SYNOPSIS: This study analyzes a random selection of Internal Revenue Service (IRS) office audits from October 1997 to July 1998, the type of audit that concerns most taxpayers. Taxpayers engage paid preparers in order to avoid this type of audit and to avoid any resulting tax adjustments. The study examines whether there are more audit adjustments and penalty assessments on tax returns with paid-preparer assistance than on tax returns without paid-preparer assistance. By comparing the frequency of adjustments on IRS office audits, the study finds that there are significantly fewer tax adjustments on paid-preparer returns than on self-prepared returns. Moreover, CPA-prepared returns resulted in fewer audit adjustments than non CPA-prepared returns.

Keywords: tax compliance; taxpayer audits; tax practitioners.

Data Availability: Subject to approval by the Internal Revenue Service.

INTRODUCTION

A profession is a discipline practiced by an individual....The individual represents a profession, and a significant measure of prestige derives from that fact alone. By the same token, a profession is judged by the performance of its practitioners, and a failure on the part of one to meet expectations diminishes the whole.

Magill and Previts (1991, 3)

Society’s views and expectations of the profession’s duties are not always consistent with the capabilities and views of those of the profession, and this has been a major concern in public accounting. Magill and Previts (1991) argue that the resulting expectation gap justifies the need to educate the public about the responsibilities and capabilities of...
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the professional accountant. Although Magill and Previts (1991) focus on financial accounting and auditing functions, they describe the profession as one whose services include attestation, advisory services, and taxation.

The expectation gap in the tax area is noted in the literature. Christensen (1992) concludes that tax practitioners believe their clients’ primary motive is to have their taxes minimized while those same tax-paying clients believe the practitioners’ primary responsibility is to prepare their tax returns accurately. Research results are mixed regarding whether the tax professional’s primary goal is to minimize taxes (IRS 1987; Ayres et al. 1989) or to prepare accurate tax returns (Collins et al. 1990; Hite and McGill 1992). Separate from the compliance issue, researchers (Hite and McGill 1992; Christensen 1992) find that taxpayers hire practitioners to avoid being audited and to reduce the likelihood of any penalty or additional tax assessment.

This study examines tax returns audited by the U.S. Internal Revenue Service (IRS) in 1998 to determine whether audit adjustments are more likely to occur on self-prepared tax returns or on CPA-assisted tax returns. We also compare CPA-assisted tax returns to non-CPA-assisted returns. Although one might assume that professionally prepared returns are more accurate, Christian et al. (1993) find that paid-preparer returns tend to be more complex, include more sole proprietorship data, and have higher levels of income. Additional income and complexity are associated with higher audit rates and larger tax adjustments (Erard 1990; Dubin et al. 1992). Erard’s (1993) examination of 1979 tax returns from the Taxpayer Compliance Measurement Program (TCMP) indicates that paid-preparer tax returns, especially CPA-prepared returns, have larger adjustments than self-prepared returns, suggesting that CPA-prepared returns are less compliant.

Research Questions and Contributions

If taxpayers hire practitioners to reduce the likelihood of owing additional taxes in an audit, we expect the results from routine, annual IRS office audits to help tax practitioners and their clients evaluate how successful paid preparers are. The primary research questions addressed in this study are as follows:

1. Does the use of paid tax preparers decrease the overall level of adjustments in an IRS office audit relative to self-prepared returns?
2. Do CPA-assisted returns have lower adjustment rates than non-CPA-assisted tax returns?
3. Are there more audit adjustments on income or deduction items?

To answer these questions, this study analyzes randomly selected 1998 office audits and finds that CPA-assisted returns resulted in fewer audit adjustments than self-prepared returns. Deduction adjustments produced the most assessments—self-prepared returns had the most deduction adjustments, and CPA-assisted returns had the least deduction adjustments. Penalties were less likely to be assessed on a CPA-assisted return.

The study’s contributions are:

1. Findings are based on actual IRS office audits analyzed by academic researchers for the first time.
2. New results on penalty assessments not previously reported.
3. It presents data on multiple-item reporting—deductions and income items—rather than just the bottom-line effect.
4. Results compare CPA practitioners with other paid preparers, unlike most prior studies that focused only on differences between all types of paid-preparers and self-preparers.
BACKGROUND LITERATURE

The IRS audits less than 1 percent of all the individual income tax returns in the U.S. (Hube 1999), using undisclosed criteria to select returns. One selection criterion is a proprietary discriminant function or DIF score developed by the IRS using data from TCMP audits. TCMP audits were used to measure noncompliance and to develop the DIF formula used subsequently to select tax returns for office and field audits. Thus, returns selected for an office audit have a higher likelihood of noncompliance than the average tax return.

Although no longer conducted, TCMP audits occurred about once every three years from 1963 to 1988, and involved approximately 50,000 individuals each time. In contrast, less than 1 percent of the individual taxpayer population is audited each year. While TCMP audits were designed to be random, office audits are not. Each office audit is selected for a specific reason. The average tax assessment from traditional IRS audits was $5,500, compared with a $289 average for TCMP audits (Andreoni et al. 1998). Our study analyzes 1998 IRS office audits to test whether there are more audit adjustments on self-prepared returns than on paid-preparer returns.

As noted, differences between types of preparers were not thoroughly examined. Some studies conclude that CPAs are more aggressive than non-CPAs, but others conclude that CPA judgments are less aggressive (Ayres et al. 1989; Jackson and Milliron 1989; Cuccia 1994). This study does not examine paid-preparer-compliance levels for the entire taxpaying population. Instead, it analyzes 1998 office audits and tests whether, once audited, there are more audit adjustments on CPA-assisted or non-CPA-assisted returns. Data from IRS office audits may clarify whether preparers, specifically CPAs, are providing the services that clients think they are buying—correct returns with reduced audit adjustments and penalty risks. Although taxpayers’ aversions to audit and penalties are based on their perceptions of traditional IRS audits, not TCMP audits, prior research studies are based only on TCMP data.

The Effect of Tax Preparers

Research uses archival tax return data to develop evidence supporting aggressive preparer judgments. For example, by analyzing a national sample of federal income tax returns, Long and Caudill (1987) conclude that income tax liability is relatively lower on paid-preparer returns than self-prepared returns with the same income, filing status, number of exemptions, and other characteristics. Christian et al. (1994) find from a sample of 7,127 returns from the Statistics of Income (SOI) panel that paid-preparer returns have relatively larger refunds and smaller total prepayments than self-prepared returns. These results imply that paid-prepared returns have lower tax liabilities, which is consistent with the findings of Long and Caudill (1987).

Lower tax liabilities for supposedly similar tax returns suggest that paid-preparer returns are either more accurate or reflect aggressive reporting decisions. Based on 1979 TCMP data, Erard (1993) found that self-prepared returns had lower audit adjustments than paid-preparer returns, after controlling for potential confounding factors. One implication is that the paid-preparer returns had higher adjustments because they were overly aggressive. Erard’s (1993) results, however, were based on the magnitude of adjustments; he found no significant difference in the frequency of adjustments.

Economically, the results from prior research using TCMP data (Erard 1993; Klepper and Nagin 1989) are not surprising. In short, paid-preparer returns resulted in lower tax liabilities but more audit adjustments. The cost of hiring someone to prepare a tax
return would be outlandishly high if the preparer investigated every income and deduction transaction. Thus, some overlooked items could result in tax return adjustments on the paid-preparer returns, especially income items intentionally or unintentionally concealed from the preparer.

The American Institute of Certified Public Accountants Statements on Responsibilities in Tax Practice (AICPA 1997) states that a CPA may rely on information unless it appears to be incorrect. The CPA must exercise due diligence, but the client has ultimate responsibility for the contents of the return. Helloloid (1989) concludes that tax professionals did not believe their role included enforcing documentation requirements. Similarly, Australian tax agents report that the most frequently cited ethical issue for tax practitioners was the failure to make reasonable inquiries when client information appeared to be incomplete or inaccurate. The end result is a continuing dilemma over deciding when potential increases in tax return accuracy justify the cost of a more detailed investigation. One can expect more adjustments to be made on paid-preparer returns than on self-prepared returns for TCMP audits, in which every line item is questioned, because routine IRS office audits focus on a few specific issues with a higher expected payoff. The IRS estimates that it spends about $.49 to collect an extra $100 of revenue resulting from an audit (IRS 1986).

Types of Tax Preparers

In an experiment using different types of practitioners as subjects, Ayres et al. (1989) find that CPA preparers are more aggressive in tax reporting decisions than non-CPA preparers. A report by the IRS (1987) argues that large CPA firms are the preparer group that is “least compatible” with the IRS mission. Erard (1993) concludes that returns prepared by a CPA or lawyer tend to be less compliant, because they have higher dollar adjustments.

In contrast, Brody and Masselli (1996) find that a substantial percentage of the 61 CPA tax practitioners in their study elected to take a conservative position on an ambiguous case that, unbeknownst to the subjects, was actually settled in favor of the taxpayer. Perhaps many tax professionals are unwilling to take aggressive positions, even in ambiguous situations where facts and circumstances support a more client-beneficial position. Cuccia’s (1994) comparison of 36 CPAs with 45 non-CPA tax practitioners concludes that CPAs tend to make less aggressive judgments about hypothetical tax reporting issues.

Several studies suggest that there are differences in tax compliance between types of tax preparers. An IRS report (1987) and Helleloid (1989) find that CPAs are more aggressive, but Jackson and Milliron (1989) and Cuccia (1994) argue that CPA preparers are less aggressive. None of those studies examined: (1) data from traditional audits or (2) how effective paid preparers are at reducing the likelihood of audit adjustments.

There are several reasons why there are fewer adjustments and fewer penalties on audited tax returns with paid-preparer assistance than on self-prepared returns. A paid preparer, especially a CPA, may have a relationship with the IRS auditor from previous professional encounters. The IRS agent may be influenced by a CPA’s knowledge of the tax law. Moreover, the IRS agent may suspect that if an adjustment is proposed, the CPA is more likely to appeal the agent’s decision, making the agent look bad to superiors. Pentland and Carlile (1996) argue that IRS agents are quite averse to: (1) having their adjustments challenged on appeal and (2) extending the time period for an audit. Thus, the first two research questions addressed in our study are whether CPA-assisted tax returns have fewer office audit adjustments than do: (1) self-prepared and (2) non-CPA-assisted returns.
Deduction or Income Adjustments

Numerous researchers studied tax reporting decisions on ambiguous deduction issues (White et al. 1993; Schisler 1994), but few systematically compared tax reporting decisions about income and deduction items. Christensen and Hite (1997) compared uncertain deductions to uncertain income items, finding that taxpayers are significantly more likely to deduct an uncertain expense than to omit an uncertain income item. In addition, taxpayers perceive that underreported income is more likely to cause an audit than overstated deductions, that underreported income is more likely to be detected than overstated deductions, and that penalties are more severe for underreported income items than for overstated deductions. Their results indicate a preference for aggressive reporting on ambiguous deductions, consistent with the IRS report (1987). That study, reporting an IRS nationwide survey of tax practitioners, found evidence that risk perceptions varied between income and deductions. Practitioners reported that 64 percent of conflicts between taxpayers and practitioners resulted from a disagreement on the reporting of deductions. Only 27 percent of the conflicts involved income. This tendency for taxpayers to expect a tax deduction for their expenditures is not necessarily unethical. For example, Hite (1998) found that small business owners rationalize claiming capital expenditures as deductions because the expenditures correlate with the cash flows.

Evidence from TCMP audits indicates that when a paid preparer is involved, deduction adjustments are less frequent and income adjustments are more frequent. After examining 25 deduction items, Klepper and Nagin (1989) concluded that 10 of those items resulted in fewer adjustments on paid-preparer returns than on self-prepared returns; 6 had more adjustments on paid-preparer returns and the remaining 9 items had relatively equal numbers of adjustments, regardless of preparer type. Among 12 income items, 4 were equal, 6 had more adjustments, and 2 had fewer adjustments on the paid-preparer returns. Preparers may be aiding compliance on deductions more than on income. Klepper and Nagin (1989) suggest that paid preparers enforce the correct reporting of unambiguous items and exploit ambiguous ones. Since office audits revolve around pre-specified issues, paid-preparer assistance may result in fewer audit adjustments if the audited issues relate more to unambiguous items. Ambiguous items may be harder for the IRS agent to attack as invalid. Paid preparers rarely ask to look at every bank statement for income items, but many practitioners, especially CPAs, typically ask to see canceled checks or invoices for major expenditures. Because adjustments of deductions seem less likely than adjustments of income, the third research question asks whether any differences on paid-preparer returns, specifically CPAs, are due to fewer deductions or fewer income adjustments.

METHOD

Obtaining data on individual audited returns is generally not possible as the IRS protects the taxpayer’s privacy. The Examination Quality Measurement System (EQMS) database, however, includes the random sample of audited returns that was used in this study. To systematically measure the quality of the examination process, the IRS used an analytic sampling method to select audit cases for review. All 33 districts selected a minimum of 15 closed cases each month from the total pool of office audit files. Each of the four regional offices (Northeast, Midstates, Southeast, and West) was responsible for ensuring that cases were randomly and continuously selected. To assist districts in the random selection process, the national office provided a list of random
dates for selecting closed cases. Clerks selecting cases had no connection to the original examiners; the duties were separated.

From October 1997 to July 1998 IRS examiners reviewed approximately 2,300 office audits as part of the EQMS program to examine whether the auditor met the prescribed standards of care during the office examination. The EQMS data include certain economic characteristics of the taxpayer. For example, the database categorizes each return into the following Adjusted Gross Income (AGI) categories: less than $25,000, $25,000 to under $100,000, and $100,000 or more. Our study uses this three-level income categorization to control for a potential association between income and audit adjustments. Also, the database indicates whether the audited returns include a Schedule C (profit or loss from business) or Schedule F (profit or loss from farming). We use this dichotomous variable to control for complexity inherent in proprietorships.

To test whether there are more audit adjustments on self-prepared returns or paid-prepared returns, we apply analysis of variance using a dichotomous dependent variable for either no adjustment (coded 0) or an adjustment for an increased tax assessment as a result of the audit (coded 1). We code an independent variable representing preparer mode as 0 for paid preparer and 1 for self-prepared. To test for the effect of type of preparer, we compute an ANOVA similar to the one above, but code the independent variable as 0 for non-CPA-assisted returns and 1 for CPA-assisted returns. Although the category for CPA-assisted returns includes both CPAs and lawyers, contacts at the IRS indicated that the category is largely comprised of CPAs.

RESULTS

Demographic Description

Our study included 2,253 audit cases; 71 percent of the audited taxpayers prepared their own tax return, 19 percent hired a CPA, and 10 percent hired a non-CPA, such as an enrolled agent or commercial tax service.

Only 24 percent of these audits included Schedule Cs or Fs. In 1997, approximately 14 percent of all the individual tax returns included a Schedule C or F (IRS 1999, Table 1). This reflects the higher rate of audit for sole proprietors. Of the audits used in this study, 29 percent had adjusted gross income (AGI) below $25,000. Most of the audits, 55 percent, were of taxpayers with AGI between $25,000 and $100,000, and AGI above $100,000 represented 16 percent of the audits. The high AGI category confirms that audit likelihood increases with AGI, because statistics reveal that only about 5 percent of individual income tax returns have AGIs greater than $100,000 (IRS 1999, Table 3). Similarly, although tax returns with AGI below $25,000 represent 51.3 percent of all the tax returns, they are less likely to get audited—only 29 percent in the present study.

Most of the audited tax returns, 61 percent, resulted in increased tax assessments. Only 39 percent resulted in a “no tax change” audit, and only a few of those actually resulted in a refund to the taxpayer. The majority of the adjustments were to deductions, with 59 percent of the audits decreasing the amount of deductions allowed. Only 22 percent of the audits increased the amount of income reported. Furthermore, only 15 percent were assessed penalties.

Paid-Preparer Results

To examine the first research question concerning the paid-preparer effect on audit adjustments, we computed a simple analysis of variance with a Bonferroni F-test using the presence (coded 1) or absence (coded 0) of an increased tax assessment as the
dependent variable. Similarly, we used as dependent variables the presence of a deduction adjustment, the presence of an income adjustment, and the presence of a penalty assessment. We coded the independent variable for type of preparation as 1 for self-preparation, 2 for use of a non-CPA paid preparer, and 3 for a CPA preparer.

Table 1 reports that use of a preparer had a significant effect (p < .05). Of those returns without paid-preparer assistance, 64 percent had adjustments as did 63 percent of the non-CPA assisted returns. Only 49 percent of the CPA-assisted returns had adjustments.

**Type of Adjustments**

The audit adjustments resulted more from deductions (59 percent) than income (22 percent), yet CPA preparers were associated (p < .05) with fewer deduction adjustments (47 percent) than self-prepared (62 percent) or non-CPA paid-preparer returns (60 percent). The likelihood of an income adjustment did not significantly vary by preparation mode. Penalty assessments, however, did significantly vary by preparation mode (p < .05). Only 11 percent of the returns associated with a CPA received a penalty while 17 percent of the self-prepared returns did.

The results of this study also indicate that of those who were assessed additional tax, 89 percent had a deduction adjustment while only 32 percent had an income adjustment. And, among those who had an income adjustment, 70 percent also had a deduction adjustment. In comparison, among those who had a deduction adjustment, only 26 percent also had an income adjustment. In short, taxpayers were more likely to have a deduction adjustment than an income adjustment as a result of an IRS office audit. Furthermore, even though the income adjustments were less frequent, they resulted in relatively more penalties. Only 22 percent of those with a deduction adjustment received a penalty compared to 30 percent of those with an income adjustment.

<table>
<thead>
<tr>
<th>Dependent Variables*</th>
<th>Independent Variables**</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Self-Prepared</td>
</tr>
<tr>
<td>Additional Tax</td>
<td>.64a</td>
</tr>
<tr>
<td>Deductions</td>
<td>.62a</td>
</tr>
<tr>
<td>Income</td>
<td>.22</td>
</tr>
<tr>
<td>Penalty</td>
<td>.17a</td>
</tr>
</tbody>
</table>

a,b The means labeled “a” significantly differ (p < .05) from the means labeled “b.”

* The dependent variables are coded 0 for tax returns in which no adjustment was made, or 1 for tax returns in which additional tax was assessed, an adjustment was made for a deduction, an adjustment was made for understated income, or a penalty was assessed.

** Means indicate the proportion of each group that was assessed an additional tax, deduction adjustment, income adjustment, or a penalty assessment.

1 A Bonferoni analysis controls for the alpha level while simultaneously testing for differences for each type of preparer such as self vs. CPA, self vs. non-CPA, and CPA vs. non-CPA assistance.
Sole Proprietorship and Income Effects

When we compared self-prepared returns to all preparer-assisted returns, we found significant differences in frequency of tax assessments, deduction adjustments, and penalty assessments. Table 1 demonstrates that CPA assistance was significant, but use of other paid-preparers was not significant. The analysis in Table 1 presents the overall results without considering the effects of a taxpayer who is a sole proprietor or the effects of income level. When we include these two factors as independent variables in a multivariate model, the overall results do not change. That is, CPA-assisted returns tend to have fewer adjustments on IRS office audits than self-prepared returns, and this is primarily a function of the deduction adjustments. Testing the CPA-preparer effect for each income level with and then without a sole proprietorship violates the statistical premise of controlling for the overall alpha levels. In addition, the cell sizes become relatively small for some of the subgroups. Nonetheless, graphical comparisons in Figures 1 and 2 provide some insights about the relationships between income level, sole proprietorships, and paid-preparer use. Statistical significance in the multivariate models is noted with an “*” for an overall significant effect and “+” in the univariate models for each subgroup.

When we computed the multivariate analysis of covariance with CPA assistance, sole proprietorship, and income levels as independent variables, we found no significant interactions (p < .05) for CPA assistance and income level or for CPA assistance and proprietorship status. We did find, however, two significant interactions (p < .05) between sole proprietorships and income level. First, income adjustments were more likely on high-income returns with a sole proprietorship than on high-income returns without a sole proprietorship. Second, penalties occurred more frequently on high- and middle-income returns with a sole proprietorship. The middle- and high-income graphs for income and penalty adjustments in Figure 1 reflect these interactions.

The data in Panel A of Figure 1 indicate that there were fewer total audit adjustments on the CPA-assisted returns compared to the self-prepared returns at all income levels. Thus, CPA assistance was statistically robust for the middle-income taxpayers without a Schedule C or F and for high-income taxpayers with a Schedule C or F.

Overall, the means from Panel B reflect a significant effect for deduction adjustments based on the multivariate analyses and on the simple ANOVA presented in Table 1. When examining each subgroup in Panel B with separate univariate analyses, smaller cell sizes result in reduced significance. For the deduction adjustments at middle-income levels, CPA-assisted returns had significantly fewer adjustments than self-prepared returns for returns with sole proprietorships and without sole proprietorships. For low-income taxpayers the rate of deduction adjustments was between 59 and 60 percent regardless of CPA assistance or presence of a sole proprietorship. For high-income taxpayers there was a significant univariate effect for CPA assistance when the audited returns did not include a Schedule C or F.

Per Table 1, there was no overall effect of CPA assistance on income adjustments, but Panel C of Figure 1 indicates that CPA-assisted returns had fewer income adjustments than self-prepared returns for high-income taxpayers who had a sole proprietorship, a significant difference in the univariate test.

Combining all groups from Figure 1, Panel D in a multivariate analysis resulted in a modest overall CPA-preparer effect on penalty assessment (p = .069). Panel D of Figure 1 indicates that penalties were significantly more likely to be assessed when there was a Schedule C or F for high-income taxpayers who prepared their own returns. Middle-income taxpayers...
**FIGURE 1**
Comparisons of Audit Adjustments on Self-Prepared and CPA-Assisted Returns

**Panel A: Total Adjustments**

<table>
<thead>
<tr>
<th>Income Level</th>
<th>Schedule C/F</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
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<td>.61 S</td>
<td>.52 C</td>
<td>.63 S</td>
</tr>
<tr>
<td>Middle Income</td>
<td>.66 S</td>
<td>.49 C</td>
<td>.63 S</td>
</tr>
<tr>
<td>High Income</td>
<td>.57 S</td>
<td>.46 C</td>
<td>.67 S</td>
</tr>
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</table>

**Panel B: Deduction Adjustments**

<table>
<thead>
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<th>Income Level</th>
<th>Schedule C/F</th>
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<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Income</td>
<td>.60 S</td>
<td>.59 C</td>
<td>.59 S</td>
</tr>
<tr>
<td>Middle Income</td>
<td>.65 S</td>
<td>.47 C</td>
<td>.58 S</td>
</tr>
<tr>
<td>High Income</td>
<td>.61 S</td>
<td>.46 C</td>
<td>.47 S</td>
</tr>
</tbody>
</table>

**Panel C: Income Adjustments**

<table>
<thead>
<tr>
<th>Income Level</th>
<th>Schedule C/F</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Income</td>
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<td>.28 C</td>
<td>.25 S</td>
</tr>
<tr>
<td>Middle Income</td>
<td>.21 S</td>
<td>.21 C</td>
<td>.29 S</td>
</tr>
<tr>
<td>High Income</td>
<td>.15 S</td>
<td>.10 C</td>
<td>.39 S</td>
</tr>
</tbody>
</table>

**Panel D: Penalty Assessments (p=.069)**

<table>
<thead>
<tr>
<th>Income Level</th>
<th>Schedule C/F</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Income</td>
<td>.18 S</td>
<td>.17 C</td>
<td>.11 S</td>
</tr>
<tr>
<td>Middle Income</td>
<td>.14 S</td>
<td>.08 C</td>
<td>.24 S</td>
</tr>
<tr>
<td>High Income</td>
<td>.15 S</td>
<td>.05 C</td>
<td>.39 S</td>
</tr>
</tbody>
</table>

S = Self-Prepared  C = CPA-Assisted

* Indicates significant differences (p < .05) between CPA-Assisted and Self-Prepared returns for an overall effect combining all income levels and proprietorship status. When separate tests were computed for only those with a Schedule C or F (“Yes”) and separately for those without a Schedule C or F (“No” in the above figure), “+” indicates statistical significance (p < .10) for CPA-Assisted returns.
who were not sole proprietors had more penalty assessments when they prepared their own tax returns than when they had CPA assistance. CPA assistance, however, did not benefit the audited low-income tax returns.

To summarize, when combining all income levels and returns with or without sole proprietorships, audit adjustments were less likely on CPA-assisted returns than self-prepared returns. However, the separate testing of each subgroup displayed in Figure 1 indicates a more positive effect of CPA assistance on high-income and middle-income tax returns than on low-income tax returns. In addition, sole proprietors had more income adjustments and penalty assessments than those without a sole proprietorship.

**Interactive Effects on Preparer Mode**

To compare type of preparer assistance, we computed a multivariate model controlling for income level and sole proprietorships. There were no overall significant main effects \( (p < .05) \) for type of preparer, CPA vs. non-CPA paid preparer. This is consistent with the Bonferroni tests presented in Table 1. However, we found a significant interaction effect for preparer mode and income level. For example, CPA-assisted returns in the middle- and high-income levels generally had less deduction adjustments. Low-income tax returns, however, actually had a higher rate of adjustments on the CPA-assisted returns.

We also found a significant main effect for sole proprietorships. In other words, sole proprietors had more income adjustments and more penalty assessments. Figure 2 illustrates the percent of adjustments on CPA-assisted and non-CPA-assisted returns by income level and sole proprietor status.

Table 1 presented evidence that audited returns with CPA assistance significantly differed from audited returns without CPA assistance. However, when we computed a multivariate model with controls for income level and sole proprietor status, we found no statistically significant effect for CPA assistance compared to non-CPA assistance. The graphs in Figure 2 indicate which subgroups differed between CPA assistance and non-CPA assistance. Based on univariate tests, we found that CPA-assisted returns had significantly fewer total adjustments than non CPA-assisted returns for middle-income taxpayers without sole proprietorships and for high-income taxpayers with sole proprietorships. In addition, we found that CPA-assisted returns had significantly fewer deduction adjustments for middle-income taxpayers with and without a Schedule C or F.

When we tested income adjustments, we found no significant preparer mode differences at any income level or proprietor status. Similarly, we found no significant differences for type of preparer on penalty assessments.

To summarize Figures 1 and 2, we found that CPA-assisted returns differed from self-prepared returns on total adjustments, deduction adjustments, and penalty assessments. CPA-assisted returns significantly differed from non-CPA-assisted returns primarily on deduction adjustments for middle-income taxpayers.

**DISCUSSION**

In Australia (Marshall et al. 1998), the U.K. (McBarnet and Whelan 1992), and the U.S. (Klepper and Nagin 1989), the role of the tax practitioner has been questioned. Many tax practitioners are associated with professional organizations having codes of ethics; would-be professionals are taught to be loyal to the profession and its standards, yet profit motives supposedly foster aggressive tax planning (Makkai and Brathwaite 1993). Several studies report that tax practitioners, specifically CPAs, condone aggressive reporting (Ayres et al. 1989; Cruz et al. 2000).
FIGURE 2
Comparisons of Audit Adjustments on CPA-Assisted and Non-CPA-Assisted Returns

Panel A: Total Adjustments

<table>
<thead>
<tr>
<th>Income Level</th>
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<th>Non-CPA-Assisted</th>
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<tbody>
<tr>
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<td>Middle Income</td>
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</tr>
<tr>
<td>High Income</td>
<td>.72</td>
<td>.44</td>
</tr>
</tbody>
</table>

Panel B: Deduction Adjustments

<table>
<thead>
<tr>
<th>Income Level</th>
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<th>Non-CPA-Assisted</th>
</tr>
</thead>
<tbody>
<tr>
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<tr>
<td>Middle Income</td>
<td>.70</td>
<td>.59</td>
</tr>
<tr>
<td>High Income</td>
<td>.70</td>
<td>.56</td>
</tr>
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</table>

Panel C: Income Adjustments

<table>
<thead>
<tr>
<th>Income Level</th>
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<th>Non-CPA-Assisted</th>
</tr>
</thead>
<tbody>
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<tr>
<td>Middle Income</td>
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<td>.05</td>
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<tr>
<td>High Income</td>
<td>.36</td>
<td>.09</td>
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</table>

Panel D: Penalty Assessments

<table>
<thead>
<tr>
<th>Income Level</th>
<th>CPA-Assisted</th>
<th>Non-CPA-Assisted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Income</td>
<td>.17</td>
<td>.04</td>
</tr>
<tr>
<td>Middle Income</td>
<td>.12</td>
<td>.05</td>
</tr>
<tr>
<td>High Income</td>
<td>.20</td>
<td>.06</td>
</tr>
</tbody>
</table>

N = Non-CPA-Assisted C = CPA-Assisted

* Indicates significant differences (p < .05) between CPA-Assisted and Self-Prepared returns for an overall effect combining proprietorship status. When separate tests were computed for only those with a Schedule C or F (“Yes” above) and separately for those without a Schedule C or F (“No”), “+” indicates statistical significance (p < .10) for CPA-Assisted returns.
No prior study, however, analyzes data from actual IRS office audits. This study examines data from office audits to document whether CPA-assisted tax returns had fewer tax adjustments and penalties than self-prepared returns. The findings were quite distinct from those of prior TCMP studies (Klepper and Nagin 1989; Erard 1993). Although TCMP audits tend to find more income errors, the present study reveals that deduction errors are more likely to be adjusted in office audits. Furthermore, errors on income issues are generally equivalent whether the return was self-prepared, CPA-prepared, or non-CPA-prepared. The only statistical exception was for high-income tax returns with a sole proprietorship. For this subgroup, CPA-assisted returns had fewer income adjustments. Most income errors appeared to be more a function of the opportunity and/or complexity inherent in sole proprietorships, regardless who prepared the return.

Although more cases had deduction adjustments (59 percent) than income adjustments (22 percent), returns with deduction adjustments had less penalties than returns with income adjustments. Approximately 22 percent of those with a deduction adjustment received a penalty while 30 percent of the returns with an income adjustment received a penalty.

In this study the audited returns do not reflect the normal individual taxpaying population, because high-income taxpayers and sole proprietorships have higher audit probabilities. For example, approximately 14 percent of the 1997 individual returns filed a schedule C or F, but 24 percent of the returns selected for office audits in this data set had a Schedule C or F. Similarly, approximately 5 percent of the 1997 individual tax returns had AGIs greater than $100,000, but 16 percent of the office audit cases had incomes that high.

This study confirms that paid-preparer returns for CPAs tend to have lower likelihoods of deduction adjustments and tax assessments than do self-prepared returns. Future researchers may want to examine why these differences exist. For example, are the differences explained by more accurate returns or by the fact that the CPAs are more successful at defending their positions?

It is possible that tax returns using a preparer or practitioner significantly differ on other dimensions. Any differences between professional tax assistance and self-preparers could result from the inherent complexity of the returns, referred to as an endogeneity problem, rather than from the preparer’s level of care. Researchers typically assume that paid-preparer/practitioner returns are more complex. If they are more complex, then one expects more audit adjustments, yet this study finds fewer, probably because the returns selected for audit reflect relatively equal criteria. Hence, endogeneity does not appear to be a threat to the validity of this study.

CONCLUSION

This study analyzes a random selection of IRS office audits from October 1997 to July 1998. The study examines whether there are more audit adjustments and penalty assessments on tax returns with paid-preparer assistance than on tax returns without paid-preparer assistance. By comparing the frequency of adjustments, we find that CPA-assisted returns had significantly fewer audit adjustments and penalty assessments than did returns without paid-preparer assistance. Specifically, we found the following:

- IRS office audits result in fewer tax adjustments on CPA-assisted returns than on self-prepared returns, while non-CPA-assisted returns do not result in significantly fewer adjustments.
Most adjustments come from deduction errors, and CPA-assisted returns have a significantly lower likelihood of having a deduction adjustment, especially for middle-income taxpayers and high-income taxpayers but not for low-income taxpayers.

Overall, type of paid preparer does not affect the frequency of adjustments to income items. However, for high-income taxpayers with a sole proprietorship, CPA-assisted returns have fewer income adjustments than non-CPA-assisted returns.

CPA-assisted returns have fewer penalties than self-prepared returns, and this is especially true for middle- and high-income taxpayers without a sole proprietorship.

This study offers evidence on the positive role that qualified accountants play in terms of decreasing deduction adjustments and decreasing penalty assessments. The results, however, are not conclusive. Given the nature of the data, the results may be a function of the types of taxpayers and types of tax returns selected for audits. This potential selection bias limits the generalizability of the findings.

Nevertheless, the study’s importance follows from our use of data on actual IRS office audits and from our distinction between CPA practitioners and other paid preparers. Taxpayers hire preparers and practitioners to decrease the likelihood of additional tax and penalty assessments on traditional IRS audits. Although the results suggest that, on average, audited taxpayers benefit from CPA assistance, the data do not establish precisely why there are fewer adjustments on these CPA-assisted returns. Future research should examine whether the results are generalizable to all returns, not just those selected for an office audit. The self-selection effect could be affecting the results, as could the different types of returns or specific types of issues being audited.

REFERENCES


