The Effects of a Shared Interest and Regret Salience on Tax Evasion

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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 affects an individual decision maker’s propensity to evade taxes. This study also examines if increasing the salience of potential regret from an adverse audit decreases tax evasion behavior. Using a 2×2 experimental design with experienced taxpayers as participants, this study finds that participants are less likely to evade taxes when they share the potential tax savings and risk of penalties with another taxpayer compared to when the reporting decision affects solely the decision maker. Supplemental analysis shows that participants find tax evasion to be more unethical when a shared interest is present. In addition, this study demonstrates that increasing regret salience from an adverse audit decreases participants’ willingness to evade taxes. This study makes contributions to multiple literature streams including taxpayer compliance, ethical decision making, and risky decision making.
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INTRODUCTION

The most recent estimates provided by the IRS show that roughly 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. A substantial amount of income information is subject to little or no information reporting (e.g. rental income and cash businesses like restaurants) and the IRS estimates that approximately 56% of this income is not reported (IRS 2012b). When the opportunity to misreport taxable income exists, it is important to understand which factors influence taxpayers’ reporting decisions. The purpose of this study is to examine how tax evasive behavior is affected by two important factors: (1) a shared interest in the consequences of tax evasion 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 evasion 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 of the entity’s owners, since the entity’s net income is allocated to and reported directly on the owners’ personal tax returns. Married taxpayers filing a joint return also represent a shared interest in the consequences of tax evasion, and for 2011 the IRS reported over 53 million taxpayers filed a joint return with their spouse (IRS 2012c). Despite the

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1 For reviews of the taxpayer compliance literature see Jackson and Milliron (1986), Cuccia (1994), and Kornhauser (2008).
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 evasion
decisions on behalf of oneself and one or more other individuals.

Tax evasion decisions involve ethical considerations (Alm and Torgler 2011) as
well as risk (Allingham and Sandmo 1972). Ethics research in domains outside of
taxation has shown that when there is *not a risk of adverse consequences*, 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 (Wiltermuth 2011;
Church et al. 2012). However, tax evasion decisions along with many other decision
contexts involve a risk of adverse consequences for behaving unethically. Prior literature
has not examined how risk may affect this relationship. If taxpayers perceive that putting
another individual at risk of audit is unethical, than the presence of another individual
who is affected by the tax reporting decision (i.e. a shared interest) will lead to a lower
willingness to evade.

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) and this study proposes that when
potential regret is made salient to the taxpayer, tax evasion will decrease. While this
premise seems logically predictable, it is possible that taxpayers already consider
potential regret from an adverse audit when making a tax reporting decision. If that is the
case, increasing potential regret salience would have no effect on tax evasion decision
making. In addition to understanding if increasing regret salience decreases tax evasion, it
is also important to understand whether increasing regret salience affects taxpayer
decision making differently in a shared interest setting compared to a setting in which the decision maker is the sole person affected by the decision.

To examine how a shared interest in the consequences of tax evasion and regret salience jointly affect taxpayer behavior, this study utilizes a $2 \times 2$ full factorial experimental design. Participants are asked to review a case scenario and indicate the likelihood that they would underreport cash revenues (e.g. evade taxes). The first manipulated variable is whether there is a shared interest in the consequences of tax evasion and is operationalized by varying business ownership form. Half of the participants are told to assume they operate their business as a Sole Proprietorship, 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 regret frame and a control 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 this question until after they decide how willing they are to underreport cash revenues, 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. The current study shows that a shared interest in the benefits and cost of an unethical behavior decreases unethical behavior. Supplemental analysis shows that
participants feel it is more unethical to evade taxes when they are in a shared interest setting. 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 contributions to three areas of research: (1) the taxpayer compliance literature, (2) the ethical decision making literature, and (3) decision making under-risk. Prior literature on taxpayer compliance has not examined how a shared interest affects taxpayer decision making. The current study demonstrates that taxpayer decision making is different when there is a shared interest in the consequences of tax evasion than when there is not a shared interest. Ethics literature has focused on how sharing the benefits of an unethical decision affects decision making, but it does not take into account how putting another individual at risk of negative consequences can alter how unethical the behavior is judged. Finally, the decision making under-risk literature has focused on how risky decision making for others differs from risky decision making for oneself. A shared interest in a risky decision is common in a variety of contexts and this study fills a gap in the literature by exploring this relationship.

The results demonstrating that taxpayers’ evasion decisions are affected by the presence of a shared interest in the consequences of tax evasion should be of interest not only to academic researchers aimed at understanding decision making, but also regulators and taxpayers. 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 Partnership returns, and toward tax returns filed with Sole Proprietor income. Taxpayers may be
interested in understanding how their relationships with other taxpayers may affect their tax compliance decisions.

This study also indicates that taxpayers are less likely to evade taxes when they anticipate the regret they would experience if they were caught evading taxes. Researchers and policy makers could use the results of this study to examine specific strategies to make regret more salient to taxpayers before making tax compliance decisions. Government agencies have often used media outlets to curb “bad behavior” (i.e. drinking and driving, the use of drugs, and not wearing a seat belt) by showing the possible consequences of this behavior. These strategies could also be applied to tax evasion.

The remainder of this article is organized as follows. The next section provides a brief background of the tax compliance literature, followed by a section which develops the hypotheses. Experimental methods are discussed, followed by the study results. Finally, conclusions are drawn and suggestions for future research are offered.

BACKGROUND LITERATURE

Early research on tax compliance centered its predictions on economic utility theory and Allingham and Sandmo’s (1972) model of tax evasion. The 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. This 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 alone (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) show 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) propose 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 and Bobek et al. (2013) show that individuals’ ethical beliefs have a direct influence on tax compliance decisions.

In summary, prior literature suggests taxpayers are concerned with the ethicality of tax evasion and the risks associated with an adverse audit when making a tax evasion decision. In the next section, previous research on ethical decision making and decision making under risk will be examined to develop hypotheses.

**HYPOTHESIS DEVELOPMENT**

**Shared Interest in the Consequences of Tax Compliance**

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 ethics and risk domains.

Taxpayers make reporting decisions based at least in part on their moral and
ethical beliefs (Alm and Torgler 2011, Bobek et al. 2013). Prior research would imply
that a decision maker's ethical beliefs toward a behavior are not concrete and may depend
on the facts and circumstances surrounding a decision. In fact, Bandura (1990, 1999, and
2002) discuss how individuals in a variety of contexts redefine or reinterpret their
behavior in order to self-justify unethical behavior and make it morally permissible to
oneself. This is consistent with moral disengagement theory, which occurs when an
individual believes that ethical standards do not apply to oneself in a particular context
(Fiske 2010). In a tax setting, Blanthorne and Kaplan (2008) provide survey evidence that
when opportunity for tax evasion is high, taxpayers view tax evasion as less unethical
than when opportunity for tax evasion is low. Therefore, taxpayers will judge how
unethical tax evasion is depending upon the context surrounding the reporting decision.

Two studies in domains outside of taxation have examined how sharing the
benefits of an unethical act affect decision making. Wiltermuth (2011) shows in four
experiments that students are more likely to cheat when the benefits of doing so are split
with another person. In an accounting context, Church et al. (2012) demonstrate a similar
behavior on a managerial budget task. Church et al. (2012) investigate the level of
budgetary slack created by a manager when the slack was kept solely by the manager
compared to when it was shared between the manager and other employees. They found
that the shared interest in slack creation made misreporting self-justifiable to the manager
because it benefited the non-reporting employees. Both these studies suggest that the
decision maker is redefining the act of cheating as less unethical because the act of cheating benefits another individual in addition to the decision maker.

A feature common to Wiltermuth (2011) and Church et al. (2012) is that in the experimental settings, the decision makers did not undertake a risk of punishment for their behavior (i.e. overstating one’s performance or building slack into their budget). The participants in the prior studies were aware that they could not be punished for behaving unethically. This allowed the participants to focus solely on the benefits that could be gained from behaving unethically. The results from these prior ethics studies would suggest that if a decision maker is only focused on the benefits (i.e. tax saving) that can be gained from performing an unethical behavior (i.e. tax evasion), then sharing the benefits with another individual allows the decision maker to view the behavior as less unethical, and therefore increases the unethical behavior.

However tax evasion decisions, like many other decision contexts, differ from the previous two studies because there may be negative ramifications for unethical behavior. For example, when a taxpayer in a shared interest context decides to evade taxes, the decision maker is putting him/herself and the other individual(s) at risk for an IRS audit. Therefore, in a tax evasion decision in which a shared interest is present, the ethicality of evasion may be judged on two components. The decision maker may consider how unethical they feel tax evasion is, and how unethical they feel it is to put another individual at risk of an adverse audit.

The literature exploring decision making under risk has not explicitly examined how a shared interest in the consequences of a risky decision affects individual decision making. There have been studies addressing how decision making is affected by whether
the consequences of that decision affect solely oneself or solely another individual but not whether the consequences affect both parties concurrently. In Zaleska and Kogan (1971), participants were required to make six risky 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 again demonstrate 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. Although these studies do not involve an inherently ethical decision such as tax evasion, they do suggest that decision makers make less risky decisions for others than for themselves.

Stone et al. (2002) posit that individuals make less risky decisions for others than decisions for themselves because they 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.

While the studies by Wiltermuth (2011) and Church et al. (2012) suggest that unethical behavior is increased when decision makers focus on the benefits to be shared, other studies suggest that more risk adverse decisions are made when the decision maker is making the decision for someone else. The taxpayers’ ability to justify tax evasion as less unethical when they are sharing the tax savings with another individual may be weakened or eliminated if the decision maker also feels that putting the other individual at risk of audit and penalties is unethical. However, because ex ante it is unclear whether taxpayers focus primarily on the benefits (i.e. tax saving) or the risks (an adverse IRS audit) when making a decision affecting another individual, the first hypothesis is proposed in the null form:

**H1.** Taxpayers’ willingness to evade will not be different when the consequences of evasion are shared with another individual than when the consequences of evasion are not shared.

**Regret Salience**

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 an outcome gamble (e.g. evasion) and a sure outcome (e.g. being compliant), the regret minimizing
choice is normally the risk-averse option. For example, if a taxpayer decides to evade taxes and is subject to an adverse audit, the taxpayer will know with 100% certainty that his/her final wealth position would have been higher had the taxpayer been compliant in the first place. However, if the taxpayer were compliant to begin with, there is no certainty as to what his/her final wealth position would have been had the taxpayer evaded.

Regret theory suggests that taxpayers 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 (Dhami and al-Nowaihi 2007; White et al. 1993).  

Studies examining anticipated regret have either focused on the role of expected outcome feedback or the ex ante salience of regret on decision making (Zeelenberg 1999). The current study examines the latter. Regret salience is the awareness 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

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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.

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.

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.
at the time the decision is made, regret will receive a higher weight in the decision process (Simonson 1992; Richard et al. 1996).

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 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) demonstrate that asking respondents to anticipate the regret and emotions they would experience from the negative consequences of an action reduces risky behavior.

In a tax setting, it is important to explore if regret salience will increase taxpayer compliance. Taxpayers may or may not inherently be contemplating the regret they would experience from an adverse audit before making a tax compliance decision. If taxpayers already contemplate regret, then increasing the salience should have minimal to no impact on taxpayer decision making. However, since not all taxpayers are compliant, increasing regret salience should have an overall impact on the population because the potential for regret is greatest when the taxpayer evades taxes and is penalized for that decision, thereby leaving the taxpayer in a lower wealth position than if he/she 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:

**H2.** Taxpayers’ willingness to evade will be *lower* when regret salience is cued than when regret salience is not cued.
Based on prior literature and logic, a main effect is expected when regret salience is cued. Another question of interest is whether the effect of regret salience on tax evasion is more effective in a shared interest condition or an unshared interest condition. When a taxpayer makes tax compliance decisions on behalf of oneself and others, Stone et al. (2002) suggest that there is a potential for two types of regret: (1) individual regret, where the outcomes of the decision affect the decision maker, and (2) other-induced regret, where 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 are 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. However, it is also possible that only other-induced regret or individual regret alone effects decision making to a maximum level and there is no incremental effect of adding the other. In addition, the act of making a risky decision for another individual may naturally cause the decision maker to consider the risk of tax evasion more in the shared interest condition than the unshared interest condition whether regret is made salient or not. As a result, the
interaction between shared interest and regret salience is posed as a research question rather than a hypothesis.

RQ. Is the reduction in tax evasion resulting from cueing regret salience different when the consequences of evasion are shared with another individual than when the consequences of evasion are not shared?

EXPERIMENTAL MATERIALS

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). Each participant was paid a dollar for their participation, and on average it took participants nine minutes to complete the study which results in an effective hourly rate of $6.67. 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). Accounting research has previously utilized M-Turk participants in the areas of taxpayer compliance (Brink and Lee 2015), auditor liability focusing on the judgments of jurors (Grenier et al. 2014a, Grenier et al. 2014b; Peecher et al. 2014) and the judgments of non-sophisticated financial statement users (Rennekamp 2012; Rennekamp et al. 2013; Koonce et al. 2013).

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

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5 M-Turk allows participants to participate in surveys until the experimenter closes the survey. After attaining the goal of 35 responses per cell, the current survey instrument was closed and 147 qualified participants completed the experiment.

6 Brandon et al. (2014) provide guidance and assistance to behavioral accounting researchers who are interested in examining research questions with externally valid research participants (e.g., U.S. taxpayers, potential jurors, non-professional investors) utilizing M-Turk and other online instrument delivery services.
should be in line with the goals of the experiment. Although common, the use of students to proxy for taxpayers has been criticized regarding the impact on the generalizability of results (Marriott 2014). Therefore, to participate in the current study, participants had to have filed six or more years’ of United States federal income tax returns, and to have answered correctly 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. Table 1 provides a summary of demographic information collected from the participants at the end of the experimental instrument as well as select demographic information from the United States population. The average age of the participants was 35.52 years old and 49.7% of the participants were female. Participants for this study were dispersed across geographic regions of the United States, average household incomes, and education levels. Approximately 85.7% 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.

(Insert Table 1 Here)

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. Participants first read a brief introduction which indicated that their responses were completely anonymous. Participants next read that they would 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. Therefore, participants reporting below the minimum amount of cash revenue are knowingly evading taxes. 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 case context and dependent measures from the experimental materials.

**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 the potential revenue were double that of the Sole Proprietor condition.

One possible concern when making a decision for a Partnership compared to a Sole Proprietorship is that the decision maker may assume that their partner has a different risk tolerance. Hsee and Weber (1997) show that when making a decision for a concrete/vivid other individual, the decision maker will assume that the other individual’s risk preference is similar to their own. For this reason, the test instrument first asked the participants to name an individual they could see as a business partner, and this named individual automatically is included in the subsequent instrument materials.

The second independent variable (Decision Frame) was also manipulated at two levels. 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 variables 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.  

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7 One possible concern with this manipulation is the idea of demand effects. Demand effects arise when participants form an interpretation of the experiment’s purpose and change their behavior to fit that
It is unclear whether all taxpayers think about the regret they would experience from an adverse audit prior to making a tax reporting decision. In the control frame condition, it is possible that some participants think about regret while others do not. However, in the regret frame condition, all participants will have thought about the regret from an adverse audit prior to making a tax reporting decision.

**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)”. Although there is uncertainty in the amount of actual cash revenue, reporting less than $40,000 ($80,000) of cash revenue in the Sole Proprietor (Partnership) condition could be considered knowingly evading taxes.

There are two primary dependent variables in this study - (1) a judgment variable and (2) a decision variable. The judgment variable 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 current year tax return for the Sole Proprietorship (Partnership)”, with endpoints 1 = “Very Unlikely” and 11 = “Very Likely”.

After the participants indicate their willingness to evade on the scale described above, the decision variable is captured by asking participants to indicate how much of the cash rental revenue they would report for the year. This monetary figure could range

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interpretation. A possible reason for demand effects is that participants form an expectation that they will be evaluated based on their responses. This concern is mitigated in the current experiment because of the use of completely anonymous online participants as opposed to students. Participants for the current study have no reputation concerns with the experimenters. In addition, participants were paid a flat wage for participation, so they could not be concerned with how their responses would affect their compensation.
from $0 to $50,000 ($0 to $100,000) in the Sole Proprietor (Partnership) condition. From this measure, a second dependent variable is captured classifying taxpayers dichotomously as either evaders or non-evaders. As a result, this measure captures 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 is a decision dependent variable measuring actual tax evasion.\textsuperscript{8, 9}

RESULTS

Shared Interest – Hypothesis 1

The first hypothesis examines whether taxpayers indicate a different likelihood to evade in the shared interest condition than taxpayers who are making the tax reporting decision without a shared interest. Table 2 Panel A presents the ANOVA results for between-subjects effects using the participants’ likelihood of tax evasion scores as the dependent measure. There is a significant main effect on the presence versus absence of a shared interest (two-tailed p-value = .010). Therefore, the null hypothesis presented in H1 is rejected.

Table 2 Panels B and C report the mean likelihood of evasion for each cell and contrasts tests, respectively. The mean likelihood of tax evasion in the Partnership (shared interest) condition reported is 3.55, which is significantly lower than the mean likelihood of tax evasion of 4.99 in the sole proprietor condition (two tailed p-value =

\textsuperscript{8} Cash rental revenue was used in this study to investigate tax evasive behavior because it creates an “opportunity” to underreport taxable income. This “opportunity” is present in all conditions and there is no reason to expect “opportunity” to interact differently between treatment conditions.

\textsuperscript{9} The survey instrument does not state that the participants are to assume that their partner will know whether the reporting participant decided to evaded taxes. However, it could be assumed that if the Partnership underwent an adverse IRS audit, the non-reporting partner would become privy to the misreporting.
This suggests that taxpayers are less likely to evade taxes when they are in a shared interest setting.

Table 3 Panel A presents the logistic regression using percent of participants “knowingly evading” as the dependent variable. Consistent with the first dependent variable, there is a significant effect on the shared interest variable (two-tailed p-value = .031) and therefore, the null hypothesis presented in H1 is rejected. Table 3 Panels B and C show that 28.38% of participants evaded taxes in the Partnership condition while 45.21% of participants evaded taxes in the sole proprietor condition and this difference is significant (two-tailed p-value = .031). Therefore, when examining both the judgment variable and the decision variable, participants in the Partnership condition had a significantly lower willingness to evade taxes.10

(Insert Tables 2 and 3 Here)

Regret Salience – Hypothesis 2

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 2 Panel A, as expected, there is a main effect on decision frame (two-tailed p-value = .046) indicating that participants in the regret frame condition indicated a different likelihood of tax evasion than participants in the control frame condition. Table 2 Panels B and C report that the mean likelihood measure of tax evasion in the regret frame condition is 3.71 while in the control frame condition it is 4.81, which is significantly different (one-tailed p-value = .023). Therefore, H2 is supported.

10 Further analysis shows that the judgment variable and the decision variable are highly positively correlated (Pearson r = 0.753, p < .001). That is, the higher an individual indicated a likelihood of evasion, the more likely they were to report cash rental revenues less than the amount known to have been received.
For the second dependent measure, it is shown in Table 3 Panel A, that the effects of decision frame, on the percent of participants knowingly evading is marginal (two-tailed p-value = .184). Table 3 Panels B and C report that the percent of participants who evaded in the regret frame (31.51%) is marginally less significant than the percent in the control frame (41.89%) (one-tailed p-value = .092). Therefore, hypothesis 2 is supported when examining the judgment variable and marginally supported when examining the decision variable.

Overall there is strong support that a shared interest in the consequences of tax evasion significantly reduces a taxpayer’s willingness to evade taxes. There is also support that when taxpayers are framed to think of the potential regret they would experience from an adverse audit, a taxpayer’s willingness to evade taxes decreases.\textsuperscript{11,12}

Shared Interest × Regret Salience - Research Question

This study posed a research question to investigate whether increasing the salience of the potential regret will decrease taxpayers’ willingness to evade differently when they are in the Partnership condition than the Sole Proprietor condition. As reported in Table 2 Panel A and Table 3 Panel A, the interaction between the presence or absence of a shared interest and the decision frame is not significant analyzing either dependent measure (two-tailed p-value = .386 and two-tailed p-value = .326, respectively).

Therefore, it does not appear that cueing regret salience decreases the participants’

\textsuperscript{11} 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 \([\text{possible cash revenue} - \text{reported cash revenue}) / \text{possible cash revenue}\] and will capture the overall aggressiveness of the population in each treatment condition. The pattern of results using this dependent measure is similar to the pattern of results presented. There is a significant main effect for a shared interest (one-tailed p-value < 0.01), but the main effect for regret salience decreases below a significant level (one-tailed p-value = 0.14).

\textsuperscript{12} Demographic variables added to the model as covariates do not statistically change the effect of a shared interest and regret salience on the likelihood of tax evasion.
likelihood of tax evasion differently in the shared interest condition than the unshared interest condition. It does not appear that other-induced regret and individual regret have a different effect on the participants’ tax reporting decision then when only individual regret is present.\(^{13}\)

**Supplementary Analysis**

To better understand the participants’ rationales for their reporting decision, participants were asked to respond to a series of supplemental questions. Table 4 summarizes the results of a shared interest on the primary dependent variables as well other supplemental measures that were investigated in the test instrument.

Wiltermuth (2011) shows that when *risk is absent*, participants felt that cheating on a task was less unethical when the rewards for cheating were split with another individual. Therefore, the participants’ abilities to justify the act as less unethical led to more unethical behavior. However, this study proposes that when risk of detection and punishment for performing an unethical behavior is present, participants’ ability to justify the behavior as less unethical is limited because participants are not only deciding how unethical the behavior is, but also how unethical it is to put another person at risk of an adverse audit. To understand if taxpayers ethical beliefs towards tax evasion were 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”.

\(^{13}\) It is also possible the in the shared interest condition, there is a floor effect. That is, in the shared interest present condition, there was not as much room for regret salience to further decrease evasion intentions as there was in the shared interest absent condition when compared to the control frame conditions.
Table 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 (two-tailed p-value = .064). Interestingly, in the absence of risk, individuals judge an unethical behavior as less unethical when the benefits are shared, but the opposite is found when risk is present in the decision. Although the participants’ ethicality judgments were dependent upon the presence or absence of a shared interest, and the ethicality judgments were significant on the dependent variables of interest, the ethicality judgments did not completely mediate the relationship between a shared interest and the likelihood of tax evasion. This result is not surprising as research shows, tax decision making is dependent upon a myriad of factors, one of which is a taxpayers ethical perceptions towards tax evasion.

Self-reported measures were used to capture the participants’ perceptions 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

---

14 Also noteworthy is that the participants were able to distinguish the difference between tax evasion and aggressiveness, as aggressive behavior was found to be less unethical than tax evasion (3.70 versus 7.86 for the Sole Proprietor condition and 4.28 versus 8.72 for the Partnership condition) (two-tailed p-values < .001).

15 Participants’ judgment of the unethicality of tax evasion was significantly impacted by whether participants were in a shared interest condition. Incorporating the participants’ unethicality judgment into the model as a covariate reduced the effect of a shared interest on the likelihood of tax evasion, but it remained statistically significant (two-tailed p-value = .047).
were netted together to form a single measure, “emotional cost/benefit” score. If the emotional cost/benefit score was above zero then it could be argued that 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.

*Insert Table 4 Here*

Table 4 reports in the Partnership condition that the mean participant's perceived emotional cost/benefit score was -2.95 which is significantly different from the mean score in the Sole Proprietor condition which was -0.99 (two-tailed p-value = .008). 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.

**Limitations**

As with all experimental studies, design choices of the current 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. 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.
In the Partnership condition, participants were asked to make a judgment based off of revenue figures which were double that of the Sole Proprietor condition. Although the intent was to keep the individual wealth states constant across conditions, it is possible that participants in the Partnership condition were less likely to evade taxes because they felt that the higher dollar amount increased the likelihood of detection. However, this is unlikely to be a concern as participants in both conditions had similar audit probability perceptions (35.38% vs. 34.69%, two-tailed p-value = .870). It is also possible that Sole Proprietors are more likely to evade because they believe no one will find out, whereas in a Partnership other individuals might become aware of the behavior. However, Hsee and Weber (1997) would suggest this possibility is unlikely as their study showed that individual risky decisions did not differ whether made in private or with public knowledge.

While risk propensity and ethical beliefs are a main driver of an individual’s willingness to evade taxes, these are individual differences. It would be expected that random assignment of participants to the conditions would ensure that the average risk preference and ethical beliefs would be similar across treatment conditions. Ex ante questions were not asked to measure an individual’s risk preference or ethical beliefs before the case scenario to ensure these measures would not bias the findings. However ex post, questions show that the participants’ “perceived audit probability” and “perceived threat of audit” did not significantly differ between treatment conditions. As expected by theory, the individuals’ ethical beliefs toward tax evasion was dependent upon whether the participants were in a shared interest condition.

CONCLUSION
Factors that affect tax compliance are of great importance to multiple parties, including academics, 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 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. The study provides evidence that taxpayers view the ethicality of tax evasion differently depending upon the presence or absence of a shared interest. However, the ethicality beliefs do not fully mediate the relationship between a shared interest and a taxpayer’s willingness to evade. This suggests that the shared interest may affect other factors that influence tax evasion decisions.

Overall, this study makes significant contributions to multiple streams of literature. Despite the magnitude of shared interest environments, previous tax research has not explored whether taxpayers make different decisions depending on the presence or absence of a shared interest. This study shows that prior study results examining taxpayer decision making cannot generalize to a shared interest setting. This study also contributes to the ethics literature by showing that when a decision is both of ethical nature and risky, a shared interest in the consequences of that behavior has the opposite
effect on decision making then if the decision context does not contain risk of detection and punishment. Finally, this study contributes to the literature on risky decision making which has tended to examine differences in decision making for oneself compared to decision making for others. A shared interest in a risky decision is different than decision making for solely oneself or another individual and this papers provides evidence on how a shared interest in a risky decision effects risky decision making.

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 strategies to make regret more salient to taxpayers before making tax compliance decisions. This is consistent with Alm and Torgler (2011), who 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. This is also consistent with Hasseldine et al. (2007), who demonstrate the effects of persuasive communication on increasing taxpayer compliance.

The results of this study suggest that taxpayers are less likely to evade taxes when they are in a shared interest setting. This study provides a foundation for studying how a shared interest can effect taxpayer decision making, but there are a plethora of interesting research questions which can and should be studied to examine the boundary conditions of the current study’s results. For example, the tax reporting decision could be affected by
one or more of the following: (1) the number of taxpayers affected by the tax evasion decision; (2) the preferences of the non-reporting taxpayer(s); (3) the relationship status (good vs. bad) between the taxpayers; and, (4) the financial condition of the reporting taxpayer or non-reporting taxpayer (for example whether the partner is experiencing cash flow problems). Any one of these factors could moderate the relationship found in the current study and should be of interest to future research.
APPENDIX A

Selected Experimental Materials

CASE

In addition to receiving income from full-time employment, you (and PARTNER’S NAME) have owned ten (twenty) rental properties as a Sole Proprietorship (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 Sole Proprietorship (Partnership). You alone are (Both you and PARTNER’S NAME are equally) responsible for the outcomes of your tax reporting decisions.

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

Total rental revenue changes from year to year because the total the 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 (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 $60,000 ($120,000) for the current year and past five years.

For the current year, rental revenue totaling $70,000 ($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 Sole Proprietorship (Partnership) bank statements.

The remaining rental revenue was received in cash and was not deposited into the Sole Proprietorship (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 $40,000 and $50,000 (between $80,000 and $100,000).

Your Task
You have to decide how much rental revenue the Sole Proprietorship (Partnership) will report for the current year which will have a direct impact on the amount of taxes you alone (you and PARTNER’S NAME) are required to pay.
Due to your (and PARTNER’S NAME) 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 (and PARTNER’S NAME) will be required to pay $350 in combined income taxes.

<page break>

YOUR DECISION

You already have decided to report the rental revenue for the current year which was deposited into the bank account ($70,000) ($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 $40,000 and $50,000 (between $80,000 and $100,000). In addition, recall that all cash rental revenue was used to pay for personal expenses and was not deposited into the Sole Proprietorship (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 PARTNER’S NAME) tax liability from the rental properties.

**Sole Proprietor Condition**

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

**Partnership Condition**

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

TEST PARTNER'S Rental Property Tax Liability

|$3,500 $7,000 $10,500 $14,000 $17,500 $21,000

30
Please indicate on the scale below, how much regret you would feel if (1) you alone decided for the Sole Proprietorship (Partnership) to under-report income, (2) the Sole Proprietorship (Partnership) was audited by the IRS, and (3) as a result of the audit, you (and PARTNER’S NAME) had to pay additional taxes, penalties and interest.

<table>
<thead>
<tr>
<th>No Regret</th>
<th>Very Strong Regret</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 3 4 5 6 7 8 9 10 11</td>
<td></td>
</tr>
</tbody>
</table>

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).

<table>
<thead>
<tr>
<th>Very Unlikely</th>
<th>Very Likely</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 3 4 5 6 7 8 9 10 11</td>
<td></td>
</tr>
</tbody>
</table>

Please indicate below, 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 addition to the $70,000 ($140,000) of rental revenue which was deposited directly into the business bank account.

<table>
<thead>
<tr>
<th>Deposited Rental Revenue Reported (NO INPUT REQUIRED)</th>
<th>$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash Rental Revenue Reported (INPUT REQUIRED)</td>
<td>$</td>
</tr>
<tr>
<td>Total Rental Revenue Reported for the Sole Proprietorship (Partnership)</td>
<td>$</td>
</tr>
</tbody>
</table>

*Updates Automatically*
REFERENCES


### Table 1
Participant Demographics

<table>
<thead>
<tr>
<th>Description</th>
<th>Participants (n=147)</th>
<th>2010 U.S.A. Population</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Median participant age</strong> ${}^a$</td>
<td>35.52</td>
<td>37.20</td>
</tr>
<tr>
<td><strong>Gender</strong> ${}^a$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>50.3%</td>
<td>49.2%</td>
</tr>
<tr>
<td>Female</td>
<td>49.7%</td>
<td>50.8%</td>
</tr>
<tr>
<td><strong>The region of the United States in which participants currently live</strong> ${}^a$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Midwest</td>
<td>19.0%</td>
<td>21.7%</td>
</tr>
<tr>
<td>Northeast</td>
<td>23.8%</td>
<td>17.9%</td>
</tr>
<tr>
<td>South</td>
<td>37.4%</td>
<td>37.1%</td>
</tr>
<tr>
<td>West</td>
<td>19.7%</td>
<td>23.3%</td>
</tr>
<tr>
<td><strong>Average household income</strong> ${}^a$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; $20,000</td>
<td>15.0%</td>
<td>19.9%</td>
</tr>
<tr>
<td>$20,000 - $50,000</td>
<td>38.8%</td>
<td>30.6%</td>
</tr>
<tr>
<td>$50,001 - $100,000</td>
<td>36.7%</td>
<td>29.1%</td>
</tr>
<tr>
<td>&gt; $100,000</td>
<td>9.5%</td>
<td>20.4%</td>
</tr>
<tr>
<td><strong>Highest level of education completed</strong> ${}^a$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Some high school</td>
<td>0.7%</td>
<td>14.4%</td>
</tr>
<tr>
<td>High school</td>
<td>9.5%</td>
<td>28.5%</td>
</tr>
<tr>
<td>Some college</td>
<td>28.6%</td>
<td>28.9%</td>
</tr>
<tr>
<td>Bachelor's degree</td>
<td>48.3%</td>
<td>17.7%</td>
</tr>
<tr>
<td>Graduate degree or higher</td>
<td>12.9%</td>
<td>10.4%</td>
</tr>
<tr>
<td><strong>Marital status on the most recent federal income tax return</strong> ${}^b$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>46.3%</td>
<td>45.4%</td>
</tr>
<tr>
<td>Head of household</td>
<td>7.5%</td>
<td>15.3%</td>
</tr>
<tr>
<td>Married filing jointly</td>
<td>42.9%</td>
<td>37.5%</td>
</tr>
<tr>
<td>Married filing separately</td>
<td>3.4%</td>
<td>1.8%</td>
</tr>
<tr>
<td>Surviving spouse</td>
<td>0.0%</td>
<td>0.1%</td>
</tr>
<tr>
<td><strong>Primary income source:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wages/salary/commissions</td>
<td>76.9%</td>
<td></td>
</tr>
<tr>
<td>Self-employed</td>
<td>19.0%</td>
<td></td>
</tr>
<tr>
<td>Investments</td>
<td>0.7%</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>3.4%</td>
<td></td>
</tr>
<tr>
<td><strong>Receive income not directly reported to the IRS on form W-2 or 1099:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 = Never to 11 = Frequently</td>
<td>3.07</td>
<td></td>
</tr>
<tr>
<td><strong>Average number of years the participants have filed federal income tax returns:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.39</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>The primary decision maker on the participants income tax returns:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self</td>
<td>85.7%</td>
<td></td>
</tr>
<tr>
<td>Spouse</td>
<td>5.4%</td>
<td></td>
</tr>
<tr>
<td>Parent</td>
<td>0.7%</td>
<td></td>
</tr>
<tr>
<td>Paid Preparer</td>
<td>6.8%</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>1.4%</td>
<td></td>
</tr>
</tbody>
</table>

${}^a$ The 2010 United States Population averages were obtained from the 2010 United States Census. This population data was the most recent at the time of this study as the census is conducted every ten years.

${}^b$ To be consistent with the census data obtained, the 2010 United States Population averages were obtained from the 2010 SOI Tax Stats available at: http://www.irs.gov/uac/SOI-Tax-Stats
Table 2
ANOVA Results, Descriptive Statistics, and 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></th>
<th>Sole Proprietor</th>
<th>Partnership</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shared Interest</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control Frame</td>
<td>5.76 [3.91]</td>
<td>3.87 [2.89]</td>
</tr>
<tr>
<td>Decision Frame</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Panel C: Contrasts

<table>
<thead>
<tr>
<th>Means Compared</th>
<th>t-Value</th>
<th>p-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1 - Main Effect: Sole Proprietor vs. Partnership</td>
<td>4.99 &gt; 3.55</td>
<td>2.626</td>
</tr>
<tr>
<td>H2 - Main Effect: Control Frame vs. Regret Frame</td>
<td>4.81 &gt; 3.71</td>
<td>2.017</td>
</tr>
</tbody>
</table>

\(^a\) Hypothesis 1 is a null hypothesis and therefore a two-tailed p-value is reported.

\(^b\) Hypothesis 2 is a directional hypothesis and therefore a one-tailed p-value is reported.
Table 3
Logistic Regression Results, Descriptive Statistics, and Contrasts

Dependent Variable: Percent of Participants "Knowingly Evading"

Panel A: Logistic Regression 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

<table>
<thead>
<tr>
<th>Shared Interest</th>
<th>Sole Proprietor</th>
<th>Partnership</th>
<th>Chi-Square</th>
<th>P-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control Frame</td>
<td>54.05%</td>
<td>29.73%</td>
<td>41.89%</td>
<td></td>
</tr>
<tr>
<td>Decision Frame</td>
<td>36.11%</td>
<td>27.03%</td>
<td>31.51%</td>
<td></td>
</tr>
<tr>
<td>Regret Frame</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Panel C: Contrasts

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Means Compared</th>
<th>Chi-Square</th>
<th>P-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1 - Main Effect: Sole Proprietor vs. Partnership</td>
<td>42.51% &gt; 28.38%</td>
<td>4.630</td>
<td>0.031(^a)</td>
</tr>
<tr>
<td>H2 - Main Effect: Control Frame vs. Regret Frame</td>
<td>41.89% &gt; 31.51%</td>
<td>1.770</td>
<td>0.092(^b)</td>
</tr>
</tbody>
</table>

\(^a\) Hypothesis 1 is a null hypothesis and therefore a two-tailed p-value is reported.

\(^b\) Hypothesis 2 is a directional hypothesis and therefore a one-tailed p-value is reported.
Table 4  
Participant Responses\(^a\)

<table>
<thead>
<tr>
<th></th>
<th>Sole Proprietor</th>
<th>Partnership</th>
<th>P-value (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>45.21%</td>
<td>28.38%</td>
<td>0.031</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>35.38%</td>
<td>34.69%</td>
<td>0.870</td>
</tr>
<tr>
<td>Perceived penalty rate</td>
<td>61.25%</td>
<td>51.73%</td>
<td>0.071</td>
</tr>
</tbody>
</table>

\(^a\) 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.