tax list. About half of those who appear in the "elite 200" in 1928-1934 also appear in the 1923-1924 tax lists. About 40% of those who appear in the top 100 in 1941 also appear in the 1923-1924 tax lists.

Part III

Tax Cuts and Response

11 Introduction

The federal personal income tax had a turbulent early history. At its inception in 1913, marginal rates ranged from 1 to 7 per cent. World War I pushed the rates as high as 77 per cent in 1918, and interwar tax cuts reduced the highest marginal rate to 24 per cent by 1929.

This paper examines an interesting and understudied chapter in the interwar period. A provision for public inspection of income tax returns became law in June 1924. Before its amendment (and effective repeal) in 1926, major newspapers across the country ran tens of thousands of names, addresses, and tax payments for the tax years 1923 and 1924. The Revenue Act of 1924 also cut marginal tax rates across the board. Thus, a unique opportunity exists to match individual taxpayers across two years and two rate structures and examine response using the elasticity of taxable income with respect to the marginal net-of-tax rate (ETI). Using data from the New York Times, I have constructed a dataset of just over 10,000 individuals whose entries can be considered matches between the two years.

Many papers in the public finance literature estimate the elasticity of taxable income. The ETI basically tells you what will happen to the government's tax revenue when it changes its marginal tax rates. This is one of the most important questions in public finance, if, after all, the goal is to gain a set amount of revenue for the government at a minimal efficiency cost. If the government cuts marginal tax rates by 5%, the ETI will tell you the effect on tax receipts.

For a mental example, I recommend thinking of a tax system with just a few brackets and rates, and hypothetical tax cuts that affect all marginal rates the same, proportionally.

Remember that a tax rate cut is actually an increase in the net-of-tax rate, and also remember that the ETI measures the change in taxable income, not the change in tax receipts. Then, in the example I recommend, you can picture tax receipts as the product of tax rates and taxable income (really, some vector of each of these). In my simple example, I want you to picture all tax rates changing proportionally equally; when that is true, the effective tax rate will make an equal proportional change.

If tax receipts go up when the net-of-tax rate goes up, then we are on the right side of the infamous "Laffer curve." If tax receipts go down when the net-of-tax rate goes up, we are on the left side. The first situation is a positive ETI greater than one. The second situation is an ETI between 0 and 1. If the ETI is close to 1, then the government will see very similar revenues from any (nondrastic) change in tax rates. But if the ETI is positive and close to 0, then income is not very responsive to changes in the tax rate, and as a result, tax receipts will fall almost proportionally to the changes in tax rates. In this last case, remember that income won't change much, but of course, tax receipts are the tax rate (which is changed) times taxable income (not much changed), so the source of the changes in receipts comes almost entirely from the change in the tax rate.

The economist must perform some minor transformations to correctly compute the numbers. The marginal tax rate cut of 5% needs to be translated into a percent change in the marginal net-of-tax rate. The marginal net-of-tax rate will be the "take home" part of income after taxes. If a marginal tax rate is 40%, the corresponding marginal net-of-tax rate is 60%. And if that marginal tax rate was cut from 40% to 35%, then the marginal net-of-tax rate climbs from 60% to 65%. The percent change is then 5% divided by 60%[12], giving a percent increase in the marginal net-of-tax rate of about 8.3%.

[12] I use the original net of tax rate as the base in this example for simplicity, but in practice, the literature uses logarithms.

12 Background

12.1 The 1924 Income Tax

The length, simplicity, tax form, and levels of taxation in the 1920s, specifically 1923 and 1924, are discussed in chapter one.

12.2 Literature

An excellent summary of the theory and evidence in ETI research is found in Goolsbee et al. (1999). The ETI is a measure of total response to tax rate changes, regardless of the cause. The measure should not be construed to mean anything more than it does. For instance, taxable income is a function of both real income and deduction choices, among other things, so implications for economic growth, broadly defined, are very limited. Generally speaking, more recent work estimating the ETI has been able to use confidential panel data, but attempts to analyze the ETI in historical periods must rely on aggregate data. Goolsbee et al. (1999) estimates the ETI around the 1924 tax cuts using data from the Statistics of Income. Through different estimation procedures and different comparison groups, he computes an overall ETI around 0.5 and difference-in-difference ETIs from 0.6 to 1.2. However, in other periods of tax cuts or tax increases that Goolsbee analyzes, he finds estimates of the ETI that are near zero or negative. Feldstein (1995) uses a panel of 4,000 taxpayers around the Tax Reform Act of 1986 to estimate an ETI of at least 1. Auten and Carroll (1999) use the Statistics of Income Individual Income Tax Files to create a dataset of 15,579 households in 1985 and 1989. Their range of assumptions gives ETIs ranging from 0.4 to 0.7, and usually around 0.6. Gruber and Saez (2002) use a panel from 1979-1990 to estimate an overall ETI of 0.4, but an ETI of 0.57 for those with incomes greater than $100,000, and an ETI less than a third as large for the complement. In particular, they found that those who itemize show larger responses. Smiley and Keehn (1995) study the tax cuts of the 1920s and determine

that overall tax revenue increased after and because of tax cuts. This hints at an ETI of greater than 1, but their analysis uses the number of taxpayers as the dependent variable rather than the amount of taxable income. In a 2012 working paper analyzing the aggregate data from the Statistics of Income, David and Christina Romer find an ETI around 0.2 with a t-statistic over 6 for the period from 1919 to 1941. For the restricted sample period from 1923 to 1932, they find an ETI around 0.38.

This paper will fall in the same period that Smiley and Keehn and Goolsbee analyze, but will make a contribution with a new dataset that includes individual taxpayers who can be followed between two years.

12.3 Congressional debate

For a review of the debate in Congress and the tax rhetoric of the 1920s, refer to chapter one.

12.3.1 Other changes in the Revenue Act of 1924

Chapter one features a longer discussion of the tax code of the 1920s, and changes in 1924. A brief summary of changes follows here.

- All taxes owed for tax year 1923 are subject to a 25% rebate, described below.
- Earned income is introduced as an adjustment. Earned income is taxed at a 25% lower rate (e.g., a marginal rate of 30 instead of 40). Earned income is defined as the first $5,000 of income, or $10,000 for those with incomes over $10,000. For those with incomes between $5,000 and $10,000, earned income is defined as at least $5,000.
- A small loophole regarding capital net losses is closed. Previously, capital net losses could be deducted from ordinary income or capital gains income, while capital gains were taxed at the 12.5% capital gains rate. Closing the loophole means that no less

tax can be paid than what would be paid if capital gains and losses worked to cancel each other out (rather than having capital net losses reduce a larger surtax rate).

- The gift tax is introduced (but repealed and retroactively rebated in the Revenue Act of 1926).
- The Board of Tax Appeals is given independence from the US Treasury, instead of its previous location at the Bureau of Internal Revenue, predecessor of the IRS.
- Assorted other tax changes; for example, the repeal of a candy tax and soft drink tax[13].

12.3.2 Ex-post adjustment

The Revenue Act of 1924 included a one time 25% rebate on 1923's taxes, after they had been paid. The Chicago Tribune claims multiple times that they run the numbers post-deduction, while the New York Times claims multiple times that they run them pre-deduction. When the Chicago Tribune runs New York numbers, they say that the New York office's numbers are not adjusted for the 25% deduction.

To correctly analyze behavioral response (those taxpayers did not know a year in advance that the tax rates would all be cut 25% after the fact), the payments in 1923 must be adjusted up by 1/3 to what they originally thought they were paying. It is not clear if the 1924 numbers are the tax payments after the 1923 rebate or before, so I compute and report both.

[13] "Numerous excise taxes are reduced or repealed. Among the taxes repealed are those on telephone and telegraph messages, candy, soft drinks, inexpensive jewelry, certain sporting and traveling goods, certain furnishings and fixtures, admissions costing 50 cents or less, truck chassis sold for $1,000 or less, automobile truck and wagon bodies sold for $200 or less, and stamp taxes on promissory notes. Taxes upon tires, inner tubes and accessories, except when sold to manufacturers, are reduced from 5 per cent to 2 1/2 per cent, but taxes upon automobiles other than those mentioned above are not changed. The heavy taxes upon tobacco and manufactures thereof are unchanged." (Blakey 1924)

13 Data

13.1 Source

In October 1924, major newspapers began running lists of tens of thousands of names, addresses, and tax payments for both individuals and corporations. Despite confusion at the time, this was probably expected, since Coolidge noted his displeasure with the publicity provision in his response to the new law, and the text was printed in major newspapers (nyt (1925), 6/3/1924). Major newspapers again ran tens of thousands of names, addresses, and tax payments in September of 1925. A contemporary account of the mayhem can be found in Atwood (1926). I have had the New York Times records digitized, and over 27,000 entries resulted from the fall 1924 lists (tax year 1923) and over 44,000 entries came from the fall 1925 lists (tax year 1924). I matched these using the reclink command in STATA (available from RePEc). Using reclink, I matched progressively on exact name and address, exact name and fuzzy address, fuzzy name and exact address, and fuzzy name and address. Entries were then checked by hand. Computer code is available by request.

After removing duplicates, estates, corporations, and people outside the New York area, there are 18,150 records in 1923 and 29,921 records in 1924. Of these, 11,774 match. The address field is given in 16,001 of 18,150 records in 1923, and in 28,651 of 29,921 records from 1924. I do not perform any data analysis with the 824 estates or 12,798 corporations. In other cities, there are 713 matches out of 1310 ('23) and 3290 ('24) entries. Address is given for 538 ('23) and 1504 ('24) of them.

In Chicago, after removing duplicates, estates, corporations, and people outside the Chicago area, there are 4,954 records in 1923 and 12,077 records in 1924. Of these, 1,555 match. The address field is almost never given in 1923 but almost always given in 1924. I do not perform any data analysis with the 190 estates or FIND NUMBER corporations. William Wrigley, Jr., is the largest taxpayer in 1923 at $836,665, but he pays only around $2,000 in 1924 (the newspapers explain this as a one time capital gain). 1924's highest is 1923's second highest,

Richard T. Crane, Jr. Four members of the McCormick family appear in the top 10.

13.1.1 Matching

See the data appendix for a discussion of matching between the two years.

13.1.2 Computing Taxable Income

I have computed taxable income in two ways. The first assumes personal exemptions only were claimed, and deduces taxable income based on the assumption that all tax paid was on ordinary income. The second uses the Statistics of Income for years 1923 and 1924, which present fairly detailed aggregate statistics by income bracket. I have used these numbers to determine how much the average taxpayer in each bracket paid in normal tax and surtax, how many deductions were claimed, and how much income was from capital gains rather than ordinary income. I computed the average tax paid and average net income and interpolated these numbers for all matches in my sample. Throughout the paper, I refer to the first measure as the taxable income, and the second measure as the imputed taxable income. Additionally, for the first method, I computed the marginal tax rate faced by each taxpayer on their last dollar of taxable income. I also computed what the marginal tax rate would have been in each year if the laws of the other year had been in effect. In other words, for a taxpayer in 1923 with an estimated taxable income of $6,000, I assigned both the marginal tax rate determined by the Revenue Act of 1921 and the Revenue Act of 1924. By this method, I hope to avoid spurious correlations that can easily result from analysis of across-the-board tax cuts.

13.2 Sample characteristics

Since the dataset is new and since newspaper editors may have been swayed to exclude certain records from their lists, I will compare the dataset against aggregate statistics presented in

the Statistics of Income. I will also present information that determines how well-preserved the rank of each taxpayer is. This will be important in determining how important the assumption of rank preservation is in studies with aggregate data.

Some perspective on the size of the sample can be gained by comparing the number of returns with more than $20,000 of income in the sample against the number in New York or the whole United States. In 1923, the sample has 7,486 individuals with over $20,000 in income. New York had 20,647, and the USA had 80,783. In 1924, the sample has 7,987 individuals with over $20,000 in income. New York had 25,969, and the USA had 96,434. The sample therefore contains a number roughly equivalent to 1/3 of the number of filers in New York in each year and 1/12 of the number of filers in the country.

The next piece of information that describes whether the sample is representative is the number of filers in each income group relative to the total number of filers in each income group. Figure in the appendix show densities and cumulative distributions for both years with minimum cutoffs of $15,000 and $20,000. In general, the sample underestimates up to about $40,000 and overestimates at higher incomes, but the sample is roughly consistent with the aggregate data.

Interestingly, the numbers for taxable incomes align quite well when using either method of income computation. While one might not expect the first method (which assumes only personal exemptions, no deductions, and all ordinary income) to match very well, it is possible that the use of exemptions and the shifting of income toward capital gains may offset each other. However, even if this were true, the marginal tax rate computed by the first method would not be accurate.

14 Analysis

14.1 Response regardless of tax rate

Before computing a complicated statistic, I first decided to review the percent changes of each individual's payment. I computed the percent change from 1923 income as the difference in the 1924 and 1923 payments, normalized by the 1923 payment, and also normalized by the 1924 payment[14].

As tax rates were cut for most taxpayers by about 20% to 25%, we should be particularly interested in what happens around an imaginary vertical line drawn at 0.75 in each histogram. Bars to the left of that line indicate individuals whose percentage decline in tax payment were larger than the decline in their tax rate (i.e., income fell), and those to the right are those for whom the opposite is true (income rose).

The table below presents statistics on the number of returns, taxable returns, total income, and total tax paid in the United States for 1923 and 1924. The tax for 1923 is adjusted up by 1/3; this accounts for the Statistics of Income reporting the final amount, post-rebate.

	returns	Taxable returns	income	tax
1923	7,698,321	4,270,121	24,840,137,364	884,868,673
1924	7,369,788	4,489,698	25,656,153,454	704,265,390
change	-328,533	219,577	816,016,090	-180,603,283
percent	-4.27%	5.14%	3.29%	-20.41%

14.2 The ETI

To compute the elasticity of taxable income, recommend the regression

$$log(z_2/z_1) = \alpha_0 + \zeta log[(1 - T_2')/(1 - T_1')] + \eta log[(z_2 - T_2(z_2))/(z_1 - T_1(z_1)] + \alpha_1 log(z_1) + \epsilon$$

[14] In formula form, that's (payment1924 - payment1923)/(payment1923), and (payment1923 - payment1924)/(payment1924)

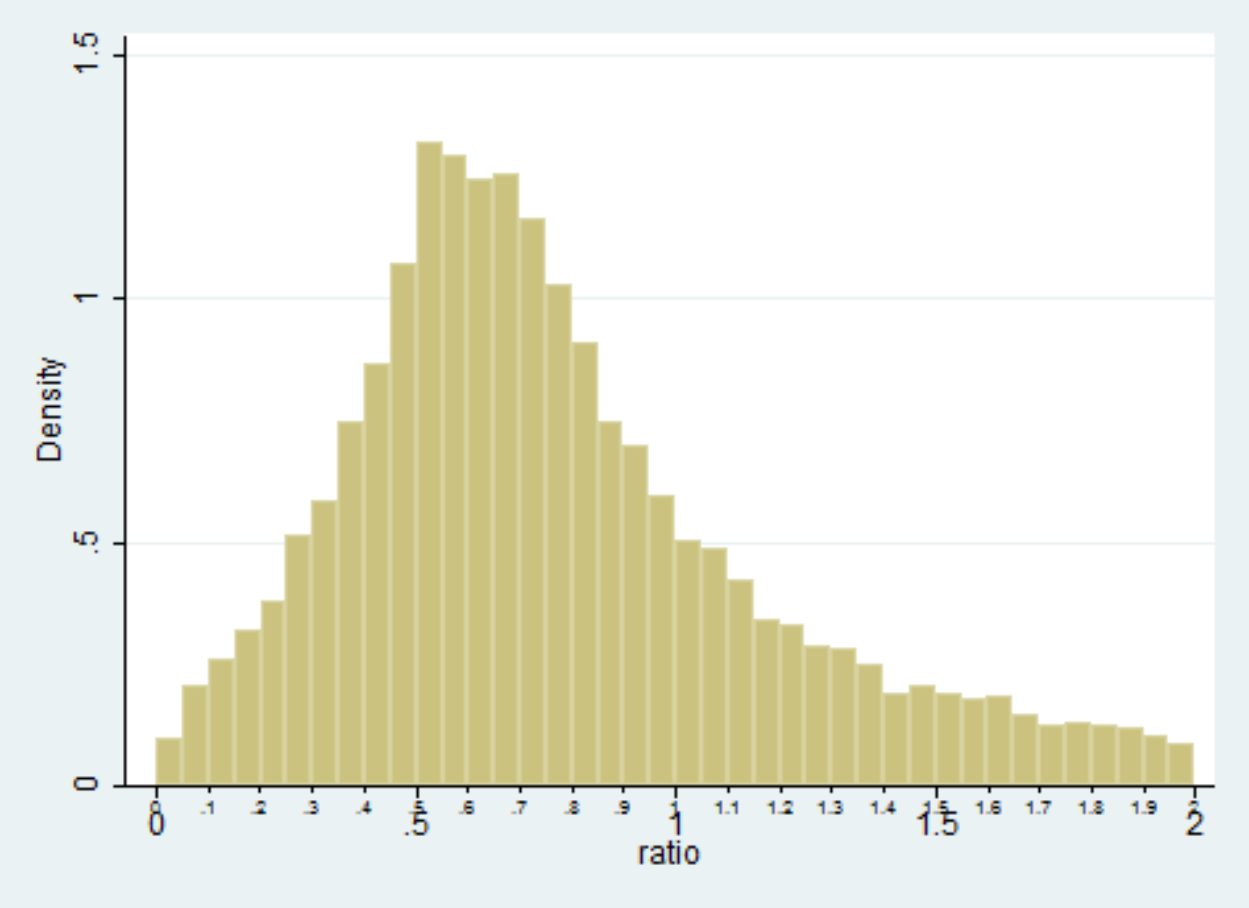


Figure 4: Histogram: New York 1924 payments divided by 1923 payments, to show the percent change in tax payments.

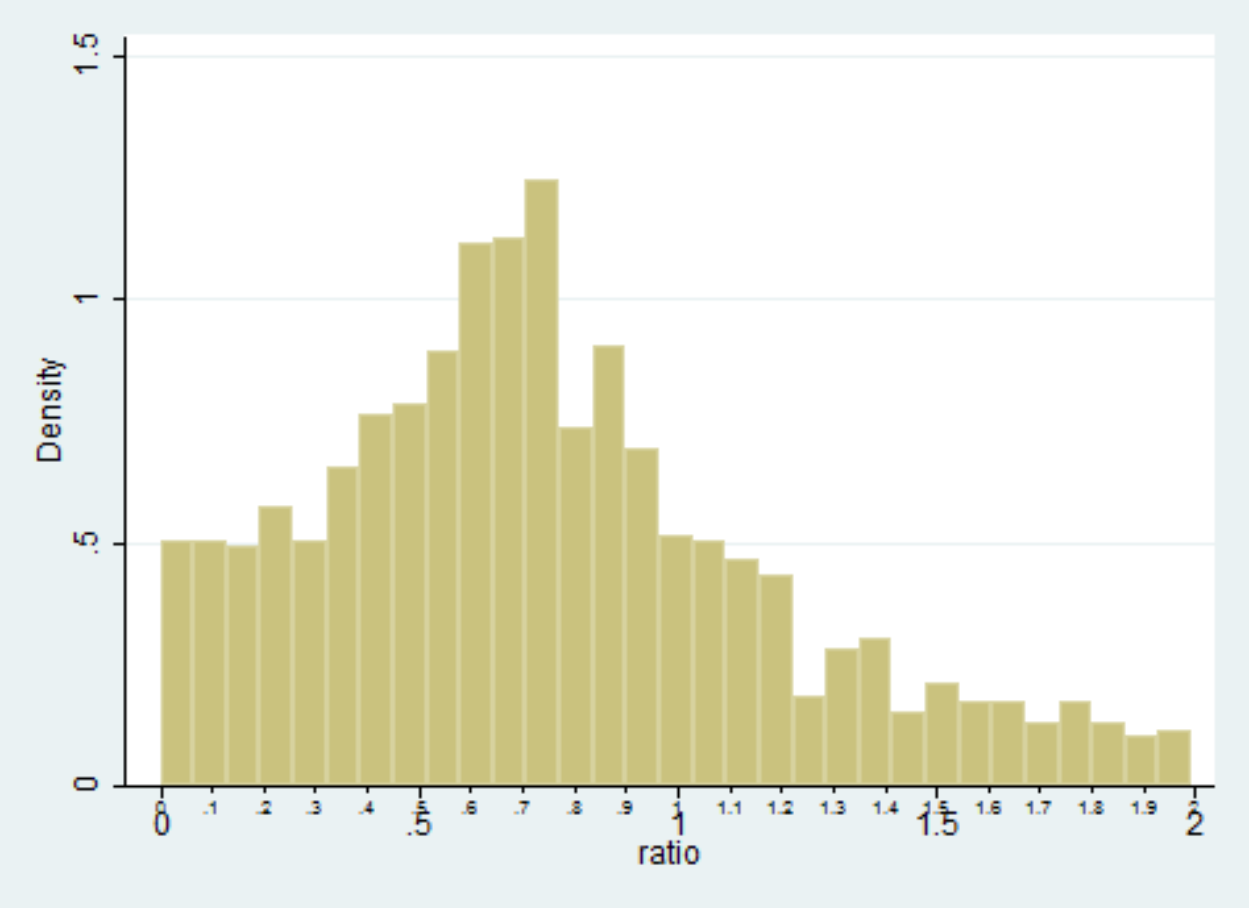


Figure 5: Chicago's 1924 payments divided by 1923 payments.

where z_i is the taxable income in year i, $T_i(z_j)$ is the total tax paid, with the income tax rules of year i and the income of year j, and T_i' is the marginal tax rate in year i.

I use the standard instruments in the literature. Instruments are necessary because of the progressivity of the tax code. When there is a positive shock to income, ϵ>0, and therefore the tax rate will increase automatically. This will lead to a correlation with both $log[(1 - T_2')/(1 - T_1')]$ and $log[(z_2 - T_2(z_2))/(z_1 - T_1(z_1)]$. The instruments $log[(1 - T_p')/(1 - T_1')]$ and $log[(z_1 - T_2(z_1))/(z_1 - T_1(z_1)]$ isolate the change in the tax laws by assuming income is unchanged between the two years, where T_p' is the predicted marginal tax rate in year 2 if income is unchanged.

The results of these regressions are reported in the appendix for both Chicago and New York. The most notable results are summarized here. The regression above with instrumental variables for New York returns an elasticity of taxable income of 0.080, with a standard error of 0.071.

When outliers with enormous percent changes in taxable income (greater than a multiple of 10 difference) are removed, the estimate changes to 0.288, statistically significantly different from zero at the 5% level with a standard error of 0.088 and R^2 of 0.74. When looking at only the top 500 taxpayers in each year, the elasticity rises to 0.387 with a standard error of 0.127. Dropping the log of first year taxable income increases the estimate even further, to 0.586, with a standard error of 0.164.

In Chicago, results depend on whether the 1924 payments are adjusted or not (see part 12.3.2). Unadjusted payments give ETIs for the same four regressions of 0.169, 0.021, -0.113, and -1.463. Adjusted payments return ETIs between 0.186 and 0.236 with two statistically significantly different from zero at the 99% confidence level.

14.3 Staying in the sample

The newspapers frequently mention that high-income people are upset that their names are running in the newspaper along with their addresses and tax payments. Since these people are quite rich, and potentially very powerful and angry, there is some chance that they could encourage the newspaper to not run their name in the second year. I run a logit model to see if there is any relationship between showing up in the second year and income in the first year. In short, you can't opt out. There is a positive relationship between the log of income in year 1 and appearing in the data in year 2, statistically significant at the 99.999% level.

15 Conclusions

The publicity of income tax returns in 1923 and 1924 provides a unique opportunity to analyze individual taxpayer behavior in the interwar period. Using a sample of 11,774 matched taxpayers in New York and 1,555 in Chicago, I have computed the elasticity of taxable income and found it to be largely consistent with past estimates, though results are usually on the lower end of the range of previous estimates. Results from a regression approach for New York are around 0.080 to 0.586, with the most trusted estimates at 0.288 and 0.387. In Chicago, results depend on the treatment of the tax payment in the second year, and are either consistently around 0.2 or erratic below 0.2 and into negative numbers. This study has also analyzed the assumption of rank preservation and found it to be more appropriate at high incomes than overall. Additionally, the New York Times list of taxpayers can likely be considered a representative sample of all taxpayers.

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Part IV

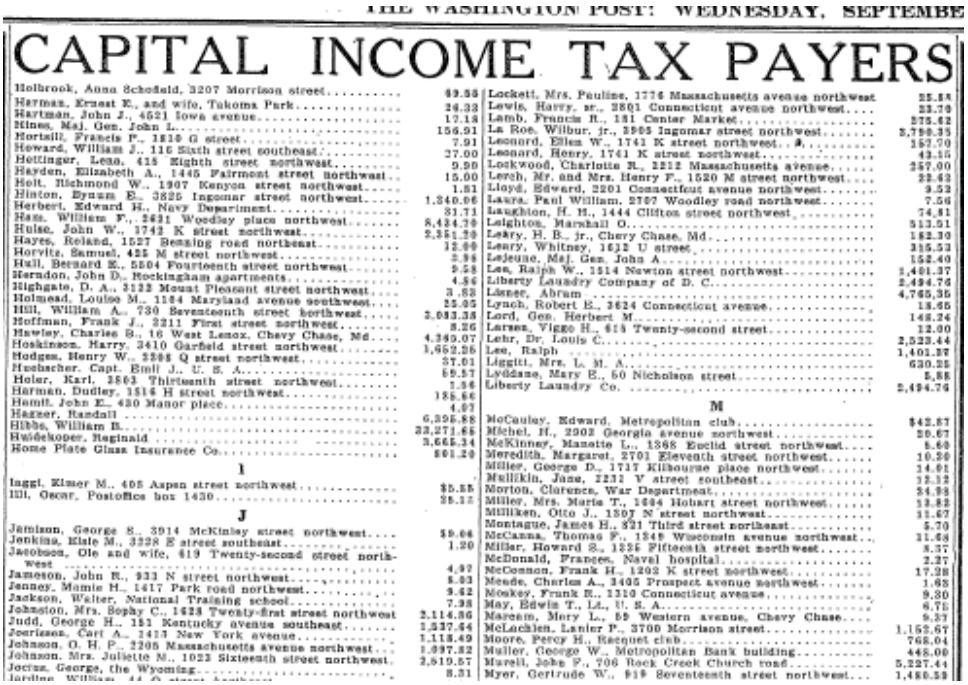
Data Appendix

Data comes from newspaper records from the period October 24, 1924 to November 20, 1924, and September 1 through 20, 1925. New York comes from the New York Times, and Chicago data comes from the Chicago Tribune. Additional records from the Washington Post have been tabulated, but not included in any analysis to date. Income tax payments that appeared in 1924 newspapers were from incomes in calendar year 1923, and payments in 1925 newspapers were from calendar year 1924 incomes.

By law, income tax collectors were required to make the name, address, and income tax payment of anybody filing a return in their district available to inspection. The New York Times and Chicago Tribune usually printed the name and address of each taxpayer with their payment. In New York, the address sometimes did not appear. In Chicago, the address appeared in 1925 but not in 1924. The names are sometimes full first and last names with a middle initial, but sometimes just first initials and a last name.

The Revenue Act of 1924 included a one time 25% rebate on 1923's taxes, after they had been paid. The Chicago Tribune claims multiple times that they run the numbers post-deduction, while the New York Times claims multiple times that they run them pre-deduction. When the Chicago Tribune runs New York numbers, they say that the New York office's numbers are not adjusted for the 25% deduction.

The New York Times included all payments over $500 in local tax collection districts, though there are occasional payments under $500 of notable people. The Chicago Tribune runs every payment that they find. Lists sometimes were accompanied by articles that described the high taxpayers from the previous day, often with their industry or family details.



THE WASHINGTON POST: WEDNESDAY, SEPTEMBE

CAPITAL INCOME TAX PAYERS

Holbrook, Anna Schofield, 3207 Morrison street $9.55
Hartman, Ernest E., and wife, Takoma Park 24.33
Hartman, John J., 4521 Iowa avenue 17.13
Hines, Maj. Gen. John L. 156.91
Hortsill, Francis P., 1818 G street 7.91
Howard, William J., 116 Sixth street southeast 27.00
Hettinger, Lena, 418 Eighth street northwest 9.98
Hayden, Elizabeth A., 1445 Fairmont street northwest 15.00
Holt, Richmond W., 1907 Kenyon street northwest 1.81
Hinton, Symum E., 3825 Ingomar street northwest 1,340.06
Herbert, Edward H., Navy Department 31.71
Hess, William F., 2431 Woodley place northwest 8,434.70
Hulse, John W., 1742 K street northwest 2,351.20
Hayes, Roland, 1527 Benning road northeast 12.00
Horvitz, Samuel, 425 M street northwest 3.96
Hull, Bernard E., 5504 Fourteenth street northwest 9.58
Herndon, John D., Rockingham apartments 4.56
Highgate, D. A., 3123 Mount Pleasant street northwest 3.88
Holmead, Louise M., 1184 Maryland avenue southwest 23.95
Hill, William A., 730 Seventeenth street northwest 3,083.38
Hoffman, Frank J., 2211 First street northwest 8.26
Hawley, Charles S., 16 West Lenox, Chevy Chase, Md 4,389.07
Hoskinson, Harry, 3410 Garfield street northwest 1,652.26
Hodges, Henry W., 2388 Q street northwest 37.01
Huebscher, Capt. Emil J., U. S. A. 55.57
Holer, Karl, 2803 Thirteenth street northwest 1.36
Harman, Dudley, 1516 H street northwest 188.66
Hamit, John E., 430 Manor place 4.03
Hazzer, Randall 6,398.88
Hibbs, William B. 23,271.65
Huidekoper, Reginald 3,665.34
Home Plate Glass Insurance Co. $01.20

I

Iaggi, Elmer M., 405 Aspen street northwest $5.55
Ill, Oscar, Postoffice box 1430 ..... 25.12

J

Jamison, George S., 3914 McKinley street northwest $9.06
Jenkins, Elsie M., 3328 E street southeast 1.20
Jacobson, Ole and wife, 419 Twenty-second street northwest 4.97
Jameson, John R., 933 N street northwest 5.03
Janney, Mamie H., 1417 Park road northwest 9.42
Jackson, Walter, National Training school 7.98
Johnston, Mrs. Sophy C., 1423 Twenty-first street northwest 2,114.86
Judd, George H., 151 Kentucky avenue southeast 1,537.64
Joerissen, Carl A., 1413 New York avenue 1,118.49
Johnson, O. H. P., 2205 Massachusetts avenue northwest 1,097.52
Johnson, Mrs. Juliette M., 1023 Sixteenth street northwest. 2,819.57
Jocius, George, the Wyoming 8.31

Lockett, Mrs. Pauline, 1776 Massachusetts avenue northwest 25.88
Lewis, Harry, sr., 2801 Connecticut avenue northwest 23.79
Lamb, Francis R., 181 Center Market 273.62
La Roe, Wilbur, jr., 3905 Ingomar street northwest 3,790.35
Leonard, Ellen W., 1741 K street northwest 157.70
Leonard, Henry, 1741 K street northwest 43.15
Lockwood, Charlotte R., 2212 Massachusetts avenue 257.00
Lersh, Mr. and Mrs. Henry F., 1520 M street northwest 22.42
Lloyd, Edward, 2201 Connecticut avenue northwest 9.52
Lacra, Paul William, 2707 Woodley road northwest 7.56
Laughton, H. H., 1444 Clifton street northwest 74.81
Leighton, Marshall O. 513.51
Lakry, H. B., jr., Chevy Chase, Md 182.30
Leary, Whitney, 1612 U street 315.53
Lejeune, Maj. Gen. John A. 152.40
Lee, Ralph W., 1314 Newton street northwest 1,401.37
Liberty Laundry Company of D. C. 2,494.76
Lisner, Abram 4,765.35
Lynch, Robert E., 3624 Connecticut avenue 13.65
Lord, Gen. Herbert M. 142.24
Larsen, Viggo H., 614 Twenty-second street 12.00
Lehr, Dr. Louis C. 2,523.44
Lee, Ralph 1,401.37
Liggitt, Mrs. L. M. A. 620.25
Laddane, Mary E., 50 Nicholson street 5.88
Liberty Laundry Co. 2,494.76

M

McCauley, Edward, Metropolitan club $42.87
Michel, H., 2902 Georgia avenue northwest 20.67
McKinney, Manette L., 1368 Euclid street northwest 5.60
Meredith, Margaret, 2701 Eleventh street northwest 10.20
Miller, George D., 1717 Kilbourne place northwest 14.01
Mullikin, Jane, 2232 V street southeast 13.12
Morton, Clarence, War Department 24.98
Miller, Mrs. Marie T., 1404 Hobart street northwest 13.82
Milliken, Otto J., 1507 N street northwest 11.67
Montague, James H., 821 Third street northeast 5.70
McCanna, Thomas F., 1348 Wisconsin avenue northwest 11.68
Miller, Howard S., 1325 Fifteenth street northwest 8.37
McDonald, Frances, Naval hospital 2.27
McGeenan, Frank H., 1202 N street northwest 17.28
Meade, Charles A., 3405 Prospect avenue northwest 1.65
Mosley, Frank R., 1310 Connecticut avenue 9.30
May, Edwin T., Lt., U. S. A. 6.75
Marsem, Mary L., 55 Western avenue, Chevy Chase 9.37
McLachlen, Lanier P., 3700 Morrison street 1,152.67
Moore, Percy H., Racquet club 768.04
Muller, George W., Metropolitan Bank building 468.00
Murell, John F., 706 Rock Creek Church road 5,227.44
Myer, Gertrude W., 919 Seventeenth street northwest 1,480.53

Figure 6: Washington Post 1925 tax payments excerpt. All tax payments reported, with mostly full names and addresses.

	New York, 1923	New York, 1924	Chicago, 1923	Chicago, 1924
total	27,540	44,692	6,089	13,279
individual	18,150	29,921	4,954	12,077
w/address	16,001	28,651	29	12,681
corporation	12,798		811	469
estate	824		190	
duplicate	5,939		149	98
other cities	1,310	3,290	282	666
w/address	538	1,504	0	0

Table 10: Summary statistics, number of records

Matching

Entries for names, addresses, and payments could not be merged on exact string matches in all cases. While exact string matching does return a large number of matches (surprisingly, around 10% of the entries in Chicago and New York each), many more can be obtained with "fuzzy" merging. I use the algorithm "RECLINK" by Michael Blasnik, available on REPEC (CITE), which computes the distance between any two strings by counting the number of changes necessary to transform string one into string two. For each string in 1923, RECLINK finds the closest fitting string in 1924 and matches it, provided that the closest string in 1924 is above some minimum threshold of closeness. I also standardized names and addresses to the extent that it was clear to do so; names were inverted to appear as "Last, First," "Jas." in the name field became "James", and "B'way" became "Broadway" in the address field, among many other changes (CAN PROVIDE DO FILE IN APPENDIX).

Entries in New York often contained addresses in both years, while in Chicago, address is nearly never provided in 1923. In New York, I began by only considering entries where an address was provided in each year. Therefore, the match process for New York first found matches with the exact name and exact address string in each year. Then, I allowed address to "fuzzy" match, but name was still required to exactly match. In the second round, this allowed something like "MacMillan, Howard J.", "137 W 86th" to match to "MacMillan, Howard J.", "173 W 86th", or "137 86th St", or other small variants of "137 W 86th". These matches were reviewed individually by hand for accuracy. In each stage, there were both numerous false matches and numerous matches. The third round required the address to match exactly, but allowed the name to vary slightly. Matches were again reviewed, and finally, the last round allowed for a fuzzy match on both name and address. I again reviewed the matches individually, before relaxing the requirement that address appear and repeated the same order of four fuzzy merges again.

COLLOQUIAL: I can put in a flowchart here that would read Exact(E) Name(N), Exact Address(A) -> EN, Fuzzy(F) Address -> Review -> FNEA -> Review -> FNFA -> Review

-> Allow address to be empty -> ENEA -> ENFA -> Review -> FNEA -> Review -> FNFA -> Review.

After this eight rounds of fuzzy matching, I then sorted the complete database of all entries, matched and unmatched, descending by payment in each year. In this way, it was extremely easy to find numerous false non-matches among the higher payment entries. Often, this resulted from two people with the same last name matching incorrectly against a family member. For example, "McCormick, Ethan F." and "McCormick, Edith N." might match incorrectly to "McCormick, E.N." and "McCormick, Eth. F." due to the way RECLINK computes closeness and only reports the one closest match. This is certainly easier to weed out at the top of the payment distribution, as nonmatches are rarer. This is also more difficult with common last names like Smith. Though each match and non-match was reviewed by hand, errors may persist, and they may persist at lower payment levels for innocuous reasons (example, if there is only "Smith, J." in 1923, but "Smith, J.F.," "Smith, E.J.," "Smith, J.D.," "Smith, J.S.," and "Smith, J.T." in 1924, I cannot match to any Smith in 1924 with much certainty).

In some cases, matches were reviewed with the tax payments in mind. For example, "Gilbert, J.O." with a payment in the tens of thousands in 1923 and "Gilbert, James O." with payment of $532 in 1924 might not be matched, while the same names with payments in the tens or hundreds of thousands in each year would be matched. In this way, the matching criterion may bias the results; however, since one regression throws out large outliers where the computed taxable incomes vary by a factor of 10, those matches would have been dropped in that computation anyway.

The following graph shows the persistence of high incomes among returns in the sample. Returns are separated into deciles, and the lines indicate how many in each decile in 1923 are matched to within one decile (i.e., how many in the 5th decile are matched to the 4th, 5th, or 6th decile in 1924), a lower decile, a higher decile, or unmatched. The graph shows mild support for the idea of rank preservation. Certainly, at the 5th decile and above, it is more

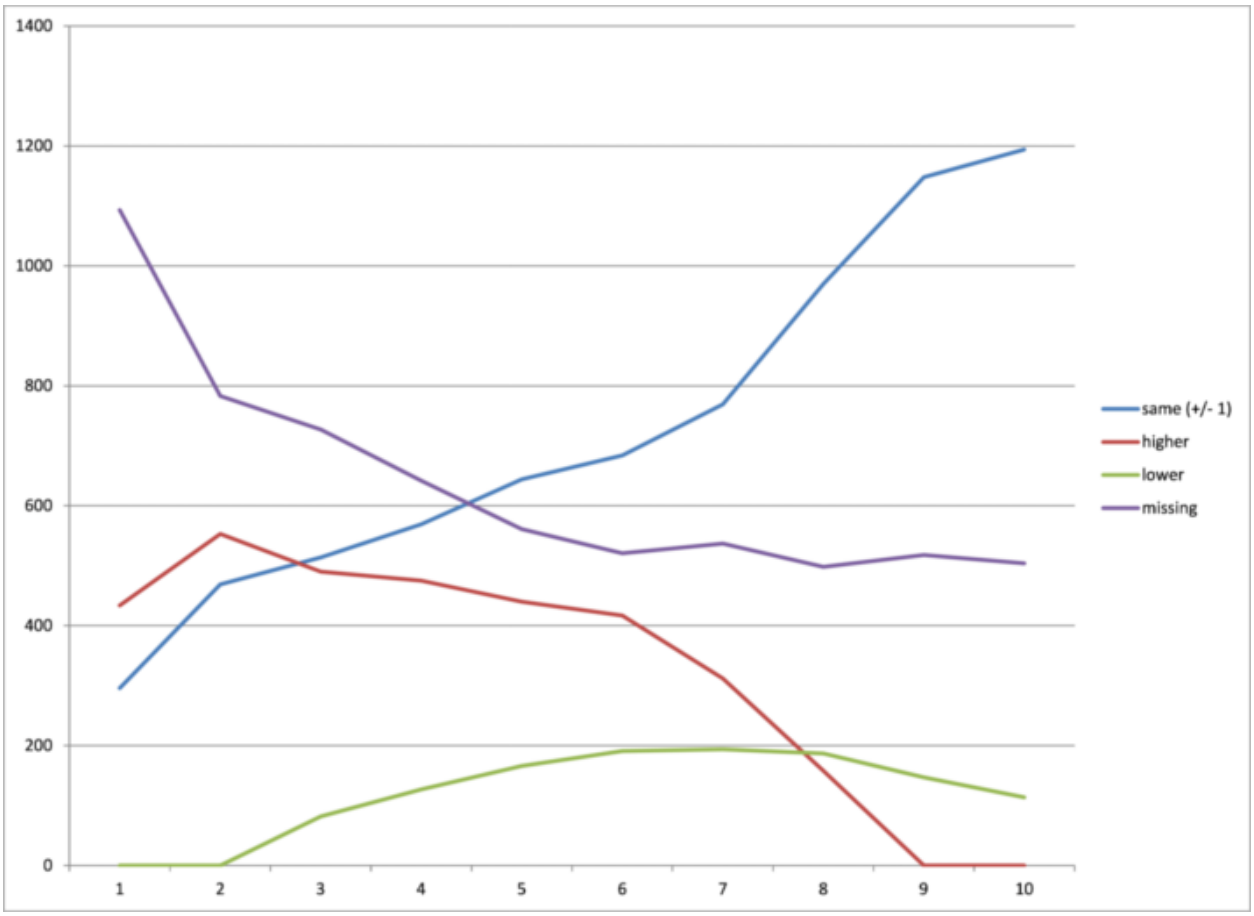


Figure 7: Number of taxpayers per decile moving to a higher, lower, or similar decile in 1924.

likely that somebody shows up within one of their current decile than either disappearing from the data, moving farther up, or moving farther down.

A Figures

Table 11: Newspaper disclosure

	city: by 1920 Census population	newspaper	1923: print local?	1923: print other?	print in 1924?	1923: why not?
1	New York	Times	y	y	y	
1	New York	Herald Tribune	y	y	y	
2	Chicago	Tribune	y	y	y	
3	Philadelphia	Evening Bulletin	y	y	n	
3	Philadelphia	America	n	n	n	
3	Philadelphia	Inquirer	n	n	n	
3	Philadelphia	North American	n	n	n	
3	Philadelphia	Public Ledger	n	n	n	
3	Philadelphia	Record	n	n	n	
4	Detroit	Free Press	n	n	n	
4	Detroit	News	n	n	n	
5	Cleveland	Plain Dealer	n	n	y	collector
5	Cleveland	Press	n	n	n	collector
6	St Louis	Post Dispatch	n	y	y	
6	St Louis	Globe Democrat				
7	Boston	Daily Advertiser	n	n	n	collector
7	Boston	Daily Globe	n	y	y	collector
7	Boston	Herald	n	n	n	collector
7	Boston	Post	n	n	n	collector

7	Boston	Sunday Advertiser	n	n	n	collector
7	Boston	Evening Transcript	n	n	n	collector
8	Baltimore	Post	y	y	y	
8	Baltimore	American	n	n	n	
8	Baltimore	Sun	n	n	y	
8	Baltimore	Evening Sun	n	n	y	
8	Baltimore	News				
9	Pittsburgh	Courier	n	n	n	
9	Pittsburgh	Post	n	n	y	collector
10	Los Angeles	Times	y	y	n	
10	Los Angeles	Herald	n	n	n	
11	Buffalo	Morning Express	n	y	y	
12	San Francisco	Chronicle	y	y	y	
12	San Francisco	Examiner	y	y	y	
12	San Francisco	Commercial News	n	n	n	
13	Milwaukee	Journal	n	n	y	
13	Milwaukee	Sentinel	n	n	y	
14	Washington DC	Post	y	y	y	
15	Newark NJ	New York Times	y	y	y	
16	Cincinnati	Enquirer	n	n	y	
16	Cincinnati	Commercial Tribune	n	n	n	

17	New Orleans	Item	n	n	n	
17	New Orleans	States	n	n	n	
17	New Orleans	Times Picayune	n	n	y	
18	Minneapolis	Journal	n	y	n	
18	Minneapolis	Morning Tribune	n	n	n	ideological
19	Kansas City	Star	y	y	y	
20	Seattle	Post-Intelligencer	y	y	y	
20	Seattle	Daily Times	n	n	y	
21	Indianapolis	News	n	n	y	
21	Indianapolis	Star	n	n	n	collector
22	Jersey City, NJ	New York Times	y	y	y	
23	Rochester	Democrat and chronicle	n	y	n[15]	
23	Rochester	Times-Union	n	n	y	
24	Portland	Oregon Daily Journal	n	y	n	collector
24	Portland	Oregonian	n	y	n	collector
25	Denver	Rocky Mountain News	y	y	y	
25	Denver	Rocky Mountain Herald	n	n	n	
26	Toledo	News-Bee	y	y	y	

[15]The Rochester Democrat and Chronicle is the only paper to run names in 1924, but not run names in 1925 for ideological reasons.

27	Providence	Journal	y	y	y	
27	Providence	Evening Bulletin	y	y	y	
28	Columbus	Evening Dispatch	n	n	y	
28	Columbus	Ohio State Journal	n	n	y	
29	Louisville	Courier-Journal	n	n	n	collector
29	Louisville	Times	n	n	y	collector
30	St. Paul	Pioneer Press	n	n	n	ideological
31	Oakland, CA	No paper				
32	Akron, OH	No paper				
33	Atlanta	Constitution	n	n	y	
33	Atlanta	Journal	n	n	y	
34	Omaha	Morning World-Herald	n	n	y	
35	Worcester, MA	No paper				
36	Birmingham, AL	Age-Herald	n	n	y	
37	Syracuse	Post-Standard	n	n	y	ideological
38	Richmond	Times-Dispatch	n	n	y	
39	New Haven	Journal Courier	n	n	n	ideological
40	Memphis	Commercial Appeal	n	n	y	
41	San Antonio	Express	n	n	y	
42	Dallas	Morning News	n	n	n	

43	Dayton, OH	No paper				
44	Bridgeport, CT	No paper				
45	Houston	Post-Dispatch	n	n	n	
46	Hartford	Courant	y	y	y	
46	Hartford	Times	n	n	y	
47	Scranton, PA	No paper				
48	Grand Rapids	Herald	n	n	y	
49	Paterson, NJ	No paper				
50	Youngstown, OH	No paper				

Table 12: Disclosure by state.

state	city	Local disclosure[16]	State disclosure[17]	Papers eager to disclose[18]
AL	Birmingham, AL	n	0	0
CA	Los Angeles	y	2	2
CO	Denver	y	2	2
CT	Hartford	y	2	2
DC	Washington DC	y	2	2
GA	Atlanta	n	0	0
IL	Chicago	y	2	2
IN	Indianapolis	n	0	0
KY	Louisville	n	0	0

[16]Yes for any paper with disclosure of local payments.

[17]0 if no disclosure of any local payments in the state. 1 if some, but not all, large cities in state have local disclosure. 2 if all large cities in state have local disclosure.

[18]0 if no paper in state discloses any names. 1 if papers in state disclose only out of state names. 2 if papers disclose in-state names.

LA	New Orleans	n	0	0
MA	Boston	n	0	1
MD	Baltimore	y	2	2
MI	Detroit	n	0	0
MN	Minneapolis	n	0	1
MO	Kansas City	y	2	2
NE	Omaha	n	0	0
NJ	Newark NJ	y	2	2
NY	New York	y	2	2
OH	Toledo	y	1	1
OR	Portland	n	1	1
PA	Philadelphia	y	1	1
RI	Providence	y	2	2
TN	Memphis	n	0	0
TX	San Antonio	n	0	0
VA	Richmond	n	0	0
WI	Milwaukee	n	0	0
WA	Seattle	y	2	2

Form 1040
U. S. Internal Revenue

(Auditor's Stamp)

INDIVIDUAL INCOME TAX RETURN

FOR NET INCOMES OF MORE THAN $5,000

OR NET INCOMES, REGARDLESS OF AMOUNT, IF DERIVED FROM A PROFESSION OR BUSINESS, INCLUDING FARMING

For Calendar Year 1924

If Your Income is Computed on a Fiscal Year Basis, or Income is Received from a Partnership or Fiduciary Computed on a Fiscal Year Basis, Form 1040FY Should be Secured from the Collector and Filed in Lieu of This Form

File This Return with the Collector of Internal Revenue for Your District on or Before March 15, 1925
(PRINT NAME AND ADDRESS PLAINLY BELOW)

(Name)

(Street and number, or rural route)

(Post office) (County) (State)

Do Not Write in These Spaces

File Code

Serial Number

First Payment

$

Examined

By

(Cashier's Stamp)

Cash Check M. O. Cert. of Ind.

OCCUPATION, PROFESSION, OR KIND OF BUSINESS

1. Are you a citizen or resident of the United States?
2. If you filed a return for 1923, to what Collector's office was it sent?
3. Is this a joint return of husband and wife?
4. Were you married and living with husband or wife on the last day of your taxable year?
5. If not, were you on the last day of your taxable year supporting one or more persons living in your household who are closely related to you by blood, marriage, or adoption?
6. If your status in respect to questions 4 and 5 changed during year, state date of such change
7. How many dependent persons (other than husband or wife) under 18 years of age or incapable of self-support because mentally or physically defective were receiving their chief support from you on the last day of your taxable year?

Item and Instruction No.	INCOME	Amount received	Expenses paid (Explain in Schedule F)		
1.	Salaries, Wages, Commissions, etc. (State name and address of person from whom received)	$	$	$	
2.	Income from Business or Profession. (From Schedule A)				
3.	Interest on Bank Deposits, Corporation Bonds, etc. (except interest upon which a tax was paid at source)				
	(a) Interest on Tax-free Covenant Bonds Upon Which a Tax was Paid at Source				
4.	Income from Partnerships, Fiduciaries, etc. (State name and address of partnership, etc.)				
5.	Rents and Royalties. (From Schedule B)				
6.	Profit from Sale of Real Estate, Stocks, Bonds, etc. (From Schedule C)				
7.	Dividends on Stock of Domestic Corporations				
8.	Taxable Interest on Liberty Bonds, etc. (From Schedule E)				
9.	Other Income (including dividends received on stock of foreign corporations). (State nature of income)				
	(a)				
	(b)				
	(c)				
10.	Total Income in Items 1 to 9				$
	DEDUCTIONS				
11.	Interest Paid			$	
12.	Taxes Paid. (Explain in Schedule F)				
13.	Losses by Fire, Storm, etc. (Explain in Table on page 2)				
14.	Bad Debts. (Explain in Schedule F)				
15.	Contributions. (Explain in Schedule F)				
16.	Other Deductions Authorized by Law. (Explain below or on separate sheet)				
	(a)				
	(b)				
	(c)				
17.	Total Deductions in Items 11 to 16				$
18.	Net Income (Item 10 minus Item 17)				$

COMPUTATION OF TAX

19.	Earned Income (see Instruction 19)	$	30.	Net Income (Item 18 above)	$	41.	Normal Tax (2% of Item 37)	$
20.	Less Personal Exemption and Credit for Dependents		31.	Less Dividends (Item 7 above)	$	42.	Normal Tax (4% of Item 39)	
21.	Balance (Item 19 minus 20)	$	32.	Interest on Liberty Bonds, etc. (Item 8)		43.	Normal Tax (6% of Item 40)	
22.	Amount taxable at 2% (not over the first $4,000 of Item 21)		33.	Personal Exemption		44.	Surtax on Item 18 (see Instruction 30)	
23.	Amount taxable at 4% (not over the second $4,000 of Item 21)		34.	Credit for Dependents		45.	Adjustment for Capital Gain or Loss (12½% of Column 9, Schedule D)	
24.	Amount taxable at 6% (balance over $8,000 of Item 21)		35.	Total of Items 31, 32, 33, and 34		46.	Total of Items 41 to 45	$
25.	Normal Tax (2% of Item 22)	$	36.	Balance (Item 30 minus 35)	$	47.	Less Credit of 25% of Tax on Earned Net Income (Item 29)	
26.	Normal Tax (4% of Item 23)		37.	Amount taxable at 2% (not over the first $4,000 of Item 36)		48.	Total Tax (Item 46 minus 47)	$
27.	Normal Tax (6% of Item 24)		38.	Balance (Item 36 minus 37)	$	49.	Less Income Tax paid at source	
28.	Normal Tax on Earned Net Income (total of Items 25, 26, and 27)	$	39.	Amount taxable at 4% (not over the second $4,000 of Item 36)		50.	Income and Profits Taxes paid to a foreign country or U. S. possession	
29.	Credit of 25% of Item 28 (not to exceed 25% of Items 41, 42, and 43)	$	40.	Amount taxable at 6% (balance over $8,000 of Item 36)		51.	Balance of Tax (Item 48 minus Items 49 and 50)	$

An amended return must be marked "Amended" at top of return

Checks and drafts will be accepted only if payable at par

2—13334

Figure 8: First of two pages of 1040, tax year 1924.

INSTRUCTIONS

The Instruction Numbers on this Page Correspond with the Item Numbers on the First Page of the Return

1. INCOME FROM SALARIES, WAGES, COMMISSIONS, ETC.

Enter as Item 1 on page 1 of the return, all salaries or other compensation credited by or received from outside sources. Use a separate line for each entry, giving the information requested.

Any amount claimed as deduction for necessary expenses against salaries, etc., such as traveling expenses, while away from home in the pursuit of a trade or business, should be fully explained in Schedule F, page 2 of the return, or on an attached statement. Traveling expenses ordinarily include expenditures for railroad fares, meals, and lodging.

2. INCOME FROM BUSINESS OR PROFESSION

If you owned a business, or practiced a profession on your own account, fill in Schedule A on page 2 of the return, and enter the net income (or loss) as Item 2 on page 1 of the return.

This schedule should include income derived from the following sources: (*a*) Sale of merchandise, or products of manufacturing, mining, construction, and agriculture; (*b*) Business service, such as amusements, hotel and restaurant service, livery and garage service, laundering, storage, transportation, etc.; and (*c*) Professional service, such as dentistry, law, or medicine. In general, report any income in the earning of which you incurred expenses for material, labor, supplies, etc.

Farmer's income schedule.—If you are a farmer or rent your farm out on shares and keep no books of account, or keep books on a cash basis, obtain from the Collector, and attach to this return, Form 1040 F, Schedule of Farm Income and Expenses, and enter the net farm income as Item 2, page 1 of this return. If your farm books of account are kept on an accrual basis, the filing of Form 1040 F is optional. Income from salaries, interest, rents, and sales of property, should be included in Items 1, 3, 5, and 6, respectively, on this return.

Installment sales.—If you have used the installment method in computing income from installment sales, you must attach to your return a schedule showing separately for the years 1921, 1922, 1923, and 1924 the following information: (*a*) Gross sales; (*b*) Cost of goods sold; (*c*) Gross profits; (*d*) Percentage of profits to gross sales; (*e*) Amount collected; and (*f*) Gross profit on amount collected.

Kind of business.—Describe the business or profession in the space provided at the top of page 1, as "grocery," "retail clothing," "drug store," "laundry," "doctor," "lawyer," "farmer," etc.

Total receipts from business or profession.—Enter on Line 1 of Schedule A the total receipts from sales or services, less any discounts or allowances from the sale price or service charge.

Inventories.—If engaged in a trade or business in which the production, purchase, or sale of merchandise is an income-producing factor, secure from the Collector of Internal Revenue and file as a part of this return a *Certificate of Inventory, Form 1126*.

Salaries.—Enter on Line 10 all salaries and wages not included as "Labor" on Line 2, except a salary for your own services or the services of your dependent minor children, or husband or wife if a joint return is filed.

Interest.—Enter on Line 11 interest on business indebtedness to others. Do not include interest to yourself on capital invested in or advanced to the business.

Taxes.—Enter on Line 12 taxes on business property or for carrying on business. Do not include taxes assessed against local benefits of a kind tending to increase the value of the property assessed, as for paving, sewers, etc., nor Federal income taxes.

Losses by fire, storm, etc.—Enter on Line 13 losses of business property arising from fire, storm, or other casualty, or theft, not compensated for by insurance or otherwise and not made good by repairs claimed as a deduction. Explain this deduction in the table provided therefor at the foot of page 2, giving the information requested.

Bad debts.—Enter on Line 14 debts, or portions thereof, arising from sales or services that have been reflected in income, which have been definitely ascertained to be worthless and have been charged off within the year, or such reasonable amount as has been added to a reserve for bad debts within the year.

A debt previously charged off as bad, if subsequently collected, must be returned as income for the year in which collected.

Depreciation, obsolescence, and depletion.—Enter on Line 15 the amount claimed as depreciation by reason of exhaustion, wear and tear of property used in the trade or business, or as obsolescence or depletion, and explain in the table at the foot of page 2 how this amount was determined by giving the information requested. If obsolescence is claimed, explain why useful life is less than actual life.

The amount of depreciation for 1924 on property acquired by purchase should be determined upon the basis of the original cost (not replacement cost) of the property and the probable number of years remaining of its useful life, except if the property was purchased prior to March 1, 1913, it will be computed on the fair market value of such property as of that date or its original cost, whichever is greater. If a return is made on the basis of a fiscal year, the amount of depreciation for 1923 should be determined in the same manner, except if the property was purchased prior to March 1, 1913, it will be computed on the fair market value of such property as of that date. See Articles 161 to 171 of Regulations 65.

In case the property was acquired in any other manner than by purchase, or if a deduction is claimed on account of depletion of mines, oil or gas wells, or timber, see Article 1602 of Regulations 65.

Do not claim any deduction for depreciation in the value of a building occupied by you as a dwelling, or of other property held for use, nor for land (exclusive of improvements thereon), nor on stocks, bonds, and like securities.

Rent, repairs, and other expenses.—Enter on Line 16 rent on business property in which you have no equity, ordinary repairs to keep the property in a usable condition, and other necessary business expenses not classified above, such as heat, light, and fire insurance. Do not include rent for a dwelling occupied by you for residential purposes, the cost of business equipment or furniture, expenditures for replacements, or for permanent improvements to property, nor personal living and family expenses.

Deficit.—If the amount to be entered on Line 19 shows a deficit, such amount should be preceded by a minus sign or written with red ink.

3. INTEREST ON BANK DEPOSITS, ETC.

Enter as Item 3 all interest received or credited to your account during the taxable year on bank deposits, notes, mortgages, and corporation bonds, except interest on bonds upon which a tax was paid at the source. Interest on bonds is considered income when due and payable.

3a. INTEREST ON TAX-FREE COVENANT BONDS

Enter as Item 3a all interest received or credited to your account on corporation bonds containing a tax-free covenant, in connection with which you filed a white Ownership Certificate, Form 1000, not claiming exemption.

The tax of 2 per cent paid at the source by the debtor corporation on the amount of such interest should be entered as Item 49 on Form 1040, or Item 68 on Form 1040 FY.

4. INCOME FROM PARTNERSHIPS, FIDUCIARIES, ETC.

Enter as Item 4 income of an estate or trust, and your share (whether received or not) in the profits of a partnership, except (*a*) where the tax or reduction on account of the share of net gain or loss derived from the sale of capital assets is computed as provided in Instruction 6a, such net gain or loss shall be reported separately in Schedule D, and (*b*) that the share of the profit which consisted of dividends on stock of domestic corporations, and the taxable interest on obligations of the United States, shall be included in Items 7 and 8, respectively, on page 1 of the return.

Enter in Item 1 your share of the earned income from a partnership.

If the taxable year on the basis of which you file your return fails to coincide with the annual accounting period of the partnership or fiduciary, then you should include in your return your distributive share of the net profits for such accounting period, ending within your taxable year, and in such case your return shall be filed on Form 1040 FY instead of Form 1040 (see Instruction 19).

5. INCOME FROM RENTS AND ROYALTIES

Fill in Schedule B, giving the information requested.

If you received property or crops in lieu of cash rent, report the income as though the rent had been received in cash. Crops received as rent on a crop-share basis should be reported as income for the year in which disposed of (unless your return shows income accrued).

Enter as depreciation the amount of wear and tear, obsolescence, or depletion sustained during the taxable year 1924, and explain in table at foot of page 2.

Other expenses, such as interest, taxes, fire insurance, fuel, light, labor, and other necessary expenses of this character should be itemized.

6. PROFIT FROM SALE OF REAL ESTATE, BONDS, ETC.

Describe the property briefly in Schedule C, and state the actual price received, or the fair market value of the property received in exchange. Expenses connected with the sale may be deducted in computing income.

Enter the original cost of the property, and if it was acquired prior to March 1, 1913, the fair market value as of that date. Attach statement explaining how value as of March 1, 1913, was determined. If the property was acquired in any other manner than by purchase, see Articles 1591 to 1601 of Regulations 65.

Enter as depreciation the amount of wear and tear, obsolescence, amortization, or depletion previously allowed with respect to such property since date of acquisition, or since March 1, 1913, if the property was acquired before that date.

Subsequent improvements include expenditures for additions, improvements, and repairs made to restore the property or prolong its useful life. Do not deduct ordinary repairs, interest, or taxes in computing gain or loss.

In the case of sales of stocks and bonds, deductions should not be taken in columns 4 and 7 for "Depreciation" and "Subsequent improvements." No loss shall be recognized in any sale or other disposition of shares of stock or securities where you have acquired substantially identical property within 30 days before or after the date of such sale, unless you are a dealer in stock or securities.

In case the amount to be entered as Item 8 is a deductible loss, such amount should be preceded by a minus sign or written with red ink.

6a. CAPITAL NET GAIN OR LOSS

If desired, the capital net gain derived from the sale or exchange of capital assets may be computed separately and a tax of 12½ per cent paid on such income in lieu of the regular normal tax and surtax. The term "capital net gain" means the excess of the total amount of capital gain over the sum of (*a*) the capital deductions and capital losses, plus (*b*) the amount, if any, by which the ordinary deductions exceed the gross income computed without capital gain.

In case a capital net loss is sustained from the sale or exchange of capital assets, the total normal tax and surtax computed on the basis of the ordinary net income shall be reduced by 12½ per cent of such capital net loss; but in no case shall the tax computed in this manner be less than the total normal tax and surtax that would be imposed without the benefit of this provision. The term "capital net loss" means the excess of the sum of the capital losses plus the capital deductions over the total amount of capital gain.

The term "capital assets" means property held by the taxpayer for more than two years (whether or not connected with his trade or business), but does not include stock in trade of the taxpayer or other property of a kind which would properly be included in the inventory of the taxpayer if on hand at the close of the taxable year, or property held by the taxpayer primarily for sale in the course of his trade or business.

Fill in Schedule D in accordance with Instructions 6 for Schedule C, if the tax is computed under this provision, and enter 12½ per cent of the capital net gain or loss as Item 45 on Form 1040, or Item 59 on Form 1040 FY. In case of a capital net loss, the amount of such loss and the credit claimed should be preceded by a minus sign or written with red ink. (See articles 1651 to 1654 of Regulations 65.)

7. DIVIDENDS

Report as Item 7 the amount received as dividends (*a*) from a domestic corporation other than a corporation entitled to the benefits of Section 262 of the Revenue Act of 1924 and other than a corporation organized under the China Trade Act, 1922, or (*b*) from a foreign corporation when it is shown to the satisfaction of the Commissioner that more than 50 per cent of the gross income of such foreign corporation for the three-year period ending with the close of its taxable year preceding the declaration of such dividends (or for such part of such period as the corporation has been in existence) was derived from sources within the United States, including your share of such dividends received on stock owned by a partnership, or an estate or trust.

8. INTEREST ON LIBERTY BONDS, ETC.

Schedule E should be filled in if you own any of the obligations or securities enumerated in column 1. Enter in column 2 all interest received or credited to your account during the year on these obligations, including your share of such interest received from a partnership, or an estate or trust, and enter in column 3 the principal amounts of the various obligations owned. Interest on all coupons falling due within the taxable year will be considered as income for the year.

If the obligations specified on lines (*d*) and (*e*) are owned in excess of the exemptions, or any on line (*f*) are owned, columns 5 and 6 should be filled in, and the total of column 6 entered as Item 8 on page 1 of the return.

9. OTHER INCOME

Enter all other taxable income for which no place is provided elsewhere on page 1 of the return, together with any dividends specifically excluded from Item 7.

10. TOTAL INCOME

Enter the net amount of Items 1 to 9, inclusive, after deducting any expenses reported in Item 1, and losses in Items 2, 4, 5, and 6.

11. INTEREST PAID

Enter as Item 11 interest paid on personal indebtedness as distinguished from business indebtedness (which should be deducted under Schedules A or B). Do not include interest on indebtedness incurred or continued to purchase or carry obligations or securities (other than obligations of the United States issued after September 24, 1917, and originally subscribed for by you) the interest upon which is wholly exempt from taxation.

12. TAXES PAID

Enter as Item 12 personal taxes and all taxes on property not used in business or profession, paid during the year, not including those assessed against local benefits of a kind tending to increase the value of the property. Do not include taxes imposed by Section 600 of the Act upon sales by the manufacturer, Federal income taxes, taxes imposed upon your interest as shareholder of a corporation, which are paid by the corporation without reimbursement from you, nor income and profits taxes claimed as a credit in Item 50, page 1 of Form 1040, or Item 69 on Form 1040 FY, with Form 1116 attached to the return.

Any deduction on account of taxes should be fully explained in Schedule F.

13. LOSSES BY FIRE, STORM, ETC.

Enter as Item 13 losses of property not connected with your trade, business, or profession, sustained during the year from fire, storm, shipwreck, or other casualty, or from theft, which were not compensated for by insurance or otherwise. (See Section 214 (*a*) 6 of the Revenue Act of 1924 and Article 141 of Regulations 65.)

Explain losses claimed in the table provided therefor on page 2 of the return.

14. BAD DEBTS

Enter as Item 14 all bad debts other than those claimed as a deduction in items above. State in Schedule F, (*a*) of what the debts consisted, (*b*) when they were created, (*c*) when they became due, and (*d*) how they were actually determined to be worthless.

15. CONTRIBUTIONS

Enter as Item 15 contributions or gifts made within the taxable year to any corporation, or trust, or community chest, fund, or foundation, organized and operated exclusively for religious, charitable, scientific, literary, or educational purposes, or for the prevention of cruelty to children or animals, no part of the net earnings of which inures to the benefit of any private stockholder or individual. The amount claimed shall not exceed 15 per cent of your net income computed without the benefit of this deduction.

Fiduciaries filing this return for estates in the process of administration are allowed, in lieu of this deduction, that provided in Section 219 (*b*) 1 of the Revenue Act of 1924.

List names of organizations and amounts contributed to each in Schedule F.

16. OTHER AUTHORIZED DEDUCTIONS

Enter any other authorized deductions for which no place is provided elsewhere on page 1 of the return. Do not deduct losses incurred in transactions which were neither connected with your trade or business, nor entered into for profit.

If this return is filed for an estate in the process of administration, there may be deducted the amount of any income properly paid or credited to beneficiaries.

Any deduction claimed should be explained in the space provided.

17. TOTAL DEDUCTIONS

Enter as Item 17 the total of Items 11 to 16, inclusive. This amount should not include any deduction claimed in Schedule A.

18. NET INCOME

Enter as Item 18 the net income, which is obtained by deducting Item 17 from Item 10.

If your income is computed on the basis of a fiscal year, or income is received from a partnership or an estate or trust which makes its return on the basis of a fiscal year, the return shall be made on Form 1040 FY, and the income taxable at the 1923 and 1924 rates entered in columns 1 and 2, respectively, on page 1 of the return.

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Figure 9: First of two pages of 1040 instructions, tax year 1924.

Table 13: 1923's top taxpayers

Rank, 1923	name	Payment	City	Rank, 1924
1	Rockefeller, John D. Junior	7435169	New York	1
2	Ford, Henry	2467946	Detroit	2
3	Whitney, Payne	2041951	New York	5
4	Ford, Edsel	1984254	Detroit	3
5	Harkness, Edward S.	1755259	New York	6
6	Harkness, Anna M.	1422676	New York	9
7	Andrew W. Mellon	1173988	Pittsburgh	4
8	Wiliam Wrigley Junior	1154420	Chicago	unlisted
9	Lamont, T. W.	847820	New York	26
10	Fleishmann, Julius	827384	New York	unlisted
11	Vanderbilt, Frederick W.	809129	New York	15
12	Johnson, Eldridge	783000	Camden, N. J.	unlisted
13	Miner, W. H.	782640	New York	1449
14	Baker, George F. Junior	678664	New York	14
15	Fleischmann, Max C.	677586	Chicago	37
16	Baker, George F.	660371	New York	12
17	Curtis, Cyrus H. K.	586655	Philadelphia	unlisted
18	Guggenheim, Simon	565751	New York	1300
19	Guggenheim, S. R.	564704	New York	210
20	William M. Wood	562443	Boston	98
21	James, Arthur Curtiss	558113	New York	24
22	Weber, Orlando F.	532170	New York	38
23	Holmes, B. F.	503815	New York	78
24	Mackay, Clarence H.	488353	New York	53
25	Ryan, Thos. F.	475416	New York	13
26	Gary, E. H.	473364	New York	52
27	Alta Rockefeller Prentice	461804	New York	42
28	G. Allan Hancock	449293	New York	21
29	Mr. Charles Taft and his wife	440729	Cincinnati	unlisted
30	Doris Duke	438536	New York	79
31	McLean, Edward B.	422849	Washington	62
32	Boldt, George C., Junior	418333	New York	830
33	Straight, Dorothy W.	416375	New York	293
34	Nash, C. W.	410148	Milwaukee	30
35	Winthrop, Kate W.	408999	New York	54
36	Huntington, Arabella D.	407019	New York	104

37	Sanford, John	390507	New York	27
38	Walters, Henry	386827	Washington	unlisted
39	Rogers, Henry H.	373297	New York	unlisted
40	Brown, M. Bayard	368632	New York	unlisted
41	Friedsam, Michael	358044	New York	59
42	Warburg, Felix M.	353883	New York	28
43	Hayden, Charles	352652	New York	34
44	R. B. Mellon	348646	Pittsburgh	7
45	Guggenheim, Murry	346949	New York	998
46	Metcalf, Jesse H.	330726	Providence, R. I.	70
47	Cochran, Alex Smith	328068	New York	66
48	Blumenthal, George	327827	New York	36
49	Harkness, Edith H.	327738	New York	188
50	Cochran, Gifford A.	326995	New York	174
51	Rice, E. E. (Mrs. Dr. A. H.)	325961	Providence, R. I.	unlisted
52	Astor, Waldorf	325550	New York	643
53	Carson, Pirie	324040	Chicago	unlisted
54	Metcalf, S. O.	306614	Providence, R. I.	69
55	Wilks, H. S. A. H. G.	301577	New York	127
56	S. R. Guggenneim	300259	New York	unlisted
57	Crane, Richard T., Junior	294992	Chicago	33
58	Patterson, Elinor M.	288432	Chicago	107
59	Astor, Vincent	285801	New York	17
60	Clark, Robert S.	283836	New York	119
61	Gould, Frank J.	283693	New York	134
62	McCormick, Stanley	282778	Chicago	80
63	Steuer, Max D.	279226	New York	130
64	Duke, James B.	277301	New York	18
65	Schiff, Mortimer L.	275849	New York	31
66	Ladd, Kate	269964	New York	unlisted
67	Norman, J. F.	268496	New York	158
68	Guggenheim, Daniel	267236	New York	394
69	George A. Ellis Junior	266863	New York	unlisted
70	Palmer, Edgar	265332	New York	83
71	Taylor, Henry R.	262851	New York	unlisted
72	Maloney, Thomas J.	259926	New York	165
73	Charles C. Stilliman	258942	New York	150
74	Underwood, John T.	258617	New York	148
75	Ogden L. Mills	257450	New York	43
76	Thompson, Mary G.	253549	New York	105
77	Coward, John M.	252341	New York	74
78	Bingham, H. P.	250694	New York	114

79	Garver, John A.	249346	New York	287
80	James H. Lockhart	246695	Pittsburgh	123
81	Bok, Edward W.	246504	Philadelphia	unlisted
82	Belding, M. M.	243681	New York	205
83	Bedford, Edward T.	242274	New York	93
84	Mitchell, Charles E.	237395	New York	143
85	Stillman, James A.	233067	New York	172
86	Commerich, Otto L.	231902	New York	unlisted
87	W. L. Mellon	225835	Pittsburgh	162
88	Douglas Fairbanks	225769	New York	151
89	Griggs, Maitland F.	223364	New York	unlisted
90	Hellum, Peter E.	222014	Chicago	unlisted
91	Burden, Florence V.	221316	New York	unlisted
92	Whitney, Gertrude V.	217638	New York	unlisted
93	Katharine McCormick	217617	Chicago	96
94	McCormick, Mary V.	217261	Chicago	129
95	McKenuey, Henry O.	216208	New York	894
96	Faulkner, Edward D.	213647	New York	458
97	Coffin, Joel S.	213294	New York	155
98	Braman, C. A.	213039	New York	5525
99	Braham, C. A. * OK WILL FIX	213039	New York	unlisted
100	William Ziegler Junior	209765	New York	351

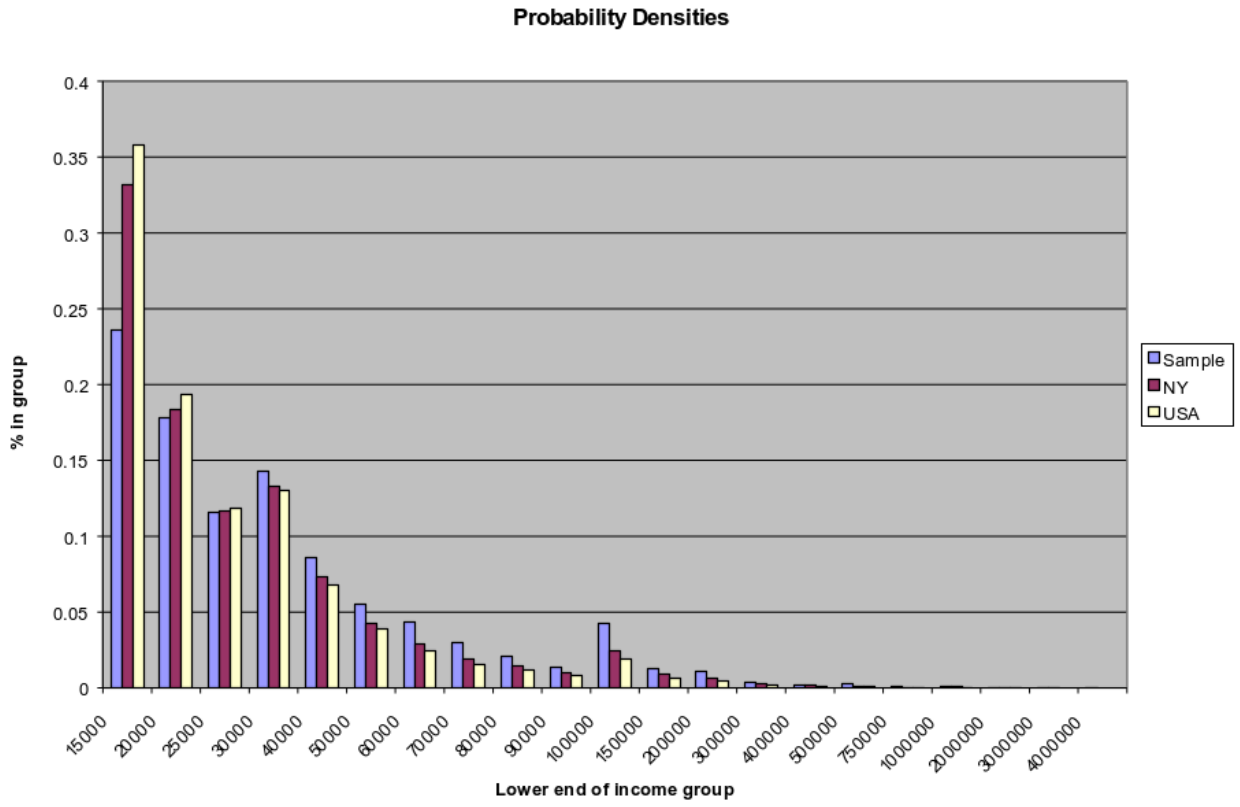
Table 14: 1924's top 100 taxpayers

Rank, 1924	Name	Payment	City	Rank, 1923
1	Rockefeller, J. D., Junior	6277669	New York	1
2	Ford, Henry	2608808	Detroit	2
3	Ford, Edsel	2158055	Detroit	4
4	Mellon, Andrew W.	1882600	Pittsburgh	7
5	Whitney, Payne	1676626	New York	3
6	Harkness, Edward S.	1351708	New York	5
7	Mellon, R. B.	1180099	Pittsburgh	44
8	Crane, Clinton H.	1066716	New York	3280
9	Harkness, Anna M.	1061537	New York	6
10	Dodge, Mrs. Anna Thompson	993028	Detroit	unlisted
11	Field, Marshall	915959	Chicago	419
12	Baker, George F.	792076	New York	16
13	Ryan, Thos. F.	791851	New York	25
14	Baker, George F., Junior	783408	New York	14
15	Vanderbilt, F. W.	772986	New York	11
16	Berwind, Edward J.	722103	New York	1472
17	Astor, Vincent	642600	New York	59
18	Duke, J. B.	641250	New York	64
19	Morgan, J. P.	574379	New York	315
20	Foster, H.	569895	Columbus	16940
21	Hancock, G. Allan	543726	Los Angeles	28
22	Cutten, Arthur C.	540500	Chicago	unlisted
23	Timken, H. H.	540336	Columbus	unlisted
24	James, Arthur C.	521388	New York	21
25	Leach, Agnes B.	485526	New York	4336
26	Lamont, Thomas W.	480747	New York	9
27	Sanford, John	473422	New York	37
28	Warburg, F. M.	471404	New York	42
29	Hutton, M. P.	461192	New York	unlisted
30	Nash, C. W.	459776	Milwaukee	34
31	Schiff, Mortimer L.	459410	New York	65
32	Goelet, R. V.	455116	New York	1673
33	Crane, Richard T., Junior	434457	Chicago	57
34	Hayden, Charles	427979	New York	43
35	Patten, James A.	425348	Chicago	160
36	Blumenthal, George	415621	New York	48
37	Fleischmann, Max C.	409274	Chicago	15
38	Weber, Orlando F.	406382	New York	22

39	Kahn, Otto H.	391776	New York	unlisted
40	Steele, Charles	390749	New York	258
41	Fisher, Fred J.	383478	Detroit	unlisted
42	Prentice, A. Rockefeller	378506	New York	27
43	Mills, Ogden	372947	New York	75
44	Fisher, Charles T.	369306	Detroit	unlisted
45	Whitney, H. P., and wife	358823	New York	1180
46	Blossom, Elizabeth	356539	Cleveland	unlisted
47	Webb, Electra H.	330580	New York	110
48	Marks, Arthur H.	327733	New York	unlisted
49	Frelinghuysen, A. H.	325929	New York	120
50	Brewer, Joseph H.	325846	Grand Rapids	unlisted
51	Havemeyer, H.	323100	New York	unlisted
52	Gary, Elbert H.	322680	New York	26
53	Mackay, Clarence H.	320449	New York	24
54	Winthrop, Kate W.	317634	New York	35
55	Ward, George S.	316593	New York	126
56	Shedd, John G.	307153	Chicago	104
57	Cochran, Thomas	296729	New York	469
58	Mather, Samuel	295809	Cleveland	unlisted
59	Friedsam, M.	292396	New York	41
60	Morrow, Dwight W.	290344	New York	unlisted
61	Mitchell, S. Z.	283903	New York	345
62	McLean, Edward B.	281125	Washington Dc	31
63	Porter, William H.	280387	New York	462
64	Higgins, E.	279265	New York	235
65	Keiser, George	273133	Chicago	unlisted
66	Cochran, Alex. Smith	271542	New York	47
67	Cyrus H. McCormick	269036	Chicago	129
68	Baruch, B. M.	268142	New York	852
69	Metcalf, S. O.	266109	Providence	54
70	Metcalf, Jesse H.	265593	Providence	46
71	Prentiss, Elizabeth B.	262427	Cleveland	unlisted
72	Dupont, William	261610	Wilmington	unlisted
73	Rice, Eleanore E.	259457	Providence	2723
74	Coward, J. M.	256796	New York	77
75	Ritter, William McC.	255729	Washington Dc	unlisted
76	Bok, Mary Louise	255331	Philadelphia	unlisted
77	Hine, Francis L.	252681	New York	1026
78	Holmes, F. B.	252623	New York	23
79	Duke, Doris	252421	New York	30
80	McCormick, Stanley	251643	Chicago	62

81	Fisher, Lawrence	250803	Detroit	unlisted
82	Simmons, Zalmon G.	250379	Hartford	unlisted
83	Palmer, Edgar	250022	New York	70
84	Dobbs, Samuel C.	247046	Atlanta	unlisted
85	Dixon, Eleanor W.	245471	Philadelphia	unlisted
86	Hanauer, Jerome J.	245162	New York	290
87	Pitcairn, Theo	244789	Philadelphia	unlisted
88	Reynolds, W. N.	243385	Raleigh	unlisted
89	Reynolds, W. M.	243085	Raleigh	unlisted
90	Mackey, F. J.	242634	Chicago	unlisted
91	Pitcairn, Raymond	237595	Philadelphia	unlisted
92	Ford, James B.	236064	New York	unlisted
93	Bedford, E. T.	235390	New York	83
94	McCormick, Edith Rockefeller	234816	Chicago	196
95	Stone, F. A.	234444	New York	unlisted
96	McCormick, Katharine M.	233871	Chicago	93
97	Crawford, George W.	231122	Pittsburgh	unlisted
98	Wood, William M.	229971	Boston	20
99	Wilson, C. S.	229851	New York	unlisted
100	Jones, B. F., Junior	229136	Pittsburgh	101

A Graphs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Lower end of income group
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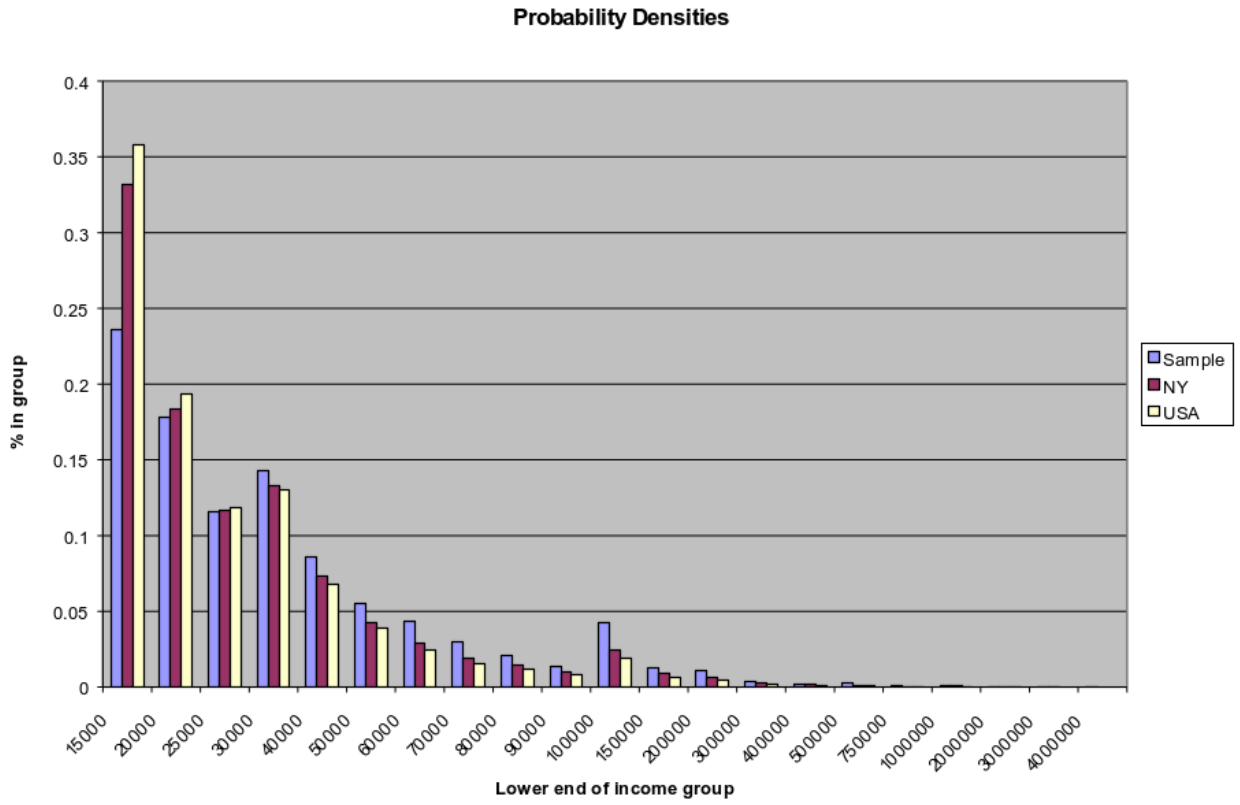
USA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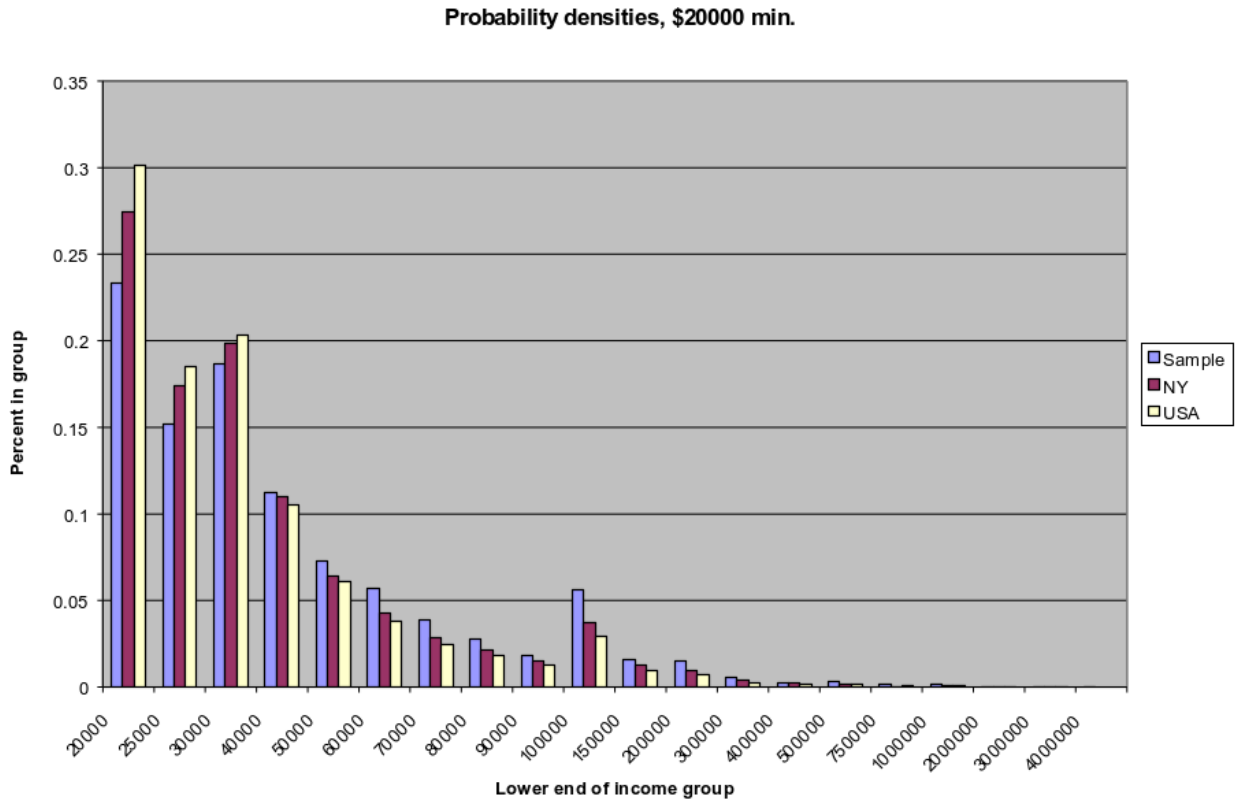
Lower end of income group
Sample
NY
USA

Figure 1.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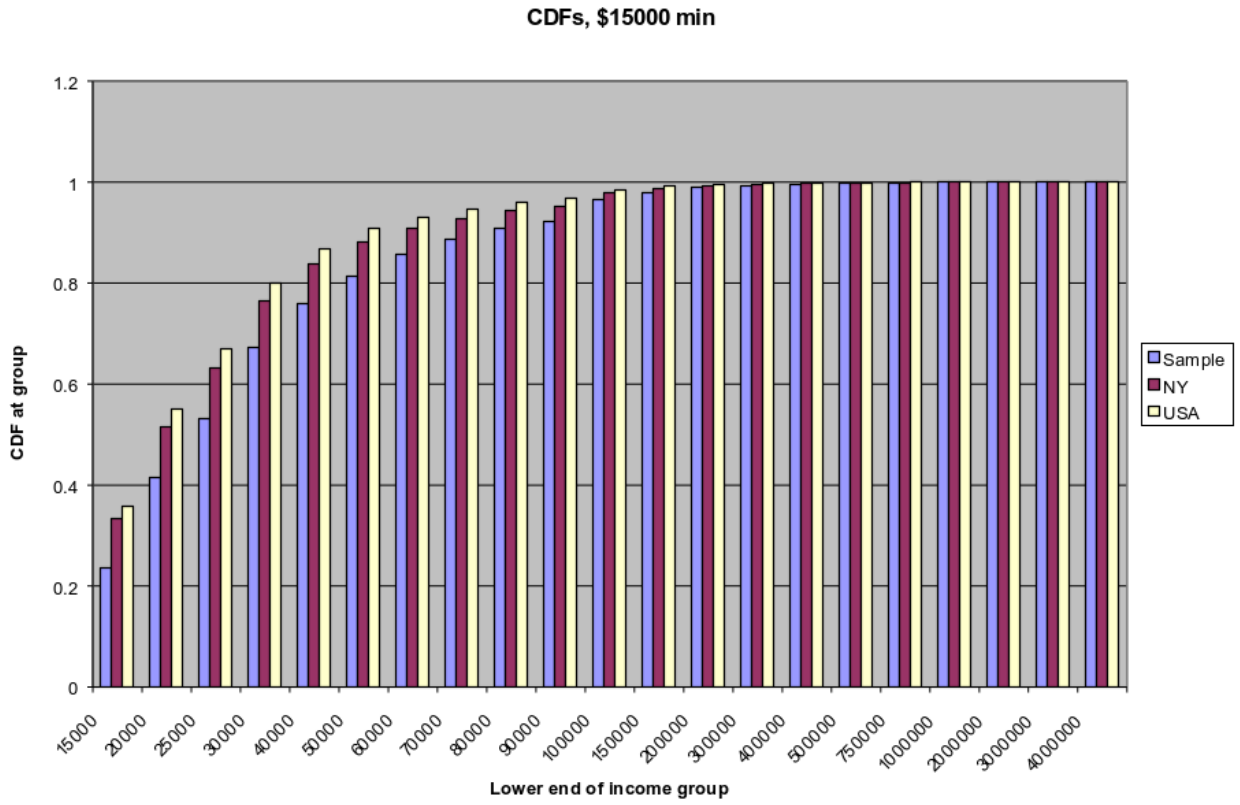
Lower end of income group
Sample
NY
USA

Figure 2.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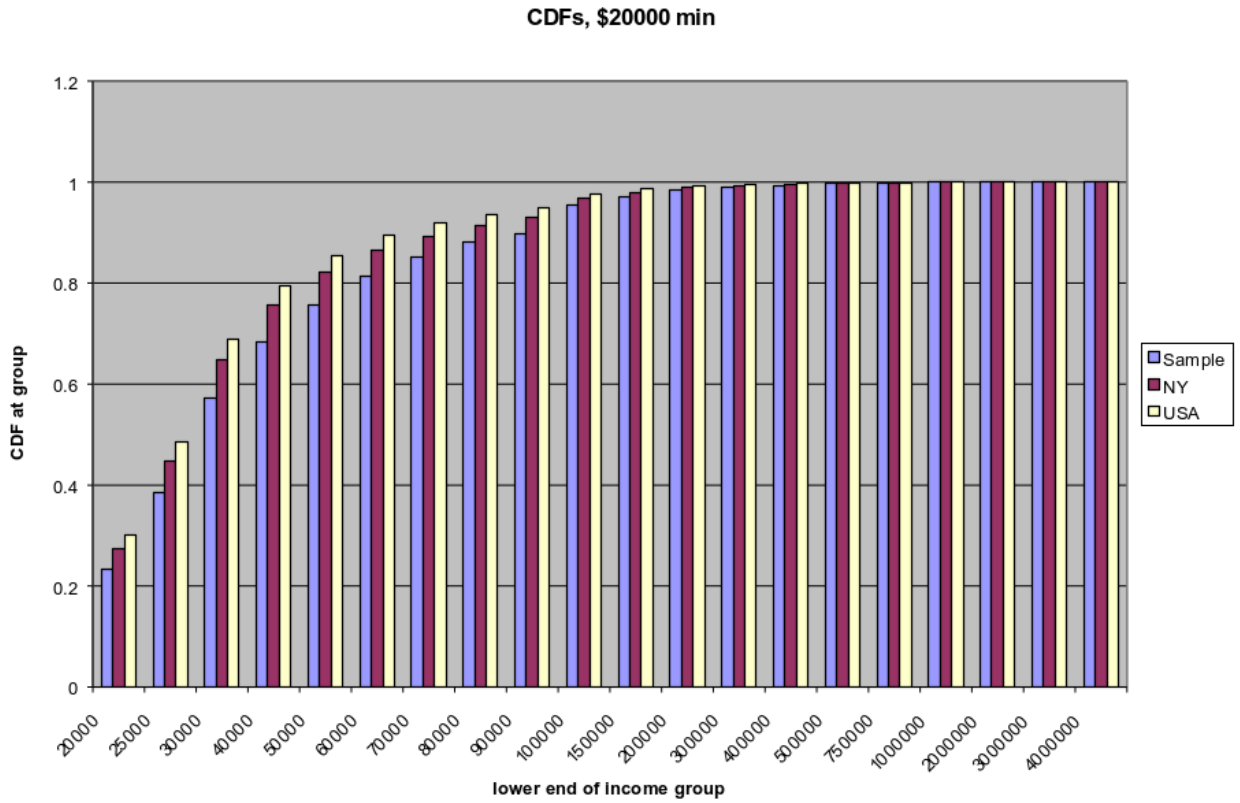
Lower end of income group
Sample
NY
USA

Figure 3.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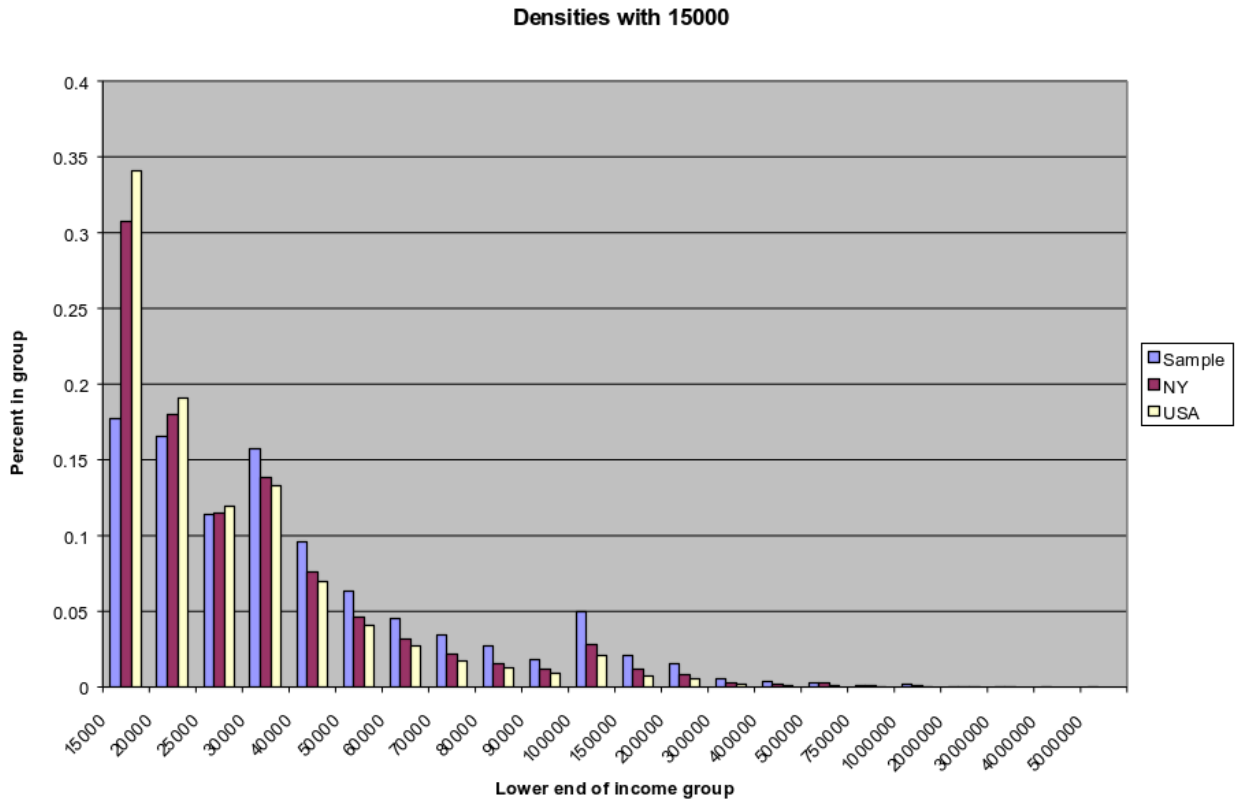
lower end of income group
Sample
NY
USA

Figure 4.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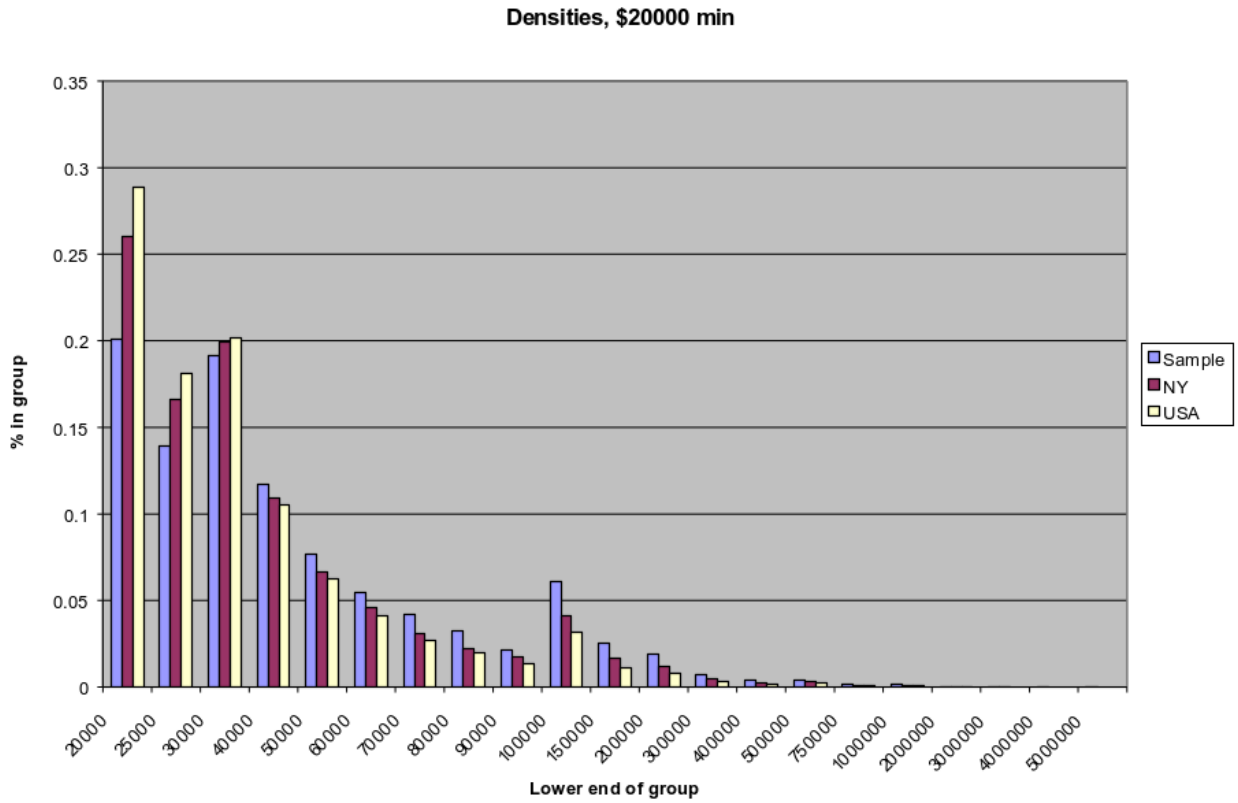
Lower end of income group
Sample
NY
USA

Figure 5.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Lower end of group
Sample
NY
USA

Figure 6.

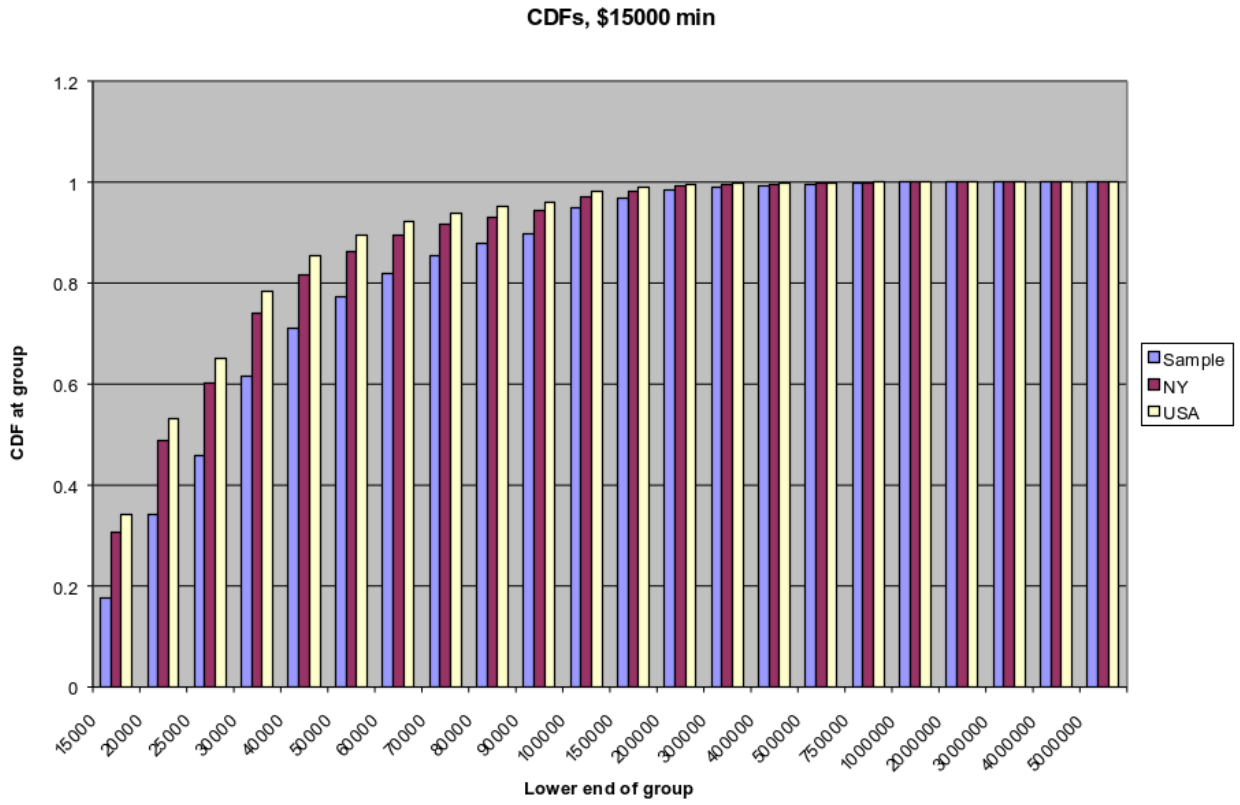
CDFs, $15000 min
CDF at group
1.2
1
0.8
0.6
0.4
0.2
0
15000
20000
25000
30000
40000
50000
60000
70000
80000
90000
100000
150000
200000
300000
400000
500000
750000
1000000
2000000
3000000
4000000
5000000
Lower end of group
Sample
NY
USA

Figure 7.

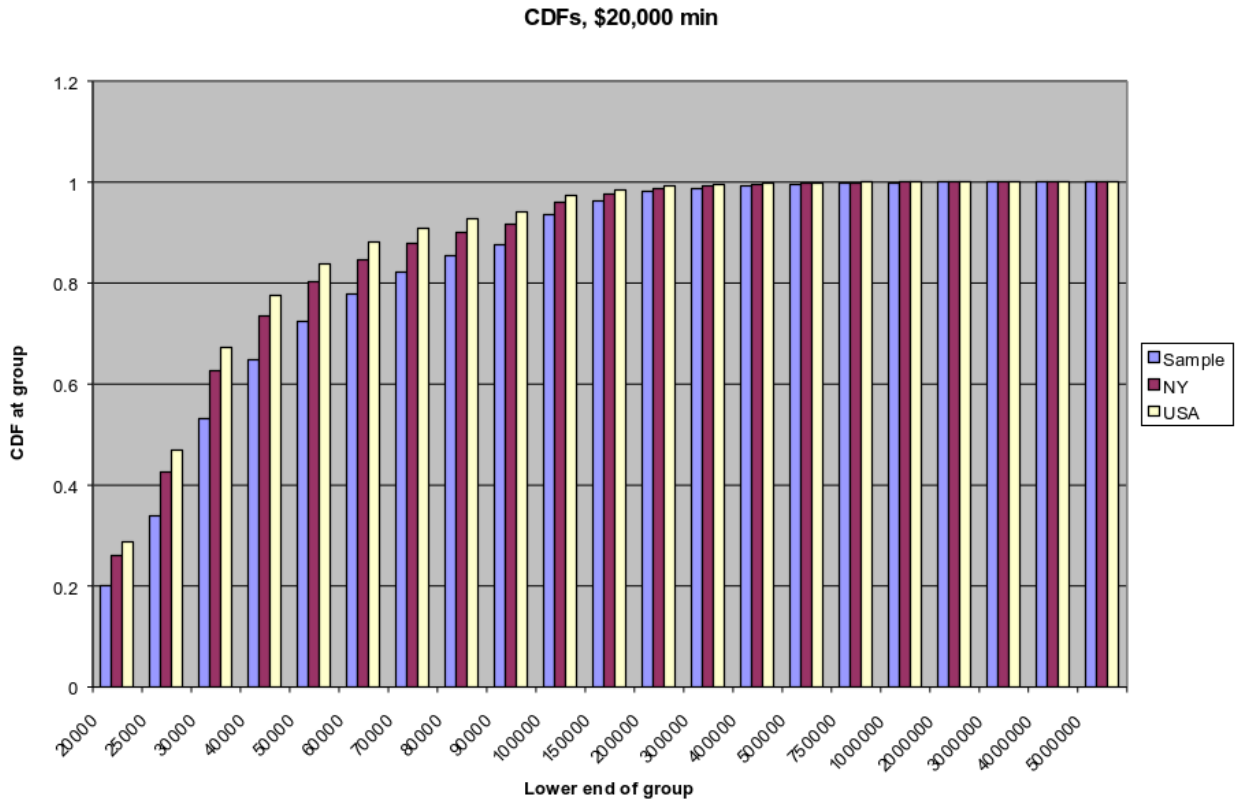
CDFs, $20,000 min
CDF at group
1.2
1
0.8
0.6
0.4
0.2
0
20000
25000
30000
40000
50000
60000
70000
80000
90000
100000
150000
200000
300000
400000
500000
750000
1000000
2000000
3000000
4000000
5000000
Lower end of group
Sample
NY
USA

Figure 8.

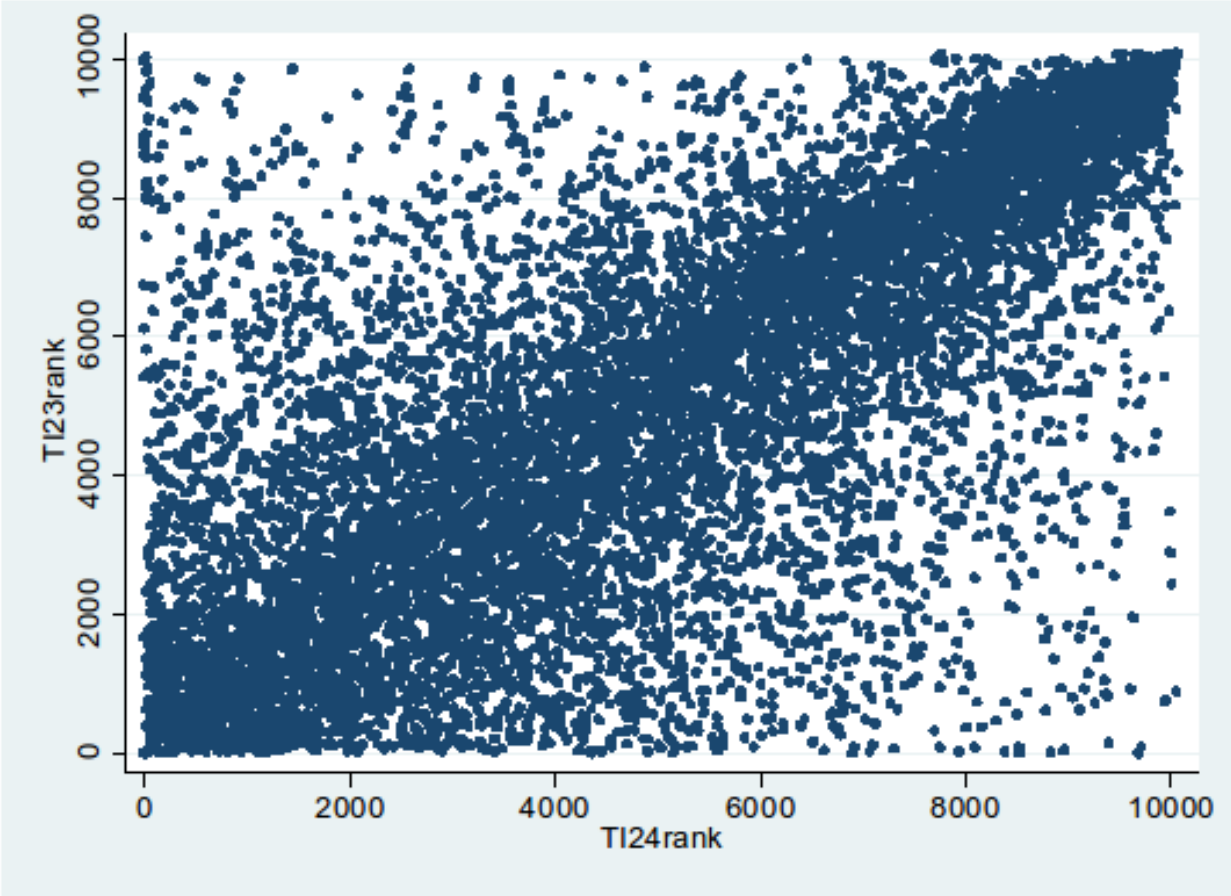

Figure 9. Scatterplot of income ranks in each year. Lower incomes are lower number ranks.

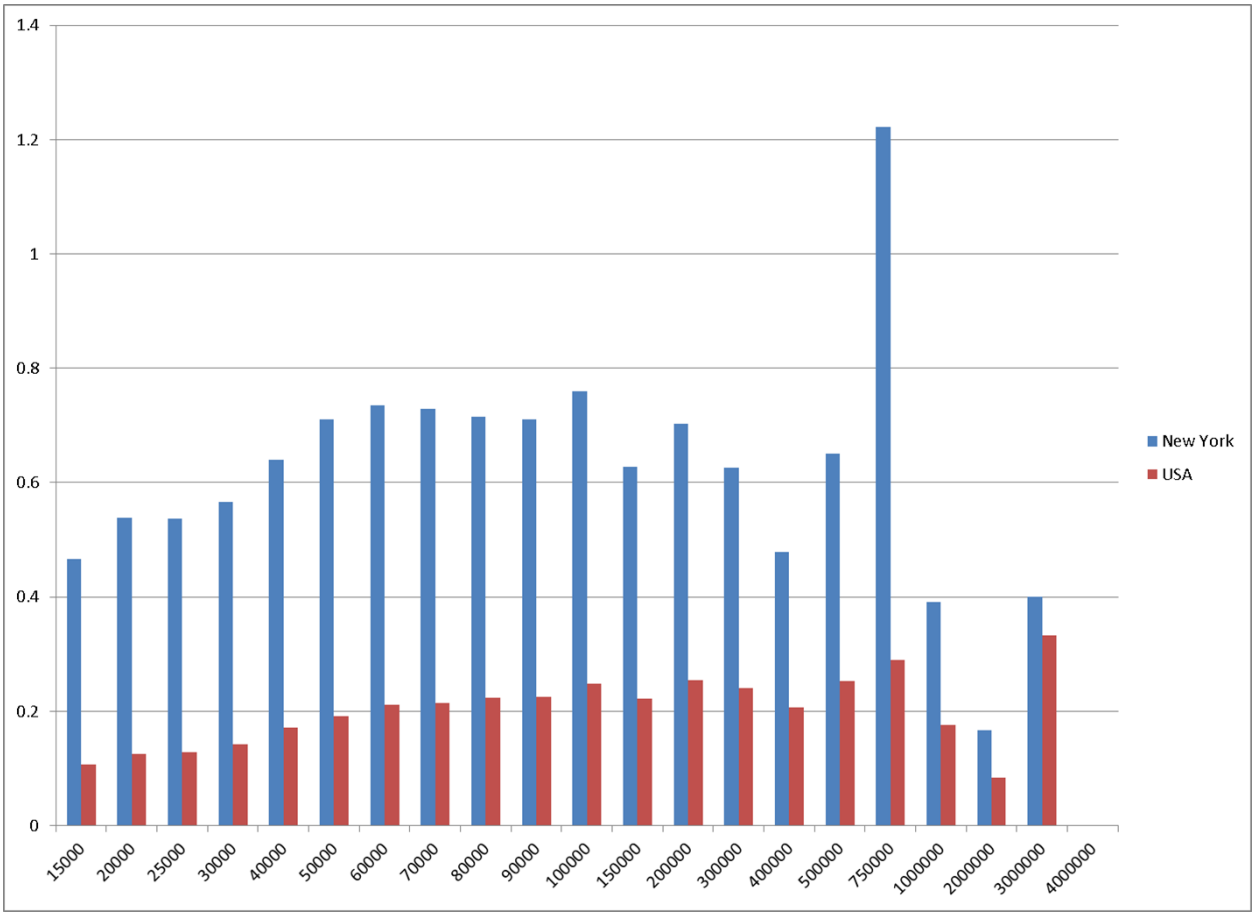

Figure 22. The percent of New York income tax filers and US filers in each income class who are found in the dataset in 1923.

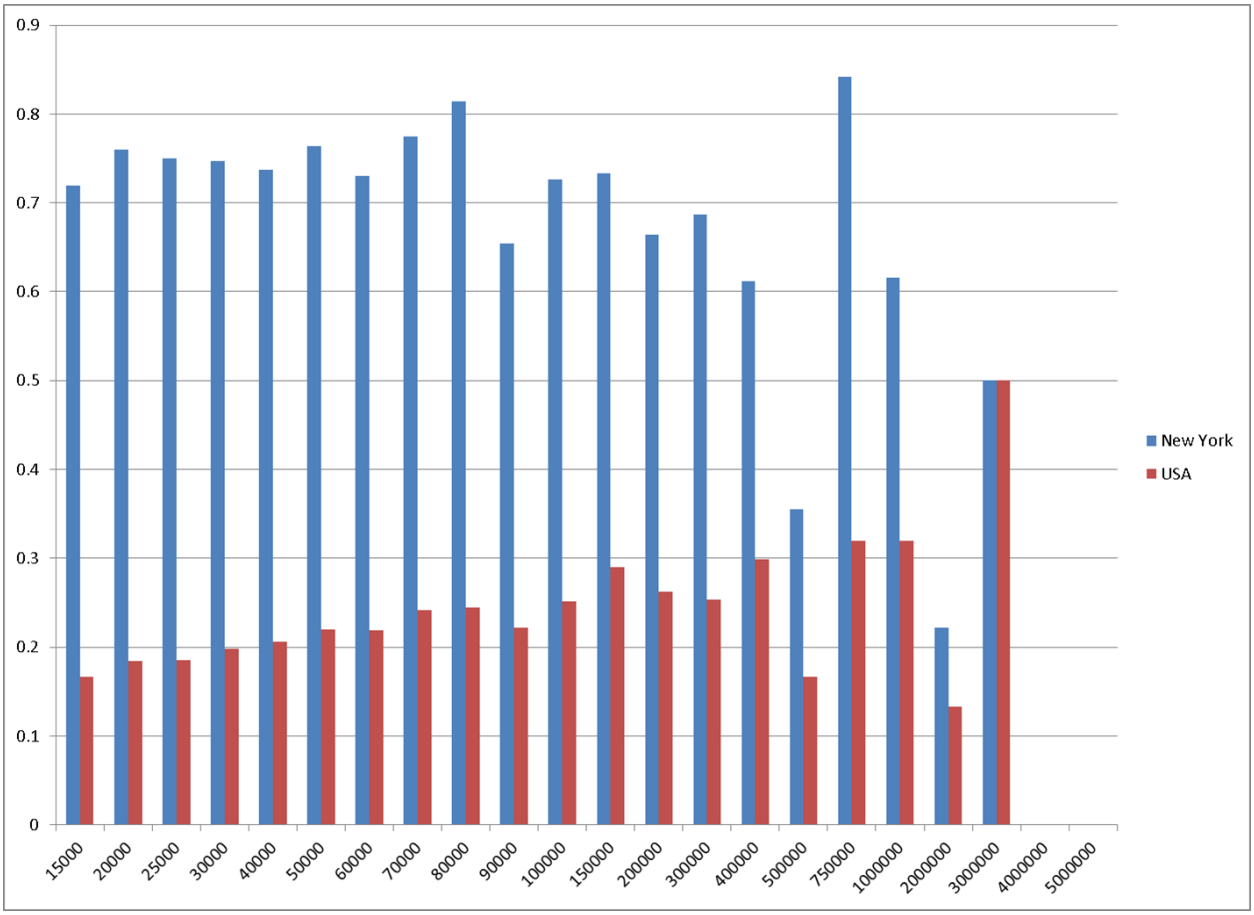

Figure 23. The percent of New York income tax filers and US filers in each income class who are found in the dataset in 1924.

B Regression results

	Log change, TI	Log change, TI	Log change, TI	Log change, TI
Log change, net-of-tax rate	-0.339	0.080	-0.395	-0.819
	(0.004)**	(0.071)	(0.003)**	(0.056)**
Log change, after-tax income	1.056	0.577	1.045	0.407
	(0.001)**	(0.061)**	(0.001)**	(0.078)**
Log of 1923 taxable income	-0.010	-0.106		
	(0.000)**	(0.013)**		
Constant	0.073	1.111	-0.021	0.099
	(0.005)**	(0.140)**	(0.000)**	(0.015)**
R^2	1.00	0.76	1.00	0.77
N	11,744	11,744	11,744	11,744
IV	No	Yes	No	Yes

* $p < 0.05$; ** $p < 0.01$

First table. No outliers dropped.

	Log change, TI	Log change, TI	Log change, TI	Log change, TI
Log change, net-of-tax rate	-0.337	0.288	-0.393	-0.539
	(0.004)**	(0.088)**	(0.003)**	(0.027)**
Log change, after-tax income	1.050	0.610	1.039	0.509
	(0.001)**	(0.055)**	(0.001)**	(0.058)**
Log of 1923 taxable income	-0.009	-0.094		
	(0.000)**	(0.011)**		
Constant	0.070	0.978	-0.021	0.067
	(0.004)**	(0.119)**	(0.000)**	(0.010)**
R^2	1.00	0.74	1.00	0.80
N	11,489	11,489	11,489	11,489
IV	No	Yes	No	Yes

* $p < 0.05$; ** $p < 0.01$

Second table. Outliers dropped. Outliers may not be inconveniently large discrepancies in numbers, but may actually be parents incorrectly linked to their children.

	Log change, TI	Log change, TI	Log change, TI	Log change, TI
Log change, net-of-tax rate	-0.220	0.387	-0.373	0.586
	(0.018)**	(0.127)**	(0.026)**	(0.164)**
Log change, after-tax income	1.146	1.426	1.153	1.525
	(0.004)**	(0.053)**	(0.007)**	(0.057)**
Log of 1923 taxable income	-0.074	-0.026		
	(0.003)**	(0.013)		
Constant	0.780	-0.045	-0.085	-0.436
	(0.033)**	(0.188)	(0.009)**	(0.058)**
R^2	1.00	0.98	1.00	0.96
N	509	509	509	509
IV	No	Yes	No	Yes

* $p < 0.05$; ** $p < 0.01$

Third table. Analysis on only those who appear in the top 500 in either year.

	Log change, TI	Log change, TI	Log change, TI	Log change, TI
Log change, net-of-tax rate	0.080	0.288	0.387	0.586
	(0.071)	(0.088)**	(0.127)**	(0.164)**
Log change, after-tax income	0.577	0.610	1.426	1.525
	(0.061)**	(0.055)**	(0.053)**	(0.057)**
Log of 1923 taxable income	-0.106	-0.094	-0.026	
	(0.013)**	(0.011)**	(0.013)	
Constant	1.111	0.978	-0.045	-0.436
	(0.140)**	(0.119)**	(0.188)	(0.058)**
R^2	0.76	0.74	0.98	0.96
N	11,744	11,489	509	509
IV	Yes	Yes	Yes	Yes
Outliers Dropped		Yes		
Top 500			Yes	Yes

* $p < 0.05$; ** $p < 0.01$

Fourth table. Summary.

	Log change, TI	Log change, TI	Log change, TI	Log change, TI
Log change, net-of-tax rate	0.169	0.021	-0.113	-1.463
	(0.181)	(0.102)	(0.038)**	(0.409)**
Log change, after-tax income	0.730	0.767	1.014	0.401
	(0.095)**	(0.060)**	(0.012)**	(0.242)
Log of 1923 taxable income	-0.152	-0.083	-0.108	
	(0.044)**	(0.018)**	(0.009)**	
Constant	1.568	0.861	1.155	0.222
	(0.461)**	(0.186)**	(0.098)**	(0.092)*
R^2	0.88	0.90	0.99	0.87
N	1,555	1,450	635	635
IV	Yes	Yes	Yes	Yes
Outliers Dropped		Yes		
Top 500			Yes	Yes

* $p < 0.05$; ** $p < 0.01$

Chicago regressions, unadjusted 1924 payments.

	Log change, TI	Log change, TI	Log change, TI	Log change, TI
Log change, net-of-tax rate	0.227	0.200	0.236	0.186
	(0.081)**	(0.061)**	(0.147)	(0.346)
Log change, after-tax income	1.043	1.017	1.151	1.129
	(0.044)**	(0.062)**	(0.048)**	(0.187)**
Log of 1923 taxable income	-0.005	-0.002	-0.004	
	(0.020)	(0.016)	(0.030)	
Constant	0.042	0.016	0.043	0.011
	(0.208)	(0.165)	(0.328)	(0.060)
R^2	0.96	0.95	0.90	0.90
N	1,545	1,506	595	595
IV	Yes	Yes	Yes	Yes
Outliers Dropped		Yes		
Top 500			Yes	Yes

* $p < 0.05$; ** $p < 0.01$

Chicago regressions, adjusted 1924 payments.