The Effects of Sharing the Consequences of Tax Evasion and Regret Salience on Taxpayer Compliance

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THE EFFECTS OF SHARING THE CONSEQUENCES OF TAX EVASION AND REGRET SALIENCE ON TAXPAYER COMPLIANCE

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Submitted in Partial Fulfillment of the Requirements
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ABSTRACT

This study examines whether sharing the potential tax savings and risk of penalties associated with tax evasion with another individual and the anticipation of potential regret from an adverse IRS audit affect an individual decision maker’s propensity to evade taxes. Research on risky decision making suggests that individuals will be less likely to evade taxes when the benefits and costs of evasion are shared, while research on ethical decision making suggests that individuals will be more likely to evade taxes when the benefits of evasion are shared with another individual. Using experimental data obtained from 147 experienced taxpayers throughout the United States, this study finds evidence consistent with the risky decision making literature. Specifically, this study demonstrates that taxpayers are less likely to evade taxes when they share the potential tax savings and risk of penalties with another taxpayer compared to when the tax evasion decision affects solely the decision maker. In addition, this study demonstrates that regret salience decreases a taxpayer’s willingness to evade taxes. Specifically, asking taxpayers to anticipate the regret they would experience if they were caught evading taxes before making a reporting decision lowers their likelihood of evasion.
TABLE OF CONTENTS

ACKNOWLEDGEMENTS ........................................................................................................ iii

ABSTRACT .......................................................................................................................... iv

LIST OF TABLES ................................................................................................................. vii

LIST OF FIGURES ............................................................................................................... viii

LIST OF SYMBOLS ............................................................................................................. ix

LIST OF ABBREVIATIONS ................................................................................................... x

CHAPTER 1: INTRODUCTION .............................................................................................1

CHAPTER 2: BACKGROUND – TAX COMPLIANCE ..............................................................6

CHAPTER 3: HYPOTHESIS DEVELOPMENT .......................................................................8

3.1 SHARED INTEREST IN THE CONSEQUENCES OF TAX EVASION ..............................8

3.2 REGRET SALIENCE ....................................................................................................11

CHAPTER 4: EXPERIMENTAL METHOD .........................................................................15

4.1 PARTICIPANTS .............................................................................................................15

4.2 TASK ..........................................................................................................................16

4.3 DESIGN .......................................................................................................................17

4.4 DEPENDENT VARIABLES ........................................................................................18

CHAPTER 5: RESULTS .......................................................................................................22

5.1 TESTS OF HYPOTHESES .........................................................................................22

5.2 ANCILLARY ANALYSIS ............................................................................................26

5.3: DISCUSSION .............................................................................................................28
CHAPTER 6: CONCLUSION ........................................................................................................38
REFERENCES ..................................................................................................................................41
APPENDIX A – INSTRUMENT MATERIALS ..................................................................................44
LIST OF TABLES

Table 4.1 Participant Demographics .................................................................21
Table 5.1 ANOVA Results and Planned Contrasts ...........................................34
Table 5.2 Categorical ANOVA Results and Planned Contrasts .......................35
Table 5.3 ANOVA Results and Planned Contrasts ...........................................36
Table 5.4 Participant Responses ...................................................................37
LIST OF FIGURES

Figure 4.1 Experimental Design .................................................................30
Figure 5.1 Likelihood of Evasion ...............................................................31
Figure 5.2 Percent of Participants Evading ...............................................32
Figure 5.3 Percent of Possible Cash Revenue Not Reported ......................33
LIST OF SYMBOLS

A  Sole Proprietor/Control Frame Condition
B  Partnership/Control Frame Condition
C  Sole Proprietor/Regret Frame Condition
D  Partnership/Regret Frame Condition
μ  Average of Participant Responses
<table>
<thead>
<tr>
<th>Abbreviation</th>
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<tr>
<td>ANOVA</td>
<td>Analysis of Variance</td>
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<tr>
<td>df</td>
<td>Degrees of Freedom</td>
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<td>IRS</td>
<td>Internal Revenue Service</td>
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<tr>
<td>M-Turk</td>
<td>Amazon Mechanical Turk</td>
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<tr>
<td>n.s.</td>
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CHAPTER 1

INTRODUCTION

Income tax reporting is a voluntary compliance system in which taxpayers report to the government how much taxable income they have for the year and remit taxes based on this figure. The most recent estimates provided by the IRS show that almost 20% (approximately $450 billion) of the United States tax revenue in 2006 was lost due to taxpayer noncompliance (IRS 2012b). A common form of noncompliance is the misrepresentation of taxable income to generate tax savings. This opportunity to misrepresent taxable income exists because a substantial amount of information is subject to little or no third party verification (e.g. rents and royalties, farm income, deductions, Partnership/S-Corp income). When the opportunity to misreport taxable income exists, it is important to understand the factors influencing taxpayers reporting decisions. The purpose of this study is to examine how tax evasion is affected by two important factors: 1) a shared interest in the consequences of tax compliance and 2) the salience of the anticipated regret that a taxpayer may experience from an adverse audit.

A shared interest in the consequences of tax compliance is very common. For example, in 2008 there were over 3.1 million Partnerships and over 2.5 million S-Corporations filing tax returns with the IRS (IRS 2012a). For “pass through” entities, tax compliance decisions made at the entity level have a direct effect on the taxation of each

---

1 For reviews of the taxpayer compliance literature see Jackson and Milliron (1986), Cuccia (1994), and Kornhauser (2008).
of the entity’s owners, since the entity’s income is allocated to and reported on the owners’ personal tax returns. This business form creates a shared interest in the consequences of the tax evasion decision among the owners. Despite the prevalence of shared interest arrangements, prior research has not addressed whether a shared interest affects the decision process of the individual who is making tax compliance decisions on behalf of themself and one or more other individuals.

The risky decision literature and ethics literature develop competing predictions regarding how a shared interest in the consequences of tax evasion impacts taxpayer compliance. On one hand, Allingham and Sandmo’s (1972) model of tax evasion implies that the decision to evade taxes is a rational decision dependent upon risk. That is, tax evasion is a gamble between potential tax savings and potential penalties. When there is a shared interest in the consequences of tax evasion, the decision maker is making a risky decision that affects oneself and other(s) concurrently. Prior research involving risk in domains outside of taxation has focused on how making a decision on the behalf of another individual differs from decisions made on one’s own behalf. For example, McCauley et al. (1971) and Zaleska and Kogan (1971) show that decisions tend to be less risky when made on behalf of another individual. Within a tax setting, this research suggests that if a tax evasion decision is viewed as a decision made under risk, the presence of another individual who is affected by the tax reporting decision (i.e. a shared interest) will lead decision makers to a lower willingness to evade.

On the other hand, tax evasion decisions may not be based on risk. Tax evasion choices also involve moral and ethical considerations (Alm and Torgler 2011). Ethics research in domains outside of taxation has shown that, individuals are more willing to
perform an unethical act when the benefits of performing that act are shared between the
decision maker and one or more individuals, as compared to when the decision maker
reaps all the benefits (Wiltermuth 2011; Church et al. 2012). This willingness comes, in
part, because the decision maker views the act as less unethical when it benefits another
individual. Applying these findings to a tax setting suggests that, if taxpayers view tax
evasion primarily as an ethical decision, then sharing the tax savings with other
individuals will allow the taxpayer to justify evasion as less unethical. These beliefs, in
turn, will lead to an increase in the willingness to evade taxes.

Regardless of whether tax evasion is viewed primarily as a risky decision or an
ethical decision, if a taxpayer evades and later is caught (i.e. undergoes an adverse audit),
he/she will likely regret the decision to evade due to the penalties and shame associated
with tax evasion. Regret theory suggests that if taxpayers anticipate the potential regret
they would experience from an adverse audit, they may apply greater weight to the risks
of tax evasion (Bell 1982; Loomes and Sugden 1982). However, for potential regret to
affect individual decision making, this post-decisional regret must be salient at the time
the decision is made. In a shared interest setting, there is potential to experience two
types of regret which may be coupled: individual regret and other-induced regret (Stone
et al. 2002). This study proposes that when potential regret is made salient to the
taxpayer, tax evasion will decrease.

To examine how a shared interest in the consequences of tax evasion and regret
salience jointly affect taxpayer behavior, this study utilizes a 2×2 full factorial
experimental design. Participants are asked to review a case scenario and indicate how
likely they would be to evade taxes by reporting cash revenues below the amount known
to have been received for the year. The first manipulated variable is whether there is a
shared interest in the consequences of tax evasion and is operationalized by varying the
business ownership form in the case materials at two levels. Holding constant the level of
individual wealth, half of the participants are told to assume they operate their business as
a Sole Proprietorship and that their decisions only affect solely themselves, while the
second half of the participants are told to assume they operate their business with a
partner and that their decisions affect themselves and their partners equally.

The second independent variable is the participant’s decision frame which is also
manipulated at two levels, a control frame and a regret frame. In the regret frame
condition, prior to deciding how willing they are to underreport cash revenues,
participants are asked to indicate the level of regret they would experience if they were
audited and caught evading taxes. In the control frame condition, participants are not
asked to indicate the level of regret they would experience if they were audited and
cought evading taxes until after they decide how willing they are to underreport cash
revenues. The control frame condition more closely resembles taxpayers natural decision
processes without experimenter manipulation and thus provides a baseline from which to
compare the responses to the regret frame condition.

Results from this study indicate that participants in the Partnership conditions
have significantly lower tax evasion intentions than participants in the Sole Proprietor
conditions. Such results are consistent with participants making evasion decisions based
on risk. In addition, consistent with regret theory, participants in the regret frame
condition have significantly lower tax evasion intentions than participants in the control
frame condition.
This paper makes at least two significant contributions to the tax compliance literature. First, it shows that sharing the risks and rewards of tax evasion influences a taxpayer’s propensity to evade taxes. Because taxpayers’ evasion decisions are affected by the presence of a shared interest in the consequences of tax compliance, regulators may shift their audit practices to account for such differences. Specifically, this study suggests that regulators may consider shifting resources away from tax returns where the consequences of tax evasion are shared, such as Partnerships returns, and toward tax returns filed with Sole Proprietor income.

Second, this study indicates that taxpayers are less likely to evade when they anticipate the regret they would experience if they were caught evading taxes. Researchers and regulators could use the results of this study to examine specific strategies to make regret more salient to taxpayers before making tax compliance decisions. For example, Alm and Torgler (2011) suggest that publicizing tax evasion convictions in the media may increase tax compliance, as this publicly increases the salience of the negative consequences of evasion.

Chapter II provides a brief background of the tax compliance literature. Chapter III develops the specific hypotheses. Chapter IV discusses the experimental methods. Chapter V presents the study results, and Chapter VI concludes.
CHAPTER 2

BACKGROUND – TAX COMPLIANCE

Early research on tax compliance centered its predictions on economic utility theory and Allingham and Sandmo’s (1972) model of tax evasion, which incorporates economic factors (income level and tax rate) and deterrent factors (penalty rate and detection rate) into a tax evasion decision. Their model suggests that an individual will choose to report an income level that maximizes the expected utility payoff in an evasion gamble, which is a function of the individual’s true income, the tax rate, the audit probability, and the penalty imposed for underreporting income. Therefore, early tax research focused on risk when studying decision making involving tax evasion. However, this early model has received mixed support (e.g. Becker et al. 1987; Beck et al. 1991; Alm et al. 1992). In fact, individuals engage in lower levels of tax evasion (report higher levels of taxable income) than would be predicted by models based on economic utility theory (White et al. 1993; Dhami and al-Nowaihi 2007). These mixed results have led researchers to examine noneconomic factors that may influence taxpayer behavior.

One such noneconomic factor involves ethical decision making. Alm and Torgler (2011) shows that an individual’s moral beliefs towards tax evasion has an effect on tax compliance behavior, in that an individual will comply as long as he/she believes it is the “right thing to do.” Survey evidence supports the assertion that a taxpayer’s ethics play a vital role in an individual’s compliance decisions (Song and Yarbrough 1978). Erard and Feinstein (1994) hypothesized that the guilt associated with making an unethical decision
will cause a taxpayer to lose utility from tax evasion. More recently, Alm and Torgler (2011) proposed a formal theory of compliance which incorporates a loss in utility from the emotional cost associated with performing an unethical behavior or from acting in opposition to a social ethical norm.

In summary, prior literature suggests the tax evasion decision is both a decision under risk and also an ethical decision. In the next section, previous research on decision making under risk and ethical decision making will be utilized to develop specific predictions for the current study.
CHAPTER 3

HYPOTHESIS DEVELOPMENT

3.1 SHARED INTEREST IN THE CONSEQUENCES OF TAX EVASION

A shared interest in the consequences of tax compliance can occur when a tax evasion decision has a direct effect on both the decision maker and one or more other taxpayers. To develop a hypothesis concerning how a shared interest in the consequences of tax evasion may affect taxpayer decision making, this study examines the prior literature in both the risk and ethics domains. Since early tax research (Allingham and Sandmo 1972) suggested that a tax evasion decision is a risk gamble, the discussion will begin by examining the risk literature.

Although the risk literature has not explicitly examined how a shared interest in the consequences of a risky decision affects individual decision making, there has been literature pertaining to how decision making is affected by whether the consequences of that decision affect solely oneself or solely another individual. In Zaleska and Kogan (1971), participants were required to make six risk gamble choices, each offering 10 possible bet alternatives. Using a within subjects experimental design, participants first made these choices for themselves and the second time for another individual. The results of that study provide clear evidence of a risk adverse shift when making decisions for others relative to the prior decisions made for oneself. McCauley et al. (1971) tested the robustness of these findings by performing a similar task and demonstrates that individuals make more conservative financial gamble decisions for others then they do
for themselves. Borrensen (1987) demonstrates in a buy versus lease decision that participants were more economically conservative when making decisions for other individuals than for themselves.

Stone et al. (2002) discusses how the differences in risky decision making for oneself versus for another individual may be because when making decisions for another individual, the decision maker may have a goal of self-image protection. When making a decision for another individual, guilt is a factor that affects the maintenance of self-image. For example, in a tax compliance setting, if a managing partner decides to underreport income for the partnership and the partnership is subsequently audited, the decision maker will experience guilt for initially placing the other partners at risk. In the medical field, Casarett and Ross (1997) suggest that doctors sometimes make conservative decisions despite the expressed wishes of their patients in order to dissuade feelings of guilt. This is supported by Kray (2000), which indicated that advisors make recommendations that minimize regret and blame from others.

Although the prior literature discussed above does not examine exactly how sharing the consequences of a decision with another individual may affect risky decision making, it does suggest that the presence of another individual will decrease risk taking behavior in a monetary gamble setting. Therefore, it is expected that if the risk involved in a tax evasion gamble is the major driver of taxpayer reporting decisions, then sharing the consequences from the tax reporting decision will reduce the taxpayers’ willingness to evade taxes. This leads to the following hypothesis:

**Hypothesis 1a:** Taxpayers’ willingness to evade will be lower when the consequences of evasion are shared with another individual than when the consequences of evasion are not shared. (Based on risk literature)
Taxpayers may also make reporting decisions based upon their moral and ethical beliefs (Alm and Torgler 2011). Blanthorne and Kaplan (2008) suggest that taxpayers may alter their ethical beliefs when they benefit from a decision, irrespective of whether this benefit is monetary or emotional. Individuals redefine or reinterpret their behavior in order to self-justify unethical behavior and make it morally permissible to oneself (Bandura 1990, 1999, 2002). This is consistent with moral disengagement which occurs when an individual believes that ethical standards do not apply to oneself in a particular context (Fiske 2010).

Previous research has shown that individuals are more willing to perform an unethical act when it benefits a third party. Gino and Pierce (2009, 2010) demonstrate that if a decision maker feels empathy towards a third-party, he/she is more likely to act unethically to benefit that individual. In their studies, participants were more likely to overstate the performance of a third-party in a task when there was perceived wealth inequity. Specifically, the emotional benefit obtained from restoring wealth equity allowed the decision maker to justify performing the unethical behavior.

Wiltermuth (2011) also finds that people are more likely to act unethically if it benefits a third party. Specifically, Wiltermuth (2011) tests whether an individual is more likely to cheat when the benefits of cheating are split with a third party versus when they are kept solely by the individual. Expanding on the work of Gino and Pierce (2009, 2010), Wiltermuth (2011) shows that the mere presence of a third party beneficiary, even an unknown third party, can increase the prevalence of unethical behavior. Wiltermuth (2011) concluded that individuals who were able to split the rewards of cheating with a
third-party were able to justify to themselves that helping another individual made the act of cheating less immoral.

In the accounting literature, Church et al. (2012) demonstrates a similar behavior in a managerial budget task. Church et al. (2012) investigates the level of budgetary slack created by a manager when the slack was kept solely by the manager compared to when it was shared by the manager and other non-reporting employees. They found that the shared interest in slack creation made misreporting self-justifiable to the manager because it benefited the non-reporting employees.

The literature above establishes that the presence of a third party beneficiary can help an individual rationalize an act as being more ethically permissible which leads to an increase in the unethical behavior. Therefore, if taxpayers’ ethical beliefs are a major driver of taxpayer reporting decisions, then sharing the consequences from the tax reporting decision should increase the taxpayers’ willingness to evade taxes. This leads to the following hypothesis:

**Hypothesis 1b:** Taxpayers’ willingness to evade will be greater when the consequences of evasion are shared with another individual than when the consequences of evasion are not shared. (Based on ethics literature)

### 3.2 Regret Saliency

Decision makers may experience regret (rejoicing) if the actual outcome of a decision is worse (better) than a forgone alternative (Zeelenberg 1999). Regret theory extends expected utility theory by suggesting that decision makers will incorporate the emotional cost of anticipated regret into their decision making, when comparing the outcome of a chosen alternative to the outcome of a rejected alternative (Bell 1982; Loomes and Sugden 1982). Regret theory assumes that decision makers are regret avoiders and will
select an option that minimizes the potential regret (Bell 1982; Loomes and Sugden 1982). Zeelenberg (1999) suggests that in a choice between a gamble (e.g. evasion) and a sure thing (e.g. being compliant), the regret minimizing choice is normally the risk-averse option.\footnote{2}

Regret theory suggests that a taxpayer anticipating the regret they would experience from the consequences of an adverse audit will be more likely to prefer the regret-avoiding option, which is to comply. Regret avoidance may be one of the possible explanations for prior literature’s findings that tax evasion is lower than levels predicted by expected utility theory (White et al. 1993; Dhami and al-Nowaihi 2007).\footnote{3}

Studies examining anticipated regret have either focused on the role of expected feedback or the salience of regret on decision making (Zeelenberg 1999).\footnote{4} The current study examines the latter. Regret salience is the cognizance of post-decisional regret that decision makers anticipate prior to making a decision. Prior studies demonstrate that if potential future regret is brought to the attention of the decision maker at the time the decision is made, regret will receive a higher weight in the decision process.

When regret is salient, past research shows that decision makers’ choices are more strongly aimed at avoiding regret. In a study by Simonson (1992), participants

\footnote{2 Zeelenberg (1999) demonstrates that regret can also lead to risk-seeking behavior when there is a choice between two options, one being more risky than the other (neither is a sure thing), and the decision maker expects feedback on the riskier option.}

\footnote{3 Dhami and al-Nowaihi (2007) demonstrate that there is a 91-98% return on tax evasion using actual probabilities of audit and penalty rates, but the evidence is that only 30% of taxpayers evade taxes. In the current study’s results discussed later, 36.7% of participants chose to evade taxes. White et al. (1993) show that taxpayers’ actions are consistent with expected utility theory only when detection rates and audit probabilities are unrealistically high.}

\footnote{4 Manipulations of expected feedback test an important assumption in regret theory that if there is no explicit feedback on the foregone alternative, a decision maker cannot compare the alternatives and cannot experience regret. In a tax setting, Kelsey and Schepanski (1991) focused on manipulations of expected feedback and found little support for regret theory. The current study examines if asking taxpayers to anticipate the regret they would feel from an adverse audit reduces tax evasive behavior.}
made a purchasing decision between a safe option (high priced, well-known brand) and a risky option (less expensive, unknown brand). Participants who were asked to indicate their feelings of regret for making a wrong decision ex ante were more likely to purchase the safe option compared to the participants not asked to indicate their feelings of regret. Similarly, Richard et al. (1996) demonstrated that asking respondents to anticipate the regret and emotions they would experience after engaging in unsafe sex reported less risky sexual behavior in the five months following the study as compared to a control group not asked to indicate their anticipated regret. In addition, Reb (2008) shows that in a financial setting in which participants were asked to select between two investment funds, asking participants to imagine “how much regret you would feel if you chose the worse option” altered the decision making process.

In a tax setting, regret salience should encourage taxpayers to comply because the potential for regret is greatest when the taxpayer evades taxes and is penalized for that decision, thereby leaving the taxpayer with a lower payoff than if they had originally been compliant. Therefore, asking taxpayers to anticipate the negative emotions they would experience if they are caught evading taxes will lead to more compliant tax behavior. This leads to the following hypothesis:

**Hypothesis 2:** Taxpayers willingness to evade will be lower when regret salience is cued than when regret salience is not cued.

When a taxpayer makes tax compliance decisions on behalf of themself and others, Stone et al. (2002) would suggest that there is potential for two types of regret: (1) individual regret, when making decisions where the outcomes affect the decision maker, and (2) other-induced regret, when the outcomes of a decision affect another person. Stone et al. (2002) examined the role of regret in individual decision making for
monetary choices that affected either solely another individual or solely the decision maker. That study asked participants to choose between a sure monetary outcome and a gamble that involved a chance at a larger gain or nothing. Stone et al. (2002) concluded that regret research on individual decision making could generalize to decision making for others since regret affects individual decision making for oneself in a statistically similar way to individual decision making for others. However, it does not indicate whether other-induced regret and individual regret is additive.

It is possible that the presence of both other-induced regret and individual regret affect decision making more than when only individual regret is present. It is expected that asking taxpayers in a shared interest setting to anticipate the negative emotions they would experience if they had been caught evading taxes will lead to a greater level of anticipated regret than asking taxpayers not in a shared interest setting, and consequently will lead to a greater decrease in tax evasion. This leads to the following hypothesis:

**Hypothesis 3:** Cueing regret salience will reduce evasion intentions more when taxpayers share the consequences of evasion with another individual than when the consequences from evasion are not shared.
CHAPTER 4

EXPERIMENTAL MATERIALS

4.1 PARTICIPANTS

This study recruited 147 experienced taxpayers from throughout the United States by utilizing an online survey-taking population pool, Amazon Mechanical Turk (M-Turk). The use of M-Turk participants is becoming increasingly popular in social science experiments. They are a large subject pool, easily available, and arguably more representative than more traditional student pools (Paolacci et al. 2010; Rennekamp 2012). Each participant was paid a dollar for their participation, and on average it took participants nine minutes to complete the study. The participants were matched to the objectives of the experiment following the guidance of Libby et al. (2002) which suggests that the sophistication of participants should be in line with the goals of the experiment.

To participate in the current study, participants had to have filed six or more years’ worth of United States federal income tax returns, and correctly answered two qualifying questions demonstrating basic tax knowledge. These qualifications were to provide comfort that the participant population had the experience and knowledge to understand the case material. The average age of the participants was 36.85 years old and 47.3% of the participants were female. Table 4.1 provides a summary of the demographic information collected from the participants at the end of the experimental instrument. Participants for this study were dispersed across geographic regions of the United States, average household incomes, and education levels. Approximately 84% of the participants
indicated that they were the primary decision maker on their income tax returns. The demographics of the study participants did not statistically differ between experimental conditions.

4.2 TASK

The experimental instrument for this study was administered online utilizing Qualtrics Survey Software. The software randomly assigned participants into the treatment conditions, discussed below. After reading a brief introduction which described to the participants that their responses were completely anonymous, participants in this study were told that they will be presented with a tax situation similar to one many taxpayers face each year, and were asked to respond to questions as if they were the taxpayer described in the case. The case material presented the participants with a rental property scenario. Participants were informed that in addition to their regular full-time employment, they also owned a number of rental properties. The participants were told that they allow their tenants to pay rent in cash, with a check, or direct deposit. The rent which was paid with a check or direct deposit is known for certain, but the participants are informed of a range of cash revenues received for the year. That is, participants know the minimum and maximum of cash revenue possibly received for the year, but there is uncertainty about the actual amount of cash rental revenues received. The participants were told that they will be making a tax reporting decision pertaining to the cash rental revenue received for the year and to assume that rental income is taxed at a 35% rate. Appendix A contains the experimental test instrument.
4.3 DESIGN

To test how a shared interest in the consequences of tax evasion and regret salience affect tax compliance behavior, this study utilized a 2×2 full factorial experimental design. The first independent variable (SHARED INTEREST) manipulated the presence or absence of a shared interest in the consequences of tax compliance by informing participants that they owned and operated their rental property business by themselves as a Sole Proprietor or that they owned rental properties with a partner in a Partnership. To hold constant the individual wealth state for the decision maker between the Sole Proprietor and Partnership conditions, the number of properties owned in the Partnership condition and potential revenue was double that of the Sole Proprietor condition.

The second independent variable (DECISION FRAME) was also manipulated at two levels (see Figure 4.1). In the first decision frame condition (regret frame), participants were asked to indicate “how much regret you would feel if (1) you alone decided for the Sole Proprietorship (Partnership) to underreport income, (2) the Sole Proprietorship (Partnership) was audited by the IRS, and (3) as a result of the audit, you (and your partner) had to pay additional taxes, penalties and interest.” This question was asked prior to the dependent variable of interest, and therefore was meant to heighten the taxpayer’s awareness of the potential regret they could possibly experience from aggressive tax reporting. The second decision frame condition (control frame), captures the dependent variable of interest prior to asking the participants to indicate potential feelings of regret from aggressive reporting. Therefore, in both decision frame conditions, participants are asked about the regret they would experience from underreporting
income, only the placement of the question varies, i.e. prior to or after the dependent measures of interest.\(^5\)

The control frame proxies for taxpayer decision making in a naturally occurring environment. That is, since the taxpayers are generally not framed to think of the potential emotional reactions to the consequences from aggressive tax reporting, the control frame allows for the best comparison of how a shared interest in the consequences of tax compliance may alter decision making without additional external influences (framing).

### 4.4 **DEPENDENT VARIABLES**

Participants in the Sole Proprietor (Partnership) condition were informed that “…cash rental revenue received for the year is between $40,000 and $50,000 ($80,000 and $100,000)”. Therefore, reporting less than $40,000 ($80,000) of cash revenue in the Sole Proprietor (Partnership) condition would be considered tax evasion. However, due to the uncertainty of the actual amount of cash revenue received, participants reporting between $40,000 and $50,000 ($80,000 and $100,000) in the Sole Proprietor (Partnership) condition were not necessarily evading taxes, but may be demonstrating different levels of aggressiveness.

The primary dependent variable for this study captures the participants’ willingness to evade taxes. Specifically, after reading the case material, participants in the Sole Proprietor (Partnership) condition were asked to indicate on an eleven point scale “how likely you are to report less than $40,000 ($80,000) of cash rental revenue on the

\(^5\) An additional 77 participant observations were collected simultaneously with the data in the four treatment conditions. These participants were placed into an enjoyment frame. That is, they were asked how much enjoyment they receive from the tax saving generated by underreporting prior to answering the dependent measures. These participants were statistically similar to the participant responses in the control frame.
current year tax return for the Sole Proprietorship (Partnership)", with endpoints 1 = “Very Unlikely” and 11 = “Very Likely”.

After participants indicate their willingness to evade on the scale described above, participants are next asked to indicate how much of the cash rental revenue they would report for the year. This monetary figure could range from $0 to $50,000 ($0 to $100,000) in the Sole Proprietor (Partnership) condition. From this measure, a second dependent variable is captured as the percent of taxpayers in each treatment condition who actually evades taxes. That is, the percent of participants who reported less than $40,000 ($80,000) in the Sole Proprietor (Partnership) condition.

In addition to the primary and secondary dependent measures intended to capture the participants’ willingness to evade taxes, another measure of interest would be the relative percent of income not reported in each treatment condition. This measure is computed as [(possible cash revenue – reported cash revenue) / possible cash revenue], and will capture the overall aggressiveness of the population in each treatment condition.
**Hypothesis Tests**

The above figure reflects the experimental design with the primary dependent variable measured as the taxpayer’s likelihood of knowingly evading income taxes.

*Planned Comparisons*

- **H1a:** Sole Proprietor/Control Frame versus Partnership/Control Frame \((\mu_B < \mu_A)\)
- **H1b:** Sole Proprietor/Control Frame versus Partnership/Control Frame \((\mu_B > \mu_A)\)
- **H2:** Control Frame versus Regret Frame \((\mu_A + \mu_B > \mu_C + \mu_D)\)
- **H3:** Partnership/Control Frame less Partnership/Regret Frame versus Sole Proprietor Control Frame less Sole Proprietor/Regret Frame \((\mu_B - \mu_D > \mu_A - \mu_C)\)
### Table 4.1 – Participant Demographics

<table>
<thead>
<tr>
<th>Total number of participants</th>
<th>147</th>
</tr>
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<tr>
<td>Average participant age:</td>
<td>36.85</td>
</tr>
<tr>
<td>Gender:</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>52.7%</td>
</tr>
<tr>
<td>Female</td>
<td>47.3%</td>
</tr>
<tr>
<td>The region of the United States in which participants currently live:</td>
<td></td>
</tr>
<tr>
<td>Midwest</td>
<td>18.3%</td>
</tr>
<tr>
<td>Northeast</td>
<td>23.7%</td>
</tr>
<tr>
<td>Southeast</td>
<td>27.2%</td>
</tr>
<tr>
<td>Southwest</td>
<td>10.7%</td>
</tr>
<tr>
<td>West</td>
<td>18.8%</td>
</tr>
<tr>
<td>Other</td>
<td>1.3%</td>
</tr>
<tr>
<td>Average household income:</td>
<td></td>
</tr>
<tr>
<td>&lt; $20,000</td>
<td>12.1%</td>
</tr>
<tr>
<td>$20,001-$50,000</td>
<td>43.3%</td>
</tr>
<tr>
<td>$50,001-$100,000</td>
<td>35.2%</td>
</tr>
<tr>
<td>&gt; $101,000</td>
<td>9.4%</td>
</tr>
<tr>
<td>Highest level of education completed:</td>
<td></td>
</tr>
<tr>
<td>Some high school</td>
<td>0.4%</td>
</tr>
<tr>
<td>High school</td>
<td>9.4%</td>
</tr>
<tr>
<td>Some college</td>
<td>30.8%</td>
</tr>
<tr>
<td>Bachelor's degree</td>
<td>47.3%</td>
</tr>
<tr>
<td>Graduate degree or higher</td>
<td>12.1%</td>
</tr>
<tr>
<td>Marital status on the most recent federal income tax return:</td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>44.2%</td>
</tr>
<tr>
<td>Head of household</td>
<td>9.8%</td>
</tr>
<tr>
<td>Married filing jointly</td>
<td>41.6%</td>
</tr>
<tr>
<td>Married filing separately</td>
<td>4.0%</td>
</tr>
<tr>
<td>Surviving spouse</td>
<td>0.4%</td>
</tr>
<tr>
<td>Primary income source:</td>
<td></td>
</tr>
<tr>
<td>Wages/salary/commissions</td>
<td>74.1%</td>
</tr>
<tr>
<td>Self-employed</td>
<td>18.8%</td>
</tr>
<tr>
<td>Investments</td>
<td>1.8%</td>
</tr>
<tr>
<td>Other</td>
<td>5.3%</td>
</tr>
<tr>
<td>Receive income not directly reported to the IRS on form W-2 or 1099:</td>
<td></td>
</tr>
<tr>
<td>1 = Never to 11 = Frequently</td>
<td>3.19</td>
</tr>
<tr>
<td>Average number of years the participants have filed federal income tax returns:</td>
<td>17.66</td>
</tr>
<tr>
<td>The primary decision maker on the participants income tax returns:</td>
<td></td>
</tr>
<tr>
<td>Self</td>
<td>84.4%</td>
</tr>
<tr>
<td>Spouse</td>
<td>8.0%</td>
</tr>
<tr>
<td>Parent</td>
<td>0.4%</td>
</tr>
<tr>
<td>Paid Preparer</td>
<td>6.7%</td>
</tr>
<tr>
<td>Other</td>
<td>0.4%</td>
</tr>
</tbody>
</table>
CHAPTER 5

RESULTS

5.1 TESTS OF HYPOTHESES

The primary dependent measure captures the participants’ self-reported likelihood of evading taxes. Recall that in the Sole Proprietor (Partnership) condition, participants read that they are “confident that the cash rental revenue received for the year is between $40,000 and $50,000 ($80,000 and $100,000). Therefore, reporting less than $40,000 ($80,000) of cash revenue in the Sole Proprietor (Partnership) condition would be considered tax evasion. To capture the participants likelihood of evading taxes, participants in the Sole Proprietor (Partnership) condition were specifically asked to indicate “how likely you are to report less than $40,000 ($80,000) of cash rental revenue on the current year tax return for the Sole Proprietorship (Partnership) on a scale with endpoints 1 = “Very Unlikely and 11 = “Very likely”.

Table 5.1 Panel A presents the ANOVA results for between-subjects effects using the participants’ likelihood of tax evasion scores as the dependent measure. The primary research question of this study set out to examine how sharing the consequences of tax evasion with another individual effects tax evasive behavior. Referring to the ANOVA results presented in Table 2 Panel A, there is a significant main effect on the presence versus absence of a shared interest (p = 0.010 two-tailed). The descriptive statistics presented in Table 5.1 Panel B show that the overall likelihood measure of tax evasion was 4.986 in the Sole Proprietor condition and 3.554 in the Partnership condition.
Hypotheses 1a and 1b make competing predictions about how a shared interest in the consequences of tax evasion naturally affects tax evasive behavior. Therefore, the proper way to test this effect is to examine the simple effect of a shared interest in the control frame conditions. Hypothesis 1a predicts that, if tax evasion is viewed primarily as a risky decision, the mean likelihood of evasion will be less in the Partnership condition than the Sole Proprietor condition. Hypothesis 1b predicts that, if tax evasion is viewed primarily as an ethical decision, the mean likelihood of evasion will be greater in the Partnership condition than the Sole Proprietor condition. Presented in Table 5.1 Panel B, the mean likelihood of tax evasion in the Sole Proprietor/Control Frame condition is 5.757 while in the Partnership/Control Frame condition it is 3.865 and Table 5.1 Panel C shows that this difference is statistically significant (p = 0.012). Therefore, hypothesis 1a is supported using the taxpayer’s likelihood of tax evasion as the dependent measure.

The second research question examines if increasing the salience of the potential regret a taxpayer would experience from an adverse audit affects tax evasive behavior. Hypothesis 2 predicts that when taxpayers are in the regret frame condition they will indicate a lower willingness to evade taxes than taxpayers in the control frame condition. Referring to Table 5.1 Panel A, there is a main effect on decision frame. As noted in Table 5.1 Panel B, the overall mean likelihood measure of evasion in the control frame condition is 4.811 while in the regret frame condition it is 3.712 and this difference is statistically significant (p = .023) which is presented in Table 5.1 Panel A and C. Therefore, hypothesis 2 is supported using the taxpayer’s likelihood of tax evasion as the dependent measure.
Hypothesis 3 predicts that increasing the salience of the potential regret will decrease taxpayers’ willingness to evade more when they are in the Partnership condition than the Sole Proprietor condition. As reported in Table 5.1 Panel B, the taxpayers’ likelihood of tax evasion in the Sole Proprietor condition decreased from 5.757 in the control frame condition to 4.194 in the regret frame condition, for a mean difference of 1.563. In the Partnership condition, the taxpayers’ likelihood of tax evasion decreased from 3.865 in the control frame condition to 3.243 in the regret frame condition, for a mean difference of .622. Since the mean decrease in the Sole Proprietor condition was greater than the mean decrease in the Partnership condition, hypothesis 3 is not supported using the taxpayer’s likelihood of tax evasion as the dependent measure and the interaction effect is not significant (p = .386 two tailed).

To test the robustness of the analysis above, this study examines the research questions and hypotheses using a second measure, the percent of participants who choose to evade taxes. After participants indicated their likelihood of evading taxes, they were asked to indicate the amount of cash rental revenue they would report for the business entity. Specifically, participants in the Sole Proprietor (Partnership) conditions were asked to indicate “how much of the cash rental revenue, up to $50,000 ($100,000) you would report on the current year tax return for the Sole Proprietorship (Partnership).” Recall that in the Sole Proprietor (Partnership) condition, participants read that they are “confident that the cash rental revenue received for the year is between $40,000 and $50,000 ($80,000 and $100,000). Therefore, reporting less than $40,000 ($80,000) of cash revenue in the Sole Proprietor (Partnership) condition would be considered tax evasion. Participants’ responses are coded dichotomously as a 1 if the participants
reported less than $40,000 ($80,000) in the Sole Proprietor (Partnership) condition and 0 otherwise.

Table 5.2 Panel A presents the Categorical ANOVA results examining the percent of participants who actually evade taxes. Consistent with the primary analysis presented above, the Categorical ANOVA results presented in Table 5.2 Panel A, demonstrate a significant main effect on the presence versus absence of a shared interest \( (p = 0.031 \) two-tailed). Referring to the descriptive statistics presented in Table 5.2 Panel B, the percent of participants who evaded taxes in the Sole Proprietor condition was 42.5\% and in the Partnership condition it was 28.4\%.

Hypothesis 1a predicts that if tax evasion is viewed primarily as a risky decision, the willingness of taxpayers to evade taxes will be less in the Partnership condition than the Sole Proprietor condition. Presented in Table 5.2 Panel B, the percent of taxpayers evading taxes in the Sole Proprietor/Control Frame condition is 54.1\% while in the Partnership/Control Frame condition it is 29.7\% and Table 5.2 Panel C shows that this difference is statistically significant \( (p = 0.014) \). Therefore, hypothesis 1a is supported using both the taxpayers’ self-reported likelihood of tax evasion as the dependent measure, and the actual percent of taxpayers evading taxes as the dependent measure.

Hypothesis 2 predicts that the percent of taxpayers who evade taxes will be lower in the regret frame condition than in the control frame condition. Table 5.2 Panel A, reports a marginally significant main effect on decision frame. Table 5.2 Panel B displays that the overall percent of taxpayers evading taxes in the control frame condition is 41.9\% while in the regret frame condition it is 31.5\% and this difference is marginally statistically significant \( (p = .092) \) which is presented in Table 5.2 Panel A and C.
Therefore, hypothesis 2 is marginally supported using the percent of taxpayers who evade taxes as the dependent measure.

Hypothesis 3 predicts that increasing the salience of the potential regret will decrease the percent of taxpayers evading taxes more when they are in the Partnership condition than the Sole Proprietor condition. Table 5.2 Panel B shows that in the Sole Proprietor condition the percent of taxpayers evading taxes decreased from 54.1% in the control frame condition to 36.1% in the regret frame condition, for a difference of 18%. In the Partnership condition the percent of taxpayers evading taxes decreased from 29.7% in the control frame condition to 27.0% in the regret frame condition, for a difference of 2.7%. Since the decrease in the Sole Proprietor condition was greater than the decrease in the Partnership condition, hypothesis 3 is not supported using the percent of taxpayers evading taxes as the dependent measure and the interaction is not significant (p = .326 two tailed). Consistent primary dependent measure, it appears that regret salience has a much greater impact on taxpayers in the Sole Proprietorship condition than the Partnership condition.

5.2 ANCILLARY ANALYSIS

Another way to examine the research questions in this study is to examine the overall aggressiveness level of the treatment conditions by comparing the percent of cash revenue not reported. This variable is computed as \([\frac{(\text{possible cash revenue} - \text{reported cash revenue})}{\text{possible cash revenue}}]\). Recall that, participants in the Sole Proprietor (Partnership) conditions were asked to indicate “how much of the cash rental revenue, up

6 In the Partnership condition this variable is computed as \([\frac{($100,000 - \text{reported cash revenue})}{$100,000}]\) while in the Sole Proprietor condition this variable is computed as \([\frac{($50,000 - \text{reported cash revenue})}{$50,000}]\)
to $50,000 ($100,000) you would report on the current year tax return for the Sole Proprietorship (Partnership).

Table 5.3 Panel A presents the ANOVA results for between-subjects effects using the percent of possible cash rental revenue not reported as the dependent measure. Referring to the ANOVA results presented in Table 5.3 Panel A, there is a significant main effect on the presence versus absence of a shared interest ($p = 0.019$ two-tailed). The descriptive statistics presented in Table 5.3 Panel B display the percent of possible cash rental revenue not reported in the Sole Proprietor condition was 33.5\% and in the Partnership condition it was 23.3\%.

Presented in Table 5.3 Panel B, the mean percent of possible cash revenue not reported in the Sole Proprietor/Control Frame condition is 37.5\% while in the Partnership/Control Frame condition it is 23.8\% and Table 5.3 Panel C shows that this difference is statistically significant ($p = 0.010$). Therefore, the results using the percent of possible cash rental revenue not reported as the dependent measure are similar to the results from the primary analysis and demonstrate that taxpayers’ aggressiveness decreases when there is a shared interest in the consequences of tax evasion.

Presented in Table 5.3 Panel B, mean percent of possible cash rental revenue not reported in the control frame condition is 30.6\% while in the regret frame condition it is 26.0\% and Table 5.3 Panel C shows that this difference is not statistically significant ($p = .142$). Therefore, it does not appear that participants overall aggressiveness was significantly affected by increasing the salience of regret. In addition increasing the salience of regret did not affect participants in the Partnership condition more than participants in the Sole Proprietorship condition ($p = .401$ two tailed).
5.3 **DISCUSSION**

The first set of hypotheses examined whether sharing the consequences of tax evasion with another individual affected tax evasive behavior. The prior literature suggests that if the tax evasion decision is thought to be viewed as primarily a risky decision, a shared interest will decrease tax evasion. However, if the tax evasion decision is thought to be viewed as primarily an ethical decision, a shared interest will increase the unethical behavior. Both dependent measures support the risky decision making literature and demonstrate that a taxpayer’s willingness to evade decreases when there is a shared interest in the consequences of tax evasion.

To better understand the participants’ rationale for their reporting decision, participants were asked to describe up to three factors they considered when deciding how much of the cash rental revenue they were going to report. Two independent coders categorized these qualitative responses into three categories. The first category “risky decision” was utilized if participants indicated that audit probabilities or penalties were considered when making the tax reporting decision. The second category “ethical decision” was utilized if participants’ ethical beliefs, honesty, or ‘the right thing to do’ were the rationale when making the tax reporting decision. The final category “other” encompassed any rationale that did not fit into the other two categories. Of the total responses, 25.9% fell into the “risky decision” category and 21.8% fell into the “ethical decision” category. These responses support that a tax evasion decision is a combination

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7 Participants were asked to indicate up to three factors they considered when deciding the amount of cash rental revenues to report. A majority of the participants indicated an ethical consideration as one factor, risk as another factor and a third factor that did not fit into either an ethics based category or a risk based category. Some of the examples of the uncategorized factors were economic satiation, government distrust, or fairness of the tax code.
of a risky decision and an ethical decision, but it is not clear from the qualitative responses if one outweighs the other.

To understand if taxpayers ethical beliefs towards tax evasion was dependent upon the presence or absence of a shared interest in the consequences of tax evasion, participants were asked to indicate how unethical they personally feel it would be to evade taxes in this case on a scale where 1 = “Not Unethical” and 11 = “Very Unethical”. Table 5.4 reports that participants in the Partnership condition felt that tax evasion was more unethical than participants in the Sole Proprietor condition, 8.72 versus 7.86 respectively (p = .035 two-tailed). Consistent with Wiltermuth (2011), this study demonstrates that a shared interest the consequences of an unethical behavior affect an individual’s ethicality judgments towards that behavior. Interestingly though, contrary to Wiltermuth (2011), this study demonstrates that a shared interest in a tax evasion decision increases participants perceptions of the unethicallity of tax evasion. One possibility is that participants felt that it was more unethical to evade taxes in the shared interest condition because of the element of risk.

Self-reported measures were used to capture the participants’ perception of the emotional costs and benefits towards underreporting rental revenue. Specifically, the first question captures the participants’ perceptions of the emotional benefits of underreporting by asking them to indicate “how HAPPY you would feel from the positive consequences that may result from underreporting rental revenue”. The second question captures the participants’ perceptions of the emotional costs of underreporting by asking them to indicate “how SAD you would feel from the negative consequences that may result from underreporting rental revenue”. Responses to these two questions
were netted together to form a single measure, “emotional cost/benefit” analysis. If the emotional cost/benefit score was above zero then the participants felt the benefits of underreporting outweighed the costs, while if this cost/benefit score was below zero then the participants felt the cost of underreporting outweighed the benefits.

Table 5.4 reports in the Partnership condition the participants perceived emotional cost/benefit score was -2.95 which is significantly different from the participants in the Sole Proprietor condition which was -0.99 (p = .008 two-tailed). Therefore, it appears that when participants share the consequences of tax evasion with another individual, they perceive the emotional costs to outweigh the benefits by a greater amount than participants who do not share the consequences of tax evasion.
FIGURE 5.1 – LIKELIHOOD OF EVASION

The participants’ likelihood of tax evasion scores are based on the mean participants’ response to the question, “Please indicate below, how likely you are to report less than $40,000 ($80,000) of cash rental revenue on the current year tax return for the Sole Proprietorship (Partnership). The participants’ responses were measured on an eleven-point scale with endpoints labeled 1 = “Very Unlikely and 11 = “Very likely”.
Participants in this study were asked to indicate “how much of the cash rental revenue, up to $50,000 ($100,000) you would report on the current year tax return for the Sole Proprietorship (Partnership).” In the Sole Proprietor (Partnership) condition, participants read that they are “confident that the cash rental revenue received for the year is between $40,000 and $50,000 ($80,000 and $100,000). Therefore, reporting less than $40,000 ($80,000) of cash revenue in the Sole Proprietor (Partnership) condition would be considered tax evasion. Participants’ responses are coded dichotomously as a 1 if the participants reported less than $40,000 ($80,000) in the Sole Proprietor (Partnership) condition and 0 otherwise.
The percent of possible cash revenue not reported is computed as \[
\frac{\text{possible cash revenue} - \text{reported cash revenue}}{\text{possible cash revenue}}
\]. Participants in the Sole Proprietor (Partnership) conditions were asked to indicate “how much of the cash rental revenue, up to $50,000 ($100,000) you would report on the current year tax return for the Sole Proprietorship (Partnership). Therefore, in the Partnership condition this variable is computed as \[
\frac{($100,000 - \text{reported cash revenue})}{$100,000}
\] while in the Sole Proprietor condition this variable is computed as \[
\frac{($50,000 - \text{reported cash revenue})}{$50,000}
\].
### TABLE 5.1 ANOVA RESULTS AND PLANNED CONTRASTS

Dependent Variable: Participants Likelihood of Evasion
1= "Very Unlikely" 11= "Very Likely"

Panel A: ANOVA for Between-Subjects Effects

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>P (two-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shared Interest</td>
<td>74.254</td>
<td>1</td>
<td>74.254</td>
<td>6.897</td>
<td>0.010</td>
</tr>
<tr>
<td>Decision Frame</td>
<td>43.814</td>
<td>1</td>
<td>43.814</td>
<td>4.070</td>
<td>0.046</td>
</tr>
<tr>
<td>Shared Interest*Decision Frame</td>
<td>8.129</td>
<td>1</td>
<td>8.129</td>
<td>0.755</td>
<td>0.386</td>
</tr>
<tr>
<td>Error</td>
<td>1539.585</td>
<td>143</td>
<td>10.766</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Panel B: Descriptive Statistics: Mean [Standard Deviation]

<table>
<thead>
<tr>
<th>SHARED INTEREST</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sole Proprietor</td>
<td>Partnership</td>
<td></td>
</tr>
<tr>
<td>Control Frame</td>
<td>5.757</td>
<td>3.865</td>
</tr>
<tr>
<td></td>
<td>[3.914]</td>
<td>[2.887]</td>
</tr>
<tr>
<td>DECISION FRAME</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regret Frame</td>
<td>4.194</td>
<td>3.243</td>
</tr>
<tr>
<td></td>
<td>[3.487]</td>
<td>[2.476]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MEANS COMPARED</th>
<th>t-VALUE</th>
<th>P (ONE-TAILED)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.986 &gt; 3.554</td>
<td>3.623</td>
<td>0.005</td>
</tr>
<tr>
<td>5.757 &gt; 3.865</td>
<td>3.334</td>
<td>0.012</td>
</tr>
<tr>
<td>4.194 &gt; 3.243</td>
<td>1.322</td>
<td>0.096</td>
</tr>
<tr>
<td>4.811 &gt; 3.712</td>
<td>2.015</td>
<td>0.023</td>
</tr>
<tr>
<td>5.757 &gt; 4.194</td>
<td>1.777</td>
<td>0.040</td>
</tr>
<tr>
<td>3.865 &gt; 3.243</td>
<td>0.981</td>
<td>0.165</td>
</tr>
<tr>
<td>0.621 &gt; 1.563</td>
<td>n.s.</td>
<td></td>
</tr>
</tbody>
</table>
TABLE 5.2 CATEGORICAL ANOVA RESULTS AND PLANNED CONTRASTS

Dependent Variable: Percent of Participants 'Knowingly Evading'
Panel A: Categorical ANOVA for Between-Subjects Effects

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>Chi-Square</th>
<th>P (two-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shared Interest</td>
<td>1</td>
<td>4.630</td>
<td>0.031</td>
</tr>
<tr>
<td>Decision Frame</td>
<td>1</td>
<td>1.770</td>
<td>0.184</td>
</tr>
<tr>
<td>Shared Interest*Decision Frame</td>
<td>1</td>
<td>0.960</td>
<td>0.326</td>
</tr>
</tbody>
</table>

Panel B: Descriptive Statistics

![Descriptive Statistics Table]

Panel C: Planned Contrasts

<table>
<thead>
<tr>
<th>Means Compared</th>
<th>Chi Square</th>
<th>P (one-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>42.5% &gt; 28.4%</td>
<td>4.630</td>
<td>0.016</td>
</tr>
<tr>
<td>54.1% &gt; 29.7%</td>
<td>4.790</td>
<td>0.014</td>
</tr>
<tr>
<td>36.1% &gt; 27.0%</td>
<td>0.700</td>
<td>0.201</td>
</tr>
<tr>
<td>41.9% &gt; 31.5%</td>
<td>1.770</td>
<td>0.092</td>
</tr>
<tr>
<td>54.1% &gt; 36.1%</td>
<td>2.450</td>
<td>0.059</td>
</tr>
<tr>
<td>29.7% &gt; 27.0%</td>
<td>0.070</td>
<td>0.398</td>
</tr>
<tr>
<td>02.7% &gt; 18.0%</td>
<td>n.s.</td>
<td></td>
</tr>
</tbody>
</table>
### TABLE 5.3 - ANOVA RESULTS AND PLANNED CONTRASTS

Dependent Variable: Percent of Possible Cash Revenue Not Reported

Panel A: ANOVA for Between-Subjects Effects

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>P (two-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shared Interest</td>
<td>0.378</td>
<td>1</td>
<td>0.378</td>
<td>5.662</td>
<td>0.019</td>
</tr>
<tr>
<td>Decision Frame</td>
<td>0.077</td>
<td>1</td>
<td>0.077</td>
<td>1.160</td>
<td>0.283</td>
</tr>
<tr>
<td>Shared Interest*Decision Frame</td>
<td>0.047</td>
<td>1</td>
<td>0.047</td>
<td>0.710</td>
<td>0.401</td>
</tr>
<tr>
<td>Error</td>
<td>9.542</td>
<td>143</td>
<td>0.067</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Panel B: Descriptive Statistics: Mean [Standard Deviation]

<table>
<thead>
<tr>
<th></th>
<th>Sole Proprietor</th>
<th>Partnership</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Control Frame</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shared Interest</td>
<td>37.5% [26.9%]</td>
<td>23.8% [21.3%]</td>
</tr>
<tr>
<td>Decision Frame</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regret Frame</td>
<td>29.3% [25.4%]</td>
<td>22.8% [27.8%]</td>
</tr>
<tr>
<td></td>
<td>33.5% [26.5%]</td>
<td>23.3% [24.8%]</td>
</tr>
</tbody>
</table>

Panel C: Planned Contrasts

<table>
<thead>
<tr>
<th>Contrasts</th>
<th>Means Compared</th>
<th>t-Value</th>
<th>P (one-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main Effect - Sole Proprietor vs. Partnership</td>
<td>33.5% &gt; 23.3%</td>
<td>2.380</td>
<td>0.010</td>
</tr>
<tr>
<td>Simple Effect - Sole Proprietor/Control vs. Partnership/Control</td>
<td>37.5% &gt; 23.8%</td>
<td>2.401</td>
<td>0.010</td>
</tr>
<tr>
<td>Simple Effect - Sole Proprietor/Regret vs. Partnership/Regret</td>
<td>29.3% &gt; 22.8%</td>
<td>1.036</td>
<td>0.152</td>
</tr>
<tr>
<td>Main Effect - Control Frame vs. Regret Frame</td>
<td>30.6% &gt; 26.0%</td>
<td>1.077</td>
<td>0.142</td>
</tr>
<tr>
<td>Simple Effect - Sole Proprietor/Control vs. Sole Proprietor/Regret</td>
<td>37.5% &gt; 29.3%</td>
<td>1.318</td>
<td>0.096</td>
</tr>
<tr>
<td>Simple Effect - Partnership/Control vs. Partnership/Regret</td>
<td>23.8% &gt; 22.8%</td>
<td>0.171</td>
<td>0.433</td>
</tr>
<tr>
<td>Interaction - Partnership/Control less Partnership/Regret vs. Sole Proprietor/Control less Sole Proprietor/Regret</td>
<td>01.0% &gt; 08.2%</td>
<td></td>
<td>n.s.</td>
</tr>
</tbody>
</table>
Participants’ responded to the dependent measures and multiple supplemental measures. To compare participants’ responses between the shared interest condition and the condition in which there was not a shared interest, this table collapses both “decision frame conditions” so that contrasts between the Sole Proprietor condition and the Partnership condition can be made.

<table>
<thead>
<tr>
<th></th>
<th>Sole Proprietor</th>
<th>Partnership</th>
<th>p (two-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number of participants</strong></td>
<td>73</td>
<td>74</td>
<td></td>
</tr>
<tr>
<td><strong>Dependent measures</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Likelihood of tax evasion</td>
<td>4.99</td>
<td>3.55</td>
<td>0.010</td>
</tr>
<tr>
<td>Percent of participant evading taxes</td>
<td>45.2%</td>
<td>28.4%</td>
<td>0.035</td>
</tr>
<tr>
<td>Percent of income not reported</td>
<td>33.5%</td>
<td>23.3%</td>
<td>0.018</td>
</tr>
<tr>
<td><strong>Supplemental measures</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anticipated regret from tax evasion</td>
<td>8.45</td>
<td>8.69</td>
<td>0.649</td>
</tr>
<tr>
<td>How unethical is it to &quot;evade taxes&quot;</td>
<td>7.86</td>
<td>8.72</td>
<td>0.064</td>
</tr>
<tr>
<td>How unethical is it to &quot;be aggressive&quot;</td>
<td>3.70</td>
<td>4.28</td>
<td>0.249</td>
</tr>
<tr>
<td>Perceived cost/benefit analysis</td>
<td>-0.99</td>
<td>-2.95</td>
<td>0.008</td>
</tr>
<tr>
<td>Perceived guilt from under-reporting</td>
<td>7.22</td>
<td>8.45</td>
<td>0.026</td>
</tr>
<tr>
<td>Perceived audit probability</td>
<td>35.4%</td>
<td>34.7%</td>
<td>0.870</td>
</tr>
<tr>
<td>Perceived penalty rate</td>
<td>61.2%</td>
<td>51.7%</td>
<td>0.071</td>
</tr>
</tbody>
</table>
CHAPTER 6

CONCLUSION

Factors that affect tax compliance are of great importance to multiple parties, including the IRS, tax professionals, and taxpayers. As such, it is important for researchers to continue to gain a better understanding of how these factors affect tax compliance. Early tax literature focused on how economic factors (i.e. income level and tax rates) and deterrent factors (i.e. audit probability and penalty rates) alter tax compliance behavior. However, the inability of these early models to accurately predict tax compliance has led researchers to focus on additional influences, such as ethical beliefs. The current study provides insight into whether a shared interest in the consequences of tax compliance can affect taxpayer behavior.

The results of this study demonstrate that taxpayers are less willing to evade income when there is a shared interest in the consequences of tax evasion. This finding has significant implications both regulators and researchers. Regulators should be interested in this study as it sheds light on how they may direct audits in a more effective and efficient manner. For example, current audits may tend to focus on Partnership entities because there is more revenue or assets owned by these companies, but this study’s results suggest that these entities will be less likely to misreport taxable income. Researchers can expand on this study by investigating why a shared interest in the consequences of tax evasion alters behavior. One example might be that Sole Proprietors more likely to evade because they believe no one will find out, whereas in a Partnership
other individuals might become aware of the behavior. Another possible explanation is that individuals may feel more entitled to additional tax savings when they are the only individuals who put forth effort in a business venture. Additionally researchers should note that although the early economic models of tax evasion may not accurately predict tax evasive behavior, taxpayers still seem to be heavily influenced by the risk involved in tax evasion decisions.

This study also investigates whether making taxpayers aware of the regret they would experience if they are caught evading taxes will lead to lower levels of tax evasion. Results support the predictions by demonstrating that heightening a taxpayer’s awareness of potential regret results in taxpayers being less likely to evade. In this study, participants were asked directly about emotions of regret. Future research can explore how the IRS could use these results to develop marketing strategies to make regret more salient to taxpayers before making tax compliance decisions. This is consistent with Alm and Torgler (2011), which suggested that “publicizing tax evasion convictions in the media as an alternative, non-financial type of penalty, and using mass media to reinforce tax compliance as the ethical norm of behavior – and publicize cheaters” may increase tax compliance.

Experimental design choices of this study may create limitations on the generalizability of the results, which may provide avenues for future research. First, participants in the Partnership condition are unaware of their partner’s preferences for tax compliance. Research on group risk shift would suggest that the presence of an aggressive partner would influence the decision maker to become more aggressive, and a conservative partner would influence the decision maker to make a more conservative
decision. Additionally, Church et al. (2012) provided evidence that a beneficiary to an unethical act who prefers honest reporting may eliminate a decision maker’s ability to morally disengage the decision. Another limitation of this study is that decision makers in the Partnership setting only had one partner, while many entities have more than two owners. Future research can explore whether the results of this study generalize to these various partner interactions.
REFERENCES


Gino, F. and L. Pierce. 2010. Lying to level the playing field: Why people may dishonestly help or hurt others to create equity. *Journal of Business Ethics* 95:89-103.


APPENDIX A – INSTRUMENT MATERIALS

Participant Qualifying Questions (Common to All Participants)

The following questionnaire is part of my dissertation and is integral in successfully obtaining a PhD in Business Administration from the University of South Carolina. Therefore, your thoughtful responses are greatly appreciated.

Please indicate below how many years you have filed a United States federal income tax return.

- Never
- 1 to 5 years
- 6 or more years

Generally, how would reporting income affect a taxpayer’s current year tax liability?

- Lower current year tax liability
- No change to current year tax liability
- Raise current year tax liability
- I don’t know

Generally, how would claiming deductions affect a taxpayer’s current year tax liability?

- Lower current year tax liability
- No change to current year tax liability
- Raise current year tax liability
- I don’t know

If you have previously taken this survey, you do not qualify to retake this "HIT". If at any time throughout the survey you feel you have previously taken this survey, please use the "Return HIT" button to return this "HIT" to the marketplace and then close this survey window.

- I have not previously taken this survey
- I have or may have previously taken this survey
INTRODUCTION

This questionnaire is part of a study to learn more about tax reporting decisions. On the next page, you will be presented with a tax situation many taxpayers face each year. Please imagine yourself in the same exact situation as the taxpayer being described and respond to the questions as if you were the taxpayer in the case.

The questionnaire should take between 5 and 12 minutes to complete although you may take as long as you like. The software used to collect data for the following questionnaire allows your identity to remain anonymous to all parties involved in this study including the experimenter.

Please respond to all questions on each screen before advancing to the next screen.

There are no incorrect responses for any of the judgments. Please work independently of other participants in this study. In reporting the results of this study, all individuals will remain anonymous. Only summary results will be reported. By advancing to the next screen, you acknowledge that your participation is voluntary. If you would like to receive summary results of the study, please email william.brink@grad.moore.sc.edu.

Thank you for your participation. Your help is greatly appreciated!

Sincerely,

William D. Brink
PhD Candidate
University of South Carolina
william.brink@grad.moore.sc.edu

Under the direction of:

Dr. Rich White
Professor
University of South Carolina
whites@moore.sc.edu
Please indicate the name (first name only) of a friend whom you have known for a long time and with whom you could see yourself going into business.

[TEST PARTNER] $>0$

CASE

In addition to receiving income from full-time employment, you and TEST PARTNER have owned twenty rental properties as a Partnership for the past five years and have no plans to sell these properties in the near future.

You alone make the tax reporting decisions for the Partnership. Both you and TEST PARTNER are equally responsible for the outcome of your tax reporting decisions.

Every year you and TEST PARTNER allow your tenants to pay their rent either by cash, check, or direct deposit into a business bank account. You and TEST PARTNER deposit checks immediately into the business bank account, but when rent is received in cash, the cash is divided evenly between you and TEST PARTNER and used each month to pay for personal expenses.

Total rental revenue changes from year to year because the total number of properties actually being rented in a given month varies. Over the past five years, you have estimated and reported for tax purposes, that the total rental revenue for the Partnership has fluctuated between $170,000 to $210,000. For the current year, the total number of properties rented in a given month has been higher than the past five years, which would result in higher rental revenue for the year. Assume that the rental property deductions, including depreciation, are $120,000 for the current year and past five years.

For the current year, rental revenue totaling $140,000 was received via direct deposit or check, and was deposited directly into a bank account. This amount can easily be traced to the Partnership bank statements.

The remaining rental revenue was received in cash and was not deposited into the Partnership bank account or a personal bank account. Therefore, there is no paper trail showing the actual amount of cash rental revenue. Because renters move throughout the year and some properties sit empty, it is uncertain the exact amount of cash that was received.

You are confident that the cash rental revenue received for the year is between $80,000 and $100,000.

Your Task
You have to decide how much rental revenue the Partnership will report for the current year which will have a direct impact on the amount of taxes you and TEST PARTNER are required to pay.

Due to your and TEST PARTNER’s other sources of income, assume that rental income is taxed at a 33% rate. That is, for every $1,000 of rental revenue reported to the IRS you and TEST PARTNER will be required to pay $330 in combined income taxes.
Partnership/Control Frame Condition (Dependent Measures)

**YOUR DECISION**

You already have decided to report the rental revenue for the current year which was deposited into the bank account ($140,000). However, you still have to decide how much of the cash rental revenue to report. Recall that you are confident that the cash rental revenue received for the year is between $80,000 and $100,000. In addition, recall that all cash rental revenue was used for personal expenses and was not deposited into the Partnership bank account or a personal bank account, and therefore there is no paper trail showing the actual amount of cash rental revenue. The Table below is presented to display how reporting cash revenue affects your tax liability and TEST PARTNER's tax liability from the rental properties.

<table>
<thead>
<tr>
<th>Rental Property Tax Liability Scenarios</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Deposited Rental Revenue</td>
<td>$ 140,000</td>
<td>$ 140,000</td>
<td>$ 140,000</td>
<td>$ 140,000</td>
<td>$ 140,000</td>
<td>$ 140,000</td>
</tr>
<tr>
<td>Cash Rental Revenue Reported</td>
<td>0</td>
<td>20,000</td>
<td>40,000</td>
<td>60,000</td>
<td>80,000</td>
<td>100,000</td>
</tr>
<tr>
<td>Total Rental Revenue Reported</td>
<td>140,000</td>
<td>160,000</td>
<td>180,000</td>
<td>200,000</td>
<td>220,000</td>
<td>240,000</td>
</tr>
<tr>
<td>Total Rental Deductions</td>
<td>(120,000)</td>
<td>(120,000)</td>
<td>(120,000)</td>
<td>(120,000)</td>
<td>(120,000)</td>
<td>(120,000)</td>
</tr>
<tr>
<td>Total Taxable Rental Income</td>
<td>$ 20,000</td>
<td>$ 40,000</td>
<td>$ 60,000</td>
<td>$ 80,000</td>
<td>$ 100,000</td>
<td>$ 120,000</td>
</tr>
<tr>
<td>Your Rental Property Tax Liability</td>
<td>$ 3,500</td>
<td>$ 7,000</td>
<td>$ 10,500</td>
<td>$ 14,000</td>
<td>$ 17,500</td>
<td>$ 21,000</td>
</tr>
<tr>
<td>TEST PARTNER's Rental Property Tax Liability</td>
<td>$ 3,500</td>
<td>$ 7,000</td>
<td>$ 10,500</td>
<td>$ 14,000</td>
<td>$ 17,500</td>
<td>$ 21,000</td>
</tr>
</tbody>
</table>

Please indicate below, how likely you are to report less than $80,000 of cash rental revenue on the current year tax return for the Partnership.

<table>
<thead>
<tr>
<th>Very Likely</th>
<th>Unlikely</th>
<th>Very Unlikely</th>
<th>Unlikely</th>
<th>Very Unlikely</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>10</td>
<td>9</td>
<td>8</td>
<td>7</td>
</tr>
</tbody>
</table>

Please indicate below, how much of the cash rental revenue (up to $100,000) you would report on the current year tax return for the Partnership, in addition to the $140,000 of rental revenue which was deposited directly into the business bank account.

Deposited Rental Revenue Reported (NO INPUT REQUIRED) | $ 140,000 |
Cash Rental Revenue Reported (INPUT REQUIRED) | $ 0 |

Total Rental Revenue Reported for the Partnership | $ 140,000 |
Partnership/Control Frame Condition (Supplemental Measures)

Note that in the Regret Frame Condition, the last item on this page was asked prior to the dependent measures.
CASE

In addition to receiving income from full-time employment, you have owned two rental properties as a Sole Proprietorship for the past five years and have no plans to sell these properties in the near future.

You alone make the tax reporting decisions for the Sole Proprietorship. You alone are responsible for the outcomes of your tax reporting decisions.

Every year you allow your tenants to pay their rent either by cash, check, or direct deposit into a business bank account. You deposit checks immediately into the business bank account, but when rent is received in cash, the cash is used each month to pay for personal expenses.

Total rental revenue changes from year to year because the total number of properties actually being rented in a given month varies. Over the past five years, you have estimated and reported for tax purposes, that the total rental revenue for the Sole Proprietorship has fluctuated between $85,000 to $105,000. For the current year, the total number of properties rented in a given month has been higher than the past five years, which would result in higher rental revenue for the year. Assume that the rental property deductions, including depreciation, are $60,000 for the current year and past five years.

For the current year, rental revenue totaling $70,000 was received via direct deposit or check, and was deposited directly into a bank account. This amount can easily be traced to the Sole Proprietorship bank statements.

The remaining rental revenue was received in cash and was not deposited into the Sole Proprietorship bank account or a personal bank account. Therefore, there is no paper trail showing the actual amount of cash rental revenue. Because renters move throughout the year and some properties sit empty, it is uncertain the exact amount of cash that was received.

You are confident that the cash rental revenue received for the year is between $40,000 and $50,000.

Your Task:
You have to decide how much rental revenue the Sole Proprietorship will report for the current year which will have a direct impact on the amount of taxes you alone are required to pay.

Due to your other sources of income, assume that rental income is taxed at a 35% rate. That is, for every $1,000 of rental revenue reported to the IRS you alone will be required to pay $350 in income taxes.
Sole Proprietor/Control Frame Condition (Dependent Measures)

**YOUR DECISION**

You already have decided to report the rental revenue for the current year which was deposited into the bank account ($70,000). However, you still have to decide how much of the cash rental revenue to report. Recall that you are confident that the cash rental revenue received for the year is between $40,000 and $50,000. In addition, recall that all cash rental revenue was used to pay for personal expenses and was not deposited into the Sole Proprietorship bank account or a personal bank account, and therefore there is no paper trail showing the actual amount of cash rental revenue. The Table below is presented to display how reporting cash income affects your tax liability from the rental property.

<table>
<thead>
<tr>
<th>Rental Property Tax Liability Scenarios</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Deposited Rental Revenue</td>
<td>$70,000 $70,000 $70,000 $70,000 $70,000 $70,000</td>
</tr>
<tr>
<td>Cash Rental Revenue Reported</td>
<td>- 10,000 20,000 30,000 40,000 50,000</td>
</tr>
<tr>
<td>Total Rental Revenue Reported</td>
<td>70,000 90,000 110,000 120,000</td>
</tr>
<tr>
<td>Total Rental Deductions</td>
<td>(60,000) (60,000) (60,000) (60,000) (60,000)</td>
</tr>
<tr>
<td>Total Taxable Rental Income</td>
<td>$10,000 $20,000 $40,000 $50,000</td>
</tr>
<tr>
<td>Year Rental Property Tax Liability</td>
<td>$3,500 $7,000 $10,500 $14,000 $17,500 $21,000</td>
</tr>
</tbody>
</table>

Please indicate below, how likely you are to report less than $40,000 of cash rental revenue on the current year tax return for the Sole Proprietorship.

- Very Unlikely
- Very Likely

Please indicate below, how much of the cash rental revenue (up to $50,000) you would report on the current year tax return for the Sole Proprietorship, in addition to the $70,000 of rental revenue which was deposited directly into the business bank account.

- Deposited Rental Revenue Reported (NO INPUT REQUIRED) $70,000
- Cash Rental Revenue Reported (INPUT REQUIRED) $[ ]
- Total Rental Revenue Reported for the Sole Proprietorship $70,000

[ ]
Sole Proprietor/Control Frame Condition (Supplemental Measures)

Please indicate on the scale below, how much enjoyment you would feel from generating tax savings for yourself.

No Enjoyment   Very Strong Enjoyment

Please indicate on the scale below, how much regret you would feel if (1) you alone decided for the Sole Proprietorship to under-report income, (2) the Sole Proprietorship was audited by the IRS, and (3) as a result of the audit, you had to pay additional taxes, penalties and interest.

No Regret   Very Strong Regret

Note that in the Regret Frame Condition, the last item on this page was asked prior to the dependent measures.