

Tax Evasion and Avoidance by Nonprofit Organizations

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Abstract:

Using actual nonprofit income tax return data we find that 19 percent of our sample evaded income taxes by overstating their taxable expenses by an average of 30 percent. Using this measure of tax evasion as well as various measures of tax avoidance we find that nonprofit tax evasion and avoidance are increasing in tax rates, tax return complexity, and accounting system flexibility, and decreasing in detection risk. The economic magnitudes of our results suggest that relatively modest changes in these variables can result in large changes in nonprofit tax avoidance behavior.

INTRODUCTION

One primary area of interest in tax research is documenting the occurrence and magnitude of tax evasion and tax avoidance via income shifting. Tax evasion is reducing one's taxes in ways inconsistent with existing tax laws whereas tax avoidance is a legal activity. Income shifting is generally defined as the intentional movement of revenues and/or expenses across various entities and locations to produce lower overall tax liabilities (Harris, Morck, Slemrod, and Yeung 1993; Scholes, Wolfson, Erickson, Maydew, and Shevlin 2004; Klassen, Lang, and Wolfson 1993; Jacob 1996; Maydew 1997; Klassen and Shackelford 1998, among others). Complementing this line of research is the examination of firm-specific characteristics that are associated with particular types of tax noncompliance and/or avoidance. These studies are valuable to policymakers interested in decreasing tax noncompliance and/or avoidance as well as to others interested in how and why specific taxpayer types do or do not respond to intended or unintended incentives created by the tax law (Clotfelter 1983; Slemrod and Sorum 1984; Scholes, Wolfson, Erickson, Maydew, and Shevlin 2004).

Most prior income shifting studies examined international settings where a company shifted income across geographic divisions. Gramlich, Limpaphayom, and Rhee (2005) was the first study to examine income shifting between differentially taxed entities wholly within the same jurisdiction. Our paper pushes this line of literature further by examining the taxable activities of nonprofit organizations. In this setting activities wholly within the same entity are differentially taxed. In exchange for providing outputs that are of a public goods nature (i.e., possess some degree of nonexcludability and nonrivalry) nonprofits generally operate free of income taxes, although the net profits of any activity unrelated to an organization's primary exempt purpose is subject to an income tax. This tax, known as the Unrelated Business Income

Tax (UBIT), closely mirrors the corporate income tax. Prior studies provide suggestive evidence that nonprofits can and do avoid the UBIT by allocating expenses from their tax-exempt to their taxable activities (Sansing 1998, Cordes and Weisbrod 1998, Yetman 2001, Sinitsyn and Weisbrod 2004, and Hoffman 2004). Because the tax laws covering expense allocation methodologies by nonprofits are rather liberal (the only requirement is that the allocations be “reasonable” and consistently applied) these studies were not able to conclude that they documented tax evasion, and were limited to documenting tax avoidance.

Two important questions remain unanswered by prior nonprofit tax research. First, do nonprofits evade the UBIT, or do they only avoid the UBIT by ostensibly legal expense allocations? Second, what are the organization level characteristics associated with prior documented UBIT avoidance (and UBIT evasion if any can be found)? Our paper addresses both of these questions.

To examine evasion, we exploit some unique mechanical properties of the nonprofit income tax return (the 990-T). For some taxable activities reported on the 990-T compliance rules mechanically limit the amount of expenses that can be reported. Because we have access to a confidential set of actual 990-Ts we are able to precisely identify any expense overstatement, given the reported numbers, for a small sub-sample of our data. To determine which characteristics are associated with evasions and avoidance we use the amounts of evasion from our evasion analysis as well as various estimates of avoidance (i.e., expense allocations derived by prior research).

The UBIT is one of the four income tax systems in the United States, yet it has received comparatively very little attention from researchers. Although the UBIT is the smallest income tax system in the United States (in terms of tax receipts), it is the most quickly growing

(Meckstroth and Arnsberger 1998). The proportion of nonprofits reporting taxable activities increased from less than 5 percent in 1975 to over 14 percent in 1999 (U.S. Department of the Treasury 2000). Nonprofit taxable revenues are growing at almost 30 percent per year (Asinoff 2001). Over the past several years, Congress has reiterated its belief that the UBIT is an important policy tool and that the benefits of the UBIT outweigh the substantial costs of implementing, maintaining, and enforcing it (U.S. House 1950; U.S. Small Business Administration Office of Advocacy 1984; and Manzullo 2001).

We find that 19 percent of the observations reported more expenses on their IRS 990-T than is allowable under existing tax law. The average amount of overstated expenses is 30 percent of reported expenses. This compares to corporations and individuals that on average understate their taxable income by 17 percent (General Accounting Office 1997). These results provide the first evidence that nonprofits evade the UBIT. Results from the second part of our analysis show that nonprofit tax evasion and avoidance are increasing in tax rates and accounting system flexibility and decreasing in the risk of detection. We find weaker evidence that the use of a paid preparer and the complexity of the tax return increases tax evasion and avoidance. Overall, our results suggest that income taxation has a relatively strong economic effect on nonprofit organizational behavior, even in the case where taxable revenues are a small proportion of the organization's total revenues and the organization's overall objective function is not profit maximization.¹

In the following section, we provide an overview of related research. In section 3, we describe our methodology and data followed by our empirical analysis in section 4. In section 5, we discuss the implications of our results and the final section concludes.

¹ The primary objective of nonprofits is to increase social welfare by providing goods and services that are of a collective (or public goods) nature (Hansmann 1980).

RELATED RESEARCH

Tax Evasion Research in the For-Profit Setting

We briefly discuss prior research in the for-profit setting to provide a basis for our analysis. There are several theoretical and empirical studies that examine tax evasion for individuals (see Andreoni et al. 1998 for a review of this literature). The seminal theoretical models, which form the basis of most modern tax avoidance models, were derived by Allingham and Sandmo (1972) and Srinivasan (1973). These models measure the effects of tax rates, detection probabilities, and penalty level on the utility gained by under-reporting taxable income. In general, these models predict that tax avoidance is decreasing in detection risk and penalty levels and increasing in tax rates. Subsequent analytical models introduced the interaction between the taxpayer and tax return preparer and generally find that individual taxpayers seek out tax preparers to resolve complex tax issues and that using paid tax preparers decreases avoidance (Klepper, Mazur, and Nagin 1991). In contrast, empirical evidence finds that paid CPA tax return preparers are associated with more tax avoidance (Erard 1993).

By comparison, few studies have examined the factors associated with corporate income tax reporting behavior. Rice (1992) constructs and empirically tests the first model of corporate tax behavior and finds no relation between using a paid preparer and corporate tax avoidance, although many of the other factors that affect individual tax avoidance similarly affect corporate tax avoidance including detection risk and tax rates.

Tax Avoidance Research in the Nonprofit Setting

Although nonprofit tax evasion has not been examined, several paper have addressed nonprofit tax avoidance. Sansing (1998) was the first to analytically examine nonprofit tax avoidance via cost allocations and demonstrates that nonprofits have a greater ability to shift

expenses from their tax-exempt to their taxable activities when these activities are linked via common expenses (i.e., when taxable and tax-exempt products are produced using common facilities, personnel, and/or materials). Using otherwise confidential IRS nonprofit taxable activity data, Cordes and Weisbrod (1998) estimate separate regression models for samples of 24 hospitals, 12 universities, and 7 museums and demonstrate that the marginal labor expenses incurred to produce an additional unit of taxable output were close to zero, yet the amount of labor expenses reported on the nonprofits' tax returns were statistically greater than zero. Yetman (2001) uses a sample of approximately 1,600 observations and estimates that more than 30 percent of the reported amounts of taxable expenses are shifted from tax-exempt activities. Hoffman (2004) examines the taxable activities of trade associations (which are non-charitable tax-exempt organizations) and finds that they shift more than 15 percent of their total expenses to their taxable activities.

DATA

The database is a pooled, cross-sectional hand collected sample of 1,667 matched sets of forms 990 (publicly available information return) and 990-T (not publicly available income tax return) from 689 nonprofits. The database is a sub-sample of the 2,316 nonprofits that reported taxable income in 1995 and that are included in the National Center for Charitable Statistics 1995 database (National Center for Charitable Statistics, 1999). The National Center database includes all nonprofits with total assets of \$10 million or more, plus a stratified random sample of smaller organizations, for a total sample of approximately 12,000 nonprofits. The 2,316 nonprofits in the sample frame account for only 25 percent of the total number of nonprofits that filed a form 990-T in 1995, but more than 85 percent of the total assets and revenues of all nonprofits with taxable income. In the fall of 1998, we sent a letter to each of these 2,316

nonprofits asking for copies of their three most recent years of IRS form 990s and 990-Ts. Of those contacted, 689 organizations (30 percent) voluntarily supplied us with matched sets of 990s and 990-Ts from the years 1994 through 1998. Unfortunately, not all of the nonprofits that sent copies of their 990s and 990-Ts provided us with three continuous years of data. On average, we received 2.4 years of data from each of the 689 nonprofits yielding a sample of 1,667 organization-year observations.

To calibrate the representativeness of our sample we conducted a logit analysis where the dependent variable was equal to 1 if the observation was one of the 689 observations in our sample and zero otherwise. Our sample of 689 unique respondents is not different from the 2,316 organizations in the sample frame on total assets, total donations, total revenues, and total expenses. Unfortunately, we could not include taxable activity measures in our logit analysis because that data is not available for the nonprofits that did not send us their 990-Ts.

NONPROFIT TAX EVASION

To document evasion we exploit some specific mechanics of the IRS 990-T. This type of analysis has two specific requirements. First, actual tax return data, along with all detail schedules, must be available. To our knowledge, we are the only researchers outside of the IRS with access to nonprofit tax return data of this detail. Second, the mechanics of the tax form must limit expenses in precise ways such that evasion can be clearly determined using reported tax return numbers. Unfortunately, this latter requirement is met for only three types of unrelated taxable activities. Therefore, the primary disadvantage of this part of our analysis is that it can only be conducted on a small sub-sample of our observations. Another disadvantage is that this analysis relies on reported numbers, rather than those that result from an IRS audit. Because of this it is possible that any tax evasion documented in these tests represents random error rather

than intentional choices.² As detailed below, we are able to perform this detailed analysis on 211 (13%) of our total sample of 1,667 observations.

The first two types of nonprofit taxable activities subject to expense limitations are net profits from advertising and exploited activities. We discuss these two activities jointly because the mechanical limitations on expenses are similar. Exploited activities are those that use the name or image of the nonprofit in order to sell a product. An example of an exploited activity is a university that sells sets of dishes emblazoned with the university logo. Advertising activities include revenues from print, radio, or television advertisements contained in exempt organization periodicals, radio, and television broadcasts.

The IRS 990-T limits the amount of expenses allocated to these two activities by making the nonprofit first aggregate all related revenues and expenses on a separate schedule (Schedule J for advertising and Schedule I for exploited activities) prior to placing those revenues and expenses on page one of the 990-T. Advertising and exploited activities each have taxable and nontaxable components. For example, The National Geographic Association is a nonprofit organization that publishes a popular magazine. From the IRS's perspective, the magazine generates two types of revenues (tax-exempt and taxable) and incurs two types of expenses (tax-exempt and taxable). Tax-exempt revenues are from subscription and newsstand sales and tax-exempt expenses are general printing, production, and circulation costs (frequently referred to as "readership" costs). Taxable revenues are payments from advertisers who advertise in the magazine and taxable expenses are the direct expenses related only to the advertisements in the magazine. Thus, two net income figures are calculated, one for the taxable portion and one for the non-taxable portion. If the taxable portion is a loss, that net loss can be reported on the 990-

² We examined all returns to determine if an organization reported fewer expenses than it could have, and found no instances of this behavior. In all cases where there was an error in reporting, it favored the taxpayer.

T. If the taxable portion is a profit, that profit can be reduced by losses on the tax-exempt portion (if the tax-exempt portion shows a loss), but not below zero taxable income.

Given this way of reporting advertising and exploited taxable activities, there are two ways in which a nonprofit could report excess expenses on their advertising and exploited activities. First, they could report too much tax-exempt expenses driving taxable income below zero. For example, one observation in our sample reported advertising revenues of \$ 95,750 and direct taxable expenses of \$80,751 thus earning a taxable profit of \$14,999. Because the tax-exempt portion was a large loss, the nonprofit is legally permitted to use those tax-exempt losses to offset the taxable profits down to zero taxable income (but not below zero). On the 990-T the taxpayer used tax-exempt expenses of \$53,481 driving taxable income down to a \$38,482 loss. This loss is valuable because it can offset other taxable activity profits across time (as a Net Operating Loss carryforward).

The second way that nonprofit can report excess taxable expenses is by reporting expenses on page one of the 990-T completely bypassing the expense limitations imposed by the detailed schedules. For example, one observation in our sample reported advertising revenues of \$130,531 and \$39,830 of direct advertising expenses thus showing a taxable profit of \$91,001. The taxpayer then correctly limited its tax-exempt expenses on Schedule J to \$90,701 and carried these figures forward to the front page of the IRS 990-T which showed zero net profits on its taxable activity. However, the taxpayer also reported additional wages expense of \$32,162 on the front page of the IRS 990-T. Because the taxpayer incorrectly reported these wages directly on the front page of the 990-T rather than on Schedule J (where they would have not reduced taxable income due to the limitation on the schedule) the organization reported excess expenses (and a reported loss) of \$32,162.

The third type of nonprofit taxable activity subject to mechanical expense limitations on the 990-T is net profits from unrelated debt financed activities. All income (rents, royalties, gains on asset sales, etc.) generated by assets that are at least partially encumbered by debt are at least partially subject to tax. The provision is intended to defeat “charitable bootstraps” wherein a corporation would convert ordinary income on its own stock to capital gains by transferring its stock to the nonprofit in exchange for an interest free note. The nonprofit would then liquidate the corporation and lease the assets back to the original shareholders. The lease payments were deductible to the ex-shareholders (receipts were not taxable to the nonprofit) and interest payments on the interest free note were long term capital gain to the ex-shareholders. Although the tax on debt financed income effectively stopped charitable bootstraps, its provisions are so general that many other types of nonprofit’s activities are subject to its rules.³

Schedule E of the 990-T limits the amount of expenses deductible against debt financed revenues to the amount of total expenses multiplied by the average ratio of debt to property basis. In our sample this ratio averages 63 percent indicating that on average only 63 percent of the total expenses related to debt financed income are deductible.

Table 1 reports our evasion results. For advertising there are 131 observations in our sample of 1,667 that reported earning all of their taxable revenues from advertising.⁴ Of these 131 observations, 22 (17%) reported excess tax deductible expenses of \$668 thousand in total. Out of the 20 nonprofits that earn all of taxable revenues from exploited activities, 4 (20%) reported excess tax deductible expenses of \$789 thousand in total. Of the 63 observations that received all of their taxable revenues from unrelated debt financed sources, three did not

³ A example is when a donor gives encumbered property to a charity. Since the asset is encumbered, any income produced by the asset (interest, dividends, or gains on sale) is partially taxable.

⁴ We restrict our analysis to observations that earn all of their taxable revenues from a single source to isolate the effects of expense understatement. Without this screen, it would not be possible to assign all reported expenses to a single specific taxable revenue source.

complete Schedule E on the 990-T leaving us with 60 analysis observations. Of the remaining 60 observations, 15 (25 percent) incorrectly reported \$47 thousand of excess tax deductible expenses. In summary, of the 211 organizations that earned all of their taxable revenues from one of the three categories with expense limitation provisions, 41 (19 percent) incorrectly reported some excess expenses on their IRS 990-T. In total, \$1,504 thousand in excess taxable expenses were reported, or an average of \$37 thousand per observation. The average nonprofit in this sample reported \$161 thousand of total taxable expenses, thus over reporting their taxable expenses by an average of 30 percent ($\$37/\$161 - \$37$).

Our average avoidance rate of 30 percent is substantially higher than comparable figures for either corporations or individuals who on average misreport 17 percent of their taxable income (although the exact percentage varies by type of income) (General Accounting Office 1997). The magnitude of our findings is somewhat surprising given that the IRS avoidance information is based on a set of individuals and corporations that were audited presumably based on expected tax liabilities, while we examined 100 percent of our returns. In addition, because our returns were voluntarily supplied to us by the organizations, it is possible that less compliant organizations were less willing to send us their otherwise confidential 990-Ts. Finally, our documented avoidance evidence derives from a simple mechanical relationship inherent on the tax form rather than a detailed examination of books and records that commonly occurs in an IRS audit. It is possible that a detailed audit of our sample of 990-Ts would find further instances of tax avoidance beyond those observed.

One obvious question that our results provoke is if we can estimate this avoidance using only tax return information; is the IRS failing to catch what appears to be obvious tax evasion by Nonprofits? There are two plausible explanations. First, it is quite possible that the IRS did catch

these items and required amended returns. Second, nonprofit organizations could be acutely aware of the underfunding of the Exempt Organizations Division of the IRS (Orban 1999) and exploit this potential weakness by taking aggressive tax positions that in light of the underfunding are unlikely to be detected. Our estimates of evasion cannot be simply taken from the front page of the IRS 990-T, but require a detailed analysis of supporting schedules.

CHARACTERISTICS ASSOCIATED WITH NONPROFIT TAX EVASION AND AVOIDANCE

Empirical Model

The second contribution of our paper is to examine the organization specific characteristics associated with nonprofit tax evasion avoidance. Although tax evasion and tax avoidance differ in their legality, it is not unreasonable to presume that they would share some common socio-economic roots and that the characteristics of a taxpayer that make them more likely to evade a tax are very likely to be the same characteristics that make them aggressive tax avoiders.

Our empirical methodology is grounded in prior analytical models in the individual and corporate income tax setting which show that tax evasion is a function of preparer type, tax rates, detection risk, and tax return complexity (Allingham and Sandmo 1972; Srinivasan 1973; Beck and Jung 1989; Klepper, Mazur, and Nagin 1991). In addition to these four variables, we include a measure of accounting system flexibility to test Sansing (1998)'s propositions on expense shifting. To operationalize these analytical results in our empirical setting we consider a nonprofit that makes its tax evasion or avoidance decision and propose that the level of evasion or avoidance is a linear function of various organization specific incentives and frictions (Scholes, Wolfson, Erickson, Maydew, and Shevlin 2004). We empirically estimate the effects of those characteristics on avoided taxable income using the following model:

$$\begin{aligned}
\text{Evade/Avoid}_{it} = & \alpha + \beta_1 \text{BIGCPA}_{it} + \beta_2 \text{SMALLCPA}_{it} + \beta_3 \text{FLEX}_{it} + \beta_4 \text{MTR}_{it} \\
& + \beta_5 \text{COMPLEX}_{it} + \beta_6 \text{DETECT}_{it} + \beta_7 \text{ASSETS}_{it} + \beta_8 \text{ASSETS}_{it}^2 \\
& + \text{TYPE}_i \times \Phi + \text{YEAR}_i \times \Psi + \mu_{it}.
\end{aligned} \tag{1}$$

In addition to our covariates of interest, we also include total assets (to control for firm size) and its square (to capture potential non-linearities) as well as vectors of indicator variables for industry (TYPE) and year (YEAR). We winsorize the data at the 1st and 99th percentiles and conduct several tests to identify and remove influential outliers including studentized residuals, leverage statistics and Cook's D statistics (Belsley, Kuh, and Welsch 1980).

Dependent Variables

Tax Evasion Measure

Our first dependent variable is the amount of over reported taxable expenses documented in the previous section. This model therefore examines the characteristics associated with nonprofit tax evasion. Because this measure is naturally truncated (i.e., we found tax evasion amounts for 41 of the 211 observations while for the other 170 observations we found zero evasion) we use a Tobit model to estimate equation (1). Prior empirical tax avoidance research used a Tobit model when the data (based on IRS audits) was similarly truncated (See Andreoni, Erard, and Feinsetin [1998] for a review of the income tax avoidance literature and the various econometric specifications used). We also include three separate measures of tax avoidance as dependent variables. We discuss the construction of these three measures of nonprofit tax avoidance in the following sections.

Tax Avoidance Measures

Prior measures of tax avoidance in the nonprofit setting derived estimates of the amounts of economic expenses that were allocated from tax-exempt to taxable activities. These prior

studies were not able to state that their documented expense shifting represented evasion because the expense allocation rules are generous. The IRS requires that the expense allocations across taxable and tax-exempt activities be “consistent and reasonable” leaving leeway for an organization to exploit the inherent flexibility of its internal cost accounting system (Treasury Reg. 1.512[a]-1[c]). Typically, nonprofits generate their taxable revenues using common facilities and/or labor that are used to generate their tax-exempt income. Frequently a single product can produce tax-exempt income if sold to one party (i.e., hospital laundry cleans bed sheets for hospital in-patients) and taxable income if sold to a different party (i.e., hospital laundry cleans bed sheets for unrelated nursing home on contract). Therefore, nonprofit taxable and tax-exempt activities involve joint costs and therefore have non-separable cost functions (Demski 1997).

Because the cost functions of taxable and non-taxable outputs are nonseparable, average cost functions are not defined and therefore existing methods of measuring income shifting in the transfer pricing setting (such as comparing the amount of taxes paid as a percentage of sales or assets in various locations as in Harris, Morck, Slemrod, and Yeung 1993) cannot be applied.⁵ As noted by (Demski, 1997, page 171) “The cost function does not separate, average cost is not defined, and any attempt to force an average cost style construction is subject to a claim of arbitrariness. This is why there is no economic notion of average cost in a multiproduct firm whose cost function is not fully separable”. Therefore we are left with identifying alternative

⁵ Transfer pricing and cost allocations are different. In the transfer pricing setting cost functions are typically separable, whereas in the joint cost setting cost functions are not separable (Demski 1997). Transfer pricing is the procedure used to record interdivision trade in a multiproduct firm. Divisions are typically separated by geographic location or sometimes by function. In a transfer pricing scenario, Division A manufactures an intermediate product that is subsequently sold to Division B who transforms the product further. Transfer pricing is the method of assigning the product cost charged by Division A to Division B. The cost functions of Division A and Division B need not be joint and frequently are completely separable (meaning that there are no joint costs). Since the cost functions are typically separable, average cost for Division A and Division B is well defined. In contrast, cost allocation is the method of assigning costs to different products in the face of joint costs.

means of estimating a reasonable partition of joint costs between taxable and tax-exempt activities in a setting where average cost is not clearly defined. Fortunately, several not unreasonable methods exist, and we employ three of them in our analysis.

avoidance as measured by Yetman (2001)

Our first measure of nonprofit tax avoidance from Yetman (2001) who estimated the amount of expenses shifted from an organization's tax-exempt to its taxable activities. Lacking any presumptions as to the behavior of average costs for jointly produced taxable and tax-exempt products, Yetman (2001) attempted to capture the underlying economic relationship between costs and revenues using regression analysis. The process regressed total expenses on taxable and tax-exempt revenues arriving at a marginal cost estimate for both taxable and tax-exempt activities. For reasons discussed above, this marginal cost estimate cannot be calibrated relative to average costs as average cost is not defined in this setting. Nonetheless, marginal cost not an unreasonable (and is perhaps the best available) first-approximation of how relatively costly it is to produce taxable vs. non-taxable outputs under conditions of joint costs. Because the sum of the estimates of marginal costs times total revenues for both taxable and tax-exempt activities were below total costs, much of the total costs were left unallocated to either taxable or non-taxable activity after the regression approach. Rather than allocate those remaining expenses on the basis of marginal costs (which would have had the effect of producing higher shifting estimates), Yetman (2001) conservatively allocated the remaining total costs proportionate to total revenues. Because this measure is continuous we scale it by total nonprofit expenses and estimate equation (1) using ordinary least squares.

To be sure this estimate captures true expense allocations with error, although we are not aware of any reason that this error would be plausibly associated with our independent variables

(causing bias). Nonetheless, to calibrate the effects of any potential bias we undertook two additional procedures to derive estimates of nonprofit tax avoidance.

alternative measure of avoidance

To derive an alternative measure of tax avoidance we avoid making any strong assumptions about the relative profitability of taxable and tax-exempt activities and simply presume that taxable and tax-exempt activities are equally profitable (defined as net income scaled by revenues). This measure is very likely to be conservative for three reasons. First, the analysis in Yetman (2001) shows that, at the very least, taxable activities are less costly at the margin relative to tax-exempt activities. Second, the purpose of taxable activities is to generate a profit which would lead to cost minimization whereas the purpose of tax-exempt activities frequently involves some social objective where cost minimization is not a primary strategy. This would cause taxable activities to be relatively less costly to produce. Third, taxable activity can evoke a negative reaction from various stakeholders such as loss of donations (Yetman and Yetman 2002), suggesting that taxable activities would require a higher rate of return relative to tax-exempt activities. These forces would tend to drive down true taxable costs relative to true tax-exempt costs. Although these features will induce a conservative bias into the magnitude of the estimated shifting, we see no reason that this bias would be plausibly related to any of our independent variables.

We derive our alternative nonprofit tax avoidance measure using the following equation:

$$\text{Avoidance} = \text{Reported Tax Expense} - \frac{\text{Taxable Revenues} \times \text{Total Expenses}}{\text{Total Revenues}}. \quad (2)$$

Because this variable is continuous we scale it by total nonprofit revenues and estimate equation (1) using ordinary least squares.

dichotomous alternative measure of avoidance

Our third and final measure of nonprofit tax avoidance is an indicator variable equal to one if the estimate from model (2) is positive, and zero otherwise. We use this variable because, as can be seen in Table 2, the alternative measure discussed above produced positive and negative estimates of shifting. Negative shifting implies that nonprofits could have reduced their tax liabilities further by shifting more expenses, but chose not to. Negative shifting estimates are consistent with the expected conservative bias caused by presuming equal profitability across taxable and tax-exempt activities as discussed above. By dichotomizing the alternative avoidance measure we avoid the effects of magnitude errors caused by equation (2). Because this variable is dichotomous we estimate equation (1) using a Logit analysis.

We recognize that all three of our avoidance measures are subject to some form of error either from measurement or sample selection. The issues of measurement error and sample selection bias in tax avoidance studies is not unique to our analysis as it is well documented that all taxpayer-specific measures of tax avoidance are necessarily estimates subject to several sources of error (Schmidt 1989; Feinstein 1991; Erard 1991; Mackie-Mason 1992; Andreoni, Erard, and Feinstein 1998). We offer our measures of tax avoidance as representing the best available in the nonprofit setting, and encourage readers to bear in mind measurement issues when interpreting our results. To the extent our results are stable across these three measures of tax avoidance, concerns over the effects of any particular form of error on our results is at least partially mitigated.

Independent Variables

We construct our independent variables based on prior analytical and empirical tax avoidance research. Our first variable is an indicator variable denoting whether a Big-4 CPA

firm (BIGCPA) prepared the 990-T or a non Big-4 CPA firm (*SMALLCPA*) prepared the return. This data was taken directly of the IRS 990-T. We do not have a clear prediction whether using a paid CPA preparer is associated with higher or lower expense shifting. Prior research on individual tax returns finds that paid CPA preparers are associated with more aggressive tax returns (Andreoni, Erard, and Feinstein. 1998). Studies of corporate tax returns find no association between using a paid CPA preparer and corporate tax return aggressiveness (Rice 1992). One problem with this metric is that it is possible that nonprofits chose their tax return preparer based on their inherent propensity to evade or avoid taxes (i.e., the relationship is endogenous). One item mitigating this factor is that, in general, nonprofits do not chose whether or not to have their tax returns prepared by a CPA, but rather chose or do not chose to undergo a financial statement audit (as required by certain funding organizations such as the United Way or Governmental granting agencies). Typically tax return preparation is included as part of the audit service package. However, it is still possible that nonprofits chose their auditor based on a more general inherent reporting aggressiveness, and therefore readers should exercise caution in interpreting the results of the CPA variable.

Our measure of accounting system flexibility (*FLEX*) is based on the analytical result in Sansing (1998). Because allocating expenses among joint products is inherently subjective, there is an increased ability on the part of management to find and allocate expenses from the tax-exempt to the taxable activity when the activities are linked via common costs (Demski 1997). Our flexibility measure is an indicator variable equal to one if the nonprofit's taxable and tax-exempt activities would plausibly use a majority of similar production inputs or know-how, and zero otherwise. For example, consider a hospital that earns taxable medical laboratory revenues such as outsourcing laboratory tests for private (non-hospital affiliated) physicians. It is

reasonable to assume that this hospital also uses its laboratory to produce tax-exempt revenues (i.e., lab services for currently admitted patients), and therefore could use its existing facilities and know-how to generate taxable revenues. In this setting most costs are joint costs making it relatively easy for a manager to find and allocate expenses from one activity to another. On the other hand, consider a symphony that sells taxable items during intermission. In that setting some costs would be joint (building) whereas some costs would be taxable only (product costs of items sold and perhaps some labor) making it more difficult for a manager to exploit the flexibility in the accounting system by allocating expenses from symphonic performances to taxable sales activities. We generated this variable based on descriptions from the nonprofit's tax returns (IRS form 990-T, line H) where the nonprofit provides a brief description of its taxable activity.⁶ Because nonprofits often engage in several taxable activities at once, yet only describe their major taxable activity on line H, this variable likely contains measurement error, which will bias the related coefficient estimate towards zero. We hypothesize that increased accounting system flexibility provides additional incentives and ability to shift expenses from tax-exempt to taxable activities to avoid the UBIT.

Our tax rate measure (*TAX*) is equal to the top state corporate income tax rate. As an alternative to this state level metric we also used the nonprofit's federal marginal tax rate on its taxable net income (net of net operating losses) after adding back the joint expense allocations found in Yetman (2001). For example, if a nonprofit reported taxable profits of \$1,000 on its IRS form 990-T and the joint cost allocation estimate from Yetman (2001) was \$500 (suggesting that the nonprofit allocated \$500 of expenses from its tax-exempt to its taxable activity), we add back the \$500 to the \$1,000 to arrive at a "pre-managed" taxable income figure of \$1,500. We then

⁶ Nonprofits also provide a taxable activity code on both the IRS forms 990 and 990-T. These codes are largely not usable for determining the exact nature of a nonprofit's taxable activity because the descriptions are imprecise (i.e., "Rental Activity").

use the marginal tax rate from the IRS form 990-T tax tables on \$1,500 of taxable income (the tax rate structure is the same as for corporations) as our measure of the pre-allocation marginal tax rate. It is important to note that this method will not result in the measure being mechanically related to our estimated avoidance metrics because of variations in reported taxable income in the cross-section (i.e., some nonprofits report large profits while others report losses, providing an independent source of tax rate variation). If a nonprofit has a net operating loss sufficient to offset its taxable income, we set the marginal tax rate equal to zero. Because the marginal tax rate is constrained at the top rate, we also estimate the model excluding nonprofits at the highest marginal rate and also by including an indicator variable equal to one if the observation is at the highest tax rate and zero otherwise. In either of these latter two sensitivity analyses, the general inferences of our results remain unchanged although the magnitude of the coefficient estimates did vary. Results using this marginal rate were consistent with those using the state level metric and we choose to present results using the more parsimonious state level measure of tax rates. Consistent with existing analytical models of tax avoidance (Allingham and Sandmo 1972 and Srinivasan 1973), we hypothesize that higher tax rates provide an increased incentive to avoid income taxes.

Our tax return complexity measure (*COMPLEX*) is the number of revenue and expense items a nonprofit reports on its IRS form 990-T, lines 1 through 29. For example, if a nonprofit earns taxable revenues from two sources (i.e., interest revenue reported on line 8 and taxable advertising revenue reported on line 11), and reported three types of expenses it would receive a complexity rating of 5. This measure undoubtedly mis-measures complexity to some extent (i.e., nonprofits may earn only one type of revenue, but it may come from many sources) but there is no reason to believe that it is systematically related to any measurement error in our dependent

variables. Governmental reports examining tax avoidance suggest that tax return complexity increases tax avoidance (General Accounting Office 1997) in the individual and for-profit corporate setting. However, Beck and Jung (1989) analytically show that the effects of complexity on tax avoidance are ambiguous. Based on this prior research we cannot hypothesize the effect of complexity but suggest that an association exists.

Our final independent variable of interest is a measure of detection risk (*DETECT*). As previously discussed prior analytical research suggests that as detection risk rises tax avoidance falls. Detection risk is one of the primary forces used by governmental authorities to restrict tax avoidance activities. Deriving firm-specific measures of detection risk is difficult because many obvious measures, such as size or total taxable revenues, also undoubtedly capture many other underlying economic traits (and are possibly mechanically correlated with the avoidance estimates themselves) making coefficient interpretation problematic. Finally, such measures would undoubtedly be subject to endogeneity. Rather than using a measure based on nonprofit characteristics, we use a measure based on state-level nonprofit reporting requirements, which, by construction, should be independent of any measurement error issues (including endogeneity) in our dependent variables. A nonprofit meets its federal reporting obligation by filing its 990 and 990-T with the IRS. However, each state has its own unique nonprofit financial reporting requirements for any charitable organization that either solicits or receives donations within its borders.⁷ These state level requirements vary greatly with many States requiring annual registration including financial information that is substantially beyond the IRS 990 and 990-T while other states require nothing at all (not even an IRS 990). We collected our measures of

⁷ Over 92 percent of our sample observations received donations and thus would be subject to the State level reporting requirements. If the remaining eight percent received donations in past years or solicited but did not receive donations they would also have had to comply with the State rules. Our results are robust to removing the eight percent of our observations that received no donations during our sample period.

various state nonprofit reporting requirements from the Charitable Organization Multi-State Filing Project at www.multistatefiling.org. The details of this measure are contained in Appendices A and B. Prior research uses this metric as a measure of nonprofit governance (Desai and Yetman, 2004). It is important to note that not all of these reporting requirements involve tax reporting per se. However, it is not unreasonable to presume that the greater exposure a nonprofit's financial information receives at the regulatory level, the more likely it is that any financial reporting misrepresentation (including tax avoidance) will be detected. At the very least, it is not unreasonable to suggest that a nonprofit manager would believe that the chances of having tax avoidance activities detected is increasing with the extent of state-level financial reporting requirements. We posit that, the higher the frequency and the more extensive the reporting to a particular state, the higher is the risk of UBIT avoidance detection. To the extent that increased reporting to state governing agencies increases the risk of detection, we hypothesize that tax avoidance will be decreasing in *DETECT*.

DISCUSSION OF RESULTS

Descriptive Statistics

Summary statistics for the analysis variables are reported in Table 2. For the sake of expositional convenience, we label our evasion measure as Evasion and our three avoidance measures as Avoidance 1 through Avoidance 3. The mean (median) value of Evasion is 0.001 (0). The mean (median) value for Avoidance 3 is negative (zero), consistent this metric being conservative. The mean value for Avoidance 4 is 54 percent.

With respect to our independent variables, Table 2 indicates that 33 percent of our sample employ a Big-4 CPA firm to complete its IRS 990-T while 32 percent use a non Big-4 CPA firm (the remaining 36 percent prepare the tax returns in-house and do not hire a paid outside

preparer). Almost half of our observations are able to produce taxable and tax-exempt activities jointly (with similar inputs such as employees, materials, or equipment). The average state tax rate is 7.2 percent. On average, a nonprofit has approximately five types of revenues and expenses per tax return and the average number of state specific reporting requirements is five (this value ranges from 0 to 10). Nonprofits in our sample earned an average of \$764 thousand in taxable revenues and reported an average of \$773 thousand in taxable expenses producing an average loss of approximately \$9 thousand. The taxable profitability ratio of our sample is approximately negative one percent. This compares to the population, which reports an average loss of approximately negative 20 percent. This suggests that the magnitude of our results are likely to be biased downwards as it appears that more profitable (or less aggressive tax avoiders) were more willing to share their otherwise confidential tax information with us. Finally, the average revenue from taxable activities for our sample is one percent of total revenues.

The correlation analysis in Table 3 indicates that all four of our tax avoidance metrics are positively correlated. This provides some comfort that all of these variables are capturing, at least to some extent, similar underlying economic characteristics. More importantly is the finding that Avoidance 3 is positively correlated with the other tax avoidance metrics. Recall that the mean value for Avoidance 3 was negative, suggesting that the average nonprofit reported fewer taxable expenses than might otherwise be allowed, although this was an artifact of the assumptions of the model used to generate this metric. It is comforting to know that, despite the fact that the mean value of Avoidance 3 is negative, it is positively correlated with our other measures of avoidance. The correlations between the use of a paid outside CPA and our avoidance metrics provide no clear univariate relationships. The correlations between *FLEX*, *TAX*, and *DETECT* and our avoidance metrics are all in line with our hypotheses.

Regression Results

Table 4 reports our Tobit regression results where our dependent variable is equal to nonprofit tax evasion. We present our results including and excluding the CPA variables because the sample size is smaller when the CPA variable is included (some observations redacted the signature block on the 990-Ts provided to us). This analysis is limited to the 211 observations that we examined in Section 4 above. We find that evasion is increasing in the state tax rate (for the full sample), return complexity, and the use of a small CPA firm (at the seven percent level). Evasion is decreasing in detection risk (at the seven percent level). The positive association between *TAX* and evasion is in line with our hypothesis and is consistent with prior research in the individual and corporate income tax settings. This result suggests that nonprofits evade more taxes in higher tax rate jurisdictions. One policy implication of this result is that changes in tax revenues are not linearly related to changes in the UBIT rate. A positive association between evasion and *COMPLEX* suggests that nonprofits exploit tax return complexity to evade the UBIT (or that more complex tax returns lend themselves to more evasion). The negative association between avoidance and *DETECT* suggests that nonprofits respond to the enhanced state-varying levels of nonprofit financial and tax reporting requirements. This result suggests that state-level reporting requirements play an important role in mitigating UBIT evasion.

We consider the evasion metric used in Table 4 to be particularly useful for this type of analysis because it precisely identifies both the occurrence and the amount of tax evasion (although it could fail to identify all such occurrences). We next seek to determine if these same characteristics are associated with nonprofit tax avoidance.

In the first two columns of Table 5 we present our OLS regression results where our measure of tax avoidance is the expense shifting measure from Yetman (2001). We find that

SMALLCPA is associated with more avoidance using the Yetman (2001) measure. To our knowledge, ours is the first analysis to document an association between using a paid outside CPA tax return preparer and tax avoidance in the non-individual income tax setting. We do not find that using a Big-4 CPA firm is associated with avoidance (F-tests indicated that the coefficients on *SMALLCPA* and *BIGCPA* are different at the five percent level). This finding is consistent with two explanations. First, it could be that small CPA firms assist their nonprofit clients in avoiding the UBIT while large CPA firms do not. Second, clients who wish to avoid the UBIT hire small CPA firms. Although we control for size which is primary factor affecting CPA firm size selection (larger nonprofits tend to use Big-4 CPAs and smaller nonprofits tend to use smaller CPAs), readers should interpret this result with caution.

The result for using a paid preparer using the Yetman (2001) measure is consistent with the result for the Tobit analysis in Table 4. With respect to our other findings, the results are similar with respect to statistical significance to those presented in Table 4 using tax evasion as the dependent variable.

The third and fourth columns of Table 5 report our results using the alternative tax avoidance measure derived using equation (2) which assumes that taxable and tax-exempt activities have the same ratio of expenses to revenues. The fifth and sixth columns are the results of Logit models where we dichotomize the estimate from equation (2) across a value of zero.

Results for the continuous variable indicate that avoidance is increasing in accounting flexibility and tax rates while it is decreasing in detection risk. These results are generally identical (with respect to statistical inferences) to those using our other measure of avoidance except that we do not find that using a paid preparer (either large or small CPA) or tax return complexity is associated with avoidance using this avoidance measure. The statistical inferences

of our logit results are identical to those of the continuous variable except that avoidance is increasing in *COMPLEX* in the logit analysis. This result is consistent with those in Table 4 and those using the Yetman (2001) metric, and suggests that transforming our Avoidance 3 variable into a dichotomous one possibly mitigates some of the inherent measurement error in Avoidance 2.

Economic Significance of Results

It is important to examine the economic significance of a tax avoidance study for two reasons. First, an economic analysis can provide context to the results. Second, we can compare the economic significance to studies in other settings in order to gain an understanding of the differential responses of various types of taxpayers. The point estimate for the tax rate in Table 5 using the avoidance measure from Yetman (2001) is 0.135. This suggests that if tax rates were increased by 13.8 percent (i.e., the rate was increased by 1.0 from the mean value of 7.2 percent to 8.2 percent), the dependent variable would rise by 0.00135. Evaluated at our mean avoidance value of 0.008, this in turn suggests that tax avoidance would rise by 16.8 percent ($0.00135 / 0.008$). This result indicates that the elasticity of the effects of tax rate increases on avoidance is equal to 1.2 ($16.8 / 13.8$). An elasticity greater than 1.0 suggests that UBIT avoidance is very sensitive to tax rate changes. Using the point estimate for *TAX* from Table 5 we find an elasticity of 2.19, suggesting a very high sensitivity to UBIT rates. Studies of individual tax avoidance find that the elasticity between tax rates and avoidance is in the range of 0.5 to 3, so our result is not unlike those found in the individual income tax setting (Clotfelter 1983; Andreoni, Erard, and Feinstein 1998). Nonetheless, our results are interesting given that nonprofits' taxable activities constitute an ancillary activity and not the nonprofit's primary operations. It is reasonable to assume that nonprofits might not pay much attention to their taxable activities as they tend to be

proportionately small and therefore nonprofits might not be as sensitive to tax rates as other taxpayers would be. Our results could partially reflect the relative ease with which a nonprofit can avoid the UBIT via excessive expense allocations.

Our point estimates for *DETECT* suggest that each additional state-level reporting requirement (the variable ranges from 0 to 10 with a mean of 5.6) will reduce avoidance by 24 percent (at the mean). This result is consistent with nonprofits being very sensitive to state level reporting requirements and suggests that relatively small increases in reporting requirements can have large effects on avoidance behavior.

We estimate that when taxable and tax-exempt activities use similar production facilities avoidance increases by 45 percent (at the mean). This finding adds some empirical magnitude to Sansing's (1998) result that it is easier to exploit internal cost accounting systems in these situations. In summary, we find that the economic significance of our findings are large, and suggest that relatively modest changes in the variables (i.e., tax rates, reporting requirements, and accounting flexibility) can have large effects on UBIT avoidance.

CONCLUSIONS

Nonprofits are subject to an unrelated business income tax on net profits from activities not closely related to their tax-exempt purpose. The simultaneous operation of differentially taxed activities provides nonprofits with an incentive and ability to shift joint expenses from taxable to tax-exempt activities to minimize overall tax liabilities. Using actual nonprofit tax return data, we document that 19 percent of our sample report 30 percent on average more taxable expenses than are allowable.

We then conduct several tests to determine the incentives and frictions that are associated with nonprofit tax evasion and avoidance. We find that nonprofit tax evasion and avoidance is

increasing in tax rates, tax return complexity, and accounting flexibility. Nonprofit tax evasion and avoidance is decreasing in detection risk. The response sensitivity of avoidance to our covariates is in line with prior research in other settings (i.e., individual income and corporate income taxes) and suggests that modest changes to tax rates and detection risk can have large effects on nonprofit tax avoidance. Given that nonprofits taxable activities are quickly expanding and the effect of these activities on overall nonprofit behavior is little understood, we hope our study encourages additional analyses.

Future research could produce additional (and potentially superior) nonprofit tax avoidance measures. Many issues remain unexplored, such as what effects management structures and board of director composition have on tax avoidance. Also of interest is how nonprofits use their taxable activity profits. Do nonprofits use these profits to increase their charitable mission, expand their taxable activities, expand their physical facilities, or to provide a source of managerial perquisites? What effects do taxable activities have on other sources of nonprofits' revenues? Answering these and other questions will help us better understand why nonprofits appear eager to engage in taxable activities and what the potential consequences are of increased commercialism by nonprofits.

REFERENCES

- Allingham, Michael G. and Agnar Sandmo. "Income Tax Evasion: A Theoretical Analysis" *Journal of Public Economics* 1 No. 4, November 1972, 323-38.
- Andreoni, James, Brian Erard, and Jonathan Feinstein. "Tax Compliance." *Journal of Economic Literature* 36 (June, 1998): 818–860.
- Asinoff, Lynn. "Tax-Exempt Groups Expand Their Profit-Making Ventures." *The Wall Street Journal* (September 5, 2001): A1.
- Beck, Paul and Woon-Oh Jung. "Taxpayer Compliance Under Uncertainty." *Journal of Accounting and Public Policy* 8 (Spring):1–27.
- Belsley, D., E. Kuh, and R. Welsch. 1980. Regression diagnostics: Identifying influential data and sources of collinearity. Wiley, New York.
- Brady, Diane. "When Nonprofits Go After Profits." *Business Week* (June 26, 2000): 173–178.
- Clotfelter, Charles. 1983. Tax Evasion and Tax Rates: An Analysis of Individual Returns. *Review of Economics and Statistics* 65: 363–373.
- Cordes, Joseph J., and Burton A. Weisbrod. "Differential Taxation of Nonprofits and the Commercialization of Nonprofit Revenues." *Journal of Policy Analysis and Management* v17, n2 (Spring, 1998): 195-214.
- Demski, Joel. *Managerial Uses of Accounting Information*. Norwell: Kluwer Academic Publishers, 1997.
- Desai, Mihir and Robert Yetman. Constraining Managers Without Owners: Governance of the Nonprofit Enterprise. Working paper (2004).
- Feinstein, John. 1991. An Econometric Analysis of Income Tax Evasion and its Detection. *Rand Journal of Economics* 22: 14–35.
- General Accounting Office. 1997. "Analyzing the Nature of the Income Tax Gap." GAO/T-GGD-97-35 (January 1997).
- Gramlich, Jeff., P. Limpaphayom, and S.G. Rhee. 2005) "Taxes, keiretsu affiliation, and income shifting." Forthcoming, *The Journal of Accounting and Economics*.
- Hansmann, Henry B. "The Role of Nonprofit Enterprise." *Yale Law Journal* v 89 n 5 (April 1980): 835-901.

Harris, Davis, Randall Morck, Joel Slemrod, and B. Yeung. 1993. "Income Shifting and U.S. Multinational Corporations" Studies in International Taxation, eds. A. Giovannini, R.G. Hubbard, and J. Slemrod (Chicago: University of Chicago Press).

Hoffman, M.A. "Tax-motivated Earnings Management by Non-charitable Nonprofits". Working paper (2004)

Imhoff, E.A. 2003. Accounting Quality, Auditing, and Corporate Governance. *Accounting Horizons* (Supplement): 117-128.

Jacob, J. "Taxes and Transfer Pricing: Income Shifting and the Volume of Intrafirm Transfers." *Journal of Accounting Research* 34 (1996): 301–13.

Klassen, K.; M. Lang; and M. Wolfson. "Geographic Income Shifting by Multinational Corporations in Response to Tax Rate Changes." *Journal of Accounting Research* (Supplement 1996): 141–73.

Klepper, S., Mazur, M. and D. Nagin. 1991. Expert intermediaries and legal compliance: The case of tax preparers. *Journal of Law and Economics* 34(April): 205–229.

Mackie-Mason, Jefferey. Discussion of "The Corporate Tax Gap: Evidence on Tax Compliance by Small Corporations." by Eric Rice. In *Why People Pay Taxes: Tax Compliance and Enforcement*, edited by J. Slemrod, 128–161. Ann Arbor Michigan: The University of Michigan Press (1992).

Manzullo, Donald. "Manzullo asks Treasury to Report on Unfair Competition Between Exempt Organizations and Small Businesses." *Tax Notes Today* 66 (April 5, 2001):32.

Maydew, E. "Tax-Induced Earnings Management by Firms With Net Operating Losses." *Journal of Accounting Research* 35 (1997): 83–96.

Meckstroth, Alicia and Paul Arnsberger. "A Twenty-Year Review of the Nonprofit Sector, 1975–1995." *Internal Revenue Service, Statistics of Income Bulletin* 18 (1998): 149–169.

National Center for Charitable Statistics. Internal Revenue Service Statistics of Income form 990 sample files. Center on Nonprofits and Philanthropy / Urban Institute online database (1999). Available at: <http://nccs.urban.org>.

Orban, Russell. Testimony before the Internal Revenue Service Panel on Unrelated Business Income Tax, Office of Advocacy, U.S. Small Business Administration (February 10, 1999).

Owens, M. 2000. Speech, 3 February. American Society of Association Executives. Washington, DC.

Rice, Eric. "The Corporate Tax Gap: Evidence on Tax Compliance by Small Corporations." In *Why People Pay Taxes: Tax Compliance and Enforcement*, edited by J. Slemrod, 128–161. Ann Arbor Michigan: The University of Michigan Press (1992).

Sansing, Richard. "The Unrelated Business Income Tax, Cost Allocation, and Productive Efficiency." *National Tax Journal* v51, n2 (June, 1998): 291-302

Schmidt, Peter. "Statistical Issues in Modeling Taxpayer Compliance". In *Taxpayer Compliance*, edited by Jeffrey A. Roth, John T. Scholz, and Ann Dryden Witte, 307 – 338. Philadelphia: The University of Pennsylvania Press (1989).

Scholes, M, M. Wolfson, M. Erickson, E. Maydew, and T. Shevlin. 2004. *Taxes and Business Strategy: A Planning Approach*. 3rd Edition. Prentice Hall, New Jersey.

Slemrod, J. and N. Sorum. 1984. The Compliance Cost of the U.S. Individual Income Tax System. *National Tax Journal* 37 No. 4: 461–455.

Srinivasan, T. N. "Tax Evasion: A Model." *Journal of Public Economics* v2, n4 (November, 1973): 339-46.

U.S. House of Representatives. 1950. Committee on Ways and Means. Revenue Revision of 1950: Hearings Before the House Committee on Ways and Means. 81st Cong., 2d sess: 579–580.

U.S. Small Business Administration, Office of Advocacy. 1984. Unfair competition by nonprofit organizations with small businesses: An issue for the 80's, 3rd ed., Washington, D.C. Office of the Chief Counsel for Advocacy, U.S. Small Business Administration.

Yetman, Robert. "Tax-Motivated Expense Allocations by Nonprofit Organizations." *The Accounting Review* 76 (July, 2001): 297–311.

Appendix A
State Specific Nonprofit Reporting Requirements

- (1) Is registration with the state required?
- (2) If registration is required must it be renewed annually?
- (3) Must the charity have a local registered agent that functions as a local point of contact for state authorities?
- (4) Must the charity disclose the names of any paid professional fundraising organizations used?
- (5) Is an annual financial audit by Certified Public Accountants required?
- (6) Must the results of the financial audit be included in the registration?
- (7) Must the registration include the organization's bylaws?
- (8) Must the registration include the organization's articles of incorporation?
- (9) Must the registration include the organization's tax exempt determination letter (the IRS Form 1023)?
- (10) Must the registration include any state specific forms in addition to the above information?

Measures are based on state-specific filing requirements as reported by the Charitable Organization Multi-State Filing Project at www.multistatefiling.org.

Appendix B
State Reporting Requirements (as defined in Appendix A)

State	Registration	Annually	Agent	Fundraiser	Audit	Financials	bylaws	articles	1023	other	Aggregate is DETECT
Alabama	1	0	0	0	0	1	1	1	1	0	5
Alaska	1	1	0	1	1	1	0	0	0	0	5
Arizona	1	1	0	1	0	0	0	0	0	0	3
Arkansas	1	1	0	1	1	0	0	0	1	1	6
California	1	1	0	0	0	1	1	1	1	0	6
Colorado	1	1	0	1	0	0	0	0	0	0	3
Connecticut	1	0	0	0	1	1	0	0	0	0	3
Delaware	0	0	0	0	0	0	0	0	0	0	0
DC	1	1	1	1	0	1	1	1	1	0	8
Florida	1	1	0	1	0	0	0	0	1	0	4
Georgia	1	1	0	0	1	1	0	0	1	1	6
Hawaii	0	0	0	0	0	0	0	0	0	0	0
Idaho	0	0	0	0	0	0	0	0	0	0	0
Illinois	1	0	1	1	1	1	1	1	1	0	8
Indiana	0	0	0	0	0	0	0	0	0	0	0
Iowa	0	0	0	0	0	0	0	0	0	0	0
Kansas	1	1	0	0	1	1	0	1	1	0	6
Kentucky	1	1	0	0	0	0	0	0	0	0	2
Louisiana	1	0	0	1	0	0	1	1	0	0	4
Maine	1	1	0	0	1	1	0	0	1	0	5
Maryland	1	1	0	1	1	1	1	1	1	0	8
Massachusetts	1	0	0	0	1	1	1	1	1	0	6
Michigan	1	1	1	1	1	1	1	1	1	0	9
Minnesota	1	1	0	1	1	0	0	1	1	0	6
Mississippi	1	1	1	1	1	1	1	1	1	1	10
Missouri	1	1	0	1	0	1	0	0	1	1	6
Montana	0	0	0	0	0	0	0	0	0	0	0
Nebraska	0	0	0	0	0	0	0	0	0	0	0
Nevada	0	0	0	0	0	0	0	0	0	0	0
New Hampshire	1	1	0	0	0	1	1	1	1	1	7
New Jersey	1	1	0	1	1	1	1	1	1	0	8
New Mexico	1	0	1	1	1	1	0	1	1	0	7
New York	1	0	0	0	1	1	1	1	1	0	6
North Carolina	1	1	0	1	0	1	1	1	1	1	8

Appendix B (continued)
State Reporting Requirements (as defined in Appendix A)

State	Registration	Annually	Agent	Fundraiser	Audit	Financials	bylaws	articles	1023	other	Aggregate is DETECT
North Dakota	1	1	1	1	1	1	0	1	0	2	9
Ohio	1	1	0	0	0	1	1	1	1	0	6
Oklahoma	1	1	0	1	0	1	0	0	0	0	4
Oregon	1	0	1	0	0	1	1	1	1	0	6
Pennsylvania	1	1	0	0	1	1	1	1	1	0	7
Rhode Island	1	1	0	1	1	1	0	0	0	1	6
South Carolina	1	1	0	1	0	1	0	0	0	0	4
South Dakota	0	0	0	0	0	0	0	0	0	0	0
Tennessee	1	1	0	1	1	1	1	1	1	2 ¹	10
Texas	0	0	0	0	0	0	0	0	0	0	0
Utah	1	1	1	1	1	0	1	1	1	1	9
Virginia	0	0	0	0	0	0	0	0	0	0	0
Vermont	1	1	0	1	1	1	1	1	1	0	8
Washington	1	1	0	1	0	1	0	0	1	1	6
West Virginia	1	0	0	1	1	0	0	0	1	1	5
Wisconsin	1	1	0	0	1	1	1	1	1	0	7
Wyoming	0	0	0	0	0	0	0	0	0	0	0

1 – Tennessee has a comprehensive set of additional state level forms. Because Tennessee requires more supplementary financial information than do other states (i.e., in addition to the IRS 990 Tennessee requires a “Summary of Financial Activities” and “Supplemental Registration Form”) we code Tennessee as a 2. Results are robust to recording this as a 1.

TABLE 1
EXCESS EXPENSE REPORTING ON THE IRS 990-T (dollar amounts in \$thousands)

Taxable Revenue Source:	Advertising	Exploited Activity	Unrelated Debt Financed Income	Summary
Observations earning all their taxable revenues from a particular source ¹	131	20	63	214
Less observations not completing related expense schedule ²	N/A	N/A	(3)	(3)
Equals observations for analysis	131	20	60	211
Observations reporting excess expenses	22	4	15	41
Percentage of analysis observations that report excess expenses	17%	20%	25%	19%
Excess taxable expenses	668	789	47	1,504

Notes: We examine these four types of taxable activities because the IRS form 990-T mechanically limits the amount of expenses that can be deducted against taxable revenues from these sources, and therefore excessive expense reporting can be clearly identified using only the information provided on the 990-T. Taxable advertising revenues are from the sales of print, radio, and other types of advertising. Taxable exploited activity income is from the use of the nonprofits “good name” such as fees paid for product sponsorships. Taxable unrelated debt financed income is income from leveraged transactions where a tax benefit is transferred to a taxable entity.

1 – We restrict our analysis to those observations that earn all of their taxable revenues from a single source to isolate the effects of expense understatement. Without this screen it would not be possible to assign all reported expenses to a single specific taxable revenue source for debt financed income and product sales.

2 – Expenses are mechanically limited on a set of associated supplementary schedules (i.e., schedule J for advertising, schedule I for exploited activities, and schedule I for debt financed income). If the nonprofit did not complete this schedule we are not able to accurately calculate the amount of expenses that should have been reported for debt financed income and product sales. The detail schedules are not needed to accurately calculate overstated expenses for advertising and exploited activities as the information otherwise provided on the 990-T is sufficient.

TABLE 2
SUMMARY STATISTICS FOR SAMPLE OF 1,667 OBSERVATIONS

Description	Mean	Median	Std. Dev.
<i>Dependent Variables:</i>			
EVADE (211 observations)	0.001	0.000	0.003
AVOID 1	0.008	0.002	0.019
AVOID 2	-0.002	0	0.024
AVOID 3	0.541	1.0	0.498
<i>Independent Variables:</i>			
BIGCPA	0.329	0	0.47
SMALLCPA	0.315	0	0.464
FLEX	0.427	0	0.494
TAX	0.072	0.079	0.027
COMPLEX	5.191	5.0	2.797
DETECT	5.586	6.0	2.613
ASSETS (in millions)	121	59	190
<i>Other Variables:</i>			
Taxable Revenues	764,271	166,291	2,631,859
Taxable Expenses	773,187	184,595	2,527,104
Total Revenues	83,558,177	32,823,741	191,275,613
Total Expenses	70,081,724	28,683,199	142,200,090

Notes: Evade is the amount of excess expenses reported on an organization's IRS 990-T as documented in table 1, scaled by total (taxable and tax-exempt) expenses. Note that there are only 211 observations for this measure. Avoid 1 is the amount of the amount of excess expenses as estimated in Yetman (2001) scaled by total expenses. Avoid 2 is the amount of excess expenses estimated by an alternative model using proportional expenses to revenues ratios across taxable and tax-exempt activities scaled by total expenses. Avoid 3 is the measure Avoid 2 dichotomized across zero. BIGCPA is an indicator variable equal to one if the tax return was prepared by a Big-4 paid outside CPA firm and zero otherwise. SMALLCPA is an indicator variable equal to one if the tax return was prepared by a non Big-4 paid outside CPA firm and zero otherwise. FLEX is an indicator variable equal to one if the taxable activity shares a majority of common inputs with the organization's tax-exempt activities, and zero otherwise. TAX is the top state tax rate. COMPLEX is equal to the number of types of revenues and expenses reported on the IRS 990-T. DETECT is equal to the number of state-level nonprofit reporting requirements. ASSETS is total assets in millions.

TABLE 3
CORRELATION STATISTICS FOR A MATCHED SAMPLE OF 1,667 SETS OF IRS FORMS 990 AND 990-T

	EVADE	AVOID 1	AVOID 2	AVOID 3	BIGCPA	SMALLCPA	FLEX	COMPLEX	TAX	DETECT
AVOID 1	0.129									
AVOID 2	0.019	0.493								
AVOID 3	0.173	0.322	0.420							
BIGCPA	-0.017	-0.014	0.034	0.020						
SMALLCPA	0.098	0.081	-0.018	-0.026	-0.470					
FLEX	0.020	0.084	0.157	0.256	0.028	-0.089				
COMPLEX	-0.003	0.239	0.061	0.213	-0.007	-0.019	0.138			
TAX	0.123	0.140	0.234	0.054	-0.059	-0.037	0.008	0.040		
DETECT	-0.382	-0.231	-0.200	-0.132	-0.064	-0.039	-0.051	0.002	0.163	
ASSETS	1.000	-0.086	0.016	-0.033	0.117	-0.203	0.022	0.092	-0.005	0.021

Notes: EVADE is the amount of excess expenses reported on an organization's IRS 990-T as documented in table 1, scaled by total (taxable and tax-exempt) expenses. AVOID 1 is the amount of the amount of excess expenses as estimated in Yetman (2001) scaled by total expenses. AVOID 2 is the amount of excess expenses estimated by an alternative model using proportional expenses to revenues ratios across taxable and tax-exempt activities scaled by total expenses. AVOID 3 is the measure Avoidance 3 dichotomized across zero. BIGCPA is an indicator variable equal to one if the tax return was prepared by a Big-4 paid outside CPA firm and zero otherwise. SMALLCPA is an indicator variable equal to one if the tax return was prepared by a non Big-4 paid outside CPA firm and zero otherwise. FLEX is an indicator variable equal to one if the taxable activity shares a majority of common inputs with the organization's tax-exempt activities, and zero otherwise. TAX is the top state income tax rate. COMPLEX is equal to the number of types of revenues and expenses reported on the IRS 990-T. DETECT is equal to the number of state-level nonprofit reporting requirements. ASSETS is total assets.

TABLE 4
TOBIT RESULTS FOR TAX EVASION

$$\text{EVADE}_{it} = \alpha + \beta_1 \text{BIGCPA}_{it} + \beta_2 \text{SMALLCPA}_{it} + \beta_3 \text{FLEX}_{it} + \beta_4 \text{MTR}_{it} + \beta_5 \text{COMPLEX}_{it} + \beta_6 \text{DETECT}_{it} + \beta_7 \text{ASSETS}_{it} + \beta_8 \text{ASSETS}_{it}^2 + \text{TYPE}_i \times \Phi + \text{YEAR}_i \times \Psi + \epsilon_{it}$$

Intercept	-0.053*	-0.062*
	(<.0001)	(<.0001)
BIGCPA	0.002	
	(0.30)	
SMALLCPA	0.003***	
	(0.07)	
FLEX	-0.001	-0.001
	(0.76)	(0.821)
TAX	0.041	0.048***
	(0.11)	(0.066)
COMPLEX	0.002*	0.002*
	(<.0001)	(<.0001)
DETECT	-0.001***	-0.001**
	(0.06)	(0.044)
ASSETS	-7.587	-15.215
	(0.52)	(0.210)
ASSETS2	7,671	13,359
	(0.50)	(0.258)
Observations	188	211
Log Likelihood	79	77

Notes: The dependent variable is the amount of excess expenses reported on an organization's IRS 990-T as documented in table 1. BIGCPA is an indicator variable equal to one if the tax return was prepared by a Big-4 paid outside CPA firm and zero otherwise. SMALLCPA is an indicator variable equal to one if the tax return was prepared by a non Big-4 paid outside CPA firm and zero otherwise. FLEX is an indicator variable equal to one if the taxable activity shares a majority of common inputs with the organization's tax-exempt activities, and zero otherwise. TAX is the top state income tax rate. COMPLEX is equal to the number of types of revenues and expenses reported on the IRS 990-T. DETECT is equal to the number of state-level nonprofit reporting requirements. ASSETS is total assets. Yearly fixed effects as well as industry effects are included, but not tabulated. *, **, *** denotes significant at the 0.01, 0.05, and 0.10 level, respectively.

TABLE 5
REGRESSION RESULTS FOR TAX AVOIDANCE

$$\text{AVOID}_{it} = \alpha + \beta_1 \text{BIGCPA}_{it} + \beta_2 \text{SMALLCPA}_{it} + \beta_3 \text{FLEX}_{it} + \beta_4 \text{MTR}_{it} + \beta_5 \text{COMPLEX}_{it} + \beta_6 \text{DETECT}_{it} + \beta_7 \text{ASSETS}_{it} + \beta_8 \text{ASSETS}_{it}^2 + \text{TYPE}_i \times \Phi + \text{YEAR}_i \times \Psi + \epsilon_{it}$$

Avoidance measure:	AVOID 1 Yetman (2001)		AVOID 2 Continuous Alternative Model		AVOID 3 Dichotomous Alternative Model	
Intercept	0.000 (0.953)	0.002 (0.705)	-0.020 (0.001)**	-0.020 (0.001)**	-2.053 (0.001)**	-2.129 (0.001)**
BIGCPA	0.001 (0.286)		0.002 (0.113)		0.066 (0.627)	
SMALLCPA	0.003 (0.011)*		0.001 (0.393)		0.060 (0.672)	
FLEX	0.004 (0.001)**	0.003 (0.001)**	0.006 (0.001)**	0.006 (0.001)**	0.747 (0.001)**	0.777 (0.001)**
TAX	0.135 (<0.001)**	0.133 (<0.001)**	0.242 (0.001)**	0.252 (0.001)**	5.199 (0.018)*	5.353 (0.010)*
COMPLEX	0.002 (<0.001)**	0.002 (<0.001)**	0.000 (-0.184)	0.000 (-0.405)	0.157 (0.001)**	0.152 (0.001)**
DETECT	-0.002 (<0.001)**	-0.002 (<0.001)**	-0.002 (0.001)**	-0.002 (0.001)**	-0.116 (0.001)**	-0.126 (0.001)**
ASSETS	0.000 (0.001)**	0.000 (0.001)**	0.000 (0.489)	0.000 (0.387)	0.001 (0.483)	0.001 (0.344)
ASSETS2	0.000 (0.013)*	0.000 (0.003)**	0.000 (0.504)	0.000 (0.463)	0.000 (0.031)*	0.000 (0.012)*
Observations	1,532	1,650	1,552	1,675	1,552	1,675
Model R ²	0.17	0.18	0.14	0.15	0.12	0.12

Notes: The three avoidance measures used as dependent variables are: the amount of excess expenses as estimated in Yetman (2001); the amount of excess expenses estimated by an alternative model using proportional expenses to revenues ratios across taxable and tax-exempt activities; and dichotomizing the alternative model. BIGCPA is an indicator variable equal to one if the tax return was prepared by a Big-4 paid outside CPA firm and zero otherwise. SMALLCPA is an indicator variable equal to one if the tax return was prepared by a non Big-4 paid outside CPA firm and zero otherwise. FLEX is an indicator variable equal to one if the taxable activity shares a majority of common inputs with the organization's tax-exempt activities, and zero otherwise. TAX is the state top income tax rate. COMPLEX is equal to the number of types of revenues and expenses reported on the IRS 990-T. DETECT is equal to the number of state-level nonprofit reporting requirements. ASSETS is total assets. Yearly fixed effects as well as industry effects are included, but not tabulated. * (**) denotes significant at the 0.01 (0.05) level.