

A Welfare Analysis of Tax Audits Across the Income Distribution

Executive Summary

More than \$500 billion in tax obligations go unpaid each year in the US – with most of these unpaid liabilities concentrated among the highest income taxpayers. Can additional spending on audits recoup those unpaid taxes? How do the returns to audits vary across the income distribution?

In this paper, we provide a detailed analysis of the returns to tax audits of individuals across the income distribution. We quantify the costs and revenues associated with all audits of US taxpayers filing in recent years. We construct these estimates using internal IRS accounting information as well as comprehensive activity logs, which record the enforcement activities of all IRS auditors.

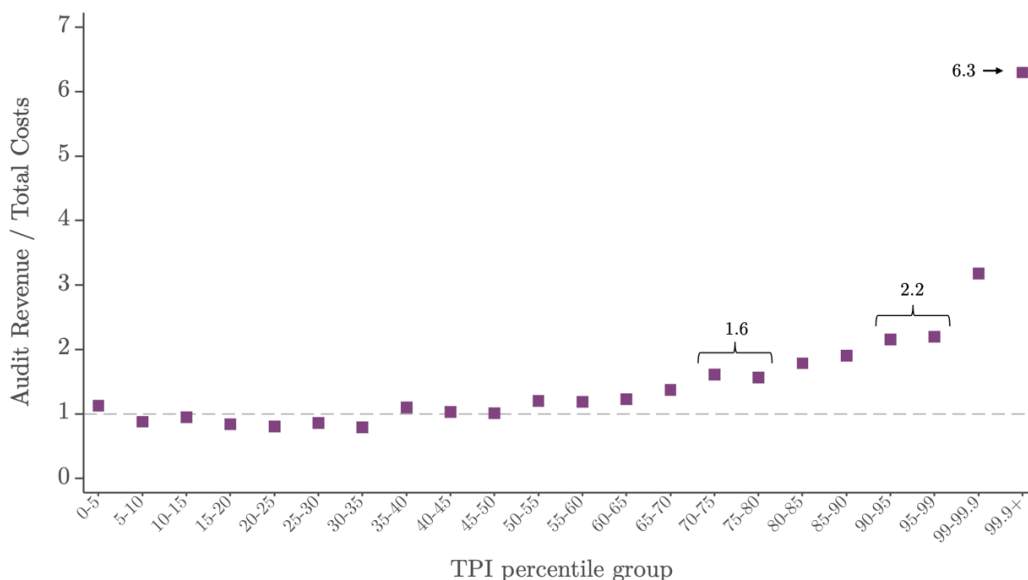
Ultimately, our paper estimates that expenditures on marginal audits directed towards top-earning taxpayers have the potential to return in excess of \$12 in revenue for each \$1 in expenditure.

Our paper proceeds in four steps: First, we begin by estimating the average return to all IRS audits, comparing average audit costs to average revenue collected. We show how these average returns vary across the distribution. Second, we examine how the return to marginal audits differs from the return to average audits, exploiting the large decline in audits from 2010 to 2014. Third, we estimate specific deterrence effects of IRS audits, estimating how auditing an individual in one year impacts their tax payments in future years. Finally, we incorporate these estimates into the MVPF framework to assess the welfare consequences of tax audits. This document outlines the primary conclusions from each of those four steps.

Finding #1: On average, the direct revenues collected during an audit exceed the costs of the audit by a factor of more than 2:1. The returns to audits of high-income taxpayers are substantially greater than the returns to audits of low-income taxpayers.

We estimate that, on average, it costs \$6,418 to conduct an in-person audit. 19% of this spending goes towards the wages of enforcement officers for hours spent conducting enforcement activities. The remainder pays for additional costs associated with enforcement such as wages for non-auditing hours, the cost of management and support staff, fringe benefits for all employees, rent, and central overhead cost such as technology costs. By contrast, the average audit collects \$13,930 in revenue, which is 2.2 times more than the total cost.

This average return varies considerably across the income distribution. Audits of higher income taxpayers are more time intensive and costly than audits of low-income taxpayers, but these higher costs are more than offset by increased revenues. Figure 1 divides average revenues by average costs to report the average return to audits across the income distribution. Results are reported in bins of taxpayer total positive income (TPI). Audits of taxpayers in the bottom 50% of the income distribution produce \$0.96 in revenue for each dollar of audit cost while audits of the 90-99th percentiles produce a return of 2.18:1 and audits of the top 0.1% produce a return of 6.29:1.

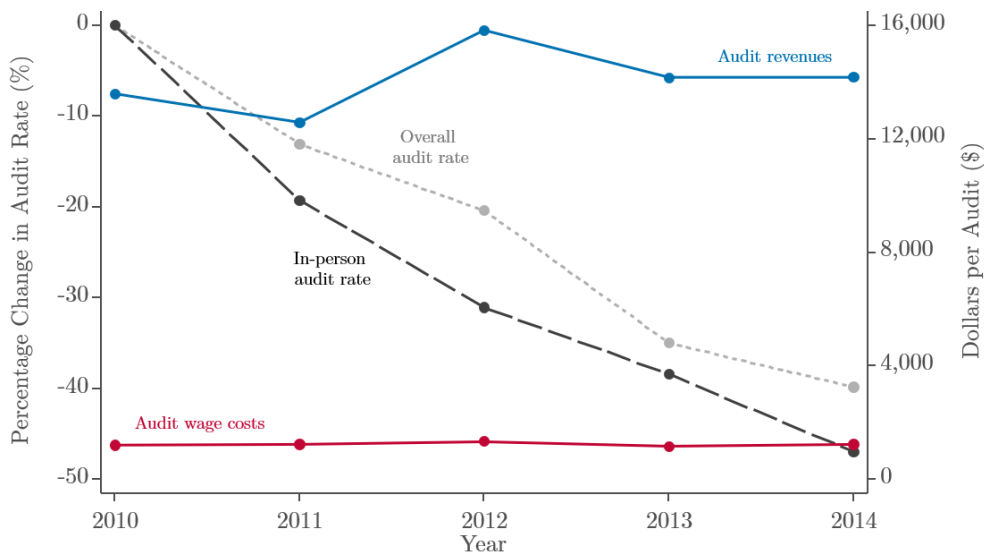


Finding #2: The return to a dollar of spending on marginal audits exceeds the return to spending on average audits

If the IRS expanded enforcement activities, would the revenues from the marginal audits differ from the average revenues discussed above? We assess this by studying the steep decline in US audit rates for taxes filed between 2010 and 2014. As shown in Figure 2, audit rates declined 40% during this period. If reductions between 2010 and 2014 had prioritized cutting audits with low revenue per unit cost, we should expect that the audits remaining in 2014 had higher returns than the average audit of a 2010 tax return. Our results show no evidence of such diminishing marginal returns. Audit revenues remained quite stable over this period. This suggests that the audit selection process prioritized criteria other than the maximization of return per dollar of costs. It also suggests that expanding audits back toward their 2010 levels would not decrease the revenue collected per audit.

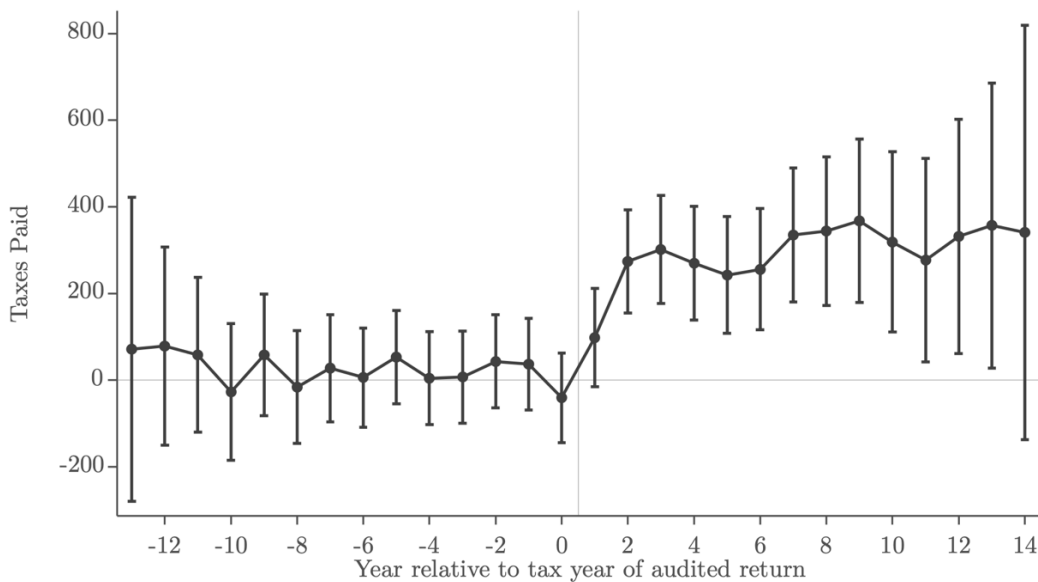
Estimating the return to marginal audits also requires evaluating the marginal costs associated with audit expansion. We draw upon accounting information from the IRS as well as IRS budget requests to examine the fraction of total audit costs that are likely fixed. The evidence suggests that 27% of audit costs are likely fixed, which means that marginal costs fall below average costs.

Taken together, the return to a dollar of spending on marginal audits is slightly higher than our estimate of the average return since marginal revenues are the same and costs are lower. In particular, the return to a dollar of marginal expenditure in the bottom half of the income distribution remains close to \$1 while the return rises to \$2.99 in the 90-99th percentile, \$4.35 in the 99-99.9th percentile and \$8.63 in the top 0.1%.



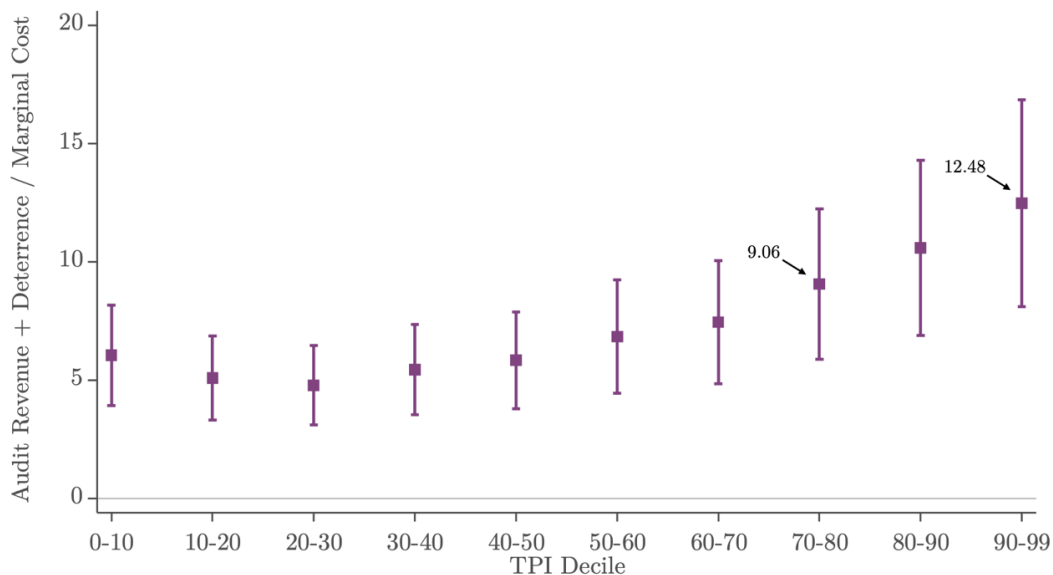
Finding #3: People pay more in taxes for at least 10 years following an audit, and the subsequent revenue generated is three times greater than the quantity collected during the initial audit.

Audits have the potential to raise revenue in an indirect manner by deterring future non-compliance. We provide new evidence on one specific form of deterrence: the impact of auditing an individual on the future tax revenue paid by that individual. We use randomly selected audits from the IRS' National Research Program (NRP) to study this specific deterrence effect. Figure 3 draws upon the change in taxes paid in each year post-audit for individuals selected for a random audit. Those tax payments are compared to a control group of non-audited individuals to estimate the treatment effect of the audit. We find that audits have a clear and persistent impact on individual behavior in the years after the initial audit. Individuals pay higher taxes for up to 14 years after the tax year of the audit. The value of this additional revenue stream is \$3,258 per audit (discounted at a 3% rate) which is approximately 3.2 times the direct revenue raised from the initial audit.



We examine deterrence effects across the income distribution and find similar effects across all levels of income. This result lies in contrast to previous research, which has suggested that deterrence effects are negative at the top of the income distribution. (It is worth noting that we can estimate precise effects for the top decile of earners but lose power to estimate precise effects in the top 1%.)

When we combine this 3.2x deterrence multiplier with our estimates of the direct returns to marginal audits, we can estimate the long-run return to marginal audits across the income distribution. We find that a dollar of marginal expenditure on audits of taxpayers below median income returns around \$5. A dollar of marginal expenditure auditing taxpayers in the 90-99th percentile of income returns close to \$13.



Finding #4: The MVPF framework suggests that expanded audits, particularly audits of high-income taxpayers, raise revenue at relatively low welfare cost.

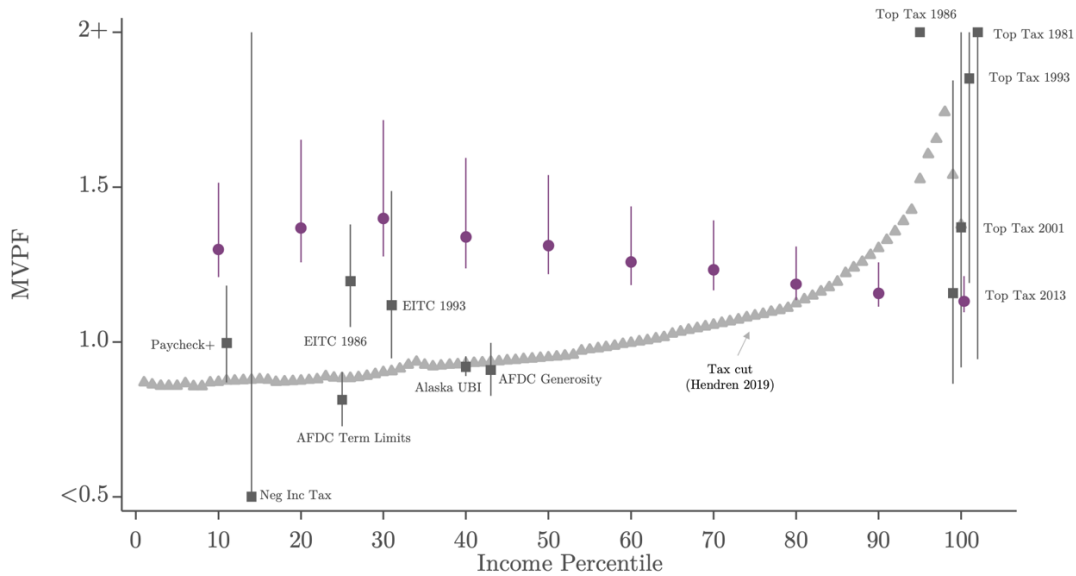
Audits have the potential to produce revenue that far exceeds their costs. What does this imply about the welfare consequences of tax audits? How does the efficiency of tax audits compare to methods of raising revenue?

To assess this, we use our estimates of the marginal return to audit spending to estimate the Marginal Value of Public Funds (MVPF) associated with expanding audit rates across the income distribution. The MVPF of additional tax audits is given by the ratio of a taxpayers' willingness-to-pay to avoid the audit (including the audit's financial burden and hassle costs) divided by the net revenue raised by the audit.

We find that the MVPF associated with additional audits is 1.40 for low-income taxpayers (with income in the 20-30th percentile) and 1.13 for high-income taxpayers (with income in the 90-99th percentile). This means, for example, that raising a dollar in revenue from taxpayers at the 90-99th percentile of

income, requires imposing a welfare cost of \$1.13 on those individuals. It also implies that audits of high-income taxpayers impose a lower welfare cost than audits of low-income taxpayers.

Figure 4 compares estimates of the MVPF of marginal tax audit expansions across the income distribution (shown in purple circles) to the MVPFs from other tax and transfer policies (shown with gray triangles and black squares). The MVPF of tax changes for high-income taxpayers typically lie well above the MVPF of tax audits.



While determinations of policy optimality depend on the welfare weights placed on taxed or audited individuals, these results suggest that current audit levels across the income distribution are inconsistent with a wide range of canonical social preferences.