DIVISION OF THE HUMANITIES AND SOCIAL SCIENCES
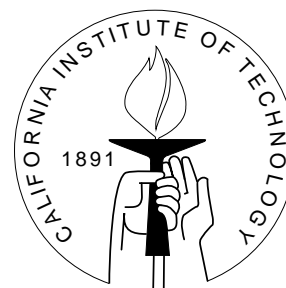
CALIFORNIA INSTITUTE OF TECHNOLOGY

PASADENA, CALIFORNIA 91125

TAX RETURN PREPARERS AND TAX EVASION

Jeffrey A. Dubin
Division of Humanities
and Social Sciences
California Institute of Technology

Gretchen A. Kalsow
Darden Graduate School of Business Administration
University of Virginia

Michael A. Udell
Joint Committee on Taxation

SOCIAL SCIENCE WORKING PAPER 1031

April 1998

Tax Return Preparers and Tax Evasion

Jeffrey A. Dubin   Gretchen A. Kalsow   Michael A. Udell

Abstract

The IRS has determined that the largest amount of tax evasion is associated with a relatively small percentage of returns prepared by tax practitioners. Tax practitioners can generally serve in three roles—to assist aggressive tax planning and evasion, to act as agents for the IRS and enforce the tax code, or simply be expensive outlets for tax return preparation. Do the distributional statistics lead to the conclusion that tax practitioners cause rather than divert additional tax evasion? The purpose of this paper is to address the causal connection between return preparation choice and evasion. We find that the return characteristics for those seeking practitioners are associated with an increased opportunity for tax evasion. But our analysis also shows that tax practitioners actually lower tax evasion beyond what it would be if an individual had sought another means of preparation, such as self preparation.

Tax Return Preparers and Tax Evasion[*]

Jeffrey A. Dubin   Gretchen A. Kalsow   Michael A. Udell

1 Introduction

The IRS estimates that for tax year 1992, as much as 73 billion dollars of tax was not reported on individual income tax returns that were filed [8]. The IRS believes that the largest amount of this tax evasion was associated with a relatively small percentage of all returns that were prepared by CPA's, attorneys, and Public Accountants, many of whom are tax practitioners.[1] Three other types of return preparation account for the remainder of the 73 billion dollars of tax evasion. They are self-prepared returns, non-paid preparers,[2] and paid preparers who are not tax practitioners.[3] Tax practitioners account for almost 43 percent of tax evasion and paid preparers account for almost 31 percent. Those returns prepared by the individual himself account for 22.8 percent

---

[1]Certified Public Accountants (CPA's), attorneys, and Public Accountants who are in good standing within their professional organizations, and who meet certain continuing education requirements established by the IRS's Director of Practice are granted tax practitioner status. Tax practitioners not only prepare tax returns for a fee, they also may represent the taxpayer in matters before the IRS, including an audit, and provide expert opinions on positions maintained on a tax return that effectively shield the taxpayer from large penalties. Public Accountants are licensed at the state level with requirements varying by state. Only four states, North Carolina, Virginia, Kansas, and Wyoming do not regulate Public Accountants. Tax Practitioner behavior is governed by the Treasury Department's Circular No. 230, which describes both grounds for, and penalties applicable for violations of, acceptable conduct by tax practitioners. Table 1 shows that almost 17 percent of the returns filed in 1979 used a tax practitioner.

[2]Non-paid assistance includes returns that were prepared, advised, or reviewed by the IRS; returns prepared by unpaid volunteers under the VITA (Volunteer Income Tax Assistance) program sponsored by the IRS; or more generally by a family member. Preparers in this category face no legal burdens associated with providing tax return preparation assistance. Table 2 show that nearly 11 percent of the returns filed in 1979 used a non-paid preparer.

[3]Paid preparers include national tax services such as H & R Block, and local tax services that are not tax practitioners. These firms set their own standards of conduct, unlike CPA's, attorneys, and Public Accountants, and provide their own training. Moreover, paid preparers are not empowered to represent the taxpayer before the IRS in the case of an audit, and have no authority to provide an expert opinion to justify a position maintained by the taxpayer. Table 1 shows that nearly 29 percent of the returns filed in 1979 used a paid preparer.

of the total evasion. The remaining tax evasion, less than 4 percent, is attributed to non-paid preparers.

In this paper we analyze the role that third party preparers of individual tax returns have on tax evasion. In particular, our research analyzes the amount of tax evasion on returns attributable to the type of return preparation used. We estimate a four alternative switching regression model and treat the amount of tax evasion found in each alternative as endogenous and dependent on the choice of return preparation mode. The four return preparation modes are non-paid assistance, paid assistance who are not tax practitioners, tax practitioners, and self-prepared returns. The relative frequency and proportion of tax evasion attributable to these modes for tax year 1979 is summarized in Table 1. We show that after controlling for taxpayer characteristics, the mode of return preparation used affects tax compliance. An important finding is that the use of a tax practitioner *lowers* the amount of tax evasion while the use of Non-Paid assistance or Paid assistance has no effect on tax evasion. We also find that complexity of the tax return *per se* does not increase the amount of non-compliance if Practitioners prepare the return. In fact, we find that increased complexity may increase compliance with the tax code if it results in an increase in the use of Practitioners. Thus, for example, while a doubling of non-wage income and the addition of another form form leads to a 9 percent increase in evasion in the short run, the additional complexity in the return and larger income amounts will cause taxpayers to switch return preparation mode, resulting in less than a 2 percent increase in evasion in the long run.

The data we use is based on a sample of tax returns audited in the Taxpayer Compliance Measurement Program (TCMP) for 1979.[4] The data was subsequently released by the IRS and is the most recent dataset available for public research. As the data was aggregated by the IRS for sub-populations (i.e., districts and return types) before release, we develop new estimators for use in discrete/continuous models in the presence of aggregate data.

2 Previous Empirical Findings

The diversity of services provided, skill levels, and business intentions of third party tax return preparers has made it difficult for economists to develop a unified theory of tax return preparer behavior.[5] While few empirical studies of taxpayer compliance and

---

[4]This dataset is the result of efforts by the Internal Revenue Service (IRS) to assess the size and extent of non-compliance with the filing of individual Federal income tax returns. For public use, the IRS prepared aggregate data extracts of the 1979 individual tax return micro-data set. For the extracts used in this research, the aggregation takes place over all taxpayers in the 58 IRS districts, which are geographically exclusive and exhaustive of the United States. Forty-four of the districts are states. Of the remaining 14 districts, four are in New York and there are two each in California, Texas, Pennsylvania, Illinois, and Ohio.

[5]Refer to Scotchmer [15], Scotchmer [14], Reinganum and Wilde [13], Graetz, Reinganum and Wilde [6], and Klepper, Mazur and Nagin [9] for theoretical models of tax return preparation choice and tax compliance.

Table 1: Returns and Non-Compliance by Mode of Preparation, 1979

Mode of Preparation	Proportion of Returns	Proportion of Noncompliance
SELF	.442	.228
NON-PAID	.106	.037
PAID PREPARERS	.285	.308
PRACTITIONERS	.167	.427
TOTAL	1.000	1.000

SOURCE: Special Research File of the 1979 TCMP, IRS

tax return preparation mode exist, some consistent results have emerged. In a series of papers, Slemrod and Sorum [17], Slemrod [16], Collins, Milliron and Toy [1], Hite [7], and Dubin, Graetz, Udell and Wilde [3] found that greater amounts of income, capital gains, self-employment activity, sole-proprietor income, itemized deductions, return complexity, age of taxpayer, and marginal tax, penalty, and audit rates all increase the use of paid third party preparers, while greater educational levels attained or greater knowledge of the tax code reduced the use of paid third party preparers. With the exception of Dubin, Graetz, Udell and Wilde [3] these researchers combined (or could not separate) Practitioners and Paid preparers in their analyses. Dubin, Graetz, Udell and Wilde [3] additionally determined that greater amounts of wage, interest, and dividend income reduce the demand for Practitioners relative to Paid preparers.

Long and Caudill [10] modeled both the demand for tax return assistance and reported tax liability. They found that the reported tax liability from returns prepared by paid preparers is less than for unassisted modes of return preparation. Erard [5] analyzed the demand for tax return preparation and for tax evasion among self prepared, paid preparers, and practitioners. He found that the demand for tax practitioners and paid preparers increases with capital gains, small business or farm activity, rents and royalties, the number of tax forms attendant on the return, being over 65 years of age, previous audit history, the marginal tax rate, and the IRS audit rate. Erard found that the use of tax practitioners *lowers* tax compliance.

In general, the empirical literature shows that greater amounts of income, and more complex returns, increase the demand for third party return preparation. The effect of this increased demand depends upon the type of return preparation selected. For

instance, *a priori*, the use of tax practitioners may or may not result in lower tax evasion. Tax evasion may decline when tax practitioners are employed due to their tax expertise, ability to exploit ambiguity in the tax code, and attestation function. Alternatively, tax evasion could remain the same if third party return preparation assistance is largely a matter of convenience. Finally, tax evasion may actually increase if tax practitioners are sought for their assistance in aggressive tax planning. In the model presented below we test these competing hypotheses.

3 Model

3.1 Specification

With the exceptions of Long and Caudill [10] and Erard [5], the empirical literature on tax evasion has not controlled for the endogeneity of third party tax return preparers on tax evasion.[6] While these analyses importantly control for the endogeneity of the mode of tax return preparation, they restrict the choice set of preparation types. We extend the research on the demand for tax return preparation services presented in Dubin, Graetz, Udell, and Wilde [3] and use audited tax return information to model the effect of self-prepared (SELF), non-paid prepared (NON-PAID), paid prepared who are not practitioners (PAID), and practitioners (PRACTITIONERS) on tax evasion using a switching regression model.

We assume that the amount of tax evasion, Y_i, on a return prepared in preparation mode i is given by the regression model

$$Y_i = X_i'\beta_i + \eta \quad \text{if } \delta_i = 1, \tag{1}$$

where $\delta_i = 1$ if mode i is selected and 0 otherwise. Following Dubin, Graetz, Udell, and Wilde [3], we assume a logistic probability model with

$$P_i = \text{Prob}[\delta_i = 1] = \frac{e^{\Gamma_i Z_i}}{\sum_{i=1}^{I} e^{\Gamma_i Z_i}}. \tag{2}$$

In the presence of correlation between η and δ_i, ordinary least squares estimation of equation 1 yields inconsistent estimates of β_i. Such correlation might arise because

---

[6]Long and Caudill [10] use unaudited 1983 tax return information to model the difference between professional tax return preparation (combining tax practitioners and non-practitioner paid modes) and non-paid modes of tax return preparation (combining self and non-paid assisted modes) on reported tax liability. Erard [5] uses audited 1979 tax return information with a distinction between non-paid prepared (combining self and non-paid assisted modes), paid-prepared that was not a practitioner, and practitioner-prepared returns to model their effect on tax evasion. As Dubin, Graetz, Udell and Wilde [3] show, restricting the choice of mode of return preparation to two or three alternatives can produce misleading inferences about the motives for tax return preparation assistance. We build on their research and analyze the effect of a larger choice set of preparer types on measurements of attendant tax evasion.

unobservable characteristics of the taxpayer's behavior could simultaneously increase the probability of selecting a tax practitioner and decrease the amount of tax evaded. In discrete/continuous systems such as these, Dubin and McFadden [4] have derived several estimators that allow consistent estimates of β_i.

Define $\nu = \eta - E(\eta \mid \delta_i = 1)$. Then $E(\nu \mid \delta_i = 1) = 0$. Under a set of assumptions for a discrete/continuous model with logistic choice probabilities, Dubin and McFadden [4] show that

$$
\begin{aligned}
E\left(\eta \mid \delta_i = 1\right) &= \sum_{m=1}^{I} \left(\frac{-\sqrt{6\sigma^2}\rho_m}{\pi}\right) \left[\frac{\log P_m}{(1 - P_m)}\right] [P_m - \delta_{im}] \\
&= \sum_{m \neq i}^{I} \left(\frac{-\sqrt{6\sigma^2}\rho_m}{\pi}\right) \left[\frac{P_m \log P_m}{1 - P_m} + \log P_i\right]
\end{aligned}
\tag{3}
$$

where $\delta_{im} = 1$ when $i = m$ and 0 otherwise, σ^2 is the unconditional variance of η and where ρ_m is a correlation parameter between the mth mode of return preparation and η. For the I alternative model, equation 3 specifies $I - 1$ selection correction terms. Each of these terms can be separated into a correction variable

$$
C(P_m, P_i) = \left[\frac{P_m \log P_m}{1 - P_m} + \log P_i\right]
\tag{4}
$$

and a correction parameter

$$
\gamma_m = \frac{-\sqrt{6\sigma^2}\rho_m}{\pi}.
\tag{5}
$$

Including these terms in a respecification of equation 1 with a correction for selection bias, yields for each mode of return preparation

$$
\begin{aligned}
Y_i &= X_i'\beta_i + \eta && \text{if } \delta_i = 1 \\
&= X_i'\beta_i + \mathrm{E}[\eta \mid \delta_i = 1] + \nu && \text{if } \delta_i = 1 \\
&= X_i'\beta_i + \sum_{m \neq i}^{I} \gamma_m C(P_m, P_i) + \nu && \text{if } \delta_i = 1.
\end{aligned}
\tag{6}
$$

Consistent estimates of the parameters β_i and γ_m in equation 6 can be achieved by ordinary least squares if P_m is known. Dubin [2] shows that when the true value of P_m in equation 6 is not known, an estimate of P_m may be substituted resulting in consistent estimation of the parameters β_i and γ_m. In the next section, we develop a consistent estimation method for equation 6 using aggregate data.

3.2 Aggregation

In a previous paper, Dubin, Graetz, Udell and Wilde [3] estimate the choice model (equation 2) using aggregate data from the 1979 Taxpayer Compliance Measurement

Program (TCMP). To estimate equation 6 with aggregate data, let $k = 1, \ldots, K$ represent taxpayers in an IRS district; $i = 1, \ldots, I$ be the modes of tax return preparation available in an IRS district; and $j = 1, \ldots, J$ denote the IRS districts. Let $\delta_{ijk} = 1$ if the kth taxpayer in the jth IRS district selects the ith mode of return preparation, and zero otherwise. Define the number of taxpayers in the jth IRS district who select the ith mode of return preparation as

$$N_{ij} = \sum_{k=1}^{K} \delta_{ijk}. \tag{7}$$

The average value of tax evasion found on returns prepared by the ith mode in the jth IRS district is

$$\overline{Y}_{ij} = \sum_{k=1}^{K} \frac{\delta_{ijk}}{N_{ij}} Y_{ijk}. \tag{8}$$

Linear aggregation of equation 6 across individuals in an IRS district and preparation mode yields

$$N_{ij}\overline{Y}_{ij} = N_{ij}\overline{X}'_{ij}\beta_i + N_{ij}\sum_{m \neq i}^{I} \gamma_m C(\overline{P}_{mj}, \overline{P}_{ij}) + \psi_{1ij} \quad \text{if } \delta_{ij} = 1 \tag{9}$$

where

$$\overline{P}_{ij} = \sum_{k=1}^{K} \frac{\delta_{ijk}}{N_{ij}} P_{ijk} \tag{10}$$

and where

$$\psi_{1ij} = \psi_{ij} + \left[N_{ij}\sum_{m \neq i}^{I} \overline{C}_{ij} - N_{ij}\sum_{m \neq i}^{I} C(\overline{P}_{ij}, \overline{P}_{mj}) \right]. \tag{11}$$

Equation 11 requires individual choice probabilities for return preparation which were not available in our data. Instead, we rely on the average probability for district and mode of preparation as estimated in Dubin, Graetz, Udell, and Wilde [3]. We replace the average of the individual choice probabilities, $\overline{P}_{ij}$, by the choice probability of an average individual, denoted by P_{ij}.

Using probabilities of the average taxpayer rather than the average of taxpayer probabilities introduces two possible problems. The first problem is that P_{mj} may be a biased estimate of $\overline{P}_{mj}$.[7] Secondly, since P_{mj} is not directly observed, we introduce an approximation error when the estimated P_{mj} is employed. Each problem is mitigated by estimating P_{mj} over sufficiently homogeneous classes of taxpayers using a consistent estimator of aggregate choice shares. This approach was followed by Dubin, Graetz, Udell

---

[7]The bias occurs because the logit probabilities defined by equation 2 are non-linear in Z. By application of Jensen's inequality, it can be shown that the probability of the average response is greater than the average of the probabilities of the individual response.

and Wilde [3], who used data grouped over 696 mutually exclusive and exhaustive categories that placed taxpayers into nearly homogeneous aggregation classes, and estimated aggregate choice shares using a minimum chi-square estimation procedure.[8]

Substituting P_{mj} for $\overline{P}_{mj}$, equation 9 can be rewritten as

$$N_{ij}\overline{Y}_{ij} = N_{ij}\overline{X}'_{ij}\beta_i + N_{ij}\sum_{m\neq i}^{I}\gamma_m C(P_{mj}, P_{ij}) + \psi_{2ij} \ \text{ if } \delta_{ij} = 1 \tag{12}$$

where

$$\psi_{2ij} = \psi_{ij} \ \ + \ \ \left[N_{ij}\left(\sum_{m\neq i}^{I}\overline{C}_{ij} - \sum_{m\neq i}^{I}C(\overline{P}_{mj}, \overline{P}_{ij})\right)\right]$$
$$+ \ \ \left[N_{ij}\sum_{m\neq i}^{I}\left(C(\overline{P}_{mj}, \overline{P}_{ij}) - C(P_{mj}, P_{ij})\right)\right].$$

Equation 12 specifies the total amount of evasion associated with the ith preparation mode in the jth IRS district. To apply least squares estimation to equation 12, note that the error term, ψ_{2ij}, has an expected value of 0 if $\delta_{ij} = 1$ since it is the sum of K terms, each which has conditional expectation equal to 0. Furthermore, the variance of ψ_{2ij} is of order $N_{ij} = \sum_{k=1}^{K}\delta_{ijk}$. Therefore, a correction for heteroscedasticity can be made to equation 12 by dividing each member through by $N_{ij}^{\frac{1}{2}}$.[9]

3.3 Data

The 1979 TCMP file for individual returns involves line-by-line audits of approximately 50,000 randomly selected tax returns. As discussed above, the dataset released by the IRS aggregates the results of the 1979 TCMP audits by the 58 IRS district and four modes of return preparation. Both the taxpayer's reported amounts and the adjusted amounts recommended by the TCMP audit were recorded.[10] Our dependent variable (EVASION) is the difference between the taxpayer reported liability and the IRS examiner's corrected liability.

To test the hypothesis that tax evasion decreases with the complexity of the tax situation, we include in our regression model the number of forms filed with the tax return (FORM).[11] We also include two variables that are generally believed to be positively

---

[8]See Dubin, Graetz, Udell and Wilde [3] for details.

[9]The number of returns that were self prepared averaged 69,248 per IRS district office, while the number of returns for non-paid averaged 15,860; for paid preparers 44,521; and for practitioners was 26,241. Refer to Udell [18] for additional detail on aggregation in discrete/continuous models and the issues of heteroscedasticity.

[10]We use the corrected amounts of deductions and exemptions as measures of the true amounts of these items.

[11]These forms include schedule C for Profit or Loss from a Business; schedule D for Capital Gains and Losses; schedule E the Supplemental Income Schedule to report income from rents, royalties, and trusts; schedule F for Farm Income and Expenses; and Form 4797 for Sales of Business Property.

correlated with tax evasion. They are the sum of income from schedules C, D, E, F, and Form 4797 (COMPLEX) and state, local and real estate tax deductions (ASSET). The later acts as a measure of state and local tax burden, while the former is associated with federal tax burden. We include the frequency with which penalties were assessed in the TCMP audit (PENALTY) to test whether penalties act as a deterrent to tax evasion.

To complete our specification, we include three additional variables. They are the sum of wage, salary, interest, and dividend income (SIMPLE), the number of eligible dependents claimed by the taxpayer (EXEMPTION), and the number of taxpayers over 65 years of age (OVER 65). Together, SIMPLE and COMPLEX account for nearly all of a taxpayer's income. EXEMPTION and OVER 65 capture two important demographic features. By our definition, EXEMPTION measures family size. An increase in EXEMPTION, all else held constant, should increase the amount of tax evasion if the additional cost of a family member exceeds the value of the exemption. Similarly, OVER 65 measures age effects. The mean values of these variables for each mode of return preparation are reported in Table 2.[12]

Table 2: Mean Values of Variables by Mode of Preparation

Variable	Self	Non-paid	Paid	Practitioner
SIMPLE	13,900	10,151	18,900	38,100
COMPLEX	963	740	2,255	7,252
ASSET	777	358	958	2,046
EXEMPTION	183	71	341	802
OVER 65	0.072	0.112	0.151	0.217
FORM	1.210	1.175	1.510	2.210
PENALTY	0.034	0.055	0.070	0.096
EVASION	112	130	225	655

Note: Amounts in dollars and frequencies in proportion of returns.

For each of the four modes of return preparation, we estimate equation 12 using

---

[12]Note that the aggregation scheme described in the previous section places restrictions on the use of variables ancillary to the 1979 TCMP data. In particular, the audit rate data available to researchers is constant across IRS districts. Since audit rates do not vary across preparer modes within districts they are not included in our regression specification. The audit rate appears in this analysis as a factor affecting the demand for tax preparation services (Dubin, Graetz, Udell, and Wilde [3]).

weighted least squares with the following specification:

$$
\begin{aligned}
\text{EVASION}_i \;=\;& \beta_{0i} + \beta_{1i}\,\text{SIMPLE}_i + \beta_{2i}\,\text{COMPLEX}_i + \beta_{3i}\,\text{ASSET}_i \\
& + \beta_{4i}\,\text{EXEMPTION}_i + \beta_{5i}\,\text{OVER 65} + \beta_{6i}\text{FORM}_i \\
& + \beta_{7i}\,\text{PENALTY}_i + \sum_{m \neq i}^{K} \text{CORRECTION TERM}_m + \psi_{2i}. \quad (13)
\end{aligned}
$$

4 Results

4.1 The Demand for Tax Evasion

Table 3 presents weighted least squares estimates of equation 13. An increase in either SIMPLE or COMPLEX income increases the amount of tax evasion for Practitioner prepared returns while only increases in COMPLEX income increase the amount of evasion found on Paid prepared returns. We find no significant effect from either income variable on evasion for Self prepared or Non-paid prepared returns. Our results for state and local taxes (ASSET), family size (EXEMPTIONS), and taxpayers over the age of 65 years (OVER 65) show no effect on tax evasion, with the exception that greater state and local tax burden increases the amount of evasion found on Practitioner prepared returns.

Increases in the penalty rate (PENALTY) somewhat increase the amount of evasion detected among Self and Paid prepared modes of return preparation. However, the current penalty regime, with substantially higher penalty rates, was created largely during the penalty reforms placed into law with the 1989 Omnibus Budget Reconciliation Act. For example, the penalty for intentional disregard of rules with respect to the paying of income tax was 5 percent of the underpayment of tax in 1979 (per the Internal Revenue Code of 1954 section 6653(a)) but is currently 20 percent (per the Internal Revenue Code of 1986 section 6662(b) as amended in 1989). Although we find no support for a deterrent effect from penalties, we do find that relative to other modes of return preparation, Practitioners reduce the effect of penalties on the amount of tax evasion.

Increases in the complexity of the tax return (FORM), decreases the amount of evasion found on returns prepared by Practitioners, but not for any other mode of return preparation. Finally, the coefficient of the selectivity correction parameter, $C(P_m, P_i)$, is significant, and positive, for the Practitioner mode. This implies (from equation 5) that there is a negative correlation between the unobservable characteristics affecting the choice of Practitioner mode and the amount of evasion detected on the return. This supports the hypothesis that Practitioners reduce non-compliance.

Two elasticity calculations are presented in Table 4. The first four columns show the short-run elasticities of tax evasion which condition on the mode of preparation. The fifth column presents the sum of the short-run elasticities over all modes of return preparation. The sixth column presents the long-run elasticities of tax evasion. To derive

Table 3: Estimates of Tax Evasion

Weighted Variable	Self	Non-paid	Paid	Practitioner
ONE	-8.617	-0.427	-87.698	61.159
	(-0.283)	(-0.007)	(-2.361)	(1.172)
SIMPLE	0.001	0.005	0.010	0.007
	(0.091)	(0.378)	(1.150)	(1.830)
COMPLEX	0.084	0.090	0.074	0.094
	(1.541)	(1.116)	(2.693)	(6.842)
ASSET	0.035	0.067	-0.035	0.076
	(0.707)	(0.498)	(-0.918)	(3.626)
EXEMPTION	-0.046	0.113	-0.038	-0.034
	(-0.199)	(0.280)	(-0.268)	(-0.026)
OVER 65	-415.762	-141.249	-69.943	-427.087
	(-1.059)	(-0.311)	(-0.212)	(-1.384)
FORM	77.789	63.246	-89.682	-345.340
	(0.557)	(0.295)	(-0.723)	(-3.902)
PENALTY	1855.020	513.482	1846.570	36.152
	(2.908)	(0.781)	(4.267)	(0.085)
CORRECTION		-57.010	15.041	135.024
		(-0.759)	(0.217)	(2.539)
R-squared	.79			
Number of Observations	232			

Note: t-statistics in parenthesis.

10

these elasticity concepts, we start with a definition of total evasion:

$$Y = \sum_{i=1}^{I} \sum_{j=1}^{J} N_{ij} \overline{Y}_{ij}. \tag{14}$$

Expected total evasion is:

$$
\begin{aligned}
\mathrm{E}(Y) &= \sum_{i=1}^{I} \sum_{j=1}^{J} \mathrm{E}(N_{ij}\overline{Y}_{ij}|\delta_{ij}=1)P_{ij} \\
&= \sum_{i=1}^{I} \sum_{j=1}^{J} (N_{ij}\overline{Y}_{ij})^* P_{ij}
\end{aligned}
\tag{15}
$$

where $(N_{ij}\overline{Y}_{ij})^* = \mathrm{E}(N_{ij}\overline{Y}_{ij}|\delta_{ij}=1)$ and is given by equation 12.

In the short-run, i.e., conditional on a choice of tax return preparation mode the component of expected total evasion from return preparation mode i is $\sum_{j=1}^{J}(N_{ij}\overline{Y}_{ij})^* P_{ij}$. In the short-run tax return preparer choice is fixed; therefore P_{ij} is constant. Conditional on choice of mode i, the short run evasion elasticity is

$$\epsilon_i^{short} = \sum_{j=1}^{J} \frac{\partial (N_{ij}\overline{Y}_{ij})^*}{\overline{X}_{ij}} \frac{\overline{X}_{ij}}{(N_{ij}\overline{Y}_{ij})^*} P_{ij}. \tag{16}$$

The combined short-run elasticity is:

$$\epsilon_{total}^{short} = \sum_{i=1}^{I} \epsilon_i^{short}. \tag{17}$$

In the long-run tax return preparation mode can be changed by the taxpayer. Therefore changes in explanatory factors influence both the level of tax evasion and the choice of preparer mode. In this case, the long-run total tax evasion elasticity is given by[13]

$$\epsilon_{total}^{long} = \sum_{i=1}^{I} \sum_{j=1}^{J} \left[\frac{\partial (N_{ij}\overline{Y}_{ij})^*}{\partial \overline{X}_{ij}} P_{ij} + (N_{ij}\overline{Y}_{ij})^* \frac{\partial P_{ij}}{\partial \overline{X}_{ij}} \right] \frac{\overline{X}_{ij}}{(N_{ij}\overline{Y}_{ij})^*}. \tag{18}$$

The total short-run elasticity of tax evasion with respect to simple income is 0.402. The short-run elasticities for the three assisted modes are 0.038 for Non-paid, 0.238 for Paid, and 0.071 for Practitioner prepared returns. Increases in non-wage income have the greatest effect on tax evasion, with a total short-run elasticity of tax evasion of 0.762. Interestingly, the largest component of the short-run effect is from self-prepared returns with a short-run elasticity of 0.321 followed next by paid preparer's at 0.210 followed by Practitioner prepared returns at 0.182. The overall effect of state and local taxes on tax evasion is small, with a short-run elasticity of 0.123 and a long-run elasticity of 0.135.

---

[13]Dubin, Graetz, Udell, and Wilde [3] provide the calculation of $\frac{\partial P_{ij}}{\partial \overline{X}_{ij}}$.

Table 4: Short Run and Long Run Elasticities of Tax Evasion

						Long Run
		Short Run Elasticities				Elasticities
Mode	Self	Non-paid	Paid	Practitioner	Total	Total
Variable	(1)	(2)	(3)	(4)	(5)	(6)
SIMPLE	0.055	0.038	0.238	0.071	0.402	0.325
COMPLEX	0.321	0.049	0.210	0.182	0.762	0.771
ASSET	0.108	0.015	-0.042	0.042	0.123	0.135
EXEMPTION	-0.033	0.006	-0.016	-0.007	-0.050	-0.057
OVER 65	-0.118	-0.011	0.013	-0.025	-0.141	-0.165
FORM	0.374	0.055	-0.171	-0.204	0.054	-0.412
PENALTY	0.250	0.021	0.163	0.001	0.435	0.398

Consistent with our expectations, larger state and local tax burdens increase evasion on Practitioner prepared returns with an elasticity of 0.042. Family size has very little overall effect on tax evasion. Additionally, the evasion elasticity with respect to age is small at -0.141.

Our most definitive results relate to return complexity. The short-run total elasticity is 0.054. The small size of this effect belies its distributional character because the short-run elasticities for Practitioner and Paid prepared returns are -0.203 and -0.171 respectively. However, these are more than offset by the short-run elasticities for the Self and Non-paid modes of return preparation, at 0.374 and 0.055 respectively. For those able to purchase tax expertise through a Paid preparer or a Practitioner, increased complexity results in lower tax evasion, while the opposite holds for the Self and Non-Paid modes of return preparation.[14] These results are even more striking when viewed in the long-run. Dubin, Graetz, Udell, and Wilde [3] show that increases in complexity increase the demand for Practitioners and reduce the demand for Self preparation. This explains why the long-run tax evasion elasticity with respect to return complexity is negative in Table 4.

Of course a taxpayer's situation may become more complicated in multiple dimensions. For instance, it's possible and likely for a taxpayer to both experience an increase in non-wage income while presenting a more complex return. To illustrate this, suppose an average taxpayer receives an additional $1000 of non-wage income and has one additional form to complete. In the short-run total tax evasion increases by $24 per return from $237 to $261, an increase of over 9 percent in evasion. In the long-run total tax evasion increases by less than $4 per return, an increase of less than 2 percent in total tax evasion. The difference between the short and long run effects is due to the change in return preparation mode from self and non-paid to paid and practitioner types.

4.2   Conclusion

We find evidence that tax evasion increases with increases in complex income but decreases with more complex returns. These long run effects are the result of both the increased demand for Practitioners and the reduction in tax evasion associated with returns prepared by Practitioners. Our evidence therefore supports the perspective of the Nitzan and Tzur [12] and Melamud, Wolfson and Ziv [11] who view Practitioners as providing an attestation role for the IRS. These results also suggests that policies that would increase the demand for Practitioners, such as eliminating the income threshold restrictions necessary to take the deduction for the use of a tax Practitioner, may be cost effective because of their ability to increase compliance. Similarly, an unexpected benefit of the recent increase in taxpayer burden from the reporting of capital gains may be an increase overall compliance as taxpayers shift to paid preparers and tax practitioners as opposed to self-preparation.

---

[14]This result is consistent with the hypothesis that Practitioners provide an attestation function for the IRS.

References

1. Julie Collins, Valerie Milliron, Daniel Toy. "Tax preparer usage and its implications." Unpublished paper, University of North Carolina, 1988.

2. Jeffrey A. Dubin. *Consumer Durable Choice and the Demand for Electricity.* North-Holland, Amsterdam, 1985.

3. Jeffrey A. Dubin, Michael J. Graetz, Michael A. Udell, Louis L. Wilde. "The demand for tax return preparation services." *Review of Economics and Statistics*, 74(1):75–82, 1992.

4. Jeffrey A. Dubin, Daniel McFadden. "An econometric analysis of residential electric applicance holdings and consumption." *Econometrica*, 52(2):345–362, 1984.

5. Brian Erard. "Taxation with representation: An analysis of the role of tax practitioners in tax compliance." *Journal of Public Economics*, 52:163–197, 1993.

6. Michael Graetz, Jennifer Reinganum, Louis Wilde. "Expert opinions and taxpayer compliance: A strategic analysis." Social Science Working Paper 710, California Institute of Techonology, 1989.

7. Peggy Hite. "Characteristics of taxpayers who use preparers: An exploratory study." Washington, D.C., November 1987. IRS Research Conference on the Role of Tax Practitioners in the Tax System.

8. Internal Revenue Service. "Federal tax compliance research: Individual income tax gap estimates for 1985, 1988, and 1992." Technical Report 1415, IRS, Washington, D.C., 1996.

9. Steven Klepper, Mark Mazur, Daniel Nagin. "Expert intermediaries and legal compliance: The case of tax preparers." *Journal of Law & Economics*, 54:205–229, 1991.

10. James Long, Steven Caudill. "The usage and benefits of paid tax return preparation." *National Tax Journal*, 40:35–46, 1987.

11. Nahum Melamund, Mark Wolfson, Ziv Amir. "Should tax preparation fees by subsidized? A game theoretic analysis." memeo, 1991.

12. Shmuel Nitzan, Joseph Tzur. "Restricted competition as a reward for public service." *European Journal of Political Economy*, 5:519–532, 1989.

13. Jennifer Reinganum, Louis Wilde. "Equilibrium enforcement and compliance in the presence of tax practitioners." *Journal of Law, Economics, and Organization*, 7:163–181, 1991.

14. Susanne Scotchmer. "The effect of tax advisors on tax compliance." In *Taxpayer Compliance: Social Science Perspectives*, pages 182–199. University of Pennsylvania Press, Philadelphia, 1989.

15. Suzanne Scotchmer. "Who profits from taxpayer confusion?" *Economics Letters*, 29:49–55, 1989.

16. Joel Slemrod. "The return to tax simplification: An econometric analysis." *Public Finance Quarterly*, 17:3–27, 1989.

17. Joel Slemrod, Nikki Sorum. "The compliance cost of the U.S. individual income tax system." *National Tax Journal*, 37:461–474, 1984.

18. Michael A. Udell. "Essays in applied economics: New techniques in aggregate data analysis." dissertation, California Institute of Technology, 1995.