

Taxpayer Behavior Under Audit Certainty

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Over the past several decades, both theoretical and empirical studies have documented that the risk of tax audit (examination by the tax authority) affects taxpayer behavior. These studies generally predict that taxpayers enter fewer uncertain tax positions to reduce their probability of audit because tax uncertainty increases the probability of audit. However, some taxpayers face a *certain* annual audit, meaning that the level of tax uncertainty does not affect their probability of tax audit. Understanding how audit certainty affects taxpayer behavior is important because many of the largest firms in the U.S. face certain audit every year, and the Internal Revenue Service (IRS) invests a sizeable portion of its resources in these efforts. Audit certainty therefore impacts an economically significant proportion of the U.S. economy, and the IRS commitment to a program of audit certainty is an economically important resource allocation decision. We know little about the effect of audit certainty on taxpayer behavior because taxpayers are not required to disclose publicly whether they face certain audit.

In this study, we overcome this data limitation using a confidential dataset of corporate taxpayers where the risk of audit is 100 percent—firms in the IRS Coordinated Industry Case (CIC) program. The IRS implemented the CIC program (formerly the Coordinated Examination Program) in the 1960s in response to the growing complexity of U.S. business operations. For CIC firms, a team from the IRS's Large Business and International (LB&I) group spends a substantial amount of time in the taxpayer's primary place of business throughout the year. The IRS team consists of the examination team manager, field agents, industry specialists, and subject-matter experts.²

The effect of audit certainty on taxpayer behavior is not clear *ex ante*. On the one hand, taxpayers could have less incentive to engage in tax avoidance (or evasion) if the increased audit probability decreases the expected benefit of tax avoidance such that a subset of tax positions are no longer value-creating. This would be consistent with the negative relation between audit risk and tax avoidance documented at lower points on the audit probability spectrum (Hoopes, Mescall, and Pittman (2012)).

On the other hand, Mills and Sansing (2000) suggest that certainty of audit could increase the incentive to engage in tax avoidance. Specifically, because the IRS will audit the firm regardless of the signals provided in the financial statements, certain audit firms no longer have incentive to reduce the difference between book and taxable income. This intuition is consistent with results presented in Slemrod, Blumenthal, and Christian (2001), which reports results of a 1995 experiment by the Minnesota Department of Revenue under which a random sample of individual taxpayers were told that the returns that they were about to file would be closely examined. Relative to the sample not told this, the high-income members of the "audit certain" sample significantly decreased their reported tax liability. The authors conjecture that these individual taxpayers claim more tax benefits to create a more aggressive starting point for negotiations with the goal of minimizing tax liability, assuming the audit will not detect and punish all tax avoidance. Further, the authors postulate that this effect is observed in high-income taxpayers, but not low- or middle-income taxpayers, because the high-income taxpayers believe that the final outcome of the certain audit is more manipulable, likely in part due to their ability to hire professional assistance. This logic likely applies to the corporate taxpayers we study, as firms assigned to the CIC program tend to be large and/or have complex operations, both of which are likely correlated with the likelihood of professional tax assistance. However, the corporate taxpayers in our sample have financial reporting obligations that individuals do not, which could cause these two types of taxpayers to have different tax avoidance preferences. In sum, how tax certainty affects taxpayer behavior is an empirical question.

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² CIC audit teams generally provide more in-depth audits than traditional IRS audits. For example, subject-matter experts in areas such as engineering, excise taxes, and employment are included in the list of specialists assigned to a CIC audit team.

Before testing our research question, we first analyze the determinants of assignment to the CIC program using CIC selection factors outlined in the Internal Revenue Manual. CIC assignment is based on a point system involving seven main criteria: (i) gross assets; (ii) gross receipts; (iii) operating entities; (iv) number of industries; (v) total foreign assets; (vi) related transactions; and (vii) foreign taxes paid. Each criterion has a point value, and a firm is assigned to the CIC program if its total point value is greater than or equal to 12. Firms with a point value less than 12 can also be assigned to the CIC program if they are sufficiently complex to warrant certain audit.

Though other research (Mills (1998); Hanlon, Mills, and Slemrod (2007)) cite size and complexity as determinants of CIC assignment, these statements are based on the Internal Revenue Manual's listed factors rather than on empirical tests. Thus, our analysis serves two purposes: 1) to shed light on whether CIC program assignment is based on factors outlined by the IRS and/or factors associated with tax avoidance, and 2) to provide researchers without access to CIC-assignment data a model of audit certainty. We find that many of the selection factors are positively associated with assignment into the CIC program, with gross receipts being the most significant size determinant and the number of geographic segments being the most significant complexity determinant. When we include factors known to affect firms' incentives or ability to avoid taxes (such as research and development expenses, excess stock option deductions, and net operating loss carryforwards) as potential determinants, we find that some of the factors are significantly associated with CIC assignment. However, their inclusion does not dramatically improve the fit of the model. These results collectively suggest that although inclusion in the CIC program is associated with firms' incentives or ability to avoid taxes, the CIC assignment decision is primarily based on firm size and complexity.

Next, we study the effect of audit certainty on taxpayers' initial filing liabilities and tax reserves. We use the taxpayer's initial Federal filing liability rate as our primary variable to test whether audit certainty has a deterrent effect on tax avoidance behavior. The advantage of the taxpayer's initial Federal liability rate is that it captures initial tax payments to the tax authority. We use the taxpayer's cash effective tax rate (ETR) as an alternative, publicly available proxy for tax payments to tax authorities. Reserves for uncertain tax positions reported in financial statements proxy for managers' expectations of future tax payments associated with current tax return positions.

We test our prediction regarding the effect of certain audit on taxpayer behavior using both a levels approach and a changes approach. We implement our levels analysis using a pooled sample from 2000 to 2011 of firms assigned to the CIC program and firms not assigned to the CIC program. We find that firms that are assigned to the CIC program do not report higher Federal filing liability rates or cash effective tax rates than firms who are not assigned to the program.

To implement our changes analysis, we first identify 405 corporate taxpayers that are assigned to the CIC program for the first time between 2000 and 2011 ("newly assigned firms").³ We then construct two samples of propensity-matched control firms—(i) firms not assigned to the program ("nonassigned firms"), and (ii) firms assigned to the program for at least the prior four years that remain assigned to the program ("long-assigned firms"). The matched sample design allows us to not only compare the tax behavior of the firm to itself before and after the change in its CIC program status, but to also compare its tax behavior with the tax behavior of a firm that does not experience a change in CIC status. We find that, post-assignment, neither the Federal filing liability rates nor the cash effective tax rates of newly assigned firms are statistically different than those of the matched sample of nonassigned firms. Further, post-assignment, neither of the tax payment rates of newly assigned firms is statistically different than the tax payment rates of the matched sample of long-assigned firms. Thus, our results suggest audit certainty does not result in firms decreasing tax avoidance upon program assignment.

However, we estimate that newly assigned firms report higher reserves for current-year tax positions relative to both nonassigned and long-assigned firms, suggesting that audit certainty does impact financial reporting for income taxes. Our result that the initial tax liability does not change for newly assigned firms suggests that the increased reserves do not represent an increase in aggressive tax avoidance. More plausible explanations include: (i) firms systematically underestimated their likelihood of sustaining a position prior to CIC assignment and subsequently update their expectations based on "learning" in the audit process, and/or (ii) firms incorporated audit likelihood in their determination of reserves prior to CIC assignment (contrary to the U.S. GAAP requirement that firms assume audit certainty with respect to each uncertain position).

³ While the probability of firm audit is 100 percent in the CIC program, the probability of audit for any particular transaction remains less than 100 percent. Thus, taxpayer behavior may continue to affect the audit risk of any particular transaction. Even so, assignment to the CIC program represents a significant positive shock to the audit probability of the firm and thus the audit probability of any particular item.

Our study expands the academic literature in two important ways. First, our model of CIC determinants provides researchers with a better proxy for the audit risk of large, publicly traded companies. Prior studies measure CIC participation as firms with at least \$250 million in assets (e.g., El Ghouli, Guedhami, and Pittman (2011); Hoopes, *et al.* (2012)). We report that only 19.5 percent of firms with assets greater than \$250M are assigned to the CIC program, suggesting that this commonly used proxy is quite weak. Second, to our knowledge, our study is the first to analyze corporate taxpayer behavior under audit certainty. In doing so, we further our understanding of the strategic game between the taxpayer and the tax authority. Though the strategic tax model does not postulate a corner solution, our results suggest that audit certainty affects taxpayer behavior in ways inconsistent with the strategic tax model and thus suggests the need for a more complete model.

Our study also informs tax authorities. Understanding how audit risk affects taxpayer behavior is important to the IRS as they design and implement new audit approaches. Per a discussion between one of the authors and the IRS, CIC audits consume a substantial portion of IRS's Large Business and International (LB&I) audit resources. Whether and how firms alter behavior within the CIC program informs the cost-benefit assessment of the program. We do not find a decrease in tax avoidance within the CIC program. However, we do find an increase in unrecognized tax benefits, which suggests that audit certainty increases managers' expectations of future tax payments but that the IRS must exert audit effort to generate significant benefits from the CIC program (i.e., via disallowing tax positions). Consistent with this interpretation, we document that IRS settlements are larger for firms in the CIC program, suggesting that the CIC program generates Treasury revenue primarily via an enforcement effect.

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