Tax Evasion and Entrepreneurship:
The Effect of Income Reporting Policies on Evasion.

An Experimental Approach

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ABSTRACT: We use experimental economics methods to better understand personal income tax compliance behavior when a portion of an individual's income is relatively difficult to detect by the tax authority. Self-employment income represents a type of income that could be difficult to identify, in part because there is no third party to report such income to the tax authority. In this experiment, subjects earn income and are told they must pay taxes on it. They choose what portion to report to the tax authority. They are told that a certain portion of their income can be detected with certainty while the remainder can only be detected with some known probability. They are also aware of the audit and the tax rates. Preliminary results indicate that overall levels of tax compliance do not respond significantly to earning larger portions of income that is not perfectly detectable. Results also indicate that tax compliance rates decline with lower audit rates and with higher tax rates.

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1. Introduction

The methods by which income is reported to the tax authority vary significantly across types of employment in the United States. One such difference is the requirement that employers must report their employees' income to the taxing authority - referred to herein as a matched income arrangement – while the income of self-employed individuals is not reported to the federal or state taxing authority by a third party (referred to, correspondingly, as non-matched income). This lack of secondary income reporting among self-employed individuals may decrease the likelihood that this group would be detected evading taxes. To the extent this reasoning is empirically valid, self-employed individuals would face a lower effective tax rate in a simple rational tax evasion model,[1] all else equal. The lower effective tax rate would artificially increase the return to self employment and inefficiently increase the number of self employed individuals.

The primary motivation for an examination into the effects of differing compliance behavior resulting from matched versus non-matched income comes from the possible tax evasion among the self-employed. Indeed, the idea that the self-employed have different income tax compliance behavior is longstanding in the literature (see Feinstein, 1991 and GAO, 1990 for examples). The empirical literature has also provided some support for the idea that evasion partially motivates the transition between self-employment and wage and salary employment. Bruce (2000) provides suggestive evidence that individuals enter into self-employment to exploit the tax evasion opportunities therewith associated. However, the issue is yet to be tested, to our knowledge, using experimental methods.

[1] See Andreoni, Erard, and Feinstein (1998) for a discussion of tax evasion models.

Experimental methodology provides several advantages in examining patterns of evasion across groups who face different probabilities that their income will be detected by the tax authority. Most importantly, an appropriately designed experiment will allow for a better isolation of the fundamental influences arising from variations in the income matching policy between wage and salary employment and self-employment, relative to naturally occurring data. In addition, fully accurate naturally occurring data are nearly impossible to obtain regarding tax evasion due to the nature of the issue: individuals intentionally hide evasion in many cases. Experimental methodology provides an advantageous alternative means of addressing these questions in that it avoids problems associated with these data inaccuracies. However, experiments do give rise to a host of different shortcomings and should be interpreted as another mode of analysis, not as the only appropriate method.

In this paper we design an experiment to test whether individuals exhibit higher tax compliance rates when the probability of being detected evading taxes is lower between income types. This situation would likely arise when an external party reports an individual's income to the taxing authorities relative to cases in which there is no third party reporting, such as is the case with individuals who work in wage and salary jobs relative to those that are self employed. We also examine the effects of tax rates, audit rates, gross income, and other factors on tax compliance behavior. This information is relevant to policy questions that surround the design of optimal income tax reporting and auditing systems and whether government should engineer tax policy to favor movement between modes of employment.

The study is organized as follows. Section 2 provides a review of the relevant literature. The experimental design is explained in section 3. In section 4 we present our results and a discussion and section 5 concludes. Preliminary results indicate that individuals who earn relatively more non-matched income do not exhibit significantly different tax compliance patterns. Results also indicate that higher tax rates and lower audit rates lead to more tax evasion.

2. Existing Literature

The focus of this paper is on differences in tax compliance behavior between individuals who earn matched income to those who earn non-matched income. The motivation is primarily due to suspected tax non-compliance of the self-employed, to be discussed below. A foremost motivation for this non-compliance is likely the lack of visibility of the income of the self-employed (Kagan, 1989), which is in large part due to the non-matched income arrangement in that sector.[2] Therefore, the extent to which self-employment non-compliance is related to a lack of income matching warrants the following discussion.

Researchers have hypothesized for years about the differing compliance behavior between self-employed individuals and individuals in wage and salary employment. Feinstein (1991, p. 15) concludes, "Schedule C (own business) and F (farm) filers are much more likely to evade than the average taxpayer." Scheutze and Bruce (2004), in providing a review of the literature on taxation and self-employment, conclude that tax non-compliance among the self-employed is a significant concern. In support of this

[2] Other reasons for non-compliance in this sector could be a lack of income withholding or simply a misunderstanding of the tax system.

claim they cite research that finds this sector of the economy makes a very significant contribution to the total level of tax evasion in the nation. One of the studies in their review (U.S. General Accounting Office, 1990) estimates that, for 1987, self-employed individuals account for 63 percent of the $48 billion in unreported income. Furthermore, Kagan (1989) reports findings from an IRS study of tax returns (IRS, 1983) which estimates that only 50.3 percent of nonfarm proprietor income is voluntarily reported to the IRS compared to 93.9 percent of wage and salary income for 1979. Kagan goes on to discuss another IRS study in which individuals that were treated as independent contractors (and had no income reported or withheld by a third party). The study found a low percentage of income reported overall and 47 percent of the independent contractors did not report any of their earnings.

In addition, the empirical literature has found suggestive evidence that individuals enter into self-employment to take advantage of non-compliance opportunities. For example, Bruce (2000) finds that higher tax rates, as well as the differential between the marginal tax rates of wage-and-salary and self-employment, both increase self-employment. He states that this result could be interpreted as evidence that individuals may enter into self-employment to exploit the associated evasion opportunities.

However, clear conclusions regarding the magnitude of tax evasion among the self-employed are still elusive to researchers despite the large literature on the subject. This is in large part due to the difficulty in estimating the magnitudes of evasion given the difficulty in capturing accurate information about tax reporting behavior in the naturally occurring world. This is also because many taxpayers who underreport intentionally attempt to hide income so as not to be caught. Also, numerous other

confounding effects blur the picture, such as ambiguous tax laws regarding deductions and non-filers (who are often difficult to capture in a data set) make clear estimates of tax non-compliance difficult to obtain. These issues arise in virtually all existing studies, which rely on naturally occurring data in the form of tax return or survey data.

3. Experimental and Analytical Design

We begin this section with a description of the experimental design used in this study. Then we highlight the behavioral hypotheses that are tested. Last we discuss of the analytical methodology that is used.

Experimental Design

The current experiment uses the same basic experimental design and platform of Alm, Jackson, and McKee (2004) (hereafer AJM). The difference is the incorporation of an examination of the effects matched versus non-matched income. The experimental structure attempts to replicate the fundamental elements of the income tax in the United States that include the following steps. First subjects earn income by performing a simple task. Then they report some or all of it to the taxing authority and pay taxes on the amount reported. Next, audit is randomly determined with some known probability. If a subject is audited, whether any unreported income is detected is randomly determined, also with a known probability. Finally, if an individual is not in compliance and is not detected, he or she pays additional taxes owed and a penalty. This procedure should provide for the necessary degree of "parallelism" to the naturally occurring world

that is crucial to the applicability of any experimental result (Smith, 1982). That is, the experimental setting here should capture all of the fundamental elements of the naturally occurring world such that the results obtained here are applicable to actual policy.

The experiment proceeds in the following fashion. Each subject sits at a laptop computer in a cubicle and is not allowed to communicate with other subjects. This eliminates any potential peer effects that could blur the conclusions of the study. All actions that subjects take are made on their computer. Subjects initially earn income based upon their performance in a simple computerized task. More specifically, they are required to move numbers in the correct order from one location on the computer screen to another location. The subject who finishes the task with the quickest time earns the highest income, 100 "lab dollars." The second and third place finishers earn 90 lab dollars, the fourth and fifth place finishers earn 80 lab dollars, and so on. Ties are randomly broken. Subjects are informed of their earnings relative to those other participants in their experiment. This is the only knowledge they have of other participants.

After earning income, subjects see a screen that reports their income as well as the income of the other participants. This screen also presents all other relevant parameters that subjects need in their decision making process. These include the audit rate, the tax rate, the percentage of income that is matchable, the penalty rate on unreported income, and the probability of being detected if they fail to report all of their non-matched income. Subjects then choose what percentage of their matchable and non-matchable income to report to the tax authority.[3] They are told that they are obligated to report all

[3] During the instructions subjects are informed of what matched and non-matched income is and that a real world example of non-matched income is tip income.

of their income, but it is ultimately their decision. They are able to report any percentage between 0 and 100 percent (no decimals) of each type of income. The computer automatically reports taxes owed. It also computes tax liability based on the fractions of matched and non-matched income that subjects report. Subjects are able to experiment with different fractions before deciding upon a final percentage to report with a calculator that is built into the software. This helps promote full information decision-making. Subjects may also view a history of previous rounds before making a decision. A virtual bingo cage determines whether subjects are audited. More specifically, audit is determined by the selection of a colored ball from a cage with 10 balls total. The number of colored balls represent audit while white balls represent no audit. The computer automatically deducts taxes paid and penalties (if any are owed) from subjects' accounts. Income for each round is represented by the following equation:

$$\text{After Tax Income} = G - t\,G\,[M^{*}R_m + U^{*}R_u] - A\,(t + P)\,G\,[M\,(1 - R_m) + D\,U\,(1 - R_u)], \text{ where}$$

- G = gross income,
- t = tax rate,
- M = percentage of income that is matched,
- R_m = percentage of matched income that is reported,
- U = percentage of non-matched income that is reported,
- R_u = percentage of unmatched income that is reported.
- A = 1 if individual is audited, 0 otherwise
- P = penalty rate on unreported income
- D = 1 if subject is detected upon not fully reporting non-matched income, 0 otherwise

Subjects are informed that they keep their after tax earnings at the end of the experiment, converted from lab dollars to US dollars at the rate of 90 to 1, and paid in cash. After income is reported and audit is determined, subjects see one final screen that summarizes everything that happened during that round.

Table 1 reports the parameters used in the experiment. We allow for five combinations of matched versus non-matched income: 0 percent, 25 percent, 50 percent, 75 percent, and 100 percent non-matched and the corresponding matched percentages.[4] These combinations should provide for a broad understanding of the relationship between income matching policies and tax compliance behavior. There are three different tax rates: 20 percent, 35 percent, and 50 percent. The 50 percent tax rate is closely representative of an effective marginal tax rate for high-income individuals when considering top marginal personal income tax rates in combination with payroll taxes under the federal tax system in the United States.

The probability of audit varies between 10 percent and 30 percent. These rates are much higher than actual audit rates in the United States. However, a more realistic audit rate, around two percent, would yield less meaningful results in this setting because there would be so few audits in each session. The implications of this divergence from a more realistic setting are discussed below. The probability that an individual is detected evading taxes varies between matched and non-matched income. The probability of detection will be fixed at 100 percent for matched income for simplicity. Detection rates vary among 25 percent, 50 percent, and 75 percent for non-matched income. The penalty rate on unreported income is held constant at a rate of 50 percent.

At the beginning of each session, subjects participate in two practice rounds to ensure that they are comfortable with the situation and to allow them to ask clarifying questions before the actual rounds begins. Earnings per subject fall in the $19 - $37 range based upon performance in the experiment, the tax parameters used in a particular

[4] For this preliminary version the 25 percent non-matched and 75 percent non-matched treatments are omitted.

session, and chance. The preliminary experimental design requires the administration of 7 sessions as outlined in Table 2. Sessions consisted of either 16, 14, or 12 subjects each based on subject availability.[5] Each session involves two stages, each with 15 rounds. The audit rate is the only parameter that changes between sessions. In total we utilized 98 subjects resulting in 2,940 observations.

The experiment follows the platform used by AJM (2004). It uses the same laboratory equipment (i.e., 16 notebook computers and a server machine) and software. Sessions were conducted on the University of Tennessee campus using undergraduate students that were recruited randomly from various classes. Subjects were not allowed to participate in more than one session and had no prior experience in this series of experimentation. Methods adhere to all guidelines concerning the ethical treatment of human subjects.

Behavioral Hypotheses

This experimental setting allows for an examination of five behavioral hypotheses. They are as follows:

H1: Individuals are less likely to fully comply with tax rules when the tax authority experiences difficulty in detecting a larger portion of their income.

H2: Higher tax rates lead to lower levels of tax compliance.

H3: Higher audit rates lead to higher levels of tax compliance.

H4: Higher wealth leads to lower levels of tax compliance.

H5: An audit in the previous round leads to higher levels of tax compliance.

[5] Subjects are divided into two groups based upon the structure of AJM (2004). This division is maintained in this study to make for a better parallel to the previous study even though it is not required. The grouping is due to the information-sharing and public good components of AJM (2004).

The first hypothesis is, of course, the focal point of this study. The second hypothesis contributes to the rather large literature on the topic in which theoretical predictions are ambiguous and empirical assessments are difficult to obtain.[6] Similarly, audit rates certainly change the expected value of reporting income versus not reporting, and would likely affect tax compliance. Wealth may affect tax compliance by affecting the marginal utility of another dollar of income and, correspondingly, one's risk preferences. Audits in the previous round would not affect compliance in a rational evasion model since the current round is independent of any previous rounds. However, individuals may still respond to past audits because of (a) the "gambler's fallacy" or (b) the notion of "catching up." The gambler's fallacy means that individuals may incorrectly believe that an audit in the last round means that an audit in the current round is less likely. Catching up means that, if an individual was audited in the previous round, they may evade more to earn more income to make up for the penalty paid earlier.

An important consideration is the expected value of reporting income versus not reporting. Table 3 reports the difference in the expected value of reporting 100 dollars of income versus not reporting any income for matched and non-matched income for each tax rate, audit rate, and non-matched income detection probability combination used in this study. Of course, if individuals followed simple mathematical models perfectly and were risk neutral, these expected value calculations would predict behavior without error, and there would be no need for an experimental test. However, individuals are probably not perfectly risk neutral and also may not follow a simple model of income maximization. In part, this study tests the perceptions of individuals. The individuals may have other reasons to comply or not, such as a moral values associated with

[6] See Andreoni, Erard and Feinstein (1998) for a discussion of this result.

compliance or "cheating." They also may focus on certain parameters more than others simply due to their priors that have been derived from the media or other sources. For example, an individual may overweight the tax rate simply because he or she is familiar with it due to prior experience. Indeed, we use non-neutral terminology (i.e., tax language) in this experiment to enhance parallelism with the naturally occurring tax environment.

None-the-less, the expected value is still important because a simple rational tax evasion model likely explains a significant portion of individual behavior. The parameters are structured such that, for a risk neutral individual, it is rational to evade in most cases. Thus, the difference between the expected value of compliance and the expected value of non-compliance is negative in all but one case – with a low tax rate and a high audit rate on matched income. We lean on the negative side since we assume that most individuals are risk neutral. We have attempted to arrange for a fairly vast range of expected value differences. Holding tax and audit rates constant, not reporting non-matched income always carries a larger expected gain relative to matched income

Analytical Design

The primary component of this study consists of a generalized least squares regression model that explains income tax compliance as a function of several tax variables and gross income. The model includes subject specific effects to control for individual specific characteristics. This model allows for heteroskedasticity across individuals. Income tax compliance is measured as the percentage of total income that is reported to the tax authority. The baseline model is summarized as follows:

$$\text{Percent of Gross Income Reported}_{i,t} = ß_0 + ß_1 \text{ Gross Income}_{i,t} +$$

$$ß_2 \text{ Percent Non-Matched}_{i,t} + ß_3 \text{ Tax Rate}_{i,t} + ß_4 \text{ Audit Rate}_{i,t} + e_{it},$$

where i and t are individual and round indices, and $e_{it} = u_i + w_{it}$. The traditional error term is denoted by w_{it} and is assumed to meet all of the usual requirements. The individual-specific effect is denoted by u_i and controls for individual level heterogeneity.[7] Appendix 1 presents summary statistics for all of the variables used in this analysis.

4. Results and Discussion

Simple Results

We begin with a review of several sets of cross tabulations to compare compliance behavior based upon various parameters. Figure 1 presents the distribution of average tax compliance rates for individuals, over 30 rounds, for matched and non-matched income. Here, as always, tax compliance is measured as the percentage of a subjects' gross income that he or she reports to the tax authority. Most individuals posted average compliance rates at the extremes, either close to 100 percent compliance or zero percent compliance. This is expected if risk preferences do not change over the income range of this study. Regarding compliance patterns for matched and non-matched income, a fairly strong picture emerges from this figure: a noticeably larger portion of non-matched income falls into the 0-20 average compliance rate range while a larger percentage of matched income falls into the 81-100 range, providing weak evidence that no-matched income leads to more evasion.

Figure 2 presents overall compliance rates by the percentage of income that is non-matched. The primary hypothesis of this study is that that compliance decreases as

[7] We also included round fixed effects in a preliminary but they were not statistically significant determinants of compliance rates.

more of an individual's income is non-matched. However, this simple analysis fails to provide strong evidence in support of this assertion as evidence in the figure. Indeed, we find that compliance actually increases from zero percent to 50 percent non-matched, although by only a small amount. However, as expected, compliance rates drop sharply when 100 percent of one's income is non-matched.

Figure 3 continues this strand of analysis by presenting the average tax compliance rate by tax rate. As previously stated, it is theoretically unclear how compliance should respond to the tax rate. Here results indicate that tax compliance decreases with higher tax rates. The difference is much larger between the 20 and 35 percent rate than between the 35 and 50 percent rate. Figure 4 presents compliance rates by income. While compliance increase between 60 and 70 lab dollars of income, average compliance rates strictly decrease as income rises above 70 lab dollars.

Regression Analysis

Results from several generalized least squares regression models are presented in Table 4. This mode of analysis allows for a more precise understanding of the relationships between the variables of interest because, in this framework, coefficient estimates isolate effects between the tax variables and compliance from every other factor that is included in the model, including subject-specific effects. Controlling for subject-specific effects is especially important because this isolates any feeling of dislike of the tax system, fairness, etc. and allows for a precise examination of the effect of changes in the included variables.

Baseline Model. Results from the baseline model are presented in the first column of table 4, labeled Model 1. Contrary to our primary hypothesis, results fail to provide evidence that tax compliance behavior responds significantly to the portion of one's income that is non-matched, and correspondingly, carries a lower probability of being detected evading taxes if audited. It may simply be the case that individuals simply do not focus on this variable despite its effect on the expected value of compliance versus non-compliance. Instead, they may devote their attention more heavily to more well known parameters such as the tax and audit rates.

Several of the other variables included in this regression are deserving of attention. We find that higher income is associated with significantly lower levels of tax compliance. More specifically, an increase from 90 to 100 lab dollars would lower the percentage of income reported by 4.5 percentage points, relative to an average tax compliance rate of 49.2 percent. In addition, results indicate that the tax rate is a statistically significant determinant of compliance. According to this model, a rate increase of 35 percent to 50 percent would lower compliance by 11.6 percentage points, a significant change when considering average compliance rates. Results also indicate that higher audit rates lead to significantly higher rates of compliance. More specifically, increasing the audit probability from 10 to 30 percent would increase compliance by 6.5 percentage points, all else equal.

Other Robustness Checks. The second column of Table 4 presents a similar model with the inclusion of a dummy variable to denote whether an individual prepares his or her own tax return. These individuals may exhibit differing compliance behavior because they understand the tax system better due to their experiences with taxes.

Results indicate that individuals who do prepare their own return are much less likely to fully comply. Estimates show that income reporting rates are 18.4 percentage points less for individuals who file their own tax return relative to those who do not. Other results from this model are basically unchanged.

The third column of Table 4 modifies the baseline by adding subjects' total earnings up to a given point in the experiment. Here individuals may attempt to enhance their earnings if they have performed poorly in previous rounds, resulting in a negative relationship between wealth and non-compliance. Alternatively, wealthier individuals could have different risk preferences. Results indicate that higher wealth is associated with less tax compliance behavior. The last robustness check, Model 4, involves the inclusion of a variable to denote whether an individual was audited in the previous round. As would be predicted in a rational tax evasion model, an audit in the previous round is not a statistically significant determinant of compliance.

Categorical Explanatory Variables. Table 5 presents results from an alternative model in which gross income, non-matched income percentage, the tax rate, and the audit rate are denoted as categorical variables. Indeed, funding availability did not permit us to provide enough variation in these variables to be able to perfectly label them as continuous. Results from this model differ slightly from our baseline results. Here we find that only an income of 100 lab dollars significantly reduces tax compliance relative to an income of 60 lab dollars. In contrast to our earlier finding, results in this model do identify a statistical difference in income reporting behavior when subjects have 100 percent non-matched income relative to when only 50 percent of income is non-matched. However, results do not identify a statistical difference between zero percent non-

matched and 50 percent non-matched. Similar to our previous results, this specification also indicates that higher tax rates and lower audit rates lower overall tax compliance rates.

5. Conclusions

In this study we have provided an analysis into the effect of how income that cannot be detected with certainty by the tax authority affects tax compliance behavior. The results should shed light on the issue of why the self-employed exhibit different tax compliance patterns relative to those in wage and salary employment if self-employment is often difficult to detect. Experimental methods provide several advantages in examining this issue. Most of all, an appropriately designed experiment will allow for a better isolation of the fundamental influences of income detection rates on compliance. In addition, accurate tax compliance data are difficult to obtain in the naturally occurring since many individuals intentionally attempt to hide evasion.

Results do not provide strong evidence that individuals who have a larger share of income that is difficult to detect exhibit significantly different tax compliance patterns. Perhaps individuals focus much more heavily on other parameters such as the audit rate and the tax rate. Indeed, we do find evidence that lower tax rates and higher audit rates lead to significantly higher tax compliance rates. Results also indicate that individuals who prepare their own tax returns and wealthier individual exhibit significantly lower tax compliance rates. Future revisions of this paper will examine more combination of matched versus non-matched income (e.g., 25 percent non-matched and 75 percent non-

matched) as well as changes in the rate that non-matched income is detected by the tax authority.

Since we are unable to identify a significant difference in compliance behavior between income that can be detected by the tax authority with certainty and income that cannot, the question remains as to why do the self-employed (whose income is presumably more difficult to identify) exhibit differing rates of compliance relative to those who are in wage and salary employment. One hypothesis is that the lack of income withholding for the self-employed may lead to lower rates of compliance. In addition, the self-employed may simply make more mistakes since their tax returns are usually more complicated than the non-self-employed. More research is required to verify these hypotheses.

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Table 1: Parameters

Percent Non-Matched	Tax Rate	Audit Probability	Probability of Detection
0			
25	20	10	25
50	35	30	50
75	50		75
100			

Table 2: Experimental Design

Treatment	Percent Non-Matched	Tax Rate	Audit Probability	Probability of Detection
1	0	35	10 and 30	-
3	50	35	10 and 30	50
5	50	35	10 and 30	75
6	50	35	10 and 30	25
7	50	20	10 and 30	50
8	50	50	10 and 30	50
9	100	35	10 and 30	50

Table 3: Should a Risk Neutral Individual Comply?

Matched Income

Tax Rate	Audit Rate	Expected Value of Compliance - Expected Value of Non-Compliance
35	10	-26.5
20	10	-13.0
50	10	-40.0
35	30	-9.5
20	30	1.0
50	30	-20.0

Non-Matched Income

Tax Rate	Probability of Detection	Audit Rate	Expected Value of Compliance - Expected Value of Non-Compliance
35	50	10	-28.2
35	75	10	-29.8
35	25	10	-26.6
20	50	10	-14.0
50	50	10	-42.5
35	50	30	-14.7
35	75	30	-19.5
35	25	30	-9.8
20	50	30	-1.9
50	50	30	-27.4

These figures are based upon an income of 100 lab dollars and a penalty rate of 50 percent of unreported income.

Table 4: Generalized Least Squares Regression Results

	Dependent Variable: Percent of Total Income Reported			
Variable	**Model 1**	**Model 2**	**Model 3**	**Model 4**
Gross Income	-0.454***	-0.507***	-0.286***	-0.471***
	(0.072)	(0.071)	(0.070)	(0.074)
Percent Non-Matched	-0.046	-0.042	0.037	-0.036
	(0.030)	(0.029)	(0.029)	(0.031)
Tax Rate	-0.776***	-0.994***	-0.881***	-0.781***
	(0.098)	(0.099)	(0.095)	(0.100)
Audit Probability	0.323***	0.323***	2.145***	0.361***
	(0.323)	(0.077)	(0.142)	(0.083)
Prepare Taxes	-	-18.357***	-	-
	-	(1.776)	-	-
Wealth	-	-	-0.034***	-
	-	-	(0.002)	-
Audit Last Round	-	-	-	-0.246
	-	-	-	(2.101)
Constant	109.5***	126.4***	97.10***	109.42***
	(7.09)	(7.16)	(6.88)	(7.24)

Entries are generalized least squares panel regression coefficients with standard errors in parentheses.

*, **, and *** denote statistical significance at the 10%, 5%, and 1% levels.

All percentages are on a 0-100 scale.

There are 2,940 observations for models 1, 2, and 3, utilizing 98 subjects.

Model 4 has 2,940 observations, also with 98 subjects. Here the first round was dropped becaue of the lagged audit variable.

Table 5: GLS Results with Categorical Explanatory Variables

Variable	Dependent Variable: Income Reported (%)
Income 70	5.631
	(4.265)
Income 80	3.813
	(4.231)
Income 90	-3.723
	(4.231)
Income 100	-10.747**
	(4.477)
Percent Non-Matched 0	0.288
	(2.295)
Percent Non-Matched 100	-6.980***
	(2.544)
Tax Rate 20	18.333***
	(2.392)
Tax Rate 50	-4.934**
	(2.396)
Audit Probability 30	6.463***
	(1.563)
Constant	44.99***
	(4.11)

*, **, and *** denote statistical significance at the 10%, 5%, and 1% levels.

All percentages are on a 0-100 scale.

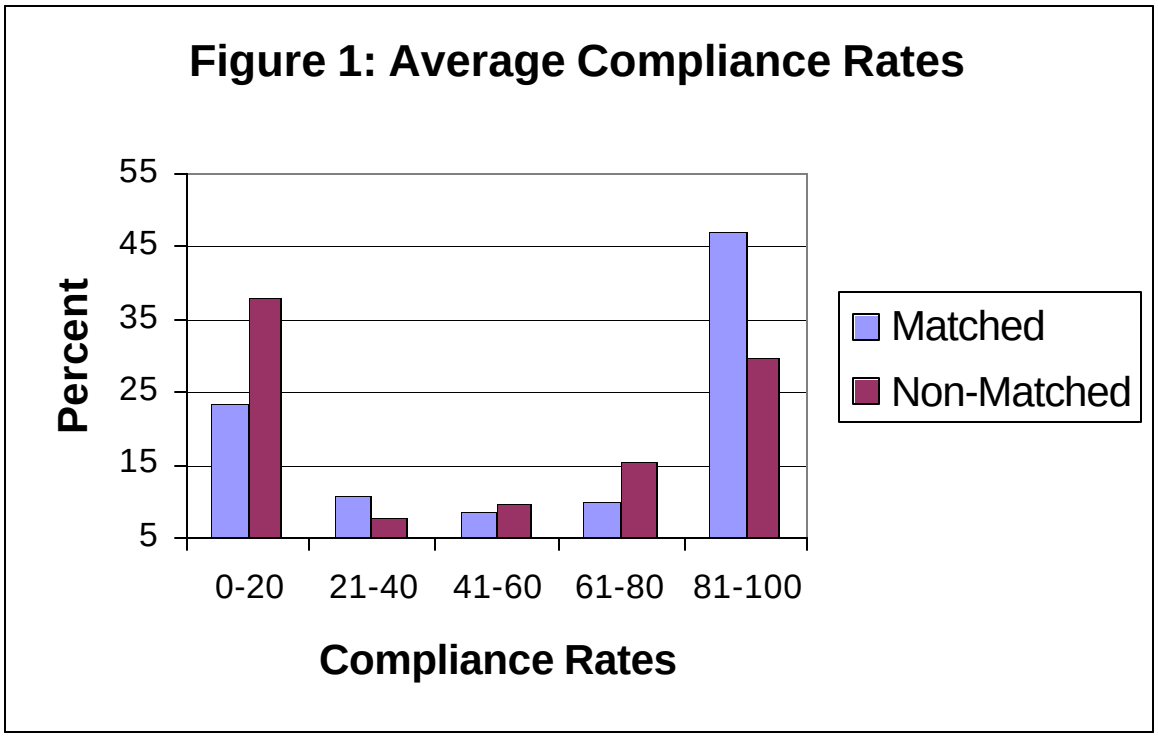
Figure 1: Average Compliance Rates
55
45
35
25
15
5
Percent
0-20
21-40
41-60
61-80
81-100
Compliance Rates
Matched
Non-Matched

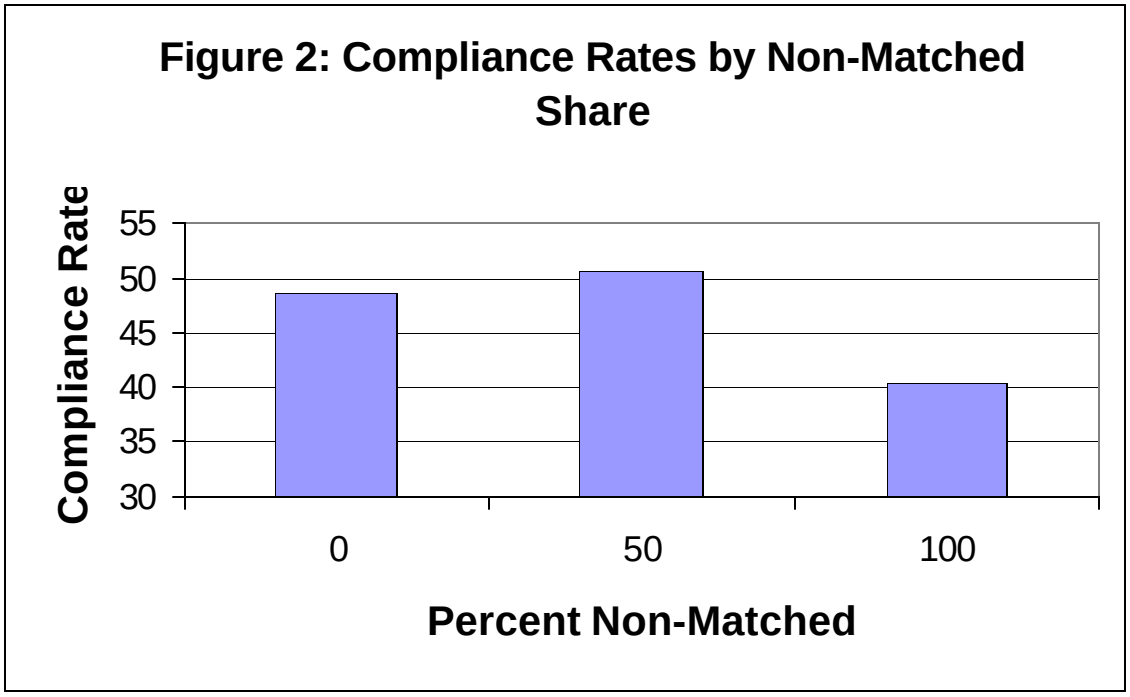
Figure 2: Compliance Rates by Non-Matched Share
55
50
45
40
35
30
Compliance Rate
0
50
100
Percent Non-Matched

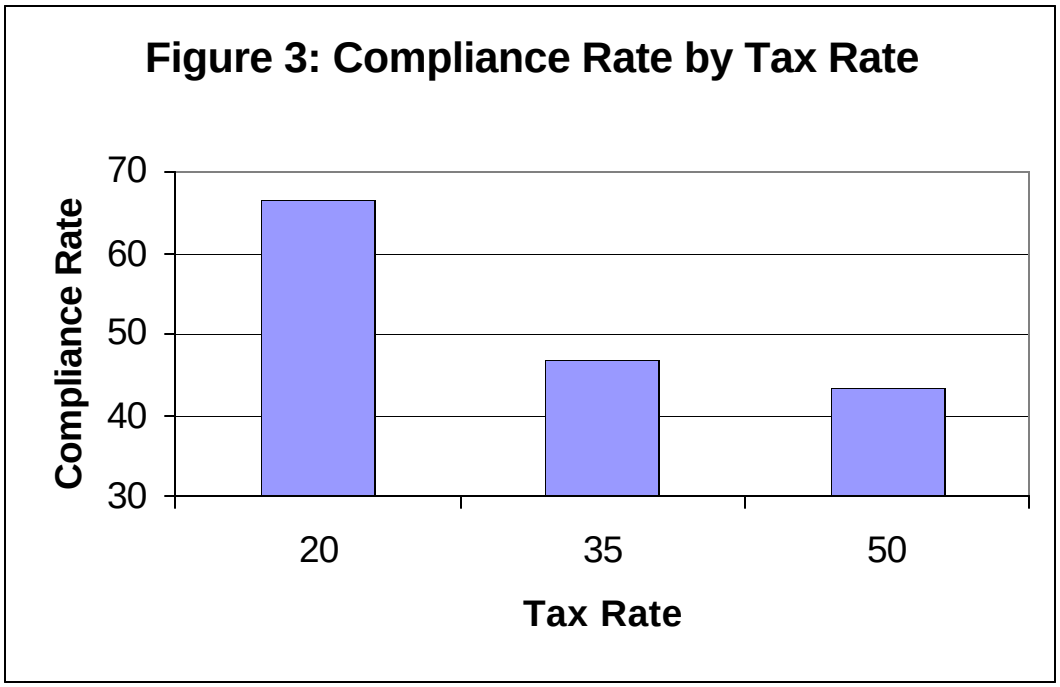
Figure 3: Compliance Rate by Tax Rate
Compliance Rate
70
60
50
40
30
20
35
50
Tax Rate

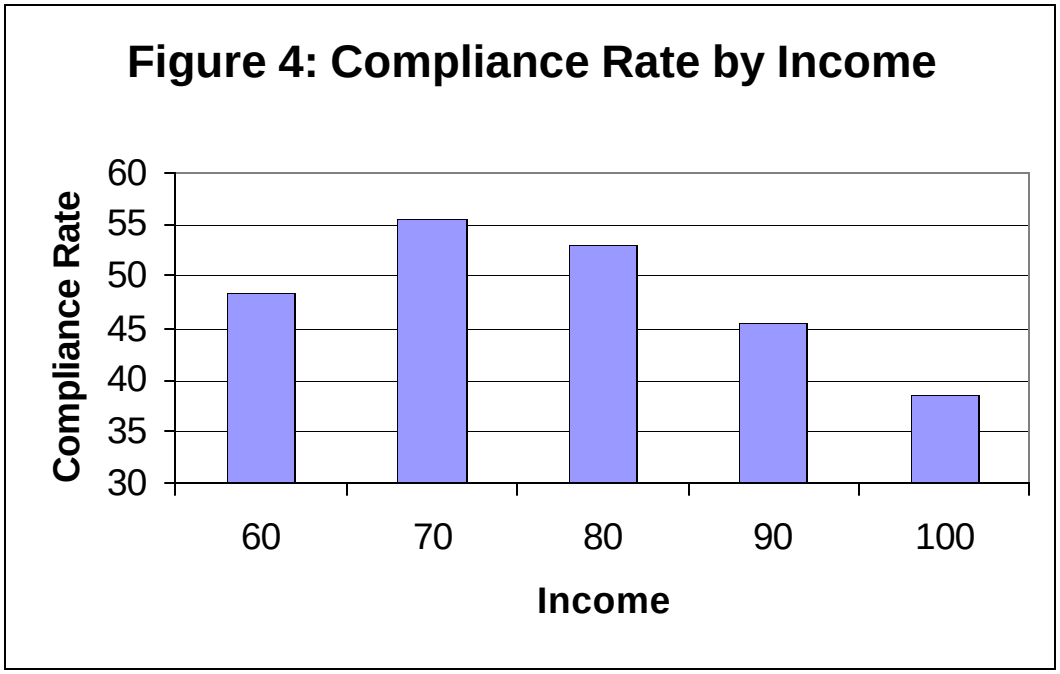
Figure 4: Compliance Rate by Income
Compliance Rate
60
55
50
45
40
35
30
60
70
80
90
100
Income