

# Do Audits Deter Future Noncompliance? Evidence on Self-Employed Taxpayers

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## 1. Introduction

The IRS audits roughly 1.5 percent of all self-employed individual income taxpayers annually. In Fiscal Year 2014, the direct effect of these audits was over \$3 billion in recommended additional tax assessments, although not all of the recommended amount will ultimately be collected (Internal Revenue Service, 2015).<sup>1</sup> Less is known, however, about the impact of audits on subsequent taxpayer reporting behavior. Behavioral changes may either undermine immediate gains in tax collections or amplify the overall revenue returns of audits. Depending on risk attitudes, norms, moral perceptions, and (perhaps most importantly) the subjective appraisal of the audit, enforcement activity has the potential to increase or decrease the willingness to comply with the law and to cooperate with the IRS in the future.

In this paper we summarize our recent research on the impact of enforcement activity on subsequent compliance behavior of nonfarm sole proprietors.<sup>2</sup> By combining administrative data for a random sample of 2,204 Schedule C filers who were audited after filing their Tax Year 2007 returns with data for a control sample of 4,705 Schedule C filers who were not audited, we are able to estimate the short- and medium-term impact of audits on reported income. In our empirical analysis, we distinguish between (seemingly) compliant and (seemingly) noncompliant taxpayers, as the audit response likely differs between these groups. A “direct deterrent effect” (Alm, Jackson & McKee, 2009) of additional tax assessments potentially increases the compliance of caught evaders, though it’s possible that an audit could embolden an evader by confirming what the auditors tend not to detect. The response of compliant taxpayers to enforcement activity is similarly ambiguous. Audits could be seen as a justified means to enforce the law, increasing trust in the state and the willingness to comply voluntarily. A coercive experience, however, might have the opposite outcome.

Kirchler, Hoelzl, and Wahl (2008), for instance, argue that tax compliance results from a combination of effective enforcement and mutual trust between taxpayers and the authorities. While audits are crucial to enforce compliance among noncooperative taxpayers, a favorable climate between taxpayers and the tax authority likely promotes voluntarily compliance.

Ayres and Braithwaite (1992) classify taxpayers according to their motivational postures. While the majority of taxpayers are committed to the system and therefore willing to comply, some are disengaged or even oppositional towards the state. Effective enforcement regimes should thus consider taxpayers’ motivations and apply different regulatory strategies accordingly (Braithwaite, 2003). Taxpayer services, for instance, are expected to build trust and strengthen compliance among committed taxpayers, while audits are necessary to detect and prosecute noncompliance among disengaged taxpayers. But if the nature or frequency of audits is perceived as disproportionate, audits might erode trust and thus undermine compliance in the aggregate. Following this line of thought, Mendoza, Wielhouwer, and Kirchler (2015) explore the impact of audit frequency. In line with their expectations, they find that audits tend to “backfire,” by weakening voluntary compliance, if they are conducted excessively.

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<sup>1</sup> These figures include both farm and nonfarm business returns; however, returns claiming the Earned Income Credit are excluded as audit coverage statistics for this category do not distinguish between business and nonbusiness returns.

<sup>2</sup> This research was conducted for the National Taxpayer Advocate (NTA) under contract TIRNO-14-E-00030 with technical support from NTA Technical Advisors Tom Beers and Jeff Wilson. Any opinions expressed in this report are those of the authors and do not necessarily reflect the views of the National Taxpayer Advocate. For more details on this project, refer to Beer, *et al.* (2015).

## 2. Methodology

In line with earlier work (Gemmel and Ratto, 2012), we distinguish compliant from noncompliant taxpayers on the basis of their audit outcomes. More specifically, we classify taxpayers as compliant if the examination did not result in a recommended additional tax assessment, and as noncompliant otherwise. This categorization procedure has two important drawbacks. One is that we may only classify audited taxpayers. The second is related to classification errors. Some truly noncompliant taxpayers are likely to go undetected during an audit and are not assessed additional tax. Conversely, some additional tax assessments may be unwarranted and disputed later on. The examination result therefore does not unambiguously signal the subjective inclination to pay taxes voluntarily. We rely on a range of nonexperimental estimators to refine the comparison between “compliant” and “noncompliant” taxpayers and quantify the magnitude of the short-run and medium-run audit impact. These include the standard difference-in-differences estimator, variants of this method that account for sample selection and attrition,<sup>3</sup> and propensity score matching methods. While propensity score matching overcomes observable differences between our experimental groups, the difference-in-differences approach accounts for unobservable, time-constant effects. It is reassuring that these two alternative approaches yield similar results.

## 3. Results

Our empirical results provide robust evidence that audits have important medium-term revenue implications. Three years after an audit, the average small-business taxpayer reports around 20 percent more income.<sup>4</sup> The indirect medium-term effect thus clearly adds to the static gain of additional tax assessments. However, by differentiating the response of compliant and noncompliant taxpayers, we are able to draw a more nuanced picture.

We find an enduring effect of audits on taxpayers who receive a positive recommended additional tax assessment. On average, such taxpayers increase their reported taxable income by 250 percent following an audit. Three years after the audit, the effect is still substantial and statistically significant, with an average increase of 120 percent. Importantly, the results also indicate that audits have a detrimental impact on the reporting behavior of taxpayers who do not experience an additional tax assessment. While the short-term impact is measured imprecisely, the estimated medium-term impact is statistically significant and implies a 35-percent reduction in reported taxable income 3 years after the audit.

The positive impact of audits on the former group might be due to some kind of specific deterrent effect (Alm, *et al.*, 2009). Understanding the observed reduction in reported income among taxpayers in the latter group is probably even more important. There are several plausible explanations for this finding. First, an experience of coercive enforcement activity could reduce tax morale among honest taxpayers, leading to the observed detrimental impact of audits on those receiving no additional tax assessment. Second, even if tax morale were unaffected by the examination experience, the audit process might provide currently compliant taxpayers with a “window” on potential opportunities for both legal and illegal tax avoidance. In addition, such taxpayers may infer that the risk of a future examination is low given that no adjustments were made during the recent audit. This newfound awareness of opportunities for reporting and paying lower taxes combined with a low perceived future audit risk could drive some taxpayers to understate their income on subsequent tax returns. A third possibility is that the observed reduction in reported income might be attributable to dishonest taxpayers within this group whose misreporting was not detected during the audit. The experience of having undergone an audit without experiencing any sanction for noncompliance may have emboldened such taxpayers, resulting in even more aggressive future reporting behavior.

Based on the available data, we are unable to pinpoint which of the above explanations prevails. The observed reduction in compliance behavior suggests, in any case, that there is scope for improving the efficiency

<sup>3</sup> We find that enforcement activity reduces the future likelihood of filing Schedule C by almost 7 percent among taxpayers who receive a positive recommended additional tax assessment.

<sup>4</sup> This estimate is substantially larger than that obtained by DeBacker, *et al.* (2015), perhaps owing to our focus on operational rather than random audits.

of audits. On the one hand, improved targeting of noncompliant returns and an improved capacity to detect noncompliance would seem likely to improve deterrence among cheaters. On the other hand, a better understanding of the psychological impact of audits on compliant taxpayers may lead to enhanced examination approaches that mitigate the erosion of tax morale and maintain their incentives to comply.

#### 4. Limitations and Scope for Future Work

A central concern of any quasi-experimental study is that nonrandom and unobservable factors may play a role in determining whether an observation is assigned as a treatment or a control. In our context, this concern is clearly justified. Ultimately, the choice of which returns to audit is at the discretion of experienced IRS examiners (“classifiers”). If the audit selection decision is driven in part by factors that we do not observe, but which are correlated with reported income, our estimated treatment effect may be biased. We aim at reducing the potential for such bias by accounting for a vast range of control variables, such as the IRS internal risk score (the “DIF” score) and the prior reported values of income sources and offsets. Furthermore, given that propensity score matching does not impose a specific functional form regarding the influence of these variables on reported income, we are confident that we are able to capture most of the systematic components of the selection process.

A limitation of our analysis is that our sample period was subject to a good deal of economic volatility. Although both our treatment and control groups experienced the same shocks, which helps to mitigate the potential impact of these economic fluctuations, it would be useful in future work to replicate the analysis using a more stable sample period. It also would be constructive to explore the differential impact of alternative audit techniques (such as face-to-face vs. correspondence) or the differential response of low- and high-income taxpayers. Finally, more sophisticated propensity score matching methods would provide further evidence on the robustness of our results and could improve the representativeness of our findings.

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