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**THE MINNESOTA INCOME TAX COMPLIANCE EXPERIMENT
STATE TAX RESULTS**

Stephen Coleman, PhD

**Minnesota Department of Revenue
April 1996**

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THE MINNESOTA INCOME TAX COMPLIANCE EXPERIMENT

EXECUTIVE SUMMARY

This report describes the Minnesota Income Tax Compliance Experiment conducted by the Minnesota Department of Revenue in 1995. The experiment tested alternate strategies to improve voluntary compliance with the state income tax. These strategies included: increased examination and auditing of tax returns *with prior notice to taxpayers*, enhanced services to taxpayers, information messages in letters sent to taxpayers, and a new M-1 tax form. About 47,000 taxpayers participated in the experiment. They were selected by random chance for the compliance strategies.

The primary measures used to evaluate compliance strategies were change in reported income and change in state taxes paid from (tax year) 1993 to 1994. Changes in taxpayer groups subject to a compliance strategy were compared to changes in similar groups of taxpayers who were unaffected by the experiment (control groups).

These are the main findings:

- Low- and mid-income taxpayers facing an examination or audit reported more income and paid more taxes. Increases were generally larger among taxpayers who had business income and paid estimated state taxes in 1993.
- We identified certain smaller groups of taxpayers who were especially responsive to the threat of an examination, reporting up to \$8,000 more income and \$700 more state taxes.
- High income taxpayers had a mixed reaction to the examination threat; some responded positively, some negatively; the net effect on taxes was slight.
- The service offer, which was an incremental expansion of existing services, did not have a net effect on reported income or taxes paid. Only 14 percent of taxpayers who were offered the service called us—slightly below the rate taxpayers normally call us.
- One of the two information messages had a modest positive effect on reported income and taxes paid. This message refuted the idea that many taxpayers cheat on their taxes and reinforced social norms about tax compliance.
- Taxpayers who had had their 1993 taxes corrected during processing by the department reported more income and paid more taxes when they subsequently got either notice of an examination or the information letter about tax cheating.
- The test M-1 form, which was used only by taxpayers who did not go to a practitioner, resulted in more people taking a subtraction, often for a child's school expenses.
- The experiment had little effect on timeliness of tax filings, the rate of adjustments made to tax filings during the department's machine processing of returns, or taxpayers' use of a tax practitioner.

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Tax Compliance Experiment Chronology

Audit letter

Service letter

Sermon letter 1

Sermon letter 2

Letter with M-1 test form

M-1 standard form

M-1 test form

"Many upset over letter hinting audit." St. Paul *Pioneer Press*, 10 February 1995

Report from Special Phone Service Group (Service Experiment)

THE MINNESOTA INCOME TAX COMPLIANCE EXPERIMENT STATE TAX RESULTS

In 1995 the Minnesota Department of Revenue conducted an experiment to measure the effectiveness of different strategies to increase voluntary compliance with the individual income tax. The strategies included: (1) an increased examination and audit rate of tax returns *with prior notice to taxpayers*; (2) enhanced customer services; (3) redesign of the standard M-1 tax form; and (4) letters to taxpayers with information messages on the importance of voluntary compliance.

The experiment measured the impact of the alternate compliance strategies on voluntary compliance by looking at changes from 1993 to 1994 in reported income and taxes paid by groups of taxpayers subject to the different strategies. These changes were compared with changes in a control group of taxpayers who were not affected by the experiment. About 47,000 taxpayers were participants in some phase of the experiment, not counting the control groups.

This was a unique experiment; none like it had been conducted by another state or by the IRS. To help design the experiment and interpret the results, the Department of Revenue set up an advisory board. The five-member board included nationally recognized experts in tax compliance research and statistical methods from Minnesota and other states. Representatives from St. Paul's IRS office also participated.

As we describe here, the results of the experiment give valuable information about the most effective strategies to increase compliance, and the experiment identifies groups of taxpayers where the compliance strategies have the greatest impact.

DESIGN OF THE EXPERIMENT

The taxpayers in the experiment were selected by random chance, subject to certain restrictions. Several restrictions applied to all taxpayers in the sample: (1) Only full-year 1993 Minnesota residents were included in the experiment. (2) The samples were drawn from people who filed Minnesota taxes in 1994 for the 1993 tax year. (3) The 1993 taxes were processed by the Minnesota Department of Revenue by the end of September 1994. (4) No amended returns were included. And (5) matching federal income tax data was available for the taxpayers. About 1,850,000 Minnesota taxpayers met these conditions. Additional selection criteria were applied to various parts of the experiment. Taxpayers who had asked for a filing extension to delay filing their 1993 taxes were generally not included in the sample. Married taxpayers who filed jointly were counted as a single case in the sample and analysis.

The portion of the sample used for the final analysis consisted of taxpayers whose 1994 taxes were filed and processed by the Department of Revenue by the end of November

1995. We did not investigate the reasons for taxpayers not filing by this date. Some loss of taxpayers in the sample was undoubtedly caused by taxpayers moving out of state or having too little income to file a 1994 return, among other possibilities. The November 1995 processing date, however, allowed us to include most of the taxpayers who might have filed late or requested an extension in 1995, perhaps as a result of the experiment.

Because of the difficulty in tracking a change of taxes when a taxpayer gets married or divorced, we limited the final analysis to taxpayers who had the same filing status in 1993 and 1994. This final group used in the analysis was about 90 percent of the original sample. (For more detail on the samples, see the Appendix.)

We describe each of the compliance strategies in turn:

Strategy I. Examination or Audit with Prior Notice.

This part of the experiment was designed to test what happens when taxpayers know that that their return will be closely examined or audited. The audit or examination threat was intended for two groups of taxpayers: a group representative of the general population of taxpayers, called low risk, and a group believed to be at a higher risk of tax evasion. The sample was stratified so that it included a greater proportion of taxpayers in the high risk category than one would find in the taxpayer population.

Previous research on tax evasion points to several factors associated with evasion, including income not subject to withholding tax and ownership of a sole proprietorship. The high risk group was a random sample from taxpayers who filed a federal schedule C or F (indicating business or farm income) in 1993 and who paid Minnesota estimated tax in 1993. The estimated tax is another indicator of income not subject to withholding tax. A Minnesota taxpayer is required to file and pay estimated tax quarterly if expected income will be \$500 or more above withholding and expected tax credits. The \$500 threshold effectively eliminated taxpayers from the high risk group who may have filed a schedule C or F but had little income from their businesses. Taxpayers not in the high risk category were classified as low risk.

In 1993 about 102,000 taxpayers fit the high risk profile; they were half of all estimated-tax filers and 20 percent of sole proprietors and farmers. (Taxpayers who delayed filing a quarterly report but made extension payments on their estimated tax were counted just the same as taxpayers who filed quarterly estimated returns and made payments.)

An advantage of a sample based on estimated-tax payers is the possibility of tailoring interventions for this group in the future if the experiment proves a success, because these taxpayers are involved with the department throughout the year. The low risk group selected to represent the general population may provide valuable information about what approach to compliance works best with people who rarely would be the target of an audit.

The experimental treatment group received a letter by first-class mail from the commissioner in January 1995. The taxpayers were told: (1) that they had been selected at random to be part of a study "that will increase the number of taxpayers whose 1994 individual income tax returns are closely examined"; (2) that both their state and federal tax returns for the 1994 tax year will be examined by the Minnesota Department of Revenue; (3) that they will be contacted about any discrepancies; and (4) that if we find "irregularities" we may also review their returns filed in prior years, as provided by law. The taxpayers were given department phone numbers to call for information and assistance with their taxes. (Copies of all letters sent to taxpayers in the experiment are in the Appendix.)

On February 10, 1995 the St. Paul *Pioneer Press* carried a report on the experiment, "Many upset over letter hinting audit." (A copy is in the Appendix.) This news item was picked up by the Associated Press, and it appeared later in several other newspapers. We are uncertain how this might have affected the results of the experiment. If there was any effect, it seems likely that the report would have enhanced the credibility of the audit threat.

In 1995 the department began examining the tax filings of all taxpayers who were sent the audit letter, but the results of the examination phase will not be known until later in 1996. The intent of the experiment, however, was to evaluate the effect of prior notice on voluntary compliance, not the effectiveness of auditing at discovering unpaid taxes after filing.

Because an examination of a return was the most costly intervention in the experiment, the sample was limited to the minimum size required. Computer simulations by Professor Kinley Larntz (Department of Statistics, University of Minnesota) showed that a sample of about 1,600 taxpayers was sufficient for the experiment. That is, there was at least an 80 percent chance of observing a 5 percent increase in taxes paid by a treatment group, in comparison with the control group, if the experiment had the expected compliance effect. The simulation also assumed that underpayment of taxes is concentrated among about 25 percent of the taxpayers and that about 10 to 25 percent of the underpayment is spread evenly across this group, while the remainder of the unpaid taxes is proportional to the taxpayer's income. With a sample of about 700, a 10 percent increase in taxes can be detected with 80 percent probability, assuming that 10 percent or more of the taxpayers are not paying all their taxes. The final sample size was increased about 10 percent to 1,724 to allow for the inevitable loss of cases that would occur because of taxpayers not filing returns. (Sample sizes for all parts of the experiment are in the Appendix).

The concentration of noncompliance among a minority of taxpayers, as assumed in the computer simulation for determining sample size, is suggested by earlier research. The exact proportion of taxpayers who try to evade taxes is unknown. Based on audits, however, the IRS estimates that 27 percent of taxpayers owe an additional \$500 or less, which amounts to 13.5 percent of the total owed by taxpayers. The group of taxpayers owing more than \$500, who are 12.3 percent of taxpayers, account for 86.5 percent of

unpaid taxes. In surveys, roughly 10 to 25 percent of taxpayers admit tax evasion. Survey results are not consistent, however, and may refer to different lengths of time when evasion might have occurred.

The sample was also stratified to include more taxpayers at the low and high income levels to increase the possibility of detecting whether the effectiveness of a treatment varies with income. There are three income ranges, labeled low, medium or mid-income, and high. Low income is under \$10,000 federal adjusted gross income, as reported on 1993 taxes. Medium income is from \$10,000 to \$100,000, and high income is over \$100,000. The low and medium income groups together represent 97 percent of the taxpaying population.

As a result of the stratification by risk and income, there are six categories of taxpayers in the analysis (2 risk levels x 3 income levels). We examined the results within each category and in combinations of the categories:

	Low Income	Mid-Income	High Income
Low Risk			
High Risk			

Strategy II. Enhanced Customer Service.

This part of the experiment was designed to test whether better customer service will stimulate greater compliance, either by reducing taxpayers' errors or by creating a more positive relationship between the taxpayer and the department. A more positive relationship might overcome a tendency to evade taxes in some taxpayers. Because it was not possible to control the amount of services used by the taxpayers, their aggregate level of service use was recorded during the experiment.

Taxpayers in the experimental treatment group were offered "special help", a level of service that is higher than currently available at the department. The taxpayers were sent a letter in January 1995 telling them that they could use a special phone number (local metro number or "800" for non-metro) to get tax information, including state and federal tax forms and help with both their state and federal taxes. Normally, the department does not offer help on federal taxes. Taxpayers were allowed to ask questions anonymously. Taxpayers who needed additional help beyond what the phone service could offer were referred to knowledgeable staff in the department who later returned their calls. Along with the service letter, taxpayers received a helpful information booklet on tax preparation that is used by VITA volunteer tax preparers. The letter also had a list of local and regional Department of Revenue offices where the taxpayers might seek information in person by appointment and included a refrigerator magnet with the special phone numbers.

A small group of department staff was organized to accept the phone calls. Calls were answered Monday through Friday from 7:30 am to 9:00 pm and on Saturdays from 9:00 am to 4:00 pm. These hours were maintained from January 17 to April 17. A taxpayer calling after hours could leave a message on an answering machine.

In reality, the phone service hours were no greater for those in the experiment than for regular taxpayers, but the hours and likelihood of the phone being answered on the first call were significantly better for all taxpayers in 1995 than in earlier years. So the level of service offered in the experiment may have exceeded what a taxpayer had come to expect from contact with the department in prior years. Because we do not know what taxpayers expected from the department in level or quality of service, we cannot determine exactly how they perceived the service offer.

The sample of taxpayers for the service experiment was taken from the same stratified groups of low risk and high risk taxpayers within low, medium and high income ranges, as discussed above in the threat-of-an-audit experiment. Anticipating a weaker effect, however, we doubled the sample size over the audit experiment to 3,448.

By having the audit and service experiments apply to comparable groups of taxpayers, it is possible to compare the relative effectiveness of the two strategies for improving compliance.

The service experiment also gave the department some experience in requests for federal tax information. Because the Minnesota tax form depends on the federal form, it is in the best interests of the state that taxpayers accurately complete their federal forms. Also, an anticipated decline in capacity of the IRS to answer phone requests may adversely affect Minnesota tax filings, giving the state more reason to offer help with federal tax forms.

Strategy III. Information Messages.

This experimental intervention, which might also be called a motivational or moral approach, was for the general taxpayer; the sample was not stratified by risk or income. Two types of psychological messages were tried. One group of about 20,000 taxpayers got a letter in January 1995 making a rational argument for paying taxes. They were told that "your income tax dollars are spent on services that we Minnesotans depend on. Over 30 percent of state taxes go to support education. Another 18 percent is spent on health care and support for the elderly and the needy. Local governments get about 12 percent of the state tax money, supporting services in your community such as law enforcement, parks, libraries and snow removal. . . . So when taxpayers do not pay what they owe, the entire community suffers." This was Letter 1 in the experiment.

A second group of 20,000 got a letter that said, "According to a recent public opinion survey, many Minnesotans believe other people routinely cheat on their taxes. This is not true, however. Audits by the Internal Revenue Service show that people who file tax returns report correctly and pay voluntarily 93 percent of the income taxes they owe.

Most taxpayers file their returns accurately and on time. Although some taxpayers owe money because of minor errors, a small number of taxpayers who deliberately cheat owe the bulk of unpaid taxes." This was Letter 2.

Psychologists have identified three (or more) hierarchical levels of how people make moral decisions, such as cheating on taxes. At the lowest level of reasoning, some people make decisions about right and wrong simply to avoid punishment. For example, people who pay their taxes only in response to an audit threat would likely be at this level. At the next level, which is the most prevalent in society, people rely on social norms to make moral decisions. At the highest level, people use a set of internal ethical standards when making decisions.

The two letters represent different levels of moral reasoning. Letter 2 seems most like the mid-level of reasoning, as it suggests what the social norm or custom is. Letter 1, however, expresses a principle for paying taxes based on the importance of taxes to pay for social needs. It is also possible that some who received these letters may have perceived them as a potential audit threat and responded accordingly

By testing two types of messages, the experiment will help the department design public service announcements and other communications to taxpayers.

Strategy IV. Redesign of the M-1 Form.

This part of the experiment tested whether the main M-1 tax form may have been oversimplified to the degree that it causes mistakes or increases noncompliance by certain types of taxpayers. This a one-page form, and it leaves out several items that the taxpayer must calculate separately or find in the instruction booklet.

The main change in the experimental form was that it included multiple lines for additions and subtractions, which appear as single lines (lines 3 and 6) on the current M-1 form (a copy is in the Appendix). Ordinarily the taxpayer must refer to the instruction book to see what additions and subtractions should be made to income. Commonly used subtractions, for example, are a child's school expenses, interest or mutual fund dividends from U. S. government bonds, and a subtraction for persons age 65 or over or permanently and totally disabled. Additions can be interest from bonds of another state or its governmental subdivisions, whether paid directly to the taxpayer or through an investment fund, or a lump-sum payment from a qualified retirement plan.

The experiment targeted two groups of 700 taxpayers. The first group was taxpayers who entered a subtraction or addition on their Minnesota M-1 form (lines 3 and 6) in 1993. The second group had not taken an addition or subtraction in 1993. The test forms were mailed only to people who had not used a tax preparer in 1993, because the special form was not available through tax preparers.

The taxpayers in this experiment received a specially made instruction booklet for their 1994 taxes, which included a letter from the commissioner, two copies of the new form and various supplementary schedules that were redesigned to conform to the test form. In anticipation of the experiment, the department halted mailing of the normal state tax forms to these taxpayers. The experimental forms had a "test" label and were a different color than normal M-1 forms. It was not mandatory that people used the form, but the letter in the booklet urged people to try it.

The test M-1 form was redesigned to look more like the federal form, and it extended to two pages instead of one. The design of the two-page form was also an opportunity to prepare for the likely possibility that the department may have to go to a two-page form in the future if additional complications are added to the state income tax.

We expected that the test form would change the proportion of taxpayers who claim additions or subtractions or the dollar amounts claimed. Therefore, analysis of the experiment compared the rates at which these items were reported by the treatment groups and the control group.

When the special forms were received at the department, the information captured on the forms was converted back to the normal form in which tax information is entered into the department's computer systems. Not all taxpayers used the test form, but the analysis compared groups without regard to use of the form so as to keep the randomization in the experimental design.

Control Groups.

A control group was selected to parallel each experimental group, but the taxpayers were not informed that they were part of the experiment. The taxes paid by control groups were the baseline for assessing compliance changes in the experimental groups. The same control group was used for the audit and service experiments, and it was the same size as the service sample (3,449). Similarly, both information letters shared a control group of 20,000.

There were two control groups for the M-1 test form. The first control group was for taxpayers who had reported additions or subtractions in 1993; the other control group was for taxpayers who had no additions or subtractions in 1993. The latter control group was drawn randomly from the large control group used for the information letters.

The experiment also had a "quasi" control group of 600 taxpayers who got a simple letter from the department advising them of the phone numbers that were available for tax assistance. These numbers were widely available and in the regular tax instruction booklet, so there was nothing new in the letter. The purpose of the test was to see if the mere fact of getting a letter from the department might change compliance, regardless of the content. The results did not show a statistically significant effect of the letter on compliance. In

retrospect, however, the sample size for this part of the experiment was too small to have a reasonable chance of detecting a compliance effect.

METHOD OF ANALYSIS

Measuring Compliance.

Compliance has three parts: payment of all taxes owed, on time, and without filing errors. Each of these dimensions was measured in the experiment.

To measure payment compliance, we started with the reported income and amount of state taxes paid on average within each experimental group and control group. Income was the federal taxable income reported on the Minnesota tax form. (This was not always the same, however, as reported on the federal tax form.) The federal taxable income is the starting point for the Minnesota taxpayer when computing state taxes. Minnesota taxes were measured after any credits. Dollar amounts were adjusted for inflation from 1993 to 1994.

Although one might compare the treatment group with the control group on the basis of 1994 taxes paid, this is less efficient from a statistical viewpoint than using information on 1993 taxes to help with the comparison. Simply put, knowing how much tax a taxpayer paid in the previous year makes it somewhat easier to predict the next year's tax. Without 1993 data, we would have had to use a much larger sample to reach the same power of detecting an experimental effect. To use both years' data to detect changes in taxpayer behavior, the analysis compared **changes** in income and taxes from 1993 to 1994 between the treatment groups and the control groups. That is, we subtracted the 1993 tax or income from the 1994 tax or income, respectively, to calculate the change. If the average change in a treatment group was different from the average change in a control group, we inferred that the treatment had an effect, provided that the difference between groups was large enough to be statistically significant.

To supplement the analysis of tax and income changes, we analyzed several other lines on the Minnesota tax form for 1994. These included additions to income, subtractions from income, and the 1994 balance. The 1994 balance is the difference between the taxpayer's final tax liability and amounts previously paid through withholding and estimated taxes. A positive balance is the amount still owed on taxes at filing time; a negative balance implies a refund.

The 1994 balance proved to be more sensitive to compliance effects of the experiment than the difference in income or taxes from 1993 to 1994. In several cases we were able to detect a compliance effect in the 1994 balance that was not apparent in the tax or income change. How is this possible? Taxpayers frequently have large changes in income from one year to the next, making it difficult to detect a relatively small change in income or taxes that might result from the experiment. So anything that helps account for normal

income or tax variation will help in the detection of a compliance effect. When we look at tax changes from 1993 to 1994 we are, in effect, using a taxpayer's 1993 taxes to help predict 1994 taxes. Because the 1994 balance is what remains to be paid after withholding and estimated taxes *during* 1994, however, the balance substantially takes into account recent changes in income during the tax year.

To measure the effect of the experiment on filing errors, we compared the treatment and control groups as to the percentage of tax filings in 1994 with errors that were detected and had a tax adjustment during machine processing by the department. As a measure of timeliness, we compared groups on the percentage of returns that were filed before April 15, 1995. The analysis also looked at whether taxpayers in the experiment were more or less likely to have used a tax practitioner in 1994 as a result of the experiment.

On the forms experiment, we compared the use of additions and subtractions by the treatment groups with the control groups and evaluated any net change in taxes that resulted.

Although the focus here was on change in state taxes, the federal income tax can reveal more detail about changes in compliance. For example, a change in reported income on the Minnesota form might be the result of the taxpayer reporting more income on the federal income tax form or taking fewer deductions. A subsequent analysis will probe the federal tax data to find out more about the source of changes in compliance at the state level.

Statistical Methods.

We used several statistical techniques in the analysis. To compare changes between groups we used both analysis of variance and linear regression. These methods told us if there was, on average, a significant difference in compliance between groups and whether the difference was an increase or decrease. Regression gave us an estimate of the average dollars involved in a change. We applied these methods to the entire sample and to sample groups identified by risk and income level or by information letter. Unless otherwise stated, a result was judged statistically significant if the significance level had probability $p = .05$ or smaller. The significance level is the probability of making a mistake in deciding that the experiment had an effect when it actually did not. At $p = .05$, there is at most one chance in twenty of making this mistake.

Believing that tax evasion is concentrated among small, relatively homogeneous, segments of the population, we also tried to identify subgroups within the treatment groups where the treatment effect might be concentrated. We used two approaches. We examined the results of the experiment for a few specific types of taxpayers who can be identified by their occupational type or their previous interactions with the department, such as taxpayers whose 1993 returns were corrected by the department. As an alternative to this method, we tried a more open-ended search for relevant taxpayer subgroups, letting the analysis tell us how to define the groups. For this, we used the statistical method

of decision-tree analysis or recursive modeling, as implemented in the FIRM computer program by Professor Douglas Hawkins (University of Minnesota, School of Statistics, Technical Report Number 546; release 2.0, April 1995.)

The FIRM computer program partitioned the sample into a large number of possible subgroups based on a list of variables that we tried as potential predictors of changes in taxes or income. These variables were: the experimental treatments, gross income, state tax balance due (or refund), amount of federal itemized deductions, federal schedule C business profit or loss, unearned income (total of rents, royalties and capital gains), working family credit, whether the taxpayer used a tax practitioner, whether the taxpayer was 65 years or over, and whether a Minnesota short form was filed. The program then automatically found the subgroups that had the most significant differences (if any) in the change in taxes or income in relation to the predictor variables or the experimental treatment. In effect, we used the program to find subgroups where the treatment had the greatest impact on compliance, if there was an impact. We did a tree analysis for each of the six risk-income categories in the audit-service experiment, and we did a separate tree analysis for the information message experiment with both letters included.

So that the tree analysis did not upset the randomization of the statistical sample, we used data for the predictor variables only for 1993, not 1994, that is, prior to the experimental treatment. The FIRM program then created the potential subgroups on the basis of 1993 data prior to any analysis, which also protected the randomization.

The importance of the tree method is that it brings our attention to relatively small groups of taxpayers where the department might reasonably focus its limited direct compliance efforts.

Because some taxpayers had very large changes in income from one year to the next, the statistical methods outlined above may be overly sensitive to such cases. To check on the possibility of extreme changes unduly affecting the analysis, we used a Wilcoxon nonparametric statistical test. This compared changes in the treatment and control groups but was not sensitive to extreme values. The nonparametric test results also did not depend on any assumption that the data have a normal (bell-curve) distribution, which is assumed in regression and analysis of variance. A disadvantage of the Wilcoxon test (and similar nonparametric tests) is that it cannot give dollar estimates when an effect is detected. We report the Wilcoxon results only when they tell us something different than the regression analysis.

RESULTS

Audit Strategy.

The audit threat increased both reported income and taxes paid, relative to the control group, among low and medium income taxpayers taken as a single group, including both

Table 1. Differences in average changes from 1993 to 1994 in reported federal taxable income (FTI) and Minnesota taxes between **audit** groups and control groups; with estimate of the standard error of the difference, significance level (P) and sample size (N) including controls. A positive difference implies increased compliance in the audit group, relative to the control group.

GROUP	\$ FTI	ERROR	P	\$ TAX	ERROR	P	N
Whole sample	733	3,767	.84	39	311	.90	4,657
High Income*	-1,945	29,964	.95	-288	2,482	.91	582
Low & Mid Income	1,131	517	.029	87	36	.014	4,075
Weighted Low & Mid	573	374	.13	41	24	.095	4,075
Audit subgroups:							
A	4,049	2,351	.087**	164	113	.14	135
B	2,024	891	.024	155	70	.028	479
C	2,980	1,333	.026	279	108	.010	866
D	7,166	2,411	.0031	637	202	.0017	437
E	8,182	2,564	.0015	736	213	.0006	432

* Wilcoxon nonparametric test gives $p = .0058$ for negative effect of the audit experiment on change in FTI and $p = .0033$ for negative effect of the audit experiment on change in TAX, relative to the control group.

** Wilcoxon nonparametric test gives $p = .022$ for positive effect of audit experiment on FTI.

Group Definitions

Low income is 1993 federal adjusted gross income below \$10,000; mid-income is \$10,000 to \$100,000; high income is over \$100,000. Both risk levels are included. High risk is 1993 federal schedule C or F filed (business or farm income) and 1993 Minnesota estimated tax paid or owed; low risk means not high risk. No change in filing status from 1993 to 1994.

Weighted: Low- and mid-income sample adjusted to true population without stratification.

A: Low risk, low income, no positive income on 1993 federal schedule C (no business income) and 1993 state tax refund was greater than \$209.

B: Low risk, mid-income, 1993 state refund between \$178 and \$472.

C: High risk, mid-income, 1993 state tax balance between -\$785 (refund) and +\$553 (owed).

D: High risk, mid-income, in subgroup C and 1993 federal itemized deductions over \$6,943.

E: High risk, mid-income, 1993 state tax balance between -\$1091 (refund) and +705 (owed) and 1993 federal itemized deductions over \$8,346.

high and low risk taxpayers. The greatest effect of the audit threat was among mid-income, high risk taxpayers. Among high income taxpayers, the experiment had mixed effects that were just barely detectable; apparently some taxpayers responded positively, and some negatively. Because of the mixed results in the high income group and because of large variations in the incomes and taxes of high income taxpayers, the results for this group are discussed separately from those seen at low- and mid-income levels. A statistical summary of the results is in Table 1.

Compared to the control group, average reported income among the low- and mid-income group, who represented 97 percent of taxpayers, increased \$1,131. Minnesota taxes paid increased \$87 over the control group. Because the sample over-represented low income and high risk taxpayers, these results can be adjusted or "weighted" to show what the effect would have been if the sample had been exactly proportional to the population. In this case, the increase in income would have been \$573 and in taxes \$41. (See also Figures 1 and 2.)

The following table compares the results of the audit experiment on low- and mid-income taxpayers in their change in taxes and 1994 balance. The dollar amounts are average differences between the audit group and control group. The smaller error estimates and significance levels (p values) for the 1994 balance show that it is a better indicator of the compliance effect and that it gives a more accurate estimate of the dollar impact. Note that the weighted results do not reach statistical significance (at $p = .05$) for tax change but do for the 1994 balance.

Audit Group	Tax Change	Error	P	1994 Balance	Error	P
Low- , Mid- Income	\$87	\$36	.014	\$72	\$24	.0026
Weighted	\$41	\$24	.095	\$51	\$18	.0039

The increases in income and taxes in the low- and mid-income group were about 6 percent of 1994 income and taxes. This is estimated by comparing the size of the changes with the mean 1994 income and taxes reported by the control group (Figure 3). (Recall that the experiment was designed to detect changes of about 5 percent or more.)

Breaking the low- and mid-income group down to high and low risk groups, we found a greater impact of the audit threat in the high risk group. Relative to the high risk taxpayers in the control group, average reported income increased by \$2004 in the high risk treatment group, and average taxes paid increased by \$186; these figures compare with \$670 and \$36, respectively, in the low risk group. The increase in taxes paid by the high risk group was almost 10 percent of the 1994 taxes paid by similar taxpayers in the control group.

In the high income group, the regression analysis, which compared averages between the groups, did not detect any compliance effect, possibly because of some extreme changes

in income. The Wilcoxon test, which is not sensitive to extreme changes, showed a modest negative effect of the audit threat on change in taxes and income (tax significance level is $p = .0073$). We cannot, however, estimate the dollar impact of the effect.

The overall negative effect in the high income group was countered among some high income taxpayers who reported increased additions on their taxes. The average amount of additions in 1994 in the control group was \$229 but was \$3,238 in the audit group. In 1994, 21 percent of taxpayers in the audit group reported an addition compared to 13 percent of the control group (chi-square test is significant at $p = .018$). The data does not differentiate whether the additions were for interest on the bonds from other states or from lump-sum retirement payments.

The tree analysis identified several subgroups within the low- and mid-income range where the compliance effect of the audit threat was concentrated (see also Figures 4 and 5 and Table 1):

Subgroup A. Within the low risk, low income group, taxpayers who had no positive income on their 1993 federal schedule C (no business income) and who had asked for a refund on their 1993 state taxes of \$209 or more showed an increase in reported income of \$4,049 relative to similar taxpayers in the control group; because of the low level of income, however, their change in taxes was not statistically significant. (Standard error for income is \$2351; statistical significance, $p = .087$ which is slightly above the standard $p = .05$, but the nonparametric Wilcoxon test gives $p = .022$).

Because of how the tree analysis works, the set of taxpayers where the experimental effect was concentrated is not exactly defined. The \$209 refund figure is a somewhat arbitrary point that the tree analysis selected when it partitioned the low risk, low income category of the sample into subgroups; one would expect similar results with a slightly different cutpoint, say, \$200 or \$210. The tree analysis first ranked the cases by the predictor variable, in this case the 1993 state tax balance, and then divided the sample into ten subgroups of roughly equal size. The \$209 point was one of the dividing points within the ten subgroups. The program then recombined subgroups where the predictor variable had no effect on change in taxes. The lack of exact definition applies similarly to all other subgroups identified here by the tree analysis.

Subgroup B. In the mid-income, low risk group of taxpayers, there was a subgroup of taxpayers who got a refund of \$178 to \$472 on their 1993 state taxes who were more strongly affected by the audit threat than other taxpayers in this category of income and risk. This subgroup reported an average increase in income of \$2,024 relative to similar taxpayers in the control group and a corresponding increase in taxes of \$155.

Subgroup C. Among mid-income, high risk taxpayers, we identified several subgroups that were partially nested and showed increasing effects of the audit threat. The largest of these subgroups included taxpayers who had 1993 state tax balances ranging from -\$785 (a

refund) to +\$553 (taxes owed). This group reported \$2,980 more in income than the corresponding taxpayers in the control group and paid \$279 more taxes.

Subgroup D. Within subgroup C was a smaller group with a stronger audit effect. This group was identified as taxpayers in C who in 1993 had more than \$6,943 in itemized deductions on their federal form. Those who got the audit letter reported incomes that increased \$7,166 over similar control group taxpayers, and they paid \$637 more in taxes.

Subgroup E. This group was similar to and overlapped subgroup D; one might see it as an alternative to D. It consisted of high risk, mid-income taxpayers who in 1993 had state tax balances ranging from -\$1,091 (refund) to +\$705 (owed) and who had 1993 itemized deductions over \$8,346. This subgroup had the largest audit effect of any identified in the experiment. The income increased by \$8,182 and taxes by \$736 on average, relative to similar control group taxpayers.

The dollar estimates produced in the tree analysis may be somewhat larger than we would see if we tried to duplicate the experiment in a different group of taxpayers. This is an inherent tendency of the tree method, and it reminds us to consider the error estimates when deciding how to use the results.

We found an interesting result when we examined the 1994 balance for audit subgroup E. As shown in the following table, the difference between the audit group and the control group in the average 1994 balance is substantially less than the change in taxes, although the results still have a high level of statistical significance (p) for the 1994 balance.

Audit Group	Tax Change	P	1994 Balance	P
Subgroup E	\$736	.0006	\$401	.0020

One would expect the 1994 balance to be close to the difference in taxes, as seen in the previous table. Why is the balance so much lower than the difference in taxes? Recall that all taxpayers in the high risk group had filed estimated taxes in 1993, and one would expect that to be generally true for 1994. In principle, the final estimated tax payment for 1994 taxes was due on January 15, 1995, while the audit letter was mailed out at the end of January. Was it possible, however, that some taxpayers paid additional estimated taxes after they got the audit letter but before they filed their taxes? This might account for the observed result.

Discussions with the department's auditors revealed that indeed it is possible to pay additional estimated taxes after the January 15 deadline. There are two methods for doing this. The taxpayer can simply mail in another estimated tax form with a payment. Or the taxpayer can file an M-13 form, which is designed for taxpayers who want to pay their taxes before the April 15 deadline but delay filing until later. In both cases, the payment is credited to the taxpayer's 1994 estimated tax account. By paying some or all of taxes

due before filing, the taxpayer may avoid a penalty for underpayment of estimated tax or late payment of tax.

We reanalyzed the results for subgroup E, looking at 1994 estimated tax payments, and compared the audit group with the control group. The audit group paid \$338 more, on average, in estimated tax payments than the control group. If one adds the 1994 estimated tax payments and the 1994 balance, the average difference between the audit group and the control group is \$740, which is almost the same as the \$736 average tax change.

These results strongly imply that some taxpayers responded to the audit threat by paying additional money before they filed their taxes, thereby reducing their chances of paying a penalty. This effect of the experiment on estimated tax payments, however, was unique to the overlapping subgroups D and E, which had the greatest compliance effects for the audit experiment. This is an example that taxpayers in different taxpaying circumstances may take different approaches in their response to an audit threat.

The sizes of the subgroups, as a percentage of taxpayers, varied from 19 percent for subgroup B to 1 percent for subgroups D and E (Figure 15). So the strongest compliance effect for the audit threat, which was seen in subgroup E, represented about 19,000 taxpayers.

We also observed another effect of the audit experiment that was limited to the category of high risk, mid-income taxpayers. In this category, and only in this category, a larger percentage of taxpayers in the audit experiment filed their Minnesota returns late, that is, after April 15, 1995, than in the control group--8.2 percent compared to 4.9 percent (Figure 9; $p = .022$ for a chi-square test). This result echoes the strong impact that the audit threat had on this category of taxpayer, as seen above in reported income and taxes.

Another minor effect of the audit strategy was that more taxpayers in the low risk, low income category who got the audit letter used a tax practitioner in 1994 than in the corresponding control group--48 percent in the audit group versus 41 percent in the control group (chi-square test significance level is $p = .038$). This was the only situation in any of the experiments where the use of a tax practitioner was related to the results.

As the tree analysis shows, the state tax balance of the previous year (amount of refund or amount owed) is useful to predict which taxpayers may respond most strongly to an audit threat. This is doubly interesting because, as we saw above, the current tax balance is a good detector of the compliance effect. (The tree analysis also showed that the state tax balance is a better predictor than the federal tax balance.) Further statistical analysis revealed that the effect of the experiment tended to be stronger among taxpayers who had claimed larger refunds in 1993; that is, the larger the refund claimed, the greater the increase in taxes paid as a result of the audit threat. Additionally, in the high risk group we found greater compliance effects at higher levels of 1993 itemized deductions. We will see that the 1993 state tax balance is also an important predictor in the service and information

message experiments. The relationship between the subgroups and the 1993 balance is illustrated in Figure 8.

Service Strategy.

Given the incremental types of service enhancements offered, the service strategy did not have a net effect on taxpayer compliance in the sample as a whole. Also, in contrast to the audit threat, low- and mid-income taxpayers in the service group did not have a statistically significant change in income, taxes, or 1994 balance relative to the control group. These results, however, do not mean that the department's services to taxpayers, in general, have no effect on compliance; the experiment tested only an expansion of specific services. See Table 2 for a summary of statistical results.

There was a weak indication of a positive service effect among low risk, high income taxpayers. Within the low risk, high income group the Wilcoxon test on the 1994 balance showed a modest positive change with service ($p = .06$). This effect was not detectable for change in taxes or income, and it was not possible to estimate the dollar impact.

One reason for lack of response to the service offer may be that relatively few taxpayers in the experiment called on the department for services. Through April 17, 1995, the special phone lines had received 474 calls for service from the 3,448 taxpayers who were offered the service (Appendix, Figure A-5). So, at most, 14 percent ($474/3448$) of people in the experimental service group called us (and a smaller percentage if some called more than once.) During this same time period, the department got 363,000 calls on its regular service lines from a taxpayer population of about 2.2 million, which would be about a 16 percent calling rate. So the special invitation to call us did not increase the proportion of taxpayers calling. A significant minority of the callers, however, asked for help with federal tax questions. (The exact number who asked for federal information is not known, because the reasons why people called were not tabulated in the experiment.)

The following two subgroups were identified by the tree analysis as having a possible service effect. Without an overall effect of the service experiment on the larger sample, however, the results should be viewed cautiously. Both subgroups were in the low risk, low income category but differed mainly in the amount of refund that was claimed on 1993 taxes. The first of the two groups had a larger increase in reported income and taxes than a comparable control group, while the second group had the opposite results. The changes in income and taxes approximately canceled one another out in the two groups, so there was no net change in the low risk, low income category as a whole, rendering the effect undetectable at the category level.

Subgroup F. This group was within subgroup A, which was identified above as showing a positive effect of the audit experiment; the 1993 refund claimed was over \$209 and there was no business income in 1993. The added condition for subgroup F was that the taxpayers' 1993 federal itemized deductions were zero; that is, the taxpayers claimed a standard deduction. Similar to the audit experiment, subgroup F had a increase in average

Table 2. Differences in average changes from 1993 to 1994 in reported federal taxable income (FTI) and Minnesota taxes between **service or information message** groups and control groups; with estimate of the standard error of the difference, significance level (P) and sample size (N) including controls. A significant difference implies a change in compliance relative to the control group.

GROUP	\$ FTI	ERROR	P	\$ TAX	ERROR	P	N
<u>Service:</u>							
Whole sample*	-3,914	2,115	.064	-344	188	.067	6,227
High Income**	-30,742	16,660	.065	-2,733	1,483	.066	782
Low & Mid Income	-64	342	.85	-1.1	24	.96	5,445
Service subgroups:							
F	2,367	651	.0004	132	52	.012	219
G	-491	243	.043	-29	14	.041	983
<u>Information Message:</u>							
Letter 1	403	540	.46	-2.2	26	.93	53,149
Letter 2***	-0.57	541	.99	-7.9	26	.76	53,149
Subgroup H							
Letter 2	850	302	.0049	48	18	.008	14,599

* Wilcoxon nonparametric test shows no service effect for whole sample; p = .95 for FTI and p = .71 for TAX.

** Wilcoxon nonparametric test shows no service effect in high income group; p = .50 for FTI and p = .56 for TAX.

*** Wilcoxon nonparametric test shows a positive effect for Letter 2 at p = .075 for FTI and p = .062 for TAX; sample size N is total for both letters and control group.

Group Definitions

Low- and mid-income: 1993 federal adjusted gross income below \$100,000; high income is over \$100,000.

F: Low risk, low income, no positive income on 1993 federal schedule C (no business income) and 1993 state tax refund was greater than \$209--same as audit subgroup A--and 1993 federal itemized deductions were zero, i.e., standard deduction was taken.

G: Low risk, low income, 1993 state refund less than \$209 and greater than \$7, taxpayer was under 65 years old in 1993, and no positive income on 1993 federal schedule C (no business income).

H: 1993 state tax balance between -\$90 (refund) and \$1,066.

income of \$2,367 compared to the controls; taxes increased by \$132. See also Figures 6 and 7.

Subgroup G. This group was defined by taxpayers who claimed a refund greater than \$7 but less than \$209 in 1993; that is their refunds were not as large as taxpayers in subgroup F. Additionally, these taxpayers were under 65 years old and did not have a positive net business income in 1993. The average income reported by the service group **decreased** by \$491 compared to a similar control group; taxes decreased by \$29 compared to the controls. This group was larger than subgroup F, which is why the net changes in dollars canceled out despite the larger average changes in subgroup F.

We cannot explain why one subgroup would respond to the service offer by increasing reported income and taxes, while they decreased in another group. One might argue that the result for subgroup F, which had an increase in income and taxes, is the more reliable for the two groups because it is within subgroup A, which had a similar compliance effect in the audit experiment. On the other hand, subgroup G is larger; there are 402 service cases in G and 92 in F. In either case, however, the results point to a possible effect of the service offer among low income taxpayers.

Two minor effects of the service experiment are worth noting. As in the audit experiment, more taxpayers in the service experiment within the high risk, mid-income category--and only in that category--filed their taxes later than taxpayers in the control group (Figure 9): 6.2 percent versus 4.9 percent, which is a weak result statistically ($p = .26$) but similar to the audit result. The service group within the high risk, mid-income category also made fewer errors than the control group (Figure 10)--4.2 percent versus 7.5 percent--something not seen in the comparable audit group (chi-square test, $p = .005$). It is not clear why some taxpayers in the service experiment responded by delaying their tax filing or making fewer errors, but the results show again the sensitivity of the high risk, mid-income category to compliance-related activities.

Information Message Strategy.

Letter 1 did not have any effect on compliance (Table 2). Letter 2, however, had a moderately significant effect on the entire sample and a stronger effect within a large subgroup of taxpayers. Although analysis of variance did not show a significant statistical effect for Letter 2, the nonparametric Wilcoxon test gave some evidence that Letter 2 was associated with a larger increase in reported income and taxes than the control group ($p = .075$ for income and $p = .062$ for taxes). Recall that Letter 2 refuted the idea that cheating on taxes is widespread and appealed to social norms to increase compliance.

The effectiveness of Letter 2 was supported by a statistical comparison of Letters 1 and 2 on the 1994 balance. There was a significant difference between the two letters, with Letter 2 having a more positive effect than Letter 1. The average 1994 balance in the Letter 2 group was -\$108 compared to -\$120 for the control group and -\$153 for Letter 1; that is, the average refund was smallest in the Letter 2 group and largest for Letter 1. The

difference between the average 1994 balances for Letter 2 and Letter 1 was \$45. (The difference is significant at $p = .043$; the analysis included cases with a change in filing status, i.e., the whole sample). The difference between average 1994 balances of the Letter 2 group and the control group was \$12.

Subgroup H. As identified by the tree analysis, these taxpayers were positively influenced by Letter 2. In 1993 they claimed a refund less than \$90 or had a balance due less than \$1,066; that is, their 1993 balance fell in the range -\$90 to \$1,066. This group represented about 36 percent of all taxpayers (Figure 15). Their average change in reported income was \$850 more than the controls, while average taxes increased by \$48 over the controls. (See also Figures 6 and 7.)

Note that Letter 2 had a compliance effect on different types of taxpayers than identified in the subgroup analyses for the audit-service experiments. Subgroup H overlapped subgroups C, D and E over part of the positive 1993 balance due range (Figure 8), but subgroups C, D and E, being in the high risk, mid-income category, represented only about 1 to 2 percent of taxpayers. Other effects of the audit-service experiment were concentrated among taxpayers who had claimed a refund in 1993. So it seems that Letter 2 appealed to some taxpayers who owed tax balances in 1993 but were not influenced by the audit threat to pay more taxes. Put another way, the audit threat did not work for most taxpayers who owed money in 1993, unless they were in the high risk group; but the information message experiment tells us that there were many taxpayers in the balance due group who should have paid more taxes.

Additional Subgroup Results.

The previous discussion gave the main results for the audit, service and information message experiments, but we have identified some additional subgroups where the experimental strategies had significant effects and other subgroups where no effect was observed. Unlike the previous analyses, we found instances where both the audit experiment and the information message experiment with Letter 2 affected the same types of taxpayers. So the results of both experiments are reported here together. Analysis of the audit experiment excluded high income taxpayers.

Some taxpayers in the experiment had had their 1993 taxes adjusted (corrected) during machine processing of their returns by the Minnesota Department of Revenue. This happened in 1994, prior to the experiment, and had nothing to do with how the sample was drawn. Certain types of errors are detected during normal tax processing, making it a partial audit of the tax return. If there was an adjustment, the taxpayer was sent a notice about the correction and either got an additional refund or paid more taxes (or got a smaller refund). We examined what happened when these taxpayers later got one of the experimental treatments. One might see these taxpayers as having had a double experimental treatment: first the adjustment with a notice to the taxpayer, then the experiment with a second notice to the taxpayer. One might expect that the experiment would have a heightened effect among taxpayers who recently had other contact with the

department. The analysis compared the results for taxpayers who got the experimental letters with similar taxpayers in the control group who also had had adjustments.

The following table shows the average changes in federal taxable income (FTI) and state taxes in the treatment groups compared to the control groups. The audit letter and Letter 2 both increased reported income and taxes paid, with the audit letter having the stronger impact. Further analysis showed that the effect under either treatment was stronger among taxpayers who had a negative adjustment on their 1993 taxes, that is, the adjustment was in favor of the taxpayer. Although the number of cases in the audit group is not large, it boosts our confidence in the results to find the same effect in the Letter 2 experiment, which had a much larger sample size. The results here also add support to the findings above about the effectiveness of Letter 2 over Letter 1.

Group	\$ FTI	Error	P	\$ Tax	Error	P	N
Audit/ 1993 Adjusted	6,687	2,488	.009	508	187	.008	92
Audit/ Adjustment<0	23,642	9,644	.02	1,923	840	.03	51
Letter 2/ 1993 Adjusted	3,722	1,549	.02	278	141	.05	677
Letter 2/ Adjustment<0	6,569	3,096	.03	564	298	.06	296

Additional analysis showed that most adjustments were made during state tax processing, not in IRS processing of the federal returns. And about twice as many of the adjustments were among high risk taxpayers than one would have expected by chance in the samples.

The audit experiment included sufficient cases in two types of business classifications to do a statistical analysis. Occupation was determined from a code on the taxpayer's 1994 federal Schedule C form. We analyzed the construction industry and the combined financial, insurance and related services group. As the following table shows, the examination-audit letter increased the average reported income and state taxes paid in both occupational groups, though the estimates are subject to considerable error.

Group	\$ FTI	Error	P	\$ Tax	Error	P	N
Construction	6,505	3,910	.10	548	319	.09	170
Finance, etc.	10,284	5,448	.06	845	460	.07	72

Another analysis produced an interesting but puzzling result. Some of the taxpayers in the experiment had paid a penalty on their 1993 federal taxes. As with the adjustment process, we examined the subsequent effect of experimental treatments on this group of taxpayers. Federal penalties were analyzed because they were much more common than state penalties. The following results show that the audit letter had a negative effect on this group, on average. And taxpayers who paid larger penalties tended to have larger negative

effects. In contrast, information Letter 2 had a weak positive effect (Wilcoxon test showed a positive effect at $p = .05$ for FTI and a $p = .04$ for Tax, with $N = 1,505$).

Group	\$ FTI	Error	P	\$ Tax	Error	P	N
1993 Federal Penalty	-6,324	2,205	.004	-408	149	.007	311

Several important taxpayer groups showed **no effect** of the audit strategy. These groups were: (1) taxpayers who reported farming income in 1993, (2) taxpayers who reported income from a partnership or small corporation (S-Corp.) in 1993, and (3) taxpayers who reported rental income in 1993. (Income data was from 1993 federal Schedule E.) The audit experiment also had no detectable effect on the proportion of taxpayers in 1994 who amended their previously filed 1993 state tax returns.

Form Strategy.

Taxpayers who had not reported an addition or subtraction in 1993 were more likely to use a subtraction in 1994 than taxpayers in the control group (Figure 12); 10 percent of the test group took a subtraction in 1994 compared to 7 percent in the control group. On average, the test group had \$136 in subtractions compared to \$69 in the control group. Although the types of additions and subtractions were not tabulated in the experiment, it was clear from a review of the returns that a frequent subtraction was for a child's school expenses. This was the expected result. Despite the greater use of subtractions, there was not a statistically significant change in net taxes. Among taxpayers who had used additions or subtractions in 1993, there were no significant changes in 1994 additions, subtractions or taxes, when compared to the control group (Figure 13).

It is hard to generalize these results to estimate what would happen if all taxpayers got the new form. Because these results are based on a small sample, one cannot conclude that there would be no net change in state taxes if all taxpayers in the state were required to use the form. Also, because none of the taxpayers in this part of the experiment had used a tax practitioner in 1993, they were not typical of most taxpayers. This, too, makes generalization of the results to the state's taxpayer population problematic.

A sidelight of the form experiment was the department's learning experience while trying to process the test forms in-house by electronic filing. Because forms must be almost perfect to file them electronically, which is usually done at a tax practitioner's office, a large number of taxpayer errors were detected. Indeed, about one-fourth of the test forms could not be filed electronically by the department. Taxpayers frequently did not attach copies of their federal returns or W-2 forms, as required by law, or had other omissions and computational errors. Also, some taxpayers had unusual federal schedules that could not be filed electronically. In short, the experiment revealed a much higher rate of taxpayer errors than is normally tabulated when the department processes income tax forms. Few of these errors were the result of using the test form, however, and many errors had no impact on tax liability.

Estimates of Tax Underpayment.

If we extrapolate the results of the experiment to the whole taxpaying population, we get an estimate of a significant portion of how much money taxpayers owe but are not paying voluntarily; this is the compliance gap. To get the estimate for a category or subgroup of taxpayers where a compliance effect was found, we first calculate the fraction of the taxpaying population that is represented by the group (Table 3 and Figure 14). Then we multiply that fraction by the total population of 1,852,839 and multiply again by the average increase in taxes for the group (Table 3 and Figure 15).

For example, the low- and mid-income taxpayers represented 96.7 percent of the population or about 1,792,000 taxpayers. The weighted increase in taxes for this group was \$41 per person. So if all low- and mid-income taxpayers had received the audit letter, the hypothetical total gain in tax revenue would have been about $1,792,000 \times \$41 = \73 million. This estimate is subject to a statistical error of about \$43 million; that is, there is about a 68 percent chance that the true figure is within the range \$30 million to \$116 million. The calculation assumes that the compliance effect would also apply to taxpayers who changed their filing status from one year to the next; if this assumption is dropped, the underpayment estimate should be reduced about 10 percent.

Another estimate, possibly more accurate, may be found by using the weighted results for the 1994 balance. This gives an estimate of $1,792,000 \times \$51 = \91 million, with an error of \$32 million.

A slightly different procedure is used to estimate the gap for subgroups within the risk-income categories. First, we find the ratio of audit cases (or service cases) within the subgroup to the audit cases (or service cases) in the final sample of the risk-income category used in the analysis. The ratio is multiplied by the number of taxpayers represented by the risk-income category to estimate how many taxpayers are represented by a subgroup, and that number is multiplied by the average dollars of tax increase or decrease in the subgroup.

The underpayment estimates for subgroups make a connection between the relative sizes of the groups and the strength of the compliance effect in the subgroups. Subgroup B within the low risk, mid-income category has the largest share of the total tax underpayment estimate of any subgroup, at \$57 million. This is followed by the information message subgroup H for Letter 2 at \$32 million. Of the three subgroups in the high risk, mid-income category, subgroup E identifies the largest part of the tax underpayment at \$12 million.

To find a total tax underpayment estimate, we add up several of the smaller estimates for subgroups that do not overlap, as determined previously by considering the risk-income

Table 3. Estimated tax changes for audit, service and sermon experiments if experimental results were applied to the whole taxpayer population; and estimated tax underpayment.

GROUP	SUBGROUP % OF RISK- INCOME CATEGORY	RISK- INCOME CATEGORY AS % POP.	% OF POP. REPRE- SENTED	AVG. \$ TAX CHANGE	\$ TOTAL (Millions)
Audit/Subgroup B	28.5 (164/575)	69.6	19.8	155	57
Audit/Subgroup C	69.8 (300/430)	2.7	1.9	279	9.8
Audit/Subgroup D	33.5 (144/430)	2.7	0.9	637	11
Audit/Subgroup E	32.1 (138/430)	2.7	0.9	736	12
Service/Subgroup F	10.0 (92/920)	24.2	2.4	132	5.9
Service/Subgroup G	43.7 (402/920)	24.2	11	-29	-5.9
Information/Letter 2/Subgroup H	na	na	36	48	32
Audit/Low & Mid Income/Weighted*	na	na	96.7	41	73
<u>Total Estimates:</u>					
B+E+F+G+H					101
Low& Mid Income Weighted+ Letter 2/Subgroup H					105

* Low- and mid-income result adjusted to true population. Standard error of tax change is plus or minus \$24, so error in total estimate is plus or minus \$43 million (68 percent confidence interval). Total estimate using 1994 balance results for low- and mid-income, weighted, is \$91 million plus or minus \$32 million.

category and ranges of 1993 balance due. Adding subgroup B for low risk, mid-income, and subgroup H for the information message, and subgroup E as the largest estimate for high risk, mid-income, we get a total of \$101 million ($57+32+12 = 101$). (There was no net change for the service subgroup estimates.) Note that the total for B and E is \$69 million, which is almost the total underpayment estimate for the entire low- and mid-income population (\$73 million) in the audit experiment, as calculated above from the change in taxes. One can conclude that most of the compliance effect of the audit experiment within the low- and mid-income categories is concentrated in two subgroups, B and E. Adding the information message underpayment estimate to the low- and mid-income estimate, one gets a slightly different estimate of total underpayment at \$105 million. (See also Figure 15.)

The tax underpayment estimate of about \$100 million is much less than the \$300 million tax gap estimated previously by the department based on the IRS audit program (TCMP) and applied to state taxes in Minnesota. The estimate here, however, may have an advantage in that it represents money that taxpayers are potentially able and willing to pay, as demonstrated in this experiment. The federal gap estimate is based on costly intensive audits, and it does not account for the final amount that might be collected. Experience shows that audit claims are frequently reduced on appeal, and large portions of tax debts are uncollectible. So \$100 million might be a rough but realistic estimate of the portion of the tax gap that is truly recoverable through increased voluntary compliance. This estimate is about 3 percent of the \$3.5 billion in state income taxes collected in fiscal year 1994.

Evaluation of Compliance Strategies.

The examination-audit experiment shows the potential to increase voluntary tax compliance by sending taxpayers letters of the type used in the experiment. This may not be practical on a large scale, however, and there might be unknown long-term risks to compliance if such letters were used routinely or without adequate examination of the tax returns. To determine the persistence of compliance effects seen in this experiment, we will have to follow the experimental group for additional years.

The experiment also shows that intensive auditing is not always a realistic answer to reducing the tax gap for state taxes, because the average increases in taxes paid by taxpayers in many of the experimental groups were small. Among low risk, mid-income taxpayers in subgroup B, for example, the average gain of \$155 in state taxes might not be cost-effective for auditing.

The best potential for an examination or auditing program is in the high risk, mid-income subgroups, where such an approach might focus on 20,000 or fewer taxpayers. Here the average gain is a potential \$700 taxes--an amount that may be large enough to warrant an expanded examination program, perhaps combined with advance notice letters as in this experiment. The results of the examination and auditing phase of the project will give us more information about cost-effectiveness. And subsequent analysis of 1994 federal tax

returns may give us more detailed information on how to detect noncompliance in the high risk groups.

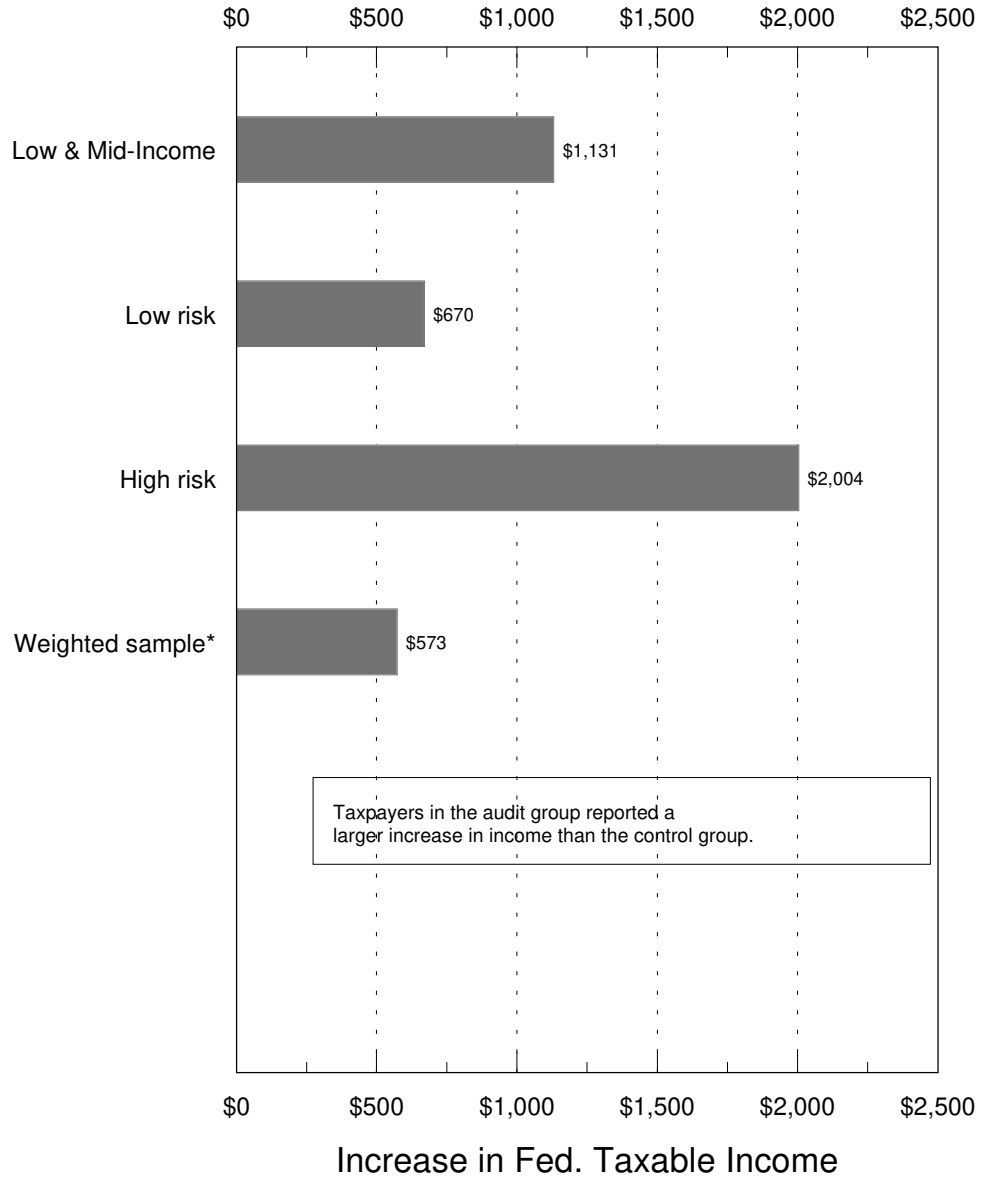
The examination and information message Letter 2 experiments also point to several smaller groups of taxpayers where the department might focus on increasing compliance. These groups include taxpayers whose income tax was adjusted in the previous year by the Minnesota Department of Revenue because of errors on their returns, and taxpayers in the construction and financial, insurance or related-services sectors who filed a federal schedule C for their business. The construction sector includes contractors in the building trades, such as carpentry, electrical work and plumbing, as well as general contractors for either residential or nonresidential construction. The financial group includes insurance agents, stockbrokers, investment advisors and similar professions.

The most cost-effective potential for increasing voluntary compliance lies in applying the results of the information message, Letter 2, experiment. This letter had a strong positive effect on taxpayers whose tax returns were adjusted in the previous year--a group representing 2 percent of all taxpayers. The average tax gain for this group was about \$278, an amount far greater than the cost of mailing the letter. Letter 2 also had a modest positive effect on the whole population and a somewhat more concentrated effect on a large subgroup (H) that represented 36 percent of the population. Although the \$48 average gain in taxes in subgroup H is small, the low cost of sending letters or, perhaps, using advertising methods, combined with the large number of potentially responsive taxpayers make this a viable option to increase compliance. The information message strategy of Letter 2 remains a bargain even if the dollar estimates are too high by a wide margin. This also seems to be a strategy with few if any potential negative effects. It would complement an examination approach, because the analysis of 1993 balances for the experimental groups showed that the examination and information strategies generally motivated different segments of the taxpayer population.

The results do not support increasing the types of services tested in the experiment. At best, the results suggest that some high income taxpayers and some low income taxpayers might benefit from increased services, but the results are tentative.

The experiment cautions us about using the examination threat on high income taxpayers, where it might have a negative effect. It will take more research work to identify the best strategy for increasing voluntary compliance among high income taxpayers.

FIG 1. DIFFERENCE BETWEEN AVERAGE CHANGE IN INCOME IN AUDIT GROUP AND CONTROL GROUP FROM 1993 TO 1994 AMONG LOW- & MID-INCOME TAXPAYERS



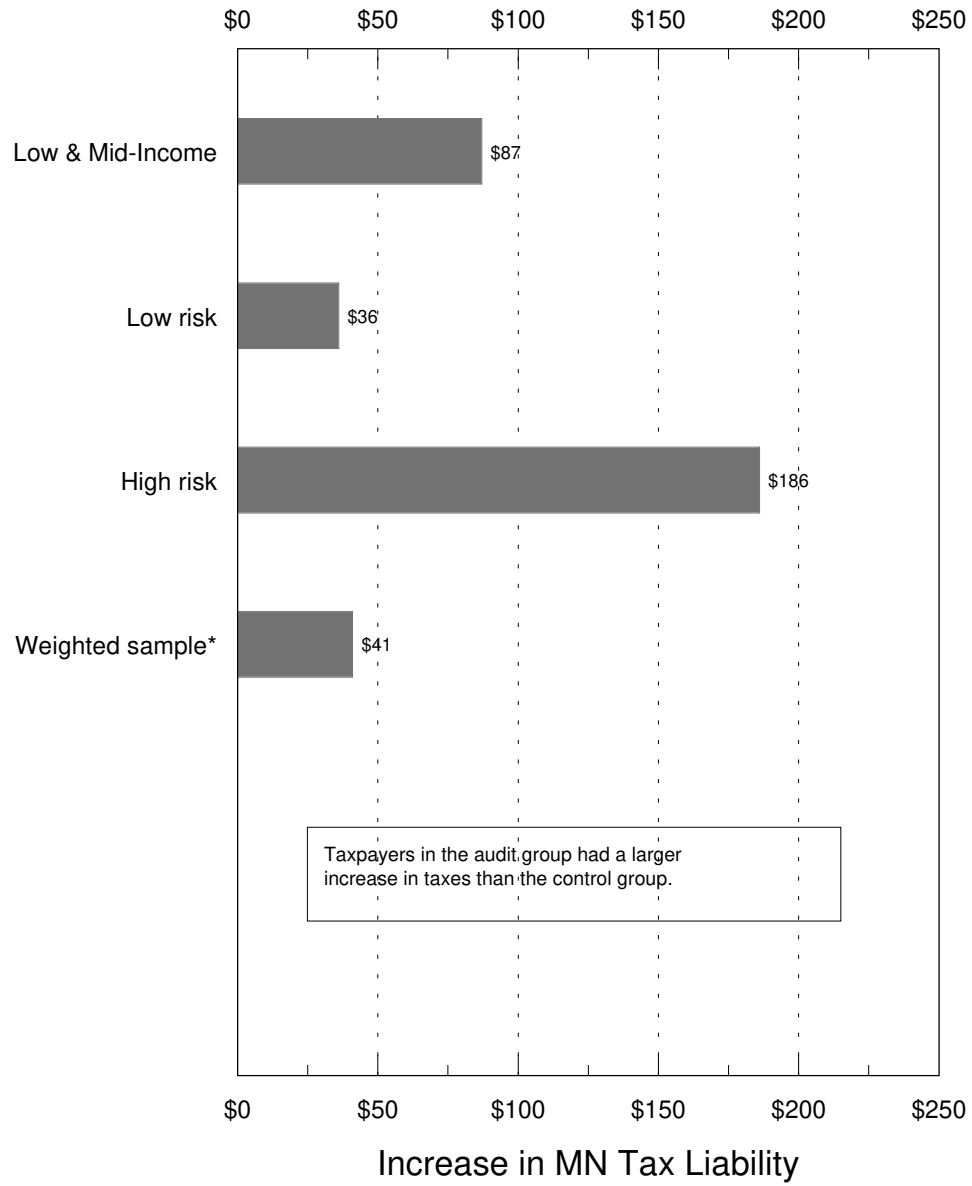
Change in FTI from 1993 to 1994 on MN tax forms.

Dollars adjusted for inflation.

Fed. adjusted gross income less than \$100,000.

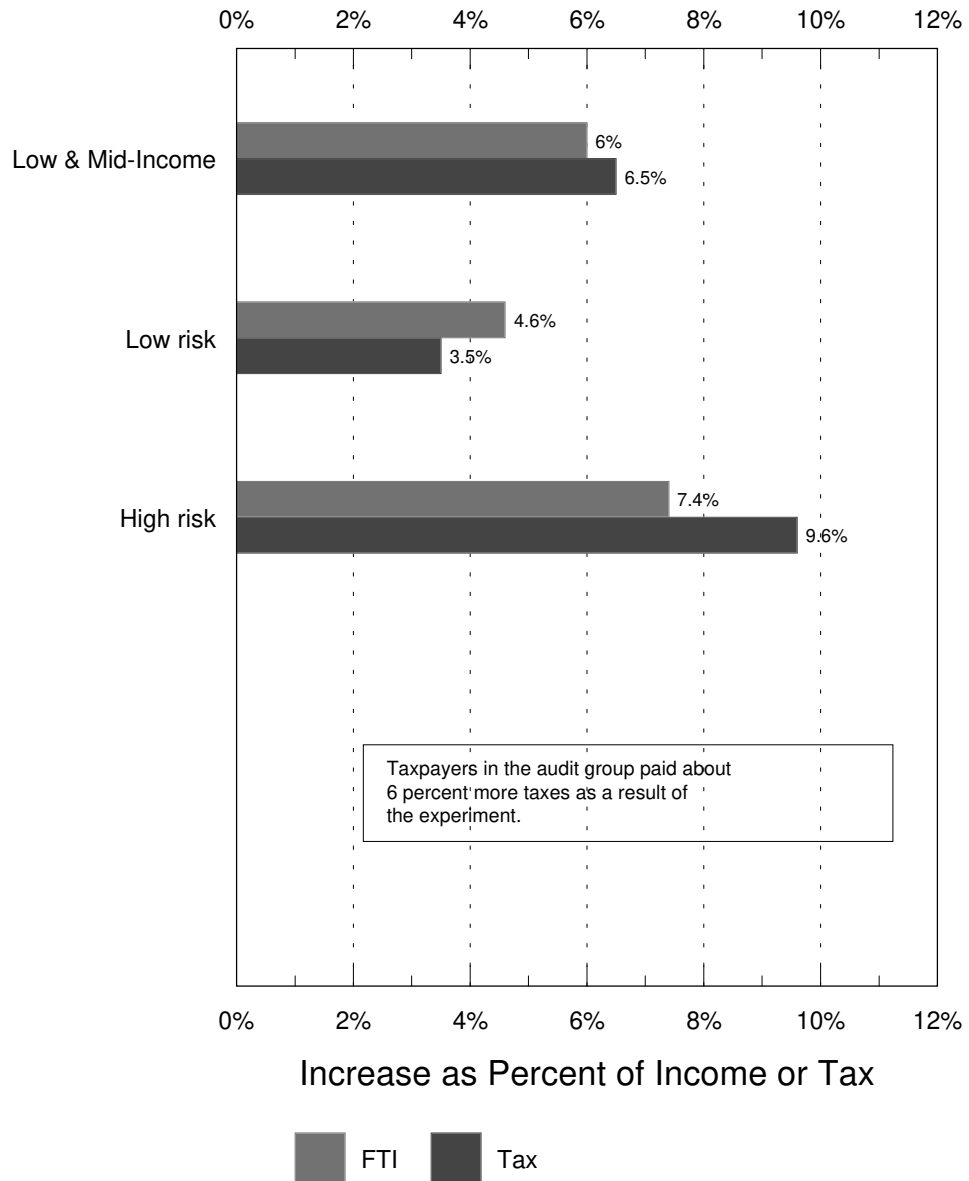
*Sample adjusted to true taxpayer population

FIG 2. DIFFERENCE BETWEEN AVERAGE CHANGE IN MN TAXES IN AUDIT GROUP AND CONTROL GROUP FROM 1993 TO 1994 AMONG LOW- & MID-INCOME TAXPAYERS



Change in tax liability after credits, 1993-94
 Dollars adjusted for inflation.
 Fed. adjusted gross income less than \$100,000.
 *Sample adjusted to true taxpayer population

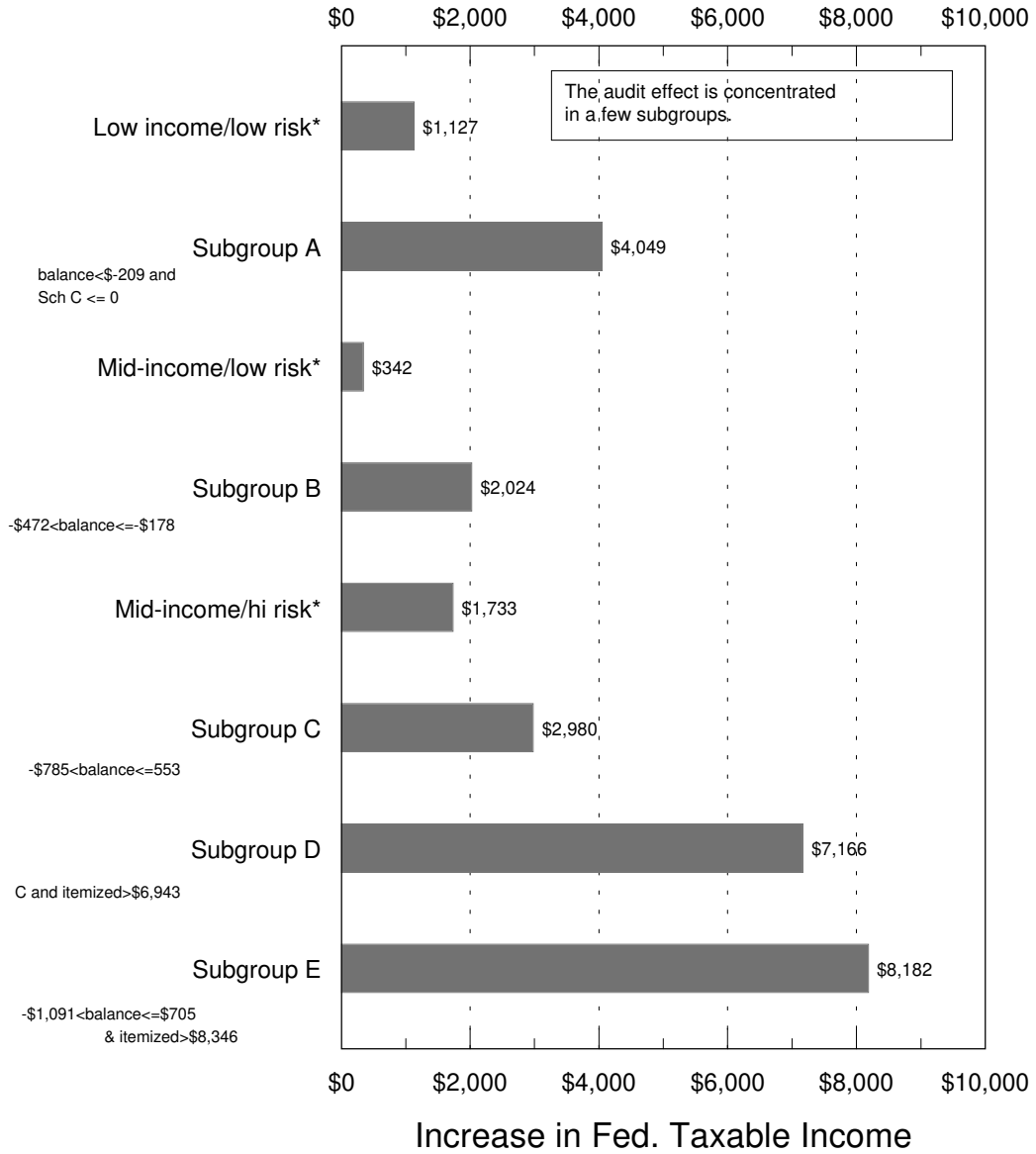
FIG 3. INCREASE IN AUDIT GROUP COMPARED TO CONTROL GROUP AS A PERCENT OF MEAN 1994 INCOME AND TAXES FOR CONTROL GROUP IN LOW- & MID-INCOME



Taxpayers in the audit group paid about 6 percent more taxes as a result of the experiment.

Dollars adjusted for inflation.
 Tax liability after credits. FTI on MN form.
 Fed. adjusted gross income less than \$100,000.

FIG 4. AVERAGE INCREASE IN FED. TAXABLE INCOME
IN AUDIT GROUP COMPARED TO CONTROL GROUP
FOR SELECTED SUBGROUPS



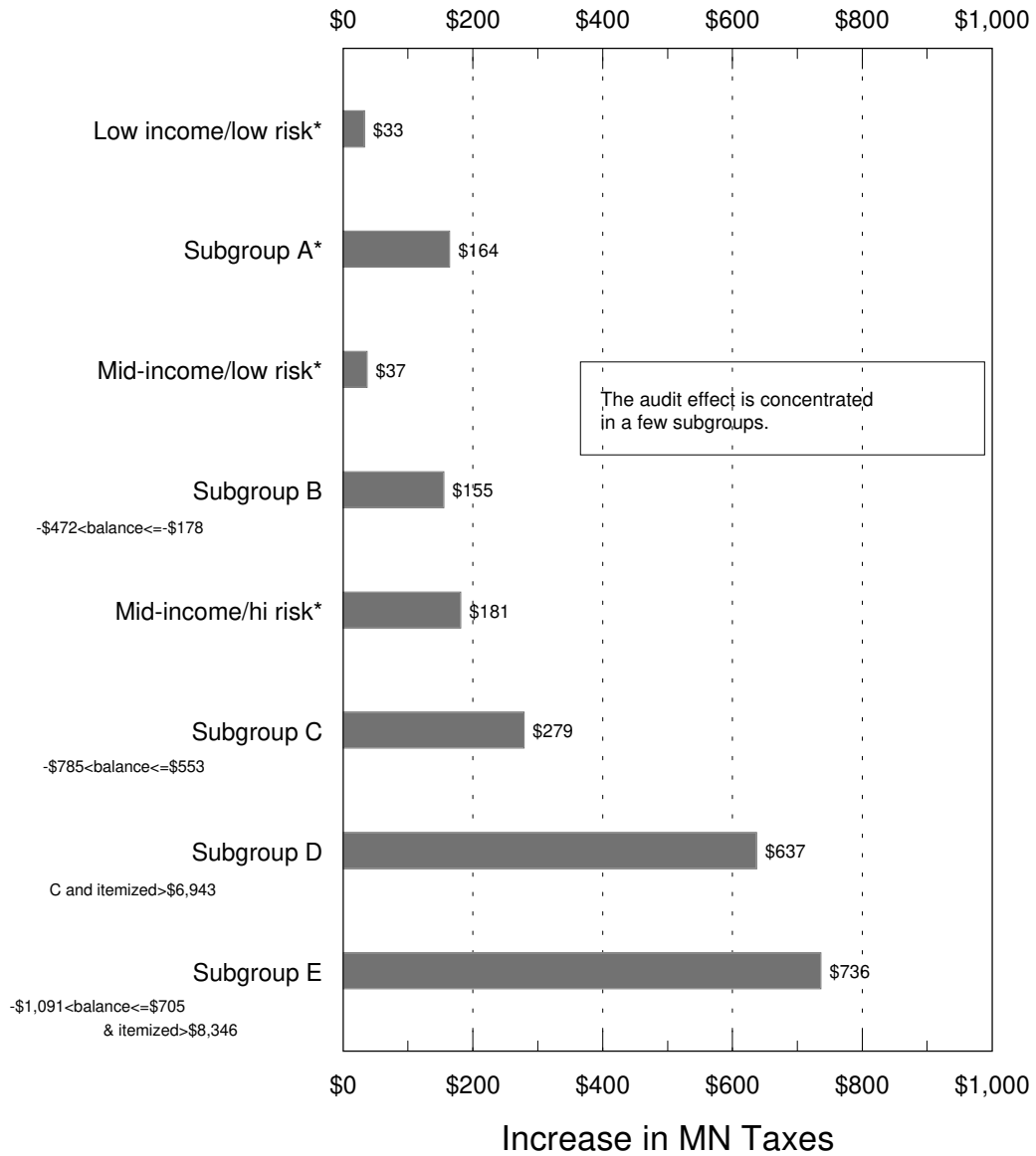
Balance is 1993 balance due or refund if minus

Itemized is 1993 federal itemized deductions

Sch C means 1993 fed. Sch C gross income

*not statistically significant

FIG 5. AVERAGE INCREASE IN MN TAX LIABILITY
 IN AUDIT GROUP COMPARED TO CONTROL GROUP
 FOR SELECTED SUBGROUPS

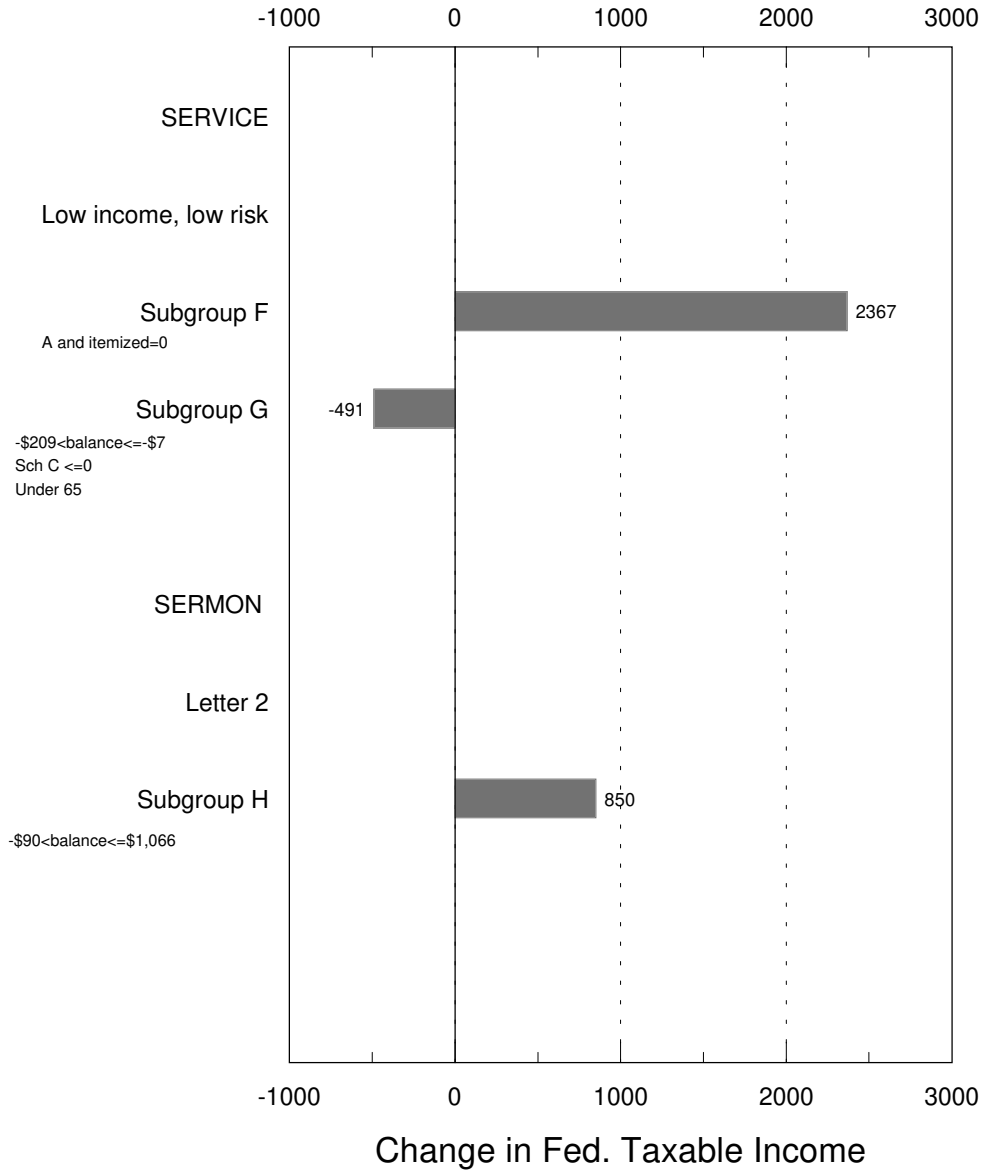


Balance is 1993 balance due or refund if minus

Itemized is 1993 federal itemized deductions

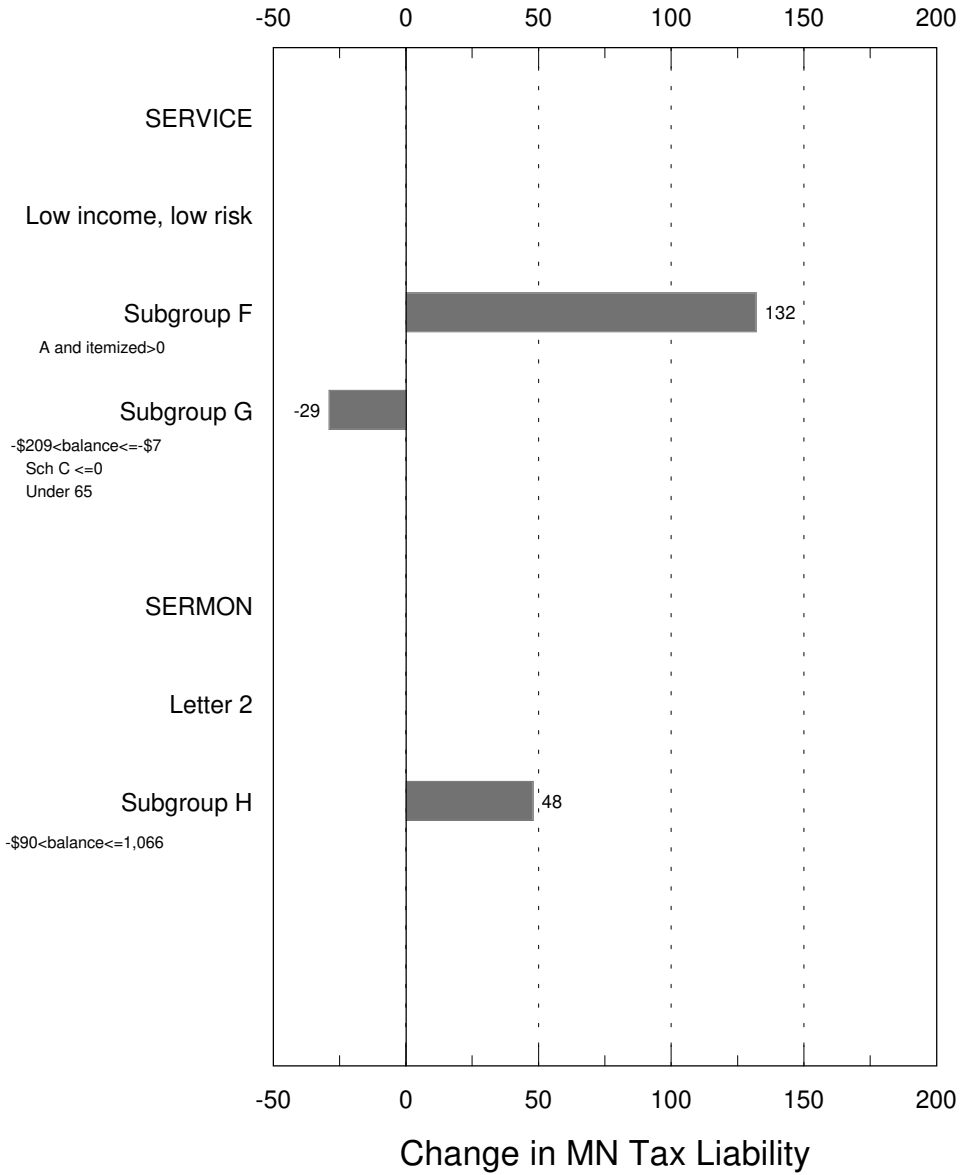
*Not statistically significant.

FIG 6. CHANGE IN FED. TAXABLE INCOME
 SERVICE AND SERMON EXPERIMENTS COMPARED TO
 CONTROL GROUPS IN SELECTED SUBGROUPS



Balance is 1993 balance due or refund if minus
 Itemized is 1993 federal itemized deductions
 Sch C is 1993 Fed. Schedule C gross profit

FIG 7. CHANGE IN MN TAX LIABILITY
 SERVICE AND SERMON EXPERIMENTS COMPARED TO
 CONTROL GROUPS FOR SELECTED SUBGROUPS



Balance is 1993 balance due or refund if minus
 Itemized is 1993 federal itemized deductions
 Sch C is Fed. Sch C gross profit in 1993

FIG 8. SUBGROUPS WITH COMPLIANCE EFFECTS IN RELATION TO THE 1993 MN TAX BALANCE FOR THE AUDIT, SERVICE AND SERMON EXPERIMENTS

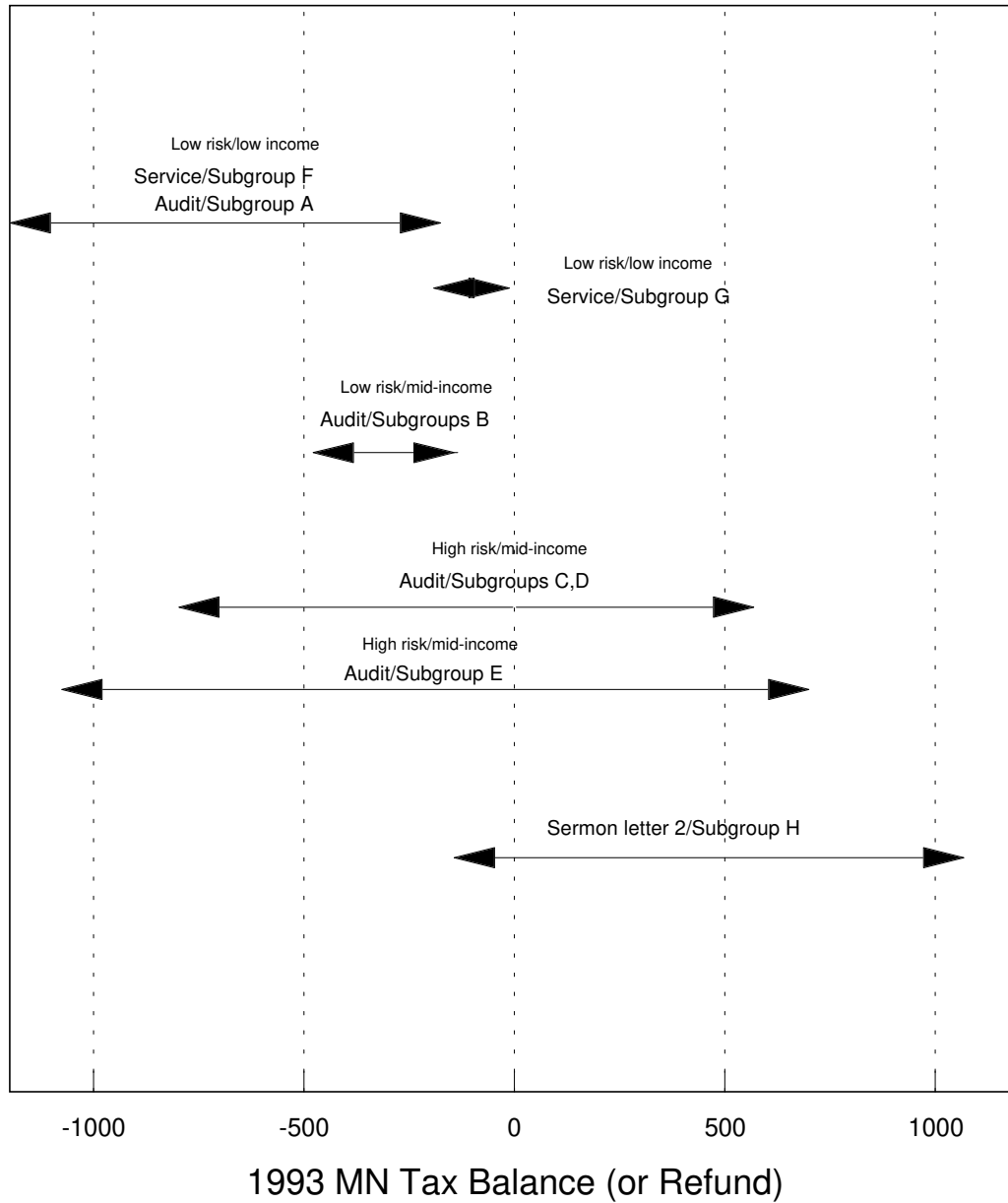
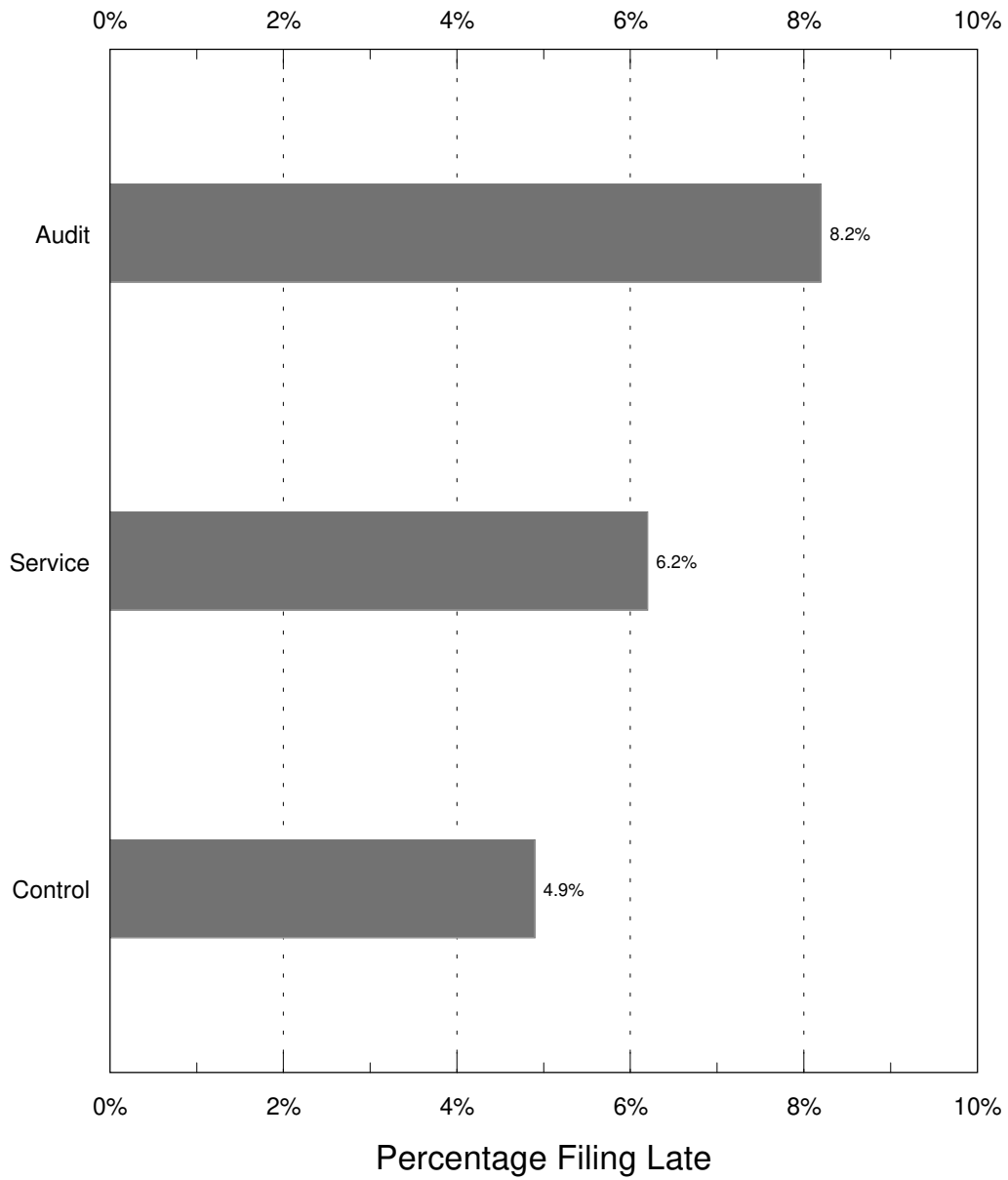


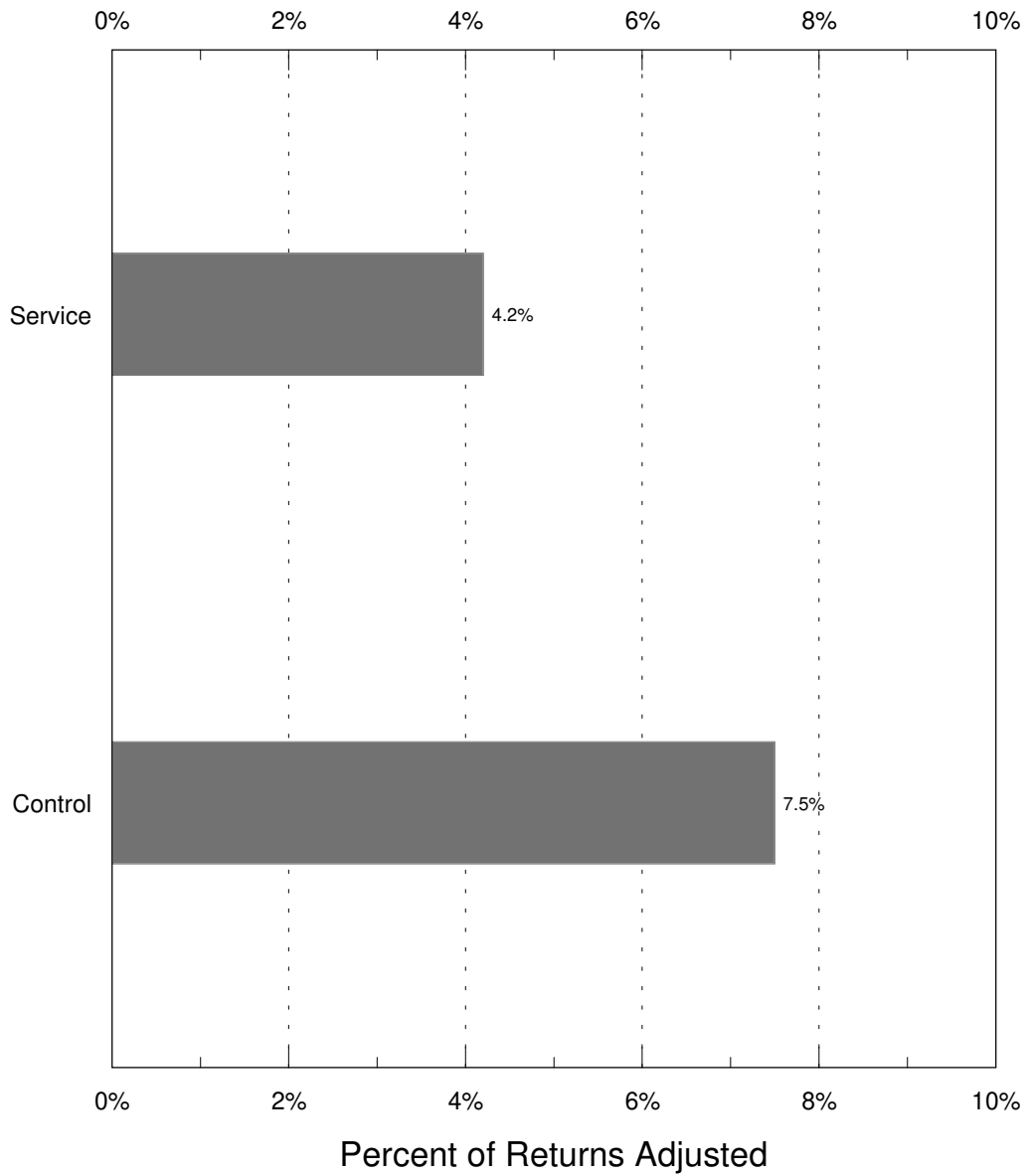
FIG 9. PERCENT OF RETURNS FILED LATE
AUDIT, SERVICE AND CONTROL GROUPS COMPARED
IN MID-INCOME, HIGH RISK CATEGORY



For audit experiment, chi-square test $p = .022$

For service, chi-square test $p = .26$

FIG 10. TAXPAYER ERROR RATES (ADJUSTED RETURNS)
SERVICE EXPERIMENT COMPARED TO CONTROL GROUP
IN MID-INCOME, HIGH RISK CATEGORY

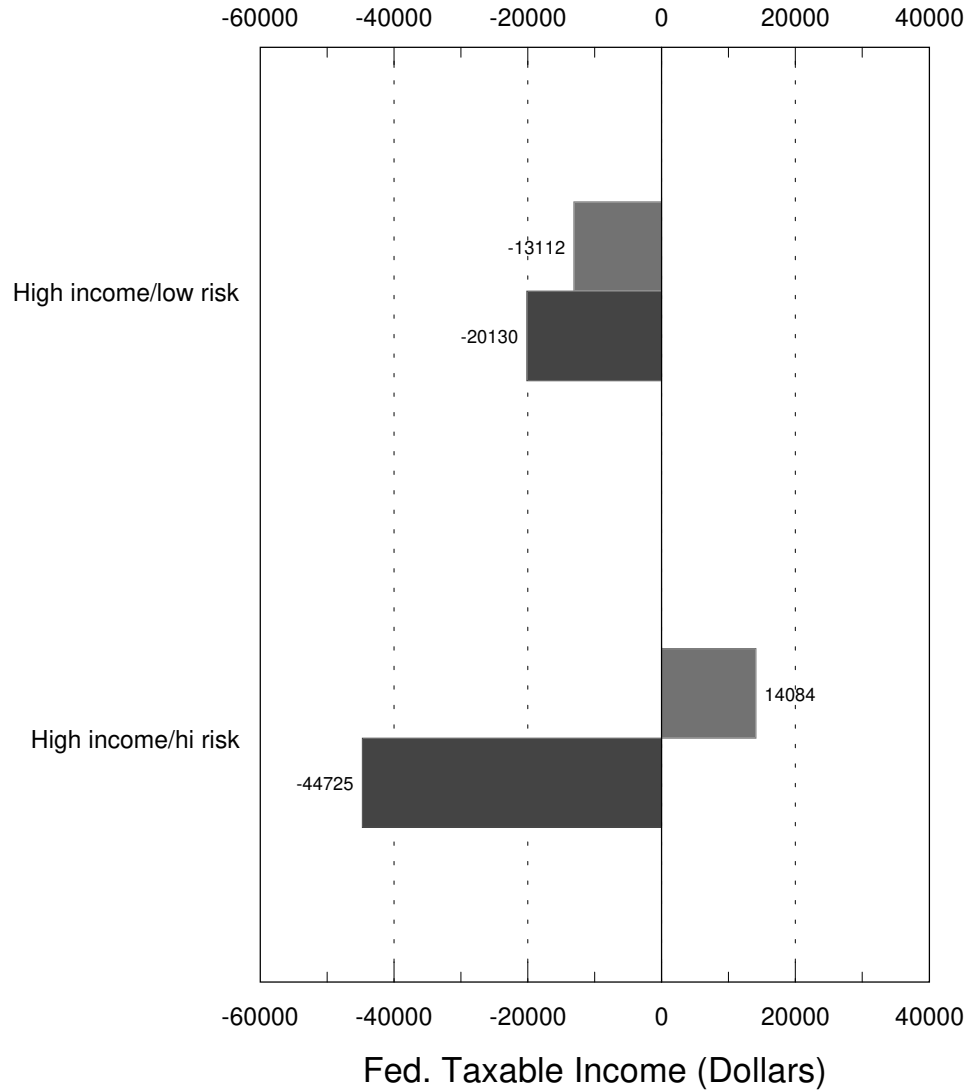


Service experiment, N = 826; control N = 816.

Chi-square test of significance, $p = .005$

Audit experiment had no effect.

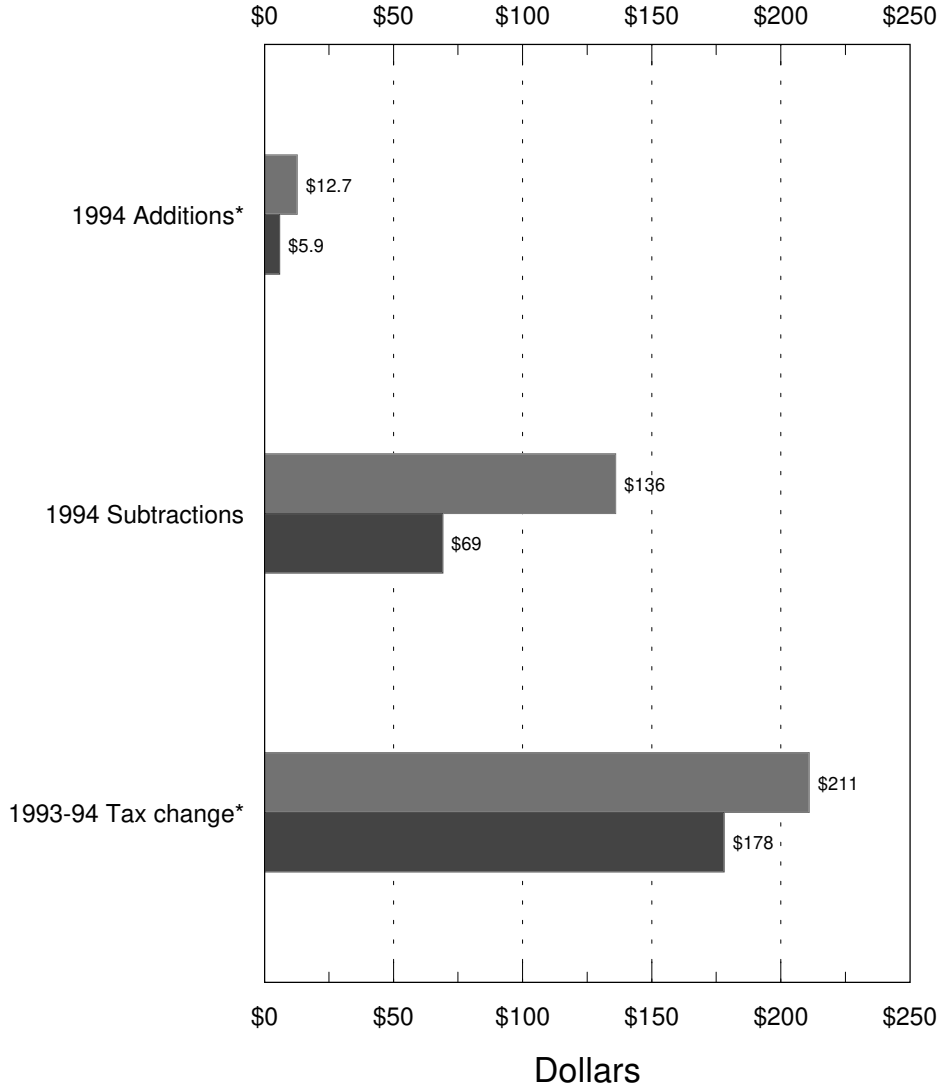
FIG 11. COMPARED TO CONTROL GROUPS, HIGH INCOME TAXPAYERS IN EXPERIMENT HAD AVERAGE CHANGES IN FTI THAT ARE NOT STATISTICALLY SIGNIFICANT



■ Audit ■ Service

Lack of significance because of great variation in change in sample. Change in MN tax liability has similar pattern and is not significant.

FIG 12. EFFECT OF NEW M-1 TEST FORM ON AVERAGE ADDITIONS, SUBTRACTIONS AND TAXES FOR TAXPAYERS WHO DIDN'T USE ADDITIONS OR SUBTRACTIONS IN 1993

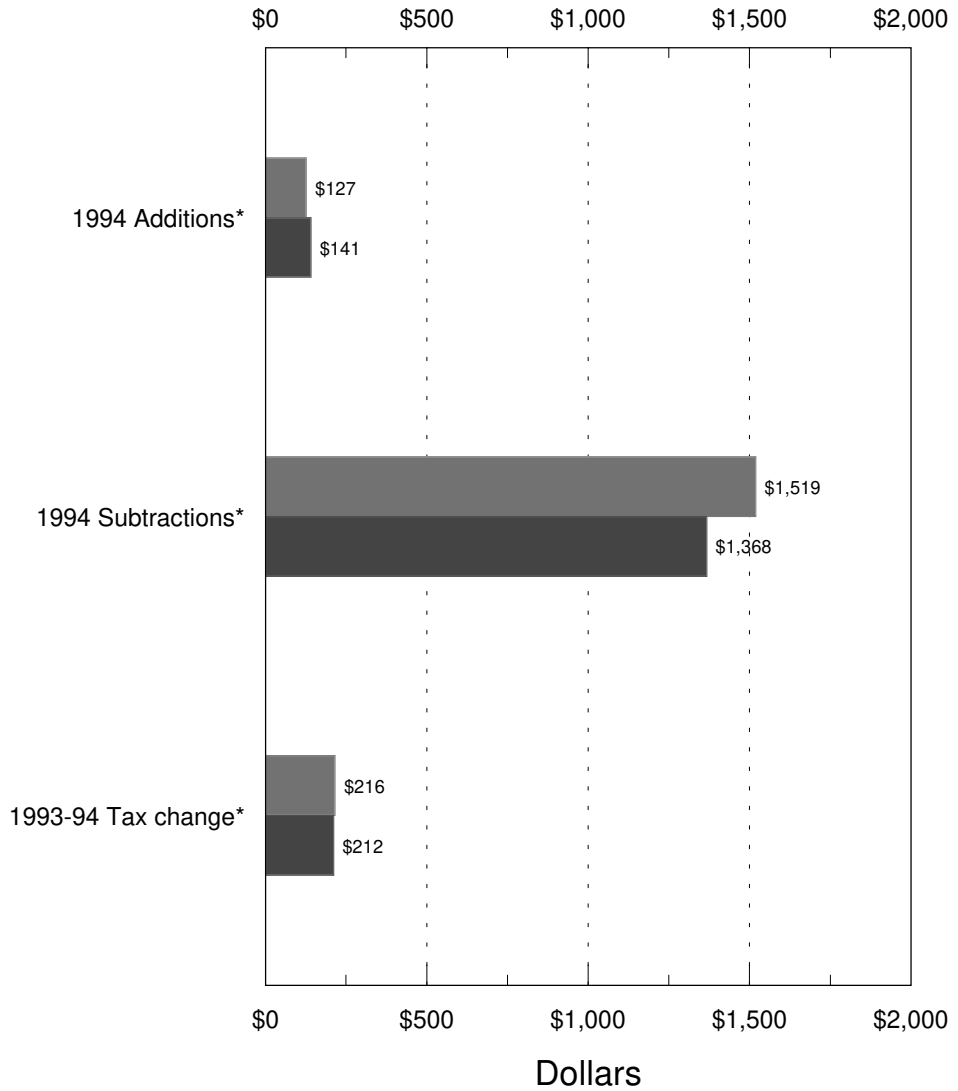


■ New Form ■ Control

Use of subtraction line: 10.1% by new form users compared to 7.1% by control group.

* Difference from control group not significant.

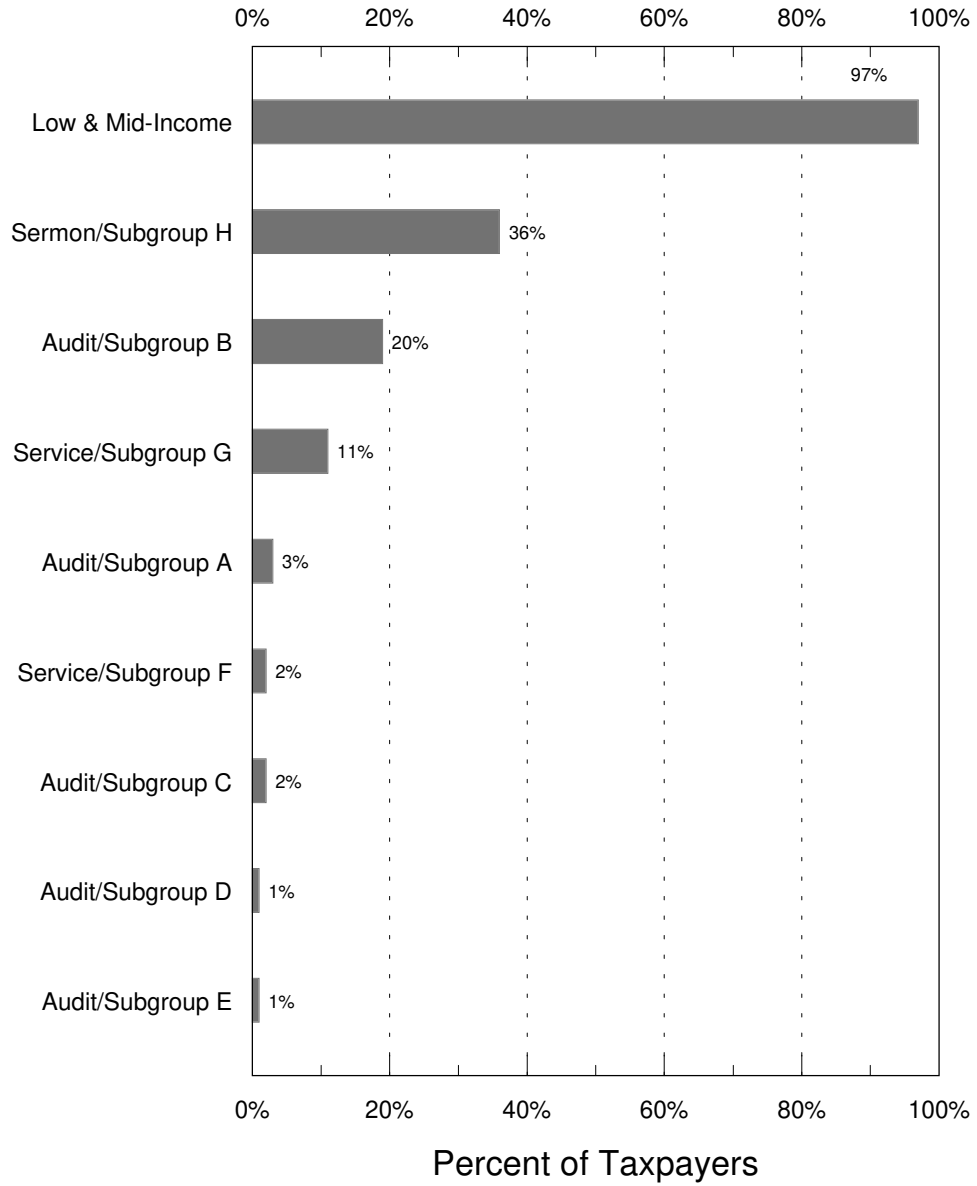
FIG 13. EFFECT OF NEW M-1 TEST FORM ON AVERAGE ADDITIONS, SUBTRACTIONS AND TAXES FOR TAXPAYERS WHO TOOK AN ADDITION OR SUBTRACTION IN 1993



■ New Form ■ Control

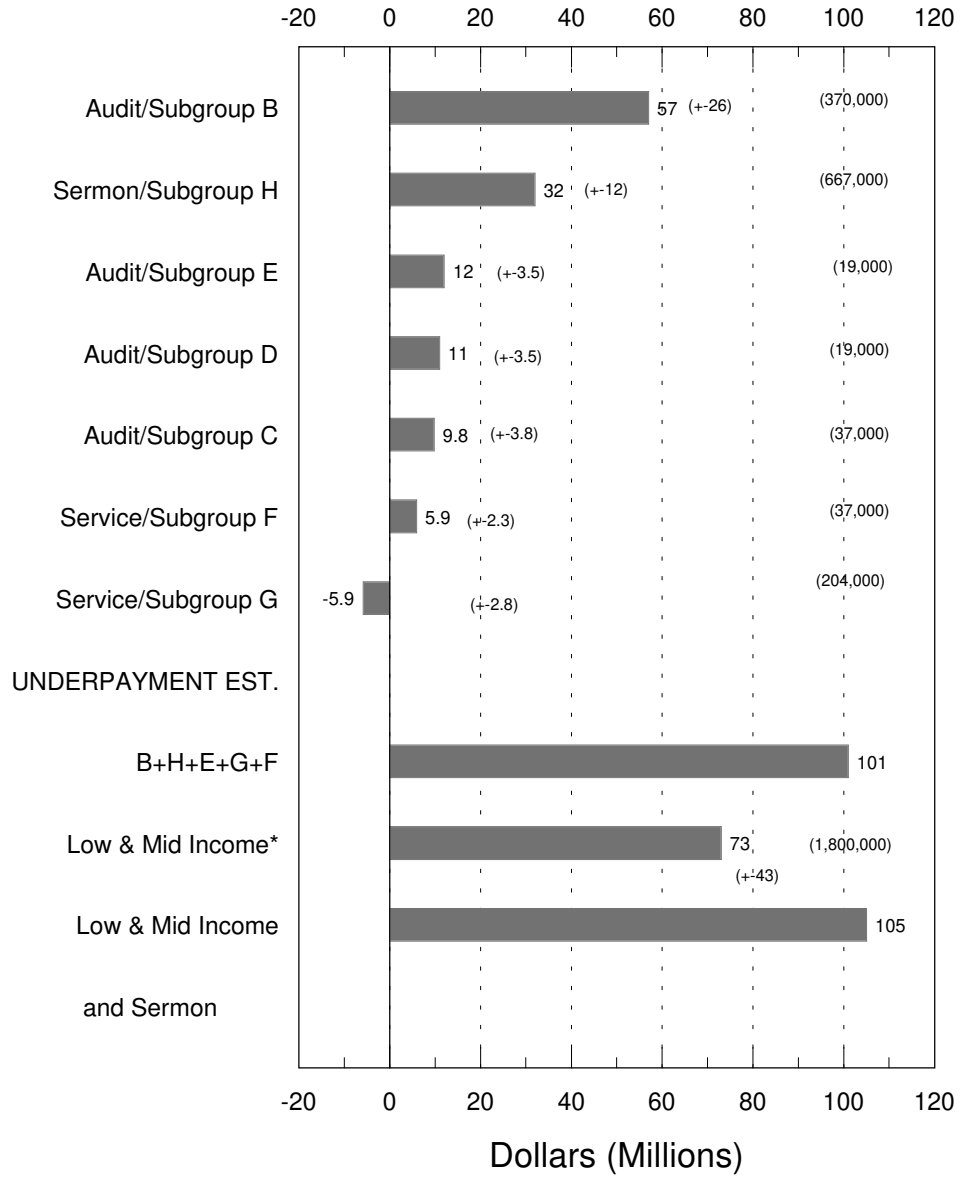
*Difference from control group not significant.
Taxpayers in forms experiment had not used a practitioner in 1993.

FIG 14. PERCENT OF TAXPAYERS REPRESENTED BY SUBGROUPS WITH EXPERIMENTAL COMPLIANCE EFFECTS



The population is 1,852,839 who filed non-amended 1993 returns before Oct. 1994 and were full-year MN residents.

FIG 15. ESTIMATED TAX CHANGES FOR SUBGROUPS IF APPLIED TO WHOLE POPULATION AND ESTIMATED NET TAX UNDERPAYMENT (PART OF TAX GAP)

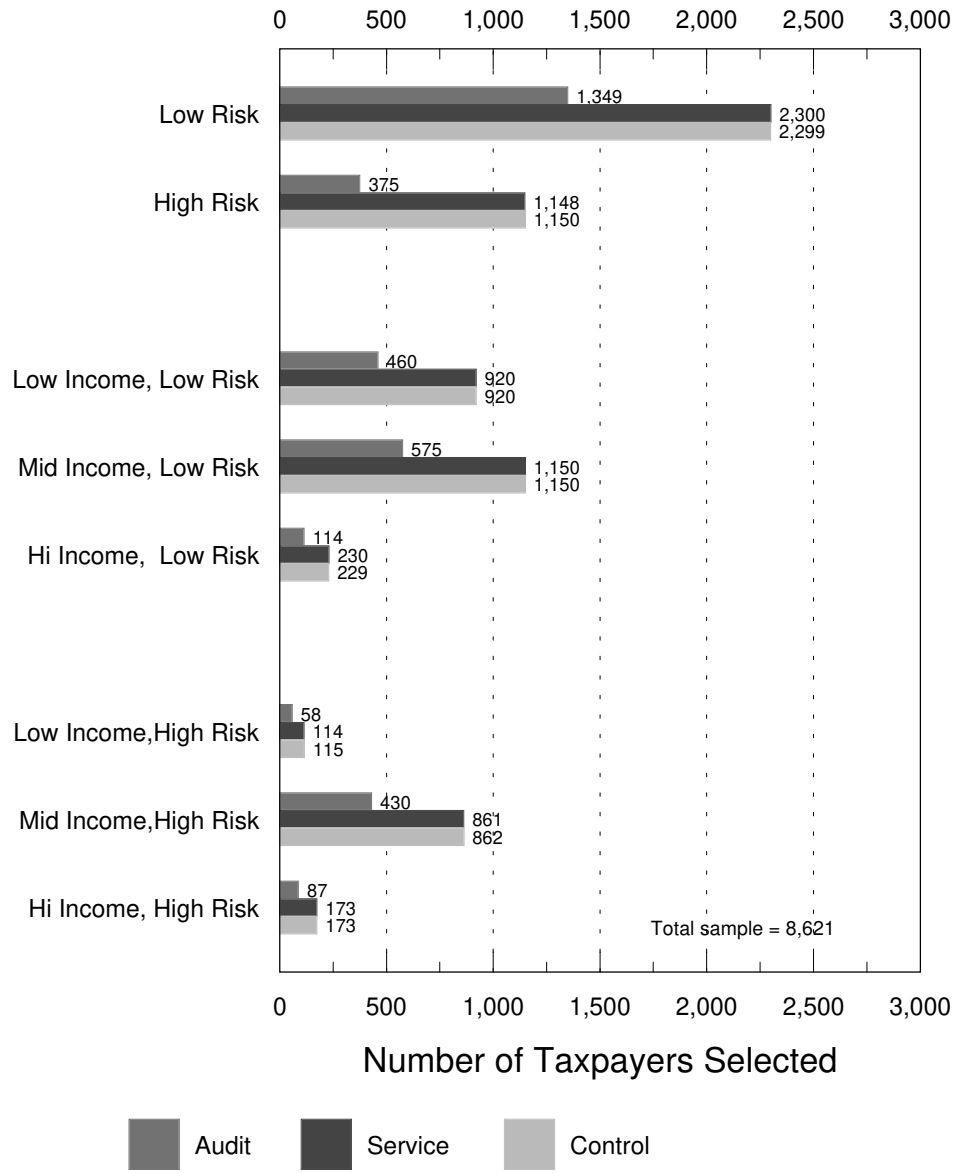


*Low + Mid Income estimate from sample but adjusted to true population; std error is +-43.

(Number of Taxpayers)

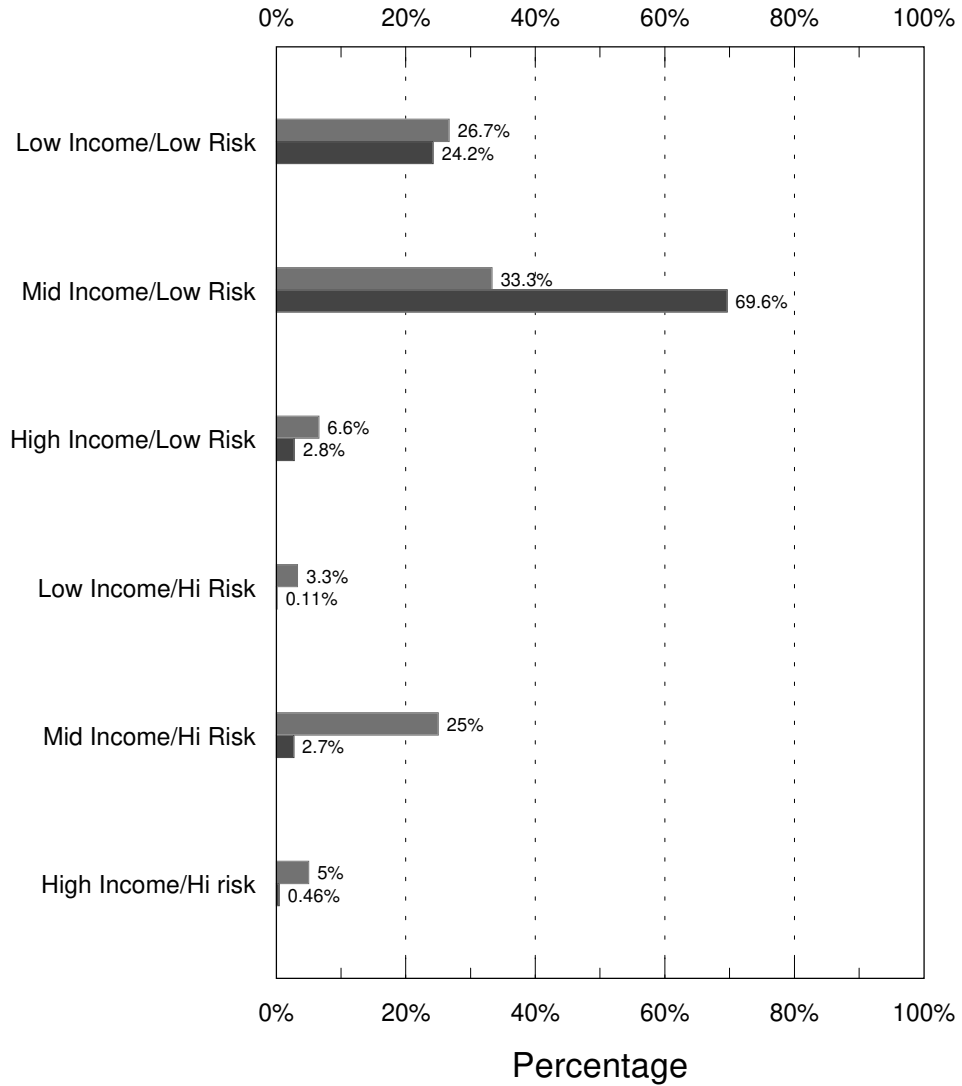
APPENDIX

FIG A1. THE AUDIT-SERVICE EXPERIMENT--
INITIAL SAMPLE SIZES BY RISK AND INCOME LEVELS



The final analysis was limited to cases with no change in filing status from 1993 to 1994; cases were dropped if no filing in 1994.

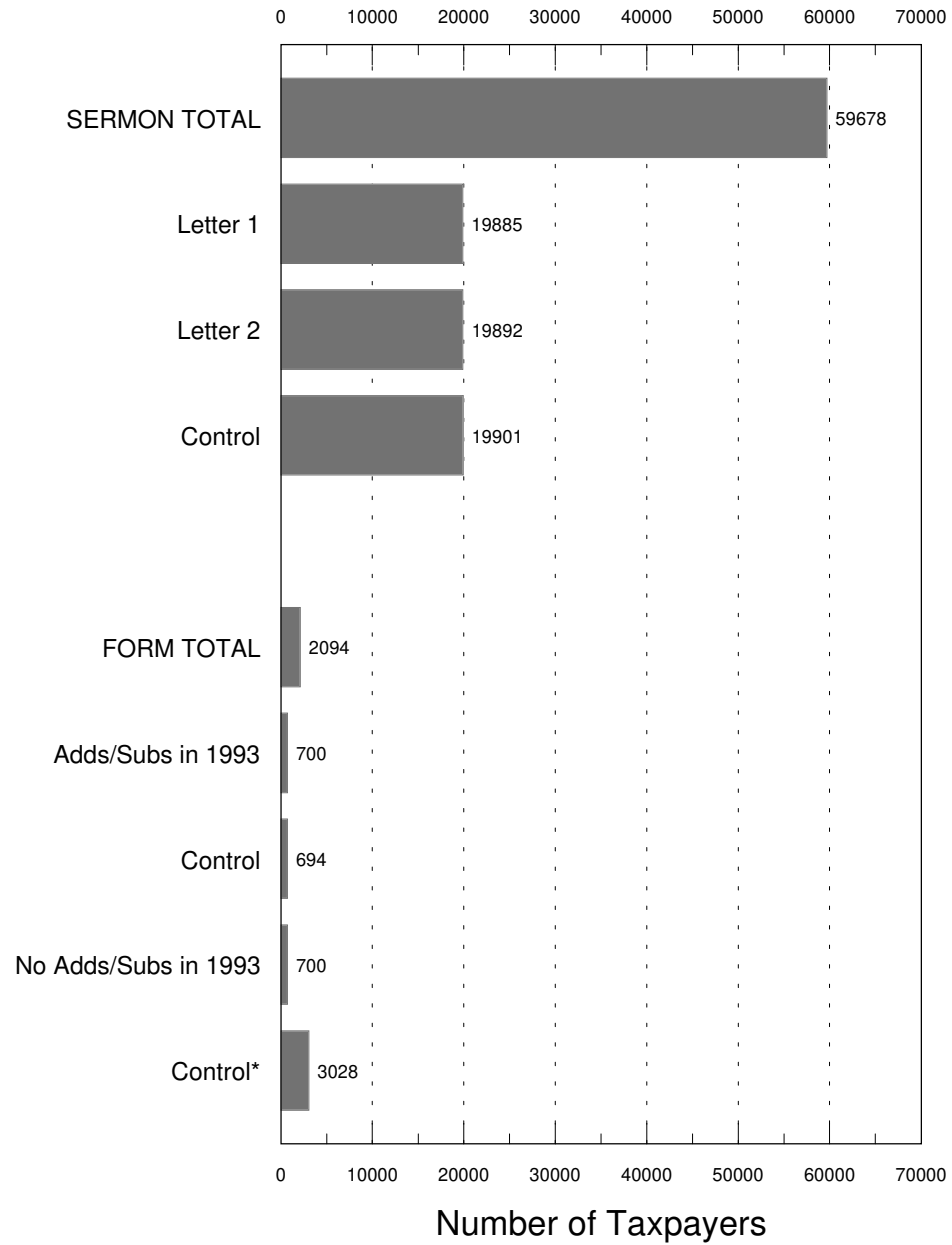
FIG A2. SAMPLE STRATIFICATION--SAMPLE GROUPS AS PERCENTAGE OF THE TOTAL SAMPLE AND AS A PERCENTAGE OF THE TOTAL TAXPAYER POPULATION



■ Sample ■ Population

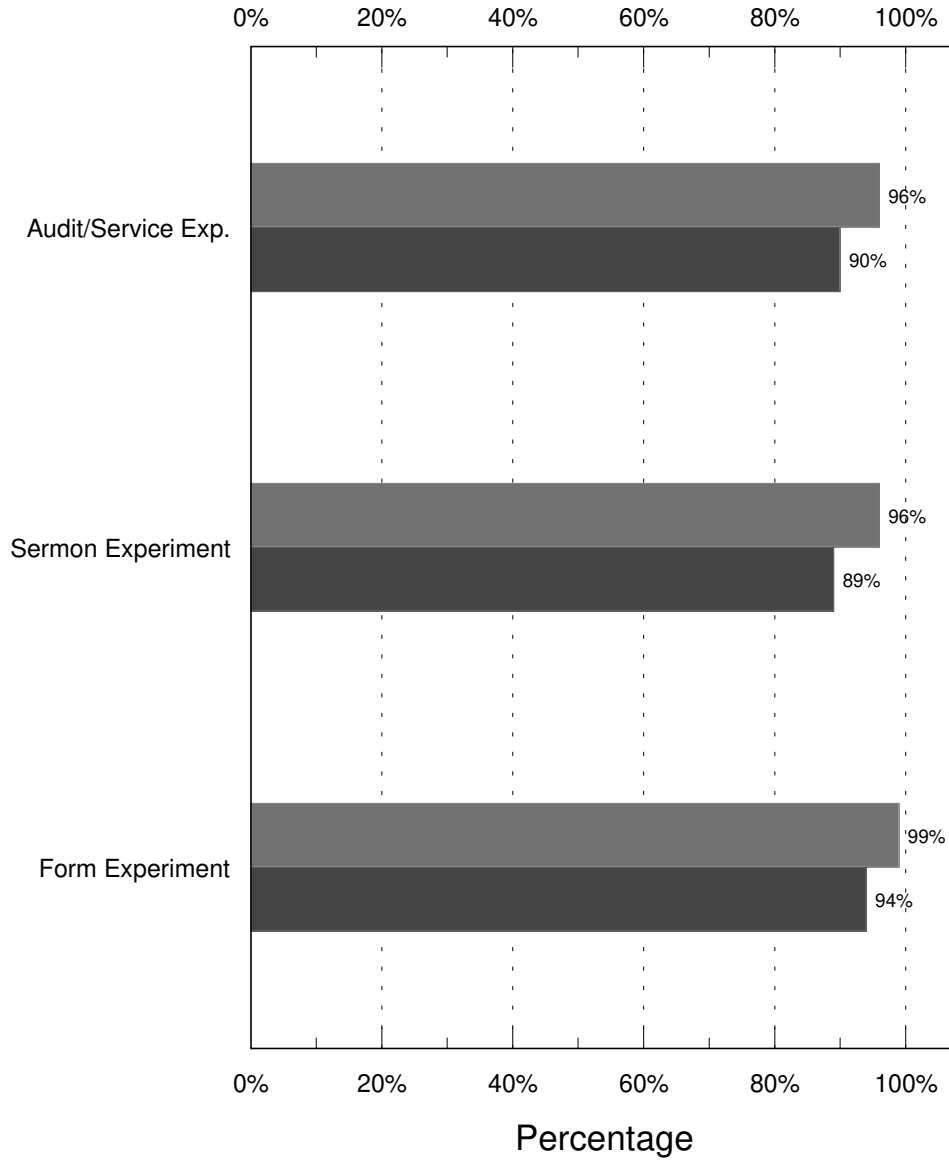
Taxpayer population is 1,852,839 who filed non-amended 1993 returns before Oct. 1994 and were full-year MN residents.

FIG A3. SAMPLE SIZES
FOR THE SERMON AND FORM EXPERIMENTS



*Control drawn from sermon control group; not included in total.

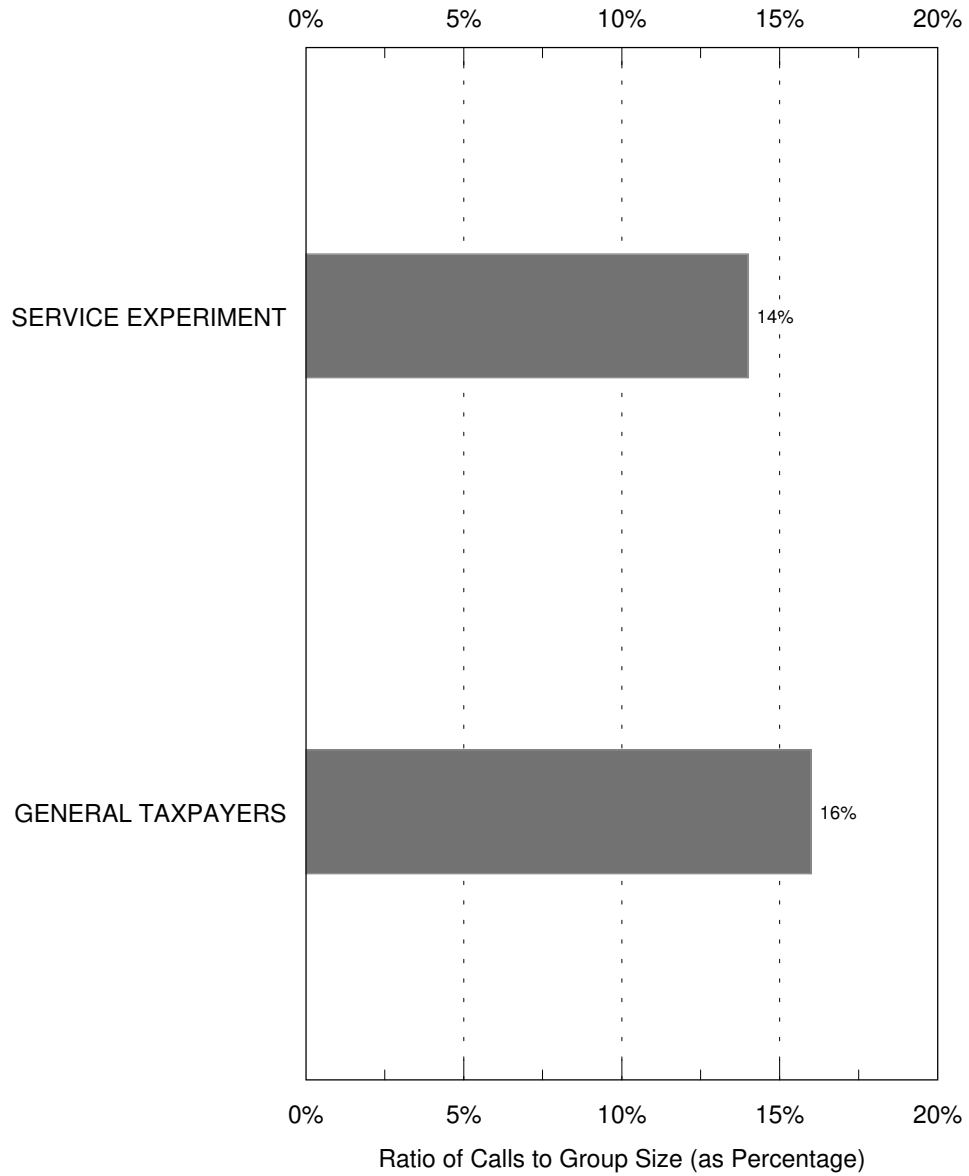
FIG A4. PERCENT OF INITIAL SAMPLES USED IN FINAL ANALYSES (NO CHANGE IN FILING STATUS FROM 1993 TO 1994)



Tax Filed
 No Change in Filing Status

Cases processed by DOR through November 1995.

FIG A5. ESTIMATED USE OF PHONE SERVICE BY TAXPAYERS IN SERVICE EXPERIMENT COMPARED TO GENERAL PHONE SERVICE USAGE BY TAXPAYERS



474 service experiment calls through 17 Apr 1995
from group of 3,400; 363,000 calls from about
2,200,000 taxpayers on general lines.

TAX COMPLIANCE EXPERIMENT -- CHRONOLOGY

1/04/95 Meeting with phone room staff

1/10/95 M-1 Test forms mailed

1/24/95 Meeting with outstate staff

1/27/95 Sermon letter 1 mailed

1/27/95 Audit letter mailed

1/30/95 Service letter mailed

1/31/95 Quasi-Control letter mailed

2/06/95 Sermon letter 2 mailed

2/10/95 St. Paul Pioneer Press article appears

several MDOR briefly describes experiment at meeting with tax preparers

4/17/95 Filing deadline

Related Events:

MDOR announces that customer service hours have been extended (1/19/95)

IRS announces delayed refunds to check on fraud

IRS announces increased auditing

Audit Letter

January, 1995

Dear Taxpayer:

This year we are doing a study that will increase the number of taxpayers whose 1994 individual income tax returns are closely examined by the Minnesota Department of Revenue. You have been selected at random from a list of all Minnesota taxpayers to be in this study.

The examination of your 1994 tax returns will include both your state and federal returns. After a close review of your returns, we may write you for additional information about them or arrange a face-to-face audit. If the examination of your 1994 returns finds any irregularities, we may also review tax returns you filed in prior years, as provided by law.

When you prepare your 1994 return, or give information to your tax preparer, please be very careful to report all your income and take only the deductions to which you are entitled. Remember to attach a copy of your federal return to your state return.

The Minnesota Department of Revenue tries to help taxpayers comply with the law. If you have questions about your Minnesota income tax return, please call us at these numbers:

Order Forms and Schedules	296-4444 from the Twin Cities metro area, or 1-800-657-FORM (toll-free) from elsewhere.
Information and Assistance	296-3781 from the Twin Cities metro area, or 1-800-652-9094 (toll-free) from elsewhere.

Sincerely,

Matthew G. Smith
Commissioner

Service Letter

January, 1995

Dear Taxpayer:

The Minnesota Department of Revenue is trying to improve its income tax services to taxpayers. To find out what services are most useful, we're offering expanded information and services on a trial basis to several thousand taxpayers. You've been selected at random to be part of this group.

You can decide whether or not to use these services. Later, however, we'll send you a survey asking which services you used and how helpful they were. Being part of this group doesn't mean you will be any more or less likely to be audited. You do not have to identify yourself to get assistance, and we will not use caller identification.

Starting January 17, you are eligible to use the following special services:

- A direct-line phone number for income tax assistance at the Department of Revenue. Someone will be on duty to answer calls Monday through Friday from 7:30 a.m. to 9 p.m., and on Saturday from 9 a.m. to 4 p.m. The number is 215-0100 from the Twin Cities metro area; or call toll-free 1-800-657-3872 from elsewhere. Please save these numbers. We've put these numbers on the enclosed refrigerator magnet for your convenience.
- By calling the above numbers, you can get help for both your Minnesota taxes and federal taxes. We cannot prepare your taxes for you, but we will try our best to answer your questions. The enclosed tax guide is also designed to answer many tax questions.
- We can answer your Minnesota income tax questions in person if you come to our main office in St. Paul or make an appointment at one of our regional or local offices; these offices can't prepare your return for you, however. Their addresses and phone numbers are attached.

Because we can serve only a limited number of taxpayers in this test, please don't give these phone numbers to other people. The numbers are for your personal use only.

Thank you for your participation in this service test. If you have any questions about the service offer, please call us at the phone numbers listed above.

Sincerely,
Matthew G. Smith
Commissioner

Enclosures (3)

January, 1995

Information Message "Letter 1"

Dear Taxpayer:

The income tax filing season has started. We at the Minnesota Department of Revenue want to remind you that filing before April 17 will let us process your return faster.

Your income tax dollars are spent on services that we Minnesotans depend on. Over 30 percent of state taxes go to support education. Another 18 percent is spent on health care and support for the elderly and the needy. Local governments get about 12 percent of the state tax money, supporting services in your community such as law enforcement, parks, libraries and snow removal. Other tax dollars pay for highways and for cleaning up the environment. So when taxpayers do not pay what they owe, the entire community suffers.

As you prepare your return, or give instructions to your tax preparer, please be very careful to report all your income and take only the deductions to which you are entitled.

The Minnesota Department of Revenue tries to help taxpayers comply with the law. If you have questions about your Minnesota income tax return, please call us at these numbers:

Order Forms and Schedules	296-4444 from the Twin Cities metro area, or 1-800-657-FORM (toll-free) from elsewhere.
Information and Assistance	296-3781 from the Twin Cities metro area, or 1-800-652-9094 (toll-free) from elsewhere.

Sincerely,

Matthew G. Smith
Commissioner

January, 1995

Information Message “Letter 2”

Dear Taxpayer:

The income tax filing season has started. We at the Minnesota Department of Revenue want to remind you that filing before April 17 will let us process your return faster.

According to a recent public opinion survey, many Minnesotans believe other people routinely cheat on their taxes. This is not true, however. Audits by the Internal Revenue Service show that people who file tax returns report correctly and pay voluntarily 93 percent of the income taxes they owe. Most taxpayers file their returns accurately and on time. Although some taxpayers owe money because of minor errors, a small number of taxpayers who deliberately cheat owe the bulk of unpaid taxes.

As you prepare your return, or give instructions to your tax preparer, please be very careful to report all your income and take only the deductions to which you are entitled.

The Minnesota Department of Revenue tries to help taxpayers comply with the law. If you have questions about your Minnesota income tax return, please call us at these numbers:

Order Forms and Schedules	296-4444 from the Twin Cities metro area, or 1-800-657-FORM (toll-free) from elsewhere.
Information and Assistance	296-3781 from the Twin Cities metro area, or 1-800-652-9094 (toll-free) from elsewhere.

Sincerely,

Matthew G. Smith
Commissioner

January, 1995

Letter for M-1 Test Form (In instruction book)

Dear Taxpayer:

The Minnesota Department of Revenue is testing a new type of tax form. The form is designed to make tax filing more accurate and to ensure that taxpayers get all the deductions and subtractions they are entitled to. You have been randomly selected to be included in this test.

We are asking you to use the enclosed tax form when you file your 1994 Minnesota income tax return. We have also included revised supplementary schedules and an instruction book that reflects the changes in the form and schedules.

Please keep the new form and instruction book until you file your return. You will not be able to get either of these from a tax preparer, a library, or any other source except our office. Please do not give the form to anyone or make copies for them. You can, however, make copies for yourself.

We appreciate your cooperation with this test, which will help us improve our services to taxpayers.

If you need help filing your income tax return or need additional forms or schedules, please call us at the following numbers. Be sure to say you are in the test group for the new tax form:

Order Forms and Schedules	296-4444 from the Twin Cities metro area, or 1-800-657-FORM (toll-free) from elsewhere.
Information and Assistance	296-3781 from the Twin Cities metro area, or 1-800-652-9094 (toll-free) from elsewhere.

Sincerely,

Morris J. Anderson
Commissioner of Revenue

The following page shows the standard 1994 Minnesota income tax form.

Individual Income Tax 1994

Use label or print or type

Your first name and initial	Last name	Social Security number	State Elections Campaign Fund If you want \$5 to go to help candidates for state offices pay campaign expenses, you may each check one box. This will not increase your tax or reduce your refund.									
Spouse's first name and initial	Last name	Social Security number										
Present home address (street, apartment number, route)												
City or town	State	Zip code	<table style="width: 100%; border: none;"> <tr> <td style="text-align: right;">Democratic Farmer-Labor</td> <td style="text-align: center;">Independent Republican</td> <td style="text-align: center;">General Campaign Fund</td> </tr> <tr> <td>You: <input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>Spouse: <input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> </table>	Democratic Farmer-Labor	Independent Republican	General Campaign Fund	You: <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Spouse: <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Democratic Farmer-Labor	Independent Republican	General Campaign Fund										
You: <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>										
Spouse: <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>										

Check your 1994 federal filing status:

Single
 Married filing joint
 Married filing separate
 Head of household
 Qualifying widow(er)

Please staple your W-2 forms here. Place check or money order here but do not staple.

Figure your Minnesota income

1 Federal taxable income (from line 37 of your federal Form 1040 or line 22 of Form 1040A or line 5 of Form 1040EZ)	1		.
2 State income tax addition. If you itemized deductions on federal Form 1040, fill out the worksheet on page 8 of the Form M-1 instructions to determine the amount to fill in here	2		.
3 Other additions to your income (see instructions on page 9)	3		.
4 Add lines 1, 2, and 3	4		.
5 State income tax refund (from line 10 of your federal Form 1040)	5	.	
6 Other subtractions from your income (see instructions on page 9)	6	.	
7 Add lines 5 and 6	7		.
8 Subtract line 7 from line 4. This is your Minnesota taxable income	8		.
9 Tax: from the table on pages 15 through 19 of the instructions, or from Schedule (check boxes): M-1MT <input type="checkbox"/> , M-1NR <input type="checkbox"/> , M-1LS <input type="checkbox"/> , M-1CR <input type="checkbox"/>	9		.
10 If you wish to donate to the Nongame Wildlife Fund, fill in the amount here. This will reduce your refund or increase your tax	10		.
11 Add lines 9 and 10	11		.
12 Minnesota income tax withheld (from your 1994 W-2 forms)	12	.	
13 Minnesota estimated tax and Form M-13 payments you made for 1994, if any	13	.	
14 Child and dependent care credit (attach Schedule M-1CD)	14	.	
15 Minnesota working family credit (see instructions on page 13)	15	.	
16 Add lines 12, 13, 14, and 15	16		.
17 If line 16 is more than line 11, subtract line 11 from line 16 and fill in the amount of your REFUND	17		.
18 If line 11 is more than line 16, subtract line 16 from line 11 and fill in the AMOUNT YOU OWE	18		.
19 If you are paying estimated tax for 1995, fill in the amount from line 17 you want applied to it, if any	19	.	
20 If you underpaid your estimated tax for 1994, fill in your penalty, if any (from line 16 of Schedule M-15)	20	.	

Refund or amount due

Sign your return

I declare that this form is correct and complete to the best of my knowledge and belief. I admit I owe the tax listed above, and confess judgment to the commissioner for the tax shown on the return to the extent not timely paid.

Your signature	Spouse's signature	Date	Daytime phone ()
Paid preparer's signature ONLY	MN tax ID or Social Security number	Date	Daytime phone ()

You must attach a copy of your 1994 federal income tax return and schedules
 Mail this form to: Minnesota Individual Income Tax, St. Paul, MN 55145-0010

The next two pages show the special test form used in the study.

Individual Income Tax 1994

Print or type

Your first name and initial	Last name	Social Security number
If a joint return, spouse's first name and initial	Last name	Social Security number
Present home address (street, apartment number)		
City or town	State	Zip code

State Elections Campaign Fund

If you want \$5 to go to help candidates for state offices pay campaign expenses, you may each check one box. This will not increase your tax or reduce your refund.

	You:	Spouse:
Democratic Farmer-Labor	<input type="checkbox"/>	<input type="checkbox"/>
Independent Republican	<input type="checkbox"/>	<input type="checkbox"/>
General Campaign Fund	<input type="checkbox"/>	<input type="checkbox"/>

Filing status

Check your 1994 federal filing status:

- Single
- Married filing joint
- Married filing separate return. Enter spouse's Social Security number above and full name here: _____
- Head of household
- Qualifying widow(er)

Please staple your W-2 forms here. Place check or money order here but do not staple.

Determine your Minnesota income

1 Federal taxable income (line 37 of your federal Form 1040 or line 22 of Form 1040A or line 5 of Form 1040EZ)	1	.
2 State income tax addition. If you itemized deductions on federal Form 1040, fill out the worksheet on page 6 of the Form M-1 instructions to determine the amount to fill in here	2	.
3 Interest from non-Minnesota state and municipal bonds (included on line 8b of Form 1040 or 1040A)	3	.
4 Interest from bonds of another state or its governmental units held by a mutual fund (included on line 8b of Form 1040 or 1040A)	4	.
5 Capital gains portion of a lump-sum distribution (line 8 of federal Form 4972)	5	.
6 Add lines 1 through 5	6	.
7 State income tax refund (line 10 of your federal Form 1040)	7	.
8 Portion of school expenses for dependents in grades K through 12	8	.
9 Interest or mutual fund dividends from U.S. government bonds	9	.
10 Subtraction for persons age 65 or over, or permanently and totally disabled (line 22 of Schedule M-1R)	10	.
11 Portion of line 15b or 16b of federal Form 1040 or line 10b or 11b of Form 1040A that is from contributions made to an IRA or Keogh plan in 1982, 1983 and/or 1984	11	.
12 Portion of line 16b of federal Form 1040 or line 11b of Form 1040A that is from contributions made to a Minnesota state, local government or school district retirement plan in 1983 and/or 1984	12	.
13 Benefits received from the Railroad Retirement Board included in line 1	13	.
14 Portion of ACRS depreciation for 1981 or 1982 assets that you added to your income on your 1981, 1982, 1983 and/or 1984 Form M-1	14	.
15 Portion of health insurance expenses, if self-employed, for which you did not get a federal tax benefit (see instructions for computation)	15	.
16 Other subtractions (see list on page 10 of the instructions). Write in type(s): _____	16	.
17 Total subtractions. Add lines 7 through 16	17	.
18 Subtract line 17 from line 6. This is your Minnesota taxable income	18	.

19 Minnesota taxable income (line 18 on the front of this form)	19		.
20 Tax from the table on pages 14 through 18 of the instructions.	20		.
21 Minnesota alternative minimum tax (line 20 of Schedule M-1MT)	21		.
22 Add lines 20 and 21 and fill in the amount. Full-year residents: Skip lines 23 through 25 and fill in this amount on line 26 below	22		.

Part-year and nonresidents only

(You must complete Schedule M-1NR before you can continue.)

23 Fill in your Minnesota source income (line 16 of Schedule M-1NR)	23		.
24 Fill in the amount from line 19 of your Schedule M-1NR	24		.
25 Divide line 23 by line 24, and fill in the resulting percentage (use 4 decimal places). If line 23 is more than line 24, fill in 100%	25		%

All applicants

26 Full-year residents: Fill in the amount from line 22 above. Part-year and nonresidents: Multiply the amount on line 22 by the percentage on line 25	26		.
27 Tax on lump-sum distribution from qualifying retirement plan (line 13 of Schedule M-1LS)	27		.
28 Add lines 26 and 27	28		.
29 Alternative minimum tax credit (line 23 of Schedule M-1MTC)	29		.
30 Credit for taxes paid to another state or province (line 7 or line 11 of Schedule M-1CR)	30		.
31 Add lines 29 and 30	31		.
32 Subtract line 31 from line 28. If less than zero, fill in "0"	32		.
33 If you wish to donate to the Nongame Wildlife Fund, fill in the amount here. This will reduce your refund or increase your tax	33		.
34 Add lines 32 and 33	34		.
35 Minnesota income tax withheld (from your 1994 W-2 forms)	35		.
36 Minnesota estimated tax and Form M-13 payments you made for 1994, if any	36		.
37 Child and dependent care credit (line 9 or 13 of Schedule M-1CD)	37		.
38 Minnesota working family credit (see instructions on page 12)	38		.

39 Add lines 35, 36, 37 and 38	39		.
40 If line 39 is more than line 34, subtract line 34 from line 39 and fill in the amount of tax you OVERPAID	40		.
41 Amount from line 40 you want APPLIED TO YOUR 1995 ESTIMATED TAX	41		.
42 Subtract line 41 from line 40 and fill in the amount to be REFUNDED TO YOU	42		.
43 If line 34 is more than line 39, subtract line 39 from line 34 and fill in the AMOUNT YOU OWE	43		.
44 If you underpaid your estimated tax for 1994, fill in your penalty, if any (line 16 of Schedule M-15, see instructions on page 13)	44		.

Make check payable to:
MN Department of Revenue

I declare that this form is correct and complete to the best of my knowledge and belief. I admit I owe the tax listed above, and confess judgment to the commissioner for the tax shown on the return to the extent not timely paid.

Your signature	Date	Daytime phone ()
Spouse's signature (if filing jointly, BOTH must sign)	Date	Daytime phone ()
Paid preparer's signature ONLY	MN tax ID or Social Security number	Date Daytime phone ()

You must attach a copy of your 1994 federal income tax return and schedules

Mail this form to: Minnesota Individual Income Tax, St. Paul, MN 55146-2200

In the original report, this page had a photocopy of an article that appeared in the St. Paul Pioneer Press on Friday, February 10, 1995, titled “Many upset over letter hinting audit.” It is not available in this Internet edition of the report.

Report From Phone Service

Compliance Experiment/Special Service Group

In January 1995 letters (copy attached) and information were sent to 3500 taxpayers informing them of some enhanced service options available to them from the Department of Revenue.

In addition to the letter and special telephone number information they received a flipchart of tax information which is usually available only to tax practitioners and VITA/TCE volunteer tax preparers.

Out office set up the special toll free and local numbers to bypass the Voice Response Unit. We set up a 3 line multiline hunt group in our Automatic Call Distributor and assigned experienced representatives and leadworkers to these lines to minimize the possibility of have to transfer the calls elsewhere. We felt by doing this we also could handle the federal questions which might come in.

After our working hours the lines were set up to go to a voicemail box with a message telling the taxpayer to leave a message and we would call them back the next day.

Totals of incoming calls on the number are attached for each day broken down into "regular hours" (7:30-5:00) and "after hours" (5:00-9:00) and Saturdays.

General Comments:

While we did see the expected drop off in calls after the first few weeks, we did not see the increase in calls toward the end of the season we expected.

Calls were approximately 60-70% state questions. The federal questions mostly related to Schedule D issues (capital gains) and pension/retirement issues.

In the original report, this page showed a table listing the frequency of calls received in our phone room. The table is not available in this Internet edition.

Your special help lines to Minnesota Taxpayer Services:

1-800-657-3872 or 215-0100 in the metro area.

Special help lines open January 17 through April 17

Monday – Friday: 7:30 a.m. to 9:00 p.m.

Saturdays: 9:00 a.m. to 4:00 p.m.

After hours leave a message. We'll get back to you the next working day.

These phone numbers are only for people selected for this experiment. Please don't give them out to others. After April 17, 1995 the special help lines will not be available. If you still need tax help after April 17, call our regular help lines: 1-800-652-9094 or 296-3781. Keep the magnetic holder as a small thank-you for your participation in this experiment.

MINNESOTA Department of Revenue