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## Decision Making in Corporate Taxation

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*University of Central Florida*

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DECISION MAKING IN CORPORATE TAXATION

by

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A dissertation submitted in partial fulfillment of the requirements  
for the degree of Doctor of Philosophy  
in the Kenneth G. Dixon School of Accounting  
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## ABSTRACT

This dissertation is comprised of three experimental studies that examine corporate tax aggressiveness through an investigation of judgment and decision making in the corporate tax environment. Studies 1 and 2 examine individual *judgment* involved in decision making (i.e., assessments of tax positions based upon tax scenario facts and tax authority). Study 1 examines how advice from external tax advisors and a tax advisor's association with the company's audit firm influences the aggressiveness of experienced in-house corporate tax decision makers. Study 2 examines how situational factors in the corporate tax environment interact with individual traits to affect individual-level tax aggressiveness, focusing in greater depth upon the *process* of individual judgment and decision making. Study 3 extends the investigation of situational factors from individual-level decision making to a group-level analysis, examining individual-level and group-level *decision making* in a tax setting (i.e., tax compliance decisions).

Overall, results reflect the complexity of the corporate tax environment. The effects of the situational factors examined in the dissertation generally influence decision makers' own perceptions. For example, Study 1 results suggest that tax advisor identity influences how corporate tax directors weight advice only if the advice is conservative and if the tax directors agree with the advice. Additionally, in Studies 2 and 3, decision maker perceptions are found to mediate the effects of manipulated situational factors. In Study 2, regulatory focus state indirectly influences individual tax aggressiveness through the perception of the tax advisor's level of client advocacy. In Study 3 decision maker type, a situational factor, affects tax compliance decision riskiness indirectly through feelings of responsibility for the possible

outcomes of the decision. Collectively these studies contribute to the nascent literature on decision making in a corporate tax environment, helping to lay the groundwork for future studies in this area.

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## GENERAL INTRODUCTION

This dissertation is comprised of three studies investigating judgment and decision making in the corporate tax environment. Hanlon and Heitzman (2010, p. 145) note that little is known about who is making corporate tax decisions and how these decisions are made, lamenting that “tax avoidance may be highly idiosyncratic and determined by a number of factors and interactions, not all of which can be measured.” This complexity combined with the fact that most experimental tax compliance research to date looks only at individual (rather than corporate) taxpayer decision making suggests a need for investigating decision making in a corporate tax setting.

Navigating the corporate tax environment requires tax decision makers to use professional judgment to interpret complex tax authority (e.g., tax law, regulations, and court cases) (Magro 1999; McGuire et al. 2012). Tax professionals may identify differing tax positions that vary in how much they affect a taxpayer’s tax calculation, forming a range of possible tax minimization opportunities (Slemrod 2007; Hanlon and Heitzman 2010; Lisowsky 2010). This dissertation employs the relative term “tax aggressiveness” to describe where a tax position falls along a range of possible tax minimization. More aggressive tax positions have weaker underlying facts, are not clearly supported by relevant tax authority, and reduce taxes to a greater extent than less aggressive tax positions (Cuccia et al. 1995; Roberts 1998; Hanlon and Heitzman 2010). This dissertation investigates corporate tax aggressiveness by examining both individual *judgment* involved in decision making (i.e., assessments of tax positions based upon tax scenario facts and tax authority in Study 1 and Study 2) as well as individual-level and group-level *decision making* (i.e., tax compliance decisions in Study 3). The first study in this dissertation

examines the influence of external tax advisor recommendations on the tax aggressiveness of decisions made by in-house corporate tax professionals (e.g., tax directors). The second study focuses on the judgment and decision making processes of individuals in a corporate tax environment, investigating how individual traits and contextual factors interact to affect individual-level tax aggressiveness. The third study extends the investigation of contextual factors from individual-level decision making to a group-level analysis, examining decision making in individual and group tax compliance settings. The following subsections describe the manner in which each study approaches the investigation of decision making in corporate taxation. The final subsection contains the overall contribution of this dissertation.

#### Study One: Accounting Professionals, Tax Advice, and Corporate Tax Aggressiveness

The first study investigates corporate tax aggressiveness through an examination of individual-level judgment and decision making, specifically the influence of advice on individual tax aggressiveness. The primary individuals of interest in this study are corporate tax decision makers, such as tax directors, that have authority to make tax compliance and planning decisions on behalf of the corporation. The study draws upon social categorization theory and the belief-adjustment model to explore how tax advice may influence tax directors' judgments differently depending upon whether or not the tax advisor is from the corporation's audit firm. I conduct an experiment in which the identity of the tax advisor and the nature of tax advice are manipulated. Experienced corporate tax directors are asked to make an assessment of a tax position based on an ambiguous tax scenario. The external tax advisor is described within the scenario as either from the accounting firm engaged to audit the corporation or from a different accounting firm. Tax directors make their judgment about the tax position after receiving either conservative or

aggressive advice from the external tax advisor. Social categorization theory, client advocacy roles, and the belief-adjustment model are used to interpret the influence of advice, leading to predictions that the effect of advice depends upon the nature of the advice *and* the identity of the tax advisor. Results suggest the nature of advice and tax advisor identity influence how tax directors weight conservative advice when they are in agreement with the advice. However, the nature of advice and tax advisor identity do not appear to influence the weight of advice when tax directors agree with aggressive tax advice.

### Study Two: Corporate Tax Aggressiveness: The Effects of Promotion and Prevention Focus on Individual Decision Making

The second study investigates the tax aggressiveness of business entities through an examination of individual-level judgment and decision making. The study draws upon Regulatory Focus Theory to examine the process through which individuals make tax compliance decisions on behalf of the corporation. Regulatory Focus Theory suggests that individuals have two fundamentally different self-regulatory mindsets that influence the way in which they pursue their goals: promotion regulatory focus (i.e., motivated to maximize successful outcomes) and prevention regulatory focus (i.e., motivated to minimize failed outcomes) (Higgins 1997; Higgins et al. 2001). Regulatory focus is exhibited as an individual *trait* (i.e., trait promotion focus or trait prevention focus); however, situational factors in the decision environment can activate a regulatory focus *state* (i.e., promotion state or prevention state) (Higgins 2000). Corporate tax decision makers with a trait promotion focus are predicted to be more tax aggressive than those with trait prevention focus. However, induced regulatory focus *state* is predicted to moderate this relationship so that inducing a regulatory state may



amplify the effects of trait regulatory focus on the tax aggressiveness of corporate tax decision maker judgment when trait and state align. I conduct an experiment in which participant trait regulatory focus (promotion trait or prevention trait) is measured and state regulatory focus is manipulated by framing corporate management's view of the external tax advisor as either an advocate (positive frame activating a promotion state) or an overseer (negative frame activating a prevention state). Results do not support study hypotheses; however, supplemental analysis suggests that regulatory focus state indirectly influences individual tax aggressiveness through the perception of the tax advisor's level of client advocacy. Decision makers perceive tax advisors to be stronger client advocates when management views the tax advisor as an advocate (promotion state) than when management views the tax advisor as an overseer (prevention state). Furthermore, perceiving the tax advisor to be more of an advocate amplifies the influence of "fit" between regulatory focus trait and state: compared to individuals with a lower trait promotion focus, tax decision makers with a greater trait promotion focus react more strongly to the induced promotion state.

### Study Three: Self-Other and Multi-Agent Decision Making in Taxation

The third study investigates risky decisions made in different tax compliance contexts. Prior research on taxpayer judgment and decision making has typically examined individual taxpayer compliance; however, little is known about how components of the decision making environment influence compliance in business tax settings. The study draws upon diffusion of responsibility theory (i.e., how feelings of responsibility differ in individual and group decision making) to examine the effect of the type of decision maker on the riskiness of tax compliance decisions. Additionally, construal level theory and social value theory are used to explore how

self-other decision making (i.e., whether decisions are made for oneself or on behalf of others) and decision maker type (i.e., individual or group decision maker) influence tax compliance. I conduct an experiment in which decision makers are asked to make a tax compliance decision. Decision maker type (individual or group) and decision target (self or other) are manipulated through the structure of the tax compliance task. I use a compliance task with minimal context to intentionally minimize the differences between conditions to determine the effect of only the specific contextual factors of interest.

Taxpayers making decisions in a group are predicted to make riskier tax compliance decisions than taxpayers making decisions individually. Self-other decision making is predicted to influence tax compliance differently depending upon whether or not the decision is made individually or in a group. Results do not support study hypotheses; however supplemental analysis suggests decision maker type affects tax compliance decision riskiness indirectly through feelings of responsibility for the possible outcomes of the decision. Group members report feeling lower levels of personal responsibility than individual decision makers, and feeling less personally responsible for the decision leads to riskier tax decisions.

#### Overall Contribution

Collectively these studies contribute to both the tax professional judgment and decision making literature and taxpayer compliance research by examining decision making in a corporate tax setting. Fair and objective evaluation of tax positions should reduce unmeasured tax risk. Corporate tax decision makers should be made aware of how components of the decision making environment (e.g., situational factors, dispositional characteristics, advice, and advisor characteristics) influence interpretation of evidence and impact objectivity in the evaluation of

possible tax positions. Additionally, this dissertation also contributes to the corporate tax avoidance/aggressiveness literature, given that these studies are some of the first to employ experimental methods to examine *why* and *how* these specific components of the decision making environment influence the tax aggressiveness of corporate tax director judgment. This dissertation also has policy implications as policies designed to influence firm-level corporate tax aggressiveness should be grounded in a solid understanding of the underlying judgment and decision making processes of individuals acting on behalf of the corporation.

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# STUDY ONE: ACCOUNTING PROFESSIONALS, TAX ADVICE, AND CORPORATE TAX AGGRESSIVENESS

## Introduction

Corporations are separate legal entities; however, given that corporations function based upon decisions made by individuals, this study investigates the tax aggressiveness of business entities through an examination of individual-level judgment and decision making. The primary individuals of interest in this study are corporate tax decision makers, such as tax directors,<sup>1</sup> that have authority to make tax compliance and planning decisions on behalf of the corporation. Tax rules are complex, particularly those for corporate taxation (Barney et al. 2012; Sullivan 2011). Corporations have the option of conducting tax planning and compliance internally or engaging external tax professionals (i.e., tax advisors<sup>2</sup> such as public accounting firms) for assistance with some or all of the tax work to achieve objectives while managing tax risk (Donohoe et al. 2014; EY 2014).

Tax advisors provide corporate tax directors with additional resources and expertise through the provision of tax advice. The decision to outsource some or all of the corporate tax function to a tax advisor has been linked to a greater focus on tax planning than on tax compliance (Dunbar and Phillips 2001). A corporation may have options for outsourcing tax work. A corporation may engage its audit firm to provide tax services, subject to audit committee approval for publicly traded companies, or the corporation may hire an alternate tax advisor

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<sup>1</sup> This study is focused on the judgment and decision making of individuals within the corporation that are involved in corporate tax matters. These individuals are labeled as tax directors for purposes of this study. The term “tax director” is intended to also represent individuals who could have other job titles such as CFO, controller, tax senior manager, or tax manager.

<sup>2</sup> The term “tax advisor” is used throughout this study to describe the individuals that assist taxpayers such as corporations with their tax work. Tax advisors are accounting professionals, external to the corporation, engaged to provide tax services to the corporation. “Tax advisor” is intended to encompass alternate terms such as tax preparer, tax service provider, and tax consultant.

(PCAOB 2014). Corporate tax aggressiveness<sup>3</sup> appears to be associated with the party that signs the corporate tax return. Corporations that sign their own tax returns or whose returns are signed by an external non-auditor tax advisor are associated with more aggressive positions than corporations whose returns are signed by an external auditor tax advisor (Klassen et al. 2015). However, it is unclear if the identity of a corporation's tax advisor shapes a corporate tax director's aggressiveness. If a corporation's tax aggressiveness is influenced by the identity of the tax advisor, as suggested by Klassen et al. (2015), does tax advisor identity influence how *advice* affects internal corporate tax decision making? This study employs an experimental design that enables controlled testing of targeted factors in this relationship. Specifically, the purpose of this study is to draw upon social categorization theory and the belief-adjustment model to investigate how tax advice may differentially influence corporate tax director judgment depending upon both the identity of the tax advisor and the nature of the advice.

Social categorization is the cognitive process underlying how individuals perceive and make sense of an overwhelming number of sensory inputs in a complex and ever-changing environment (Hogg 2001). Corporate tax directors may categorize a tax advisor from the accounting firm engaged to audit the corporation ("tax-audit" category) differently than a tax advisor from an accounting firm that is not the audit firm ("tax-nonaudit" category). The "tax-nonaudit" category may be more strongly associated with a tax advisor's client advocacy<sup>4</sup> role. The different categorization may lead to differing perceptions about a tax advisor's function and

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<sup>3</sup> As explained in more detail later, the present study considers tax aggressiveness to be a relative term used to describe where a tax position falls along the range of possible tax minimization. Tax positions that are more aggressive have weaker underlying facts and are not clearly supported by relevant tax authority (Cuccia et al. 1995; Roberts 1998).

<sup>4</sup> Mason and Levy (2001, 127) define client advocacy as "a state of mind in which one feels one's primary loyalty belongs to the taxpayer. It is exhibited by a desire to represent the taxpayer zealously within the bounds of the law, and by a desire to be a fighter on behalf of the taxpayer."

expected behavior, which may influence corporate tax director judgment. This study predicts that advice affects tax director judgment differently depending on both tax advisor identity and whether or not the advice is surprising, given the tax advisor's identity. In this study, advice is considered to be surprising if incongruent with the tax advisor's identity (i.e., conservative advice from a non-auditor tax advisor or aggressive advice from an auditor tax advisor). Specifically, the study predicts that aggressive advice from the audit firm tax advisor (i.e., surprising advice) will have a stronger effect on the corporate tax director's judgment than aggressive advice from the non-audit firm tax advisor (i.e., unsurprising advice). Likewise, conservative advice from the non-audit firm tax advisor (i.e., surprising advice) is predicted to have a stronger effect on the tax director's judgment than conservative advice from the audit firm tax advisor (i.e., unsurprising advice).

One hundred and nineteen experienced corporate tax professionals (Vice Presidents of Tax, Tax Directors, and Tax Managers) are included in the study. As suggested by their job titles, the vast majority have a great deal of tax experience and most are employed by multi-national US-based corporations. An experimental design is used to examine how the identity of the tax advisor and the nature of advice influence how corporate tax directors weight advice. Participants are given a corporate tax scenario with ambiguous underlying case information and relevant tax authority. The tax advisor's identity is manipulated in the tax scenario information as a tax advisor either from the audit firm or from a different accounting firm. Participants receive advice from a tax advisor and then make a judgment about their likelihood of taking the aggressive tax position. The advice is manipulated as either aggressive or conservative, which is considered to be surprising or unsurprising based upon the identity of the tax advisor. The study does not find evidence overall that nature of advice and tax advisor identity influence the weight

of advice. However, more interesting findings emerge when examining the weight of advice when tax directors agree with the advice. The study finds that tax advisor identity influences the weight of conservative advice when the tax director agrees with the conservative advice. Tax directors in agreement with conservative tax advice weighted advice from the audit firm tax advisor (“tax-audit”) more heavily than when advice came from a tax advisor from a different firm (“tax-nonaudit”). However, when tax directors agree with aggressive advice, tax advisory identity does not appear to influence the weight of advice.

The study contributes to both the tax professional judgment and decision making literature and taxpayer compliance research by examining decision making in the corporate tax environment. Corporate tax directors are sophisticated decision makers, attuned to many components of the corporation’s overarching tax risk management (Donohoe et al. 2014; Graham et al. 2014). As a component of the tax risk management process, corporate tax directors should be made aware of how the identity of the tax advisor may affect their judgment and evaluation of potential tax positions. Tax directors need to make unbiased risk assessments in order to accurately align tax positions with a corporation’s tax risk appetite (COSO 2004; Donohoe et al. 2014). Failure to accurately assess tax positions may expose the corporation to unmeasured tax risk, which could have implications for tax compliance, accounting for income taxes in financial reporting, and reputational concerns (Donohoe et al. 2014).

The study also contributes to the corporate tax avoidance/aggressiveness literature, as this study is one of the first to employ an experimental design to investigate corporate tax aggressiveness by examining the judgment and decision making of tax directors who make tax decisions on behalf of corporations. An experimental design enables this study to examine *why* particular factors influence aggressive tax behavior in a business entity context. The study uses



an experimental method to address this issue by isolating tax advisor identity and the nature of advice to examine the effect on tax director judgment. Prior research on corporate tax aggressiveness has examined firm-level characteristics of corporations that engage in aggressive tax reporting behavior (Chen et al. 2010; Lisowsky 2010; Lanis and Richardson 2011; Rego and Wilson 2012; Honaker 2013; Higgins et al. 2014; Klassen et al. 2015), as well as performance measures and incentive structures for key decision makers (Phillips 2003; Robinson et al. 2010; Armstrong et al. 2012; Gaertner 2014). Recently, studies have focused on key individuals to investigate the association of individual-level characteristics with corporate tax aggressiveness (Cleaveland et al. 2010; Dyreng et al. 2010; Chyz 2013; Honaker 2013; Koester et al. 2013; Laws and Mills 2014). These studies have treated firm-level and individual-level characteristics as determinants of aggressive tax reporting; however, as a result of using an archival methodology, these studies are more appropriately described as showing an association between these characteristics and the presumed outcomes of aggressive corporate tax decisions. Thus, these prior studies provide information about corporations that are tax aggressive, but they do not unravel the *why* behind the factors thought to influence aggressive corporate tax behavior.

The following section of this research study contains a review of the relevant literature and development of the hypotheses. The second section describes the research method. The third section presents results. The final section draws conclusions.

## Theory and Hypotheses

### Tax Risk Preferences and Corporate Tax Aggressiveness

Tax advisors use professional judgment to navigate the tax law (Magro 1999; McGuire et al. 2012). Due to the complexity of the tax rules, a definitively “correct” tax position may not

always be determinable, so tax advisors may identify differing tax positions using the same set of information (Slemrod 2007). These differing tax positions could vary in how much they affect a taxpayer's tax calculation; forming a range of possible tax minimization (Hanlon and Heitzman 2010; Lisowsky 2010). The present study considers tax aggressiveness to be a relative term used to describe where a tax position falls along the range of possible tax minimization. Tax positions that are more aggressive have weaker underlying facts and are not clearly supported by relevant tax authority (Cuccia et al. 1995; Roberts 1998). Given any one issue, a more aggressive tax position reduces taxes to a greater extent than a less aggressive tax position (Hanlon and Heitzman 2010).

The corporate tax rules are complex and often ambiguous, creating uncertainty (Slemrod 2007; Barney et al. 2012). The current convention in practice is to refer to this uncertainty in terms of managing tax risk<sup>5</sup> (Donohoe et al. 2014). Borrowing from the COSO definition of enterprise risk management, tax risk management can be equated to a corporation's process of identifying potential events with tax implications and managing risk to be within its "risk appetite" (COSO 2004; Donohoe et al. 2014). For each individual corporation there is an optimal level of tax aggressiveness that most benefits the shareholders (Armstrong et al. 2014). Theoretically, after risk preference has been identified, the tax aggressiveness of tax director judgment should be guided by the overarching tax risk preference. Thus, corporate tax aggressiveness may be viewed as the operationalization of a corporation's tax risk preference (aka "risk appetite").

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<sup>5</sup> Big 4 public accounting firms produce publications targeted at corporate tax risk and tax risk management. See for example EY's 2014 tax risk and controversy survey (EY 2014).

Several factors have been shown to be associated with corporate tax aggressiveness. At the organizational level, overall corporate business strategy has been linked to corporate tax strategy (Higgins et al. 2014). Corporations that structure their business around a strategy of innovation are more tax aggressive than corporations focused on stability and defending market share (Higgins et al. 2014). Relatedly, evaluating the tax department as either a cost center or a profit center is also associated with tax aggressiveness, with the latter having been shown to be correlated with lower cash effective tax rates (ETR) (Robinson et al. 2010). Also, companies can effectively incentivize the tax aggressiveness of decision makers through executive compensation arrangements (Phillips 2003; Hanlon et al. 2005; Rego and Wilson 2012; Gaertner 2014). Recent studies have begun to examine associations between individual corporate decision makers and tax aggressiveness. Tracking the movement of individual corporate executives between companies suggests that tax aggressiveness may be attributable to individual decision makers (Dyreng et al. 2010). Further, an executive's personal tax aggressiveness may be associated with corporate tax aggressiveness (Chyz 2013). Additionally, decision maker gender appears to be related to corporate tax aggressiveness; female CFOs have been associated with less tax aggressiveness than male CFOs (Francis et al. 2014). Management may choose to seek corporate tax directors with likeminded tax risk preferences.

Top management and the corporate tax department are not the only individuals involved in corporate tax decisions. Corporations may engage tax professionals from public accounting firms to provide or assist the corporate tax function. The interactions of internal corporate tax directors, tax advisors, and tax authorities collectively shape corporate tax aggressiveness (Gracia and Oats 2012). Tax advisors perform an important function of serving as interpreters of

tax rules by drawing upon firm-wide experiences interacting with tax authorities (Picciotto 2007).

### Corporate Tax Advisors

Companies may choose whether or not to receive tax services from the same accounting firm that is engaged to audit their financial statements. U.S. publicly traded companies must first receive preapproval from their audit committee before the audit firm is engaged to provide tax services; however, if preapproval is granted, even publicly traded corporations may engage their audit firm for tax services (PCAOB 2014). The audit committee is specifically tasked with oversight of financial reporting and disclosure (SOX 2002). The requirement for preapproval from the audit committee stems from concerns that auditor independence could be threatened by sizeable revenues from non-audit services that could unduly influence auditor judgment (PCAOB 2014, SOX 2002).

The existence of publicly traded companies that continue to engage the same accounting firm for both audit and tax services suggests that in some instances the benefits of this arrangement outweigh the costs (Gleason and Mills 2011). Indeed, investors perceive the benefits of enhanced financial reporting due to knowledge spillover from auditor-provided tax services to be greater than the potential threat to auditor independence (Krishnan et al. 2013). Collaborations between same-firm audit and tax functions can generate tax strategies for optimizing outcomes for both tax reporting and financial reporting. McGuire et al. (2012) only examine companies that engage the same accounting firm for both audit and tax services; they find that companies engaging an audit firm with tax-specific industry expertise are linked to

greater tax aggressiveness compared to other companies in their sample<sup>6</sup> (McGuire et al. 2012). The sample for the McGuire et al. (2012) study contains only companies that engage the same accounting firm for both audit and tax services. Though companies may choose to engage the same accounting firm for both audit and tax services, many companies do not (Klassen et al. 2015). Companies using their audit firm as their tax advisor are associated with less tax aggressiveness than companies using non-auditor tax advisors (Klassen et al. 2015). Klassen et al. (2015) use confidential IRS data to classify a company's tax advisor as an auditor, a nonauditor, or the internal tax department. The Klassen et al. (2015) study is able to observe the association between tax advisor identity and tax aggressiveness through the use of confidential IRS data, a relationship which had been previously inaccessible using only publicly available information. However, the data in the Klassen et al. (2015) study do not reveal *why* using a tax advisor from the audit firm is associated with less tax aggressiveness, more specifically if knowing whether or not the tax advisor is from the company's audit firm influences how advice affects tax director judgment.

ASC 740 requires that companies evaluate tax positions for financial reporting purposes (FASB 2009). A corporation's tax accounts are included in the audit of the corporation's financial statements. Thus, a tax director may consider the financial reporting implications when assessing potential tax positions. One perspective could be that corporate tax directors perceive a tax advisor from the audit firm as *more* likely to favorably assess a tax position due to reduced independence or a knowledge spillover effect. The knowledge spillover literature examines whether auditor provided tax services impair independence (possibly impacting audit quality) or

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<sup>6</sup> The McGuire et al (2012) study uses the term tax avoidance, but I have consistently used the term tax aggressiveness to avoid confusion generated by the use of multiple terms.

whether using a tax advisor from the corporation's audit firm allows knowledge to be transferred between tax and audit functions, generating potential benefits such as increased audit effectiveness and audit efficiency. Prior research has found support for the knowledge spillover effect (Kinney et al. 2004; Gleason and Mills 2011; Krishnan and Visvanathan 2011). Joe and Vandervelde (2007) examine knowledge transfer between audit tasks and nonaudit tasks, and note that auditors performing both services display less professional skepticism.<sup>7</sup> Choudhary et al. (2015) also find reduced professional skepticism when a corporation's auditor also provides the corporation's tax services.

Joe and Vandervelde (2007) and Choudhary et al. (2015) focus on the effects of the provision of nonaudit services on auditor judgments. Tax services are one type of non-audit services provided by auditors. Auditor-provided tax services may be associated with reduced auditor skepticism. If auditor-provided tax services are associated with reduced auditor skepticism, then the corporation's tax director may view the option to use the same accounting firm for both tax and audit services as an opportunity to lessen auditor scrutiny of the corporation's tax positions during the audit of the tax accounts. Consistent with a knowledge spillover effect, the tax director may also expect a tax advisor from the audit firm to have greater knowledge of the corporation. Thus, a tax director could expect a tax advisor from the audit firm to be more comfortable with seemingly more aggressive tax positions than a tax advisor from a different accounting firm. However, this inference is inconsistent with the Klassen et al. (2015) study which finds that corporations using their audit firm as their tax advisor appear to engage in less tax aggressiveness than corporation using non-auditor tax advisors. Rather than viewing a

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<sup>7</sup> Though the Joe and Vandervelde (2007) study examines knowledge transfer between audit and nonaudit tasks, the particular nonaudit task examined in the study is not the provision of tax services.

tax advisor from the audit firm as more likely to accept aggressive tax positions due to knowledge spillover or reduced skepticism, corporate tax directors may perceive the differing professional roles for tax and audit professionals to be more influential on tax advisor judgment, which may lead the tax director to interpret evidence in accordance with a tax advisor's professional role.

Tax advisors and auditors have differing objectives and responsibilities. A tax advisor has the responsibility to act as an advocate on behalf of taxpayers when recommending a tax position or preparing a tax return (AICPA 2009). Though a client advocate, a tax advisor is also required to exercise due diligence in determining the accuracy of tax information furnished to the Internal Revenue Service (IRS 2014). Thus, a tax advisor has a dual role: taxpayer advocate and overseer of tax information. Auditors have the responsibility to obtain reasonable assurance about whether the financial statements are free of material misstatement (AICPA 1972a). Auditors are tasked with maintaining a questioning mind and critically assessing evidence (AICPA 1972b).

This study draws upon social categorization theory to examine how differing professional roles associated with the identity of the tax advisor (either from the audit firm or a different firm) influence tax director judgments. As this study investigates the influence of advice from two categories of tax advisors with differing professional roles, social categorization theory and professional roles are used to interpret a tax director's categorization of the tax advisor and how this categorization may affect tax director judgment. Categorization is the cognitive process through which individuals perceive and interpret stimuli in their surroundings (Hogg 2001). Perception is accomplished via the categorization process (Bruner 1957). Individuals receive stimuli input and unconsciously form mental categories based on defining attributes (Bruner 1957). Accumulated stimuli input is stored in memory and used to categorize subsequent input by comparing the new input to stored individual exemplars or prototypes (Smith and Zarate

1990). Categories function as mental shortcuts, enabling individuals to perceive their surroundings and quickly process information to inform individual judgment and behavior (Hogg 2001). Within the broad concept of categorization, *social* categorization specifically involves the categorization of individuals by a perceiver (Hogg 2001). The way in which a perceiver categorizes an individual may lead to selective processing of relevant information, which influences interpretation of evidence and ultimately biases judgment (Bodenhausen and Wyer 1985; Bodenhausen 1988).

The knowledge spillover/reduced skepticism perspective presented earlier involves auditor judgment and the possible effects on audit quality; however, it does not consider the impact of differing professional roles on the tax director's perception of tax advisors. Corporate tax directors may categorize a tax advisor from the audit firm ("tax-audit") differently than a tax advisor from an accounting firm that is not the audit firm ("tax-nonaudit"). The different categorization of the tax advisor may lead to differing perceptions about a tax advisor's function and predicted behavior and may influence how tax directors interpret evidence in making judgments about the likelihood that a corporation should take an aggressive tax position. When the corporate tax director categorizes the tax advisor as "tax-audit," this categorization may be associated with the tax advisor's obligation regarding the accuracy of tax information. The corporate tax director may perceive a tax advisor in the "tax-audit" category as having more of an oversight function due to the tax advisor's affiliation with the audit firm engaged to attest to the appropriateness of information reported in the corporation's financial statements. Conversely, when the corporate tax director categorizes the tax advisor as "tax-nonaudit," an advisor in the "tax-nonaudit" category may be more strongly linked to a client advocacy function than an advisor in the "tax-audit" category. The corporate tax director may perceive a tax advisor in the



“tax-nonaudit” category as more of a client advocate due to the absence of affiliation with the corporation’s audit firm. The tax director’s categorization of a tax advisor as either “tax-audit” or “tax-nonaudit” may affect the lens through which the tax director interprets a tax advisor’s recommendation and how the advice influences tax director judgment.

### The Influence of Advice

Little research has examined the influence of advice on professional decision making in the accounting domain. Research on advice in the tax context is particularly sparse. The demand for advice increases as uncertainty increases, which is compatible with a tax risk management perspective (Beck et al. 1996). However, demand for advice does not necessarily translate into utilization of advice (Beck et al. 1996). This study employs the belief-adjustment model to examine the influence of advice received by corporate tax directors. The belief-adjustment model posits that belief revision occurs through an anchoring-and adjustment process of evidence evaluation (Hogarth and Einhorn 1992). An anchor, the initial belief, is adjusted in response to additional evidence, forming a new anchor, the revised belief (Hogarth and Einhorn 1992). Each piece of evidence adjusts the previous belief, forming a series of revised beliefs. Belief adjustment depends upon both the level of the anchor and the direction of subsequent evidence (Hogarth and Einhorn 1992). The level of the anchor (e.g., a larger anchor versus a smaller anchor) is the strength of the initial belief regarding a hypothesis (Hogarth and Einhorn 1992). For example, if in response to Hypothesis A, an individual believing that Hypothesis A is 80 percent likely to be true would have a larger anchor compared to an individual believing that Hypothesis A is 20 percent likely to be true. The direction of subsequent evidence can be positive or negative; subsequent positive evidence increases the degree of an individual’s initial

belief and subsequent negative evidence decreases the degree of an individual's initial belief (Hogarth and Einhorn 1992). The model posits that a large anchor (initial belief) will have a larger adjustment in response to negative evidence than in response to positive evidence. The model also predicts the converse: a small anchor (initial belief) will have a larger adjustment in response to positive evidence than in response to negative evidence (Hogarth and Einhorn 1992). Thus, a recency effect is predicted such that the most recent evidence is more influential than previous evidence when evidence is surprising (Ashton and Ashton, 1988; Hogarth and Einhorn 1992). Evidence is surprising when it is inconsistent with previous evidence (e.g., positive evidence followed by negative evidence), and evidence is unsurprising when it is consistent with previous evidence (e.g., positive evidence followed by positive evidence) (Ashton and Ashton, 1988; Hogarth and Einhorn 1992).

The present study is interested in how tax advisor identity and the nature of advice influence tax director judgment due to input of both of these factors as evidence in the anchoring-and-adjusting process. As agents of the corporation, tax directors should have a default preference for tax minimizing positions. Social categorization theory suggests that tax directors will perceive tax advisors differently, categorizing tax advisors from the audit firm as "tax-audit" and tax advisors from a different firm as "tax-nonaudit." The categorization of a tax advisor as "tax-audit" may adjust the tax director's default anchor towards a more conservative tax position. Likewise, the categorization of a tax advisor as "tax-nonaudit" may adjust the tax director's default anchor towards a more aggressive tax position.

The amount of belief adjustment is determined by both the level of the anchor and the direction of subsequent evidence (Hogarth and Einhorn 1992). The level of the anchor is the strength of the initial belief regarding a hypothesis, theoretically dichotomized as either a large

anchor or a small anchor (Hogarth and Einhorn 1992). Regarding the tax aggressiveness of corporate tax director judgment, the hypothesis at issue concerns the likelihood that an aggressive tax position is the appropriate position. Thus, a large anchor represents a greater likelihood that an aggressive tax position is appropriate and a small anchor signifies a lesser likelihood that an aggressive position is appropriate.

Advice received from the tax advisor is expected to act as a subsequent piece of evidence in the tax director's anchor-and-adjusting process. The belief-adjustment model describes a contrast or surprise effect in which a large anchor will move more in response to negative evidence than in response to positive evidence (Hogarth and Einhorn 1992). Thus, a tax director receiving advice from a tax advisor not from the audit firm ("tax-nonaudit" category) will have a greater belief adjustment if the tax advisor gives conservative advice (negative evidence) than if the tax advisor gives aggressive advice (positive evidence). Likewise, a tax director receiving advice from a tax advisor from the audit firm ("tax-audit" category) will have a greater belief adjustment if the tax advisor gives aggressive advice (positive evidence) than if the tax advisor gives conservative advice (negative evidence). Consistent with the belief-adjustment model, pairing either a large anchor with negative evidence or a small anchor with positive evidence creates a surprise (Hogarth and Einhorn 1992). A recency effect is predicted such that the most recent evidence is more influential than previous evidence when evidence is surprising (Ashton and Ashton 1988; Hogarth and Einhorn 1992). Thus, a tax director receiving surprising advice will be more heavily influenced by the advice than by the advisor; however, whether the advice is surprising depends upon the identity of the tax advisor. Stated formally:

***H1a:** Conservative advice from the non-audit firm tax advisor (i.e., surprising advice) will have a stronger effect on the corporate tax director's judgment than conservative advice from the audit firm tax advisor (i.e., unsurprising advice).*

***H1b:** Aggressive advice from the audit firm tax advisor (i.e., surprising advice) will have a stronger effect on the corporate tax director's judgment than aggressive advice from the non-audit firm tax advisor (i.e., unsurprising advice).*

## Research Method

### Participants

Corporate tax professionals with job titles such as VP Tax, Tax Director, Head of Tax, etc. were contacted via email to request participation in the study.<sup>8</sup> Email addresses were obtained from an academic research database. Participants were recruited using a multi-contact method (Dillman et al. 2009). As an incentive for participating, I offered to make a contribution of \$2 on behalf of each participant to one of three national-level charities. Screening questions were used to insure that potential participants had adequate experience for inclusion in the study. In order to be eligible to participate in the study, participants must have had experience making in-house corporate tax decisions on behalf of a company. Screening questions assessed the following types of experience: supervision of a company's income tax return preparation and filing, researching income tax matters on behalf of a company, conducting income tax planning

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<sup>8</sup> This study collects potentially sensitive information about a company's tax aggressiveness; thus, corporate tax executives were assured any responses would be anonymous (i.e., responses would not be linkable to their identity or the identity of their corporate employer). I sent a recruitment email containing an anonymous link to the study to 4,579 email addresses. 269 emails were undeliverable. It is unclear how many emails may have been blocked by company filters. 243 participants clicked the link to view information about the study; 139 actually completed the study.

on behalf of a company, and preparing or reviewing a company's tax provision calculations. The screening questions instructed potential participants to consider only their experience while they were employed in-house by a company and not to consider any experience they may have had working for a public accounting firm.

One hundred and nineteen experienced corporate tax professionals completed the experiment, with 115 participants (96.7 percent) having more than seven years of experience in taxation. Participants with more than seven years of experience were asked to specify total years of experience; 96 responded with a mean (standard deviation) of 23.9 years (7.87). Participants were primarily employed by multi-national US-based corporations (79.9 percent), with others employed by domestic US multistate corporations (15.1 percent) and multi-national foreign-based (5.0 percent). The vast majority of participants indicated their corporation's financial statements were audited by a public accounting firm (99.2 percent). Regarding the percentage of tax services outsourced (rather than conducted in-house), responses ranged from 0 percent to 100 percent with mean (standard deviation) of 33.0 percent (22.5). Additionally, some corporations chose to outsource tax services to the same accounting firm that conducted their audit (43.7 percent) and other corporations used different accounting firms for tax and audit services (55.5 percent). Table 1 presents demographic data. Study 1 tables are presented in Appendix A.

### Materials and Design

The experiment was computer-based and administered via Qualtrics software. Participants were first provided with a link to begin the study. The opening screen of the Qualtrics study presented the explanation of research (general study overview, estimated time to complete, contact information for the experimenters, etc.). Individuals that agreed to participate

proceeded to the next screen to answer screening questions before beginning the study.

Participants were asked to work independently and complete the study in one continuous sitting, without outside interruptions.

The experimental materials consisted of five sections: background information and tax scenario about a hypothetical corporation (Maylor Corp), select guidance relevant to the tax scenario and the in-house tax staff opinion, a recommendation from Maylor Corp's tax advisor regarding the tax scenario, the participant's response section, and demographics. See Figure 1 for a diagram of the experimental procedures.

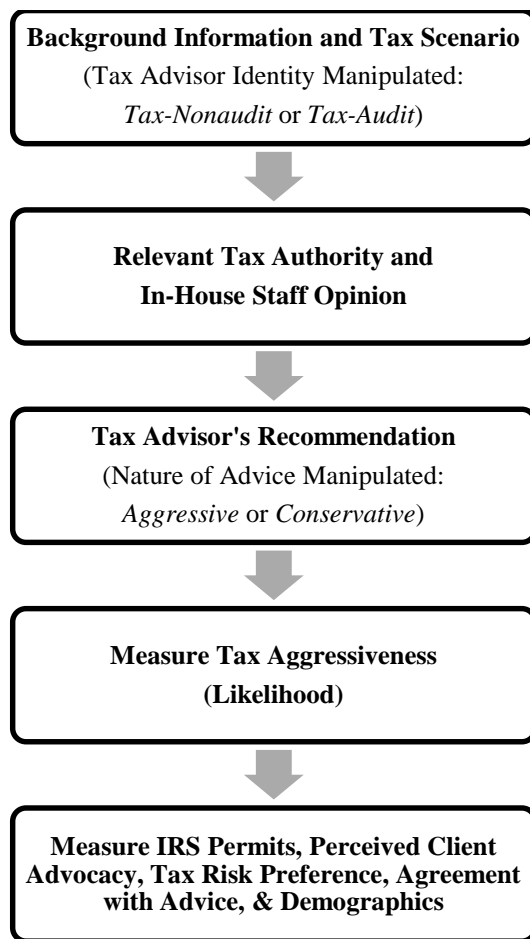


Figure 1: Diagram of Experimental Procedures

Participants were presented with background information for a hypothetical scenario in which they were asked to assume the role of Maylor Corp’s Tax Director. Each participant received one of two possible variations of background information, differing only in who was said to sign Maylor Corp’s tax returns and review research projects conducted in-house by Maylor Corp’s tax department: tax professionals from an accounting firm that is not Maylor Corp’s audit firm or tax professionals from Maylor Corp’s audit firm. After reading through the background information for Maylor Corp, all participants then received the same tax scenario. The tax scenario involved the Research and Development (R&D) Credit and the qualification of certain research expenses for the R&D Credit. Specifically, participants were told that Maylor Corp had incurred costs for supplies related to a new research and development project and provided with facts about the new project. The tax scenario was derived from an actual court case on the proper treatment of supplies for the R&D Credit.<sup>9</sup>

Following the tax scenario, participants were provided with relevant information from the Internal Revenue Code and Regulations. The potential classification of the supplies as “qualified research expenses” for the R&D Credit was a matter of judgment as it was not directly addressed in the tax guidance provided in the experimental materials.<sup>10</sup> Participants were informed that Maylor Corp’s in-house tax department staff had compiled the tax authority and provided a preliminary opinion that, should Maylor Corp include the supplies in the R&D Credit calculation, there was a 60% likelihood that the position would be successfully upheld. The purpose of the 60% likelihood was to anchor the participants on the same starting point prior to receiving advice from Maylor Corp’s external tax advisors.

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<sup>9</sup> *Union Carbide Corp.* TCM 2009-50.

<sup>10</sup> Despite recent legislative activity, the tax rules for claiming the R&D Credit for supplies remain complex and ambiguous (Frank et al. 2010).

After participants had read the relevant tax authority and the preliminary opinion of Maylor Corp's tax department staff, they were given advice from the party designated as Maylor Corp's tax advisor in the background information. Participants were provided with either a recommendation that Maylor Corp should include the supplies in the R&D credit calculation (aggressive advice) or that Maylor Corp should not include the supplies in the R&D credit calculation (conservative advice). After receiving the tax advisor's recommendation, participants were asked the likelihood of including the supplies as qualified expenses for the R&D Credit. The study also included an adapted measure of client advocacy, a measure of tax risk preference, manipulation checks, and demographic information. Experimental materials are included as Appendix B.

### Independent Variables

#### Tax Advisor Identity

Tax advisor identity is manipulated within the background information for Maylor Corp that participants receive early in the experiment. The experimental materials indicate that Maylor Corp's tax advisors are either tax professionals from an accounting firm that is not the same as Maylor Corp's audit firm (Tax-Nonaudit) or tax professionals from Maylor Corp's audit firm (Tax-Audit). The materials state that research projects are often conducted in-house by Maylor Corp's tax department and then reviewed by Maylor Corp's tax advisor. After participants read through the tax scenario about Maylor Corp's research and development and view the tax department staff's preliminary opinion and relevant tax authority, participants view the tax advisor's recommendation on the appropriate tax treatment. In both the Tax-Nonaudit and Tax-Audit conditions, the accounting firm is described as a Big 4 public accounting firm.



## Nature of Advice

Maylor Corp's tax advisor provides a recommendation about the treatment of the supplies for purposes of the R&D credit. The materials indicate that the tax advisor's recommendation is based upon analysis of the facts and interpretation of the same relevant tax authority that was provided earlier in the study. The relevant tax authority is inconclusive regarding the appropriate treatment of the supplies for the R&D Credit, representing a grey area in the tax law. The tax advisor's recommendation is either a Conservative or an Aggressive position. In the Conservative position, Maylor Corp's tax advisor recommends that Maylor Corp should not include the supplies in the R&D credit calculation. In the Aggressive position, Maylor Corp's tax advisor recommends that Maylor Corp should include the supplies in the R&D credit calculation.

The nature of the advice (Conservative or Aggressive) is surprising or unsurprising given the identity of the tax advisor. Surprising tax advice is either conservative advice from a non-auditor tax advisor or aggressive advice from an auditor tax advisor. Unsurprising tax advice is either aggressive advice from a non-auditor tax advisor or conservative advice from an auditor tax advisor. See Figure 2 for a diagram of surprising and unsurprising advice given the 2x2 design manipulating the nature of advice and the identity of the tax advisor.

|                             |                     | <b>Nature of Tax Advice</b> |                   |
|-----------------------------|---------------------|-----------------------------|-------------------|
|                             |                     | <i>Conservative</i>         | <i>Aggressive</i> |
| <b>Tax Advisor Identity</b> | <i>Tax-Nonaudit</i> | Surprising                  | Unsurprising      |
|                             | <i>Tax-Audit</i>    | Unsurprising                | Surprising        |

Figure 2: Diagram of Surprising and Unsurprising Advice

## Additional Measures

### IRS Permits

IRS Permits is a measure of the perceived likelihood that the IRS will permit the position that the UltraX supplies are qualified research expenses for Maylor Corp's Research and Development credit. IRS Permits is measured with an eleven-point scale with labeled points ranging from 0% "Not At All Likely" to 100% "Extremely Likely." A lower perceived likelihood that the IRS would permit the tax position of including the expenses represents greater perceived riskiness of the tax position. A participant's assessment of the likelihood that the IRS will permit the position is expected to covary with the dependent variable, Weight of Advice.

### Perceived Client Advocacy

A nine item scale was adapted from the Mason and Levy (2001) measure of client advocacy. Similar to Stephenson (2007), the instructions were modified so that participants are asked to answer the questions as they think a corporation's external tax professionals would respond. Specifically, participants in the Tax Advisor Identity – Tax-Nonaudit condition are asked to "please answer the following items as you think a corporation's external tax professionals would respond in arrangements such as this when the corporation's external tax professionals are not from the audit firm." Participants in the Tax Advisor Identity – Tax-Audit condition are asked to "please answer the following items as you think a corporation's external tax professionals would respond in arrangements such as this when the corporation's external tax professionals are from the audit firm."

The original Mason and Levy (2001) items were worded to measure a participant's client advocacy. The items used for this study have been rephrased so that each item measures participants' perceptions of how a corporation's external tax professionals would respond. Client

Advocacy is expected to help explain how participants are differentially influenced by the identity of the corporation's tax advisor and how they respond to aggressive versus conservative tax advice from auditor and non-auditor tax advisors.

### Tax Risk Preference

Tax Risk Preference is a tax risk measure of how certain an individual would want to be of his or her tax position within the experimental scenario. Participants are asked "how certain would you want to be of your tax position before including the UltraX supplies as qualified research expenses for the R&D Credit?" Tax Risk Preference is measured with an eleven-point scale ranging from 0% "Not At All Certain" to 100% "Extremely Certain." An individual who prefers a higher degree of certainty is considered to have a lower tax risk preference. Thus, responses are reverse coded such that a greater score reflects a greater tax risk preference. Tax Risk Preference is measured for use as a possible control variable.

### Agreement with Advice

Agreement with Advice is measured as the extent to which a participant agrees with the advice provided by Maylor Corp's tax advisor in the scenario. Specifically, participants are asked, "To what extent do you agree or disagree with the recommendation of the external tax professionals?" Agreement with Advice is measured on a seven-point Likert-type scale with labeled points ranging from 1 "Strongly Disagree" to 7 "Strongly Agree." Responses are dichotomized based upon the mid-point of the scale into High or Low Agreement with Advice; the mid-point 4 "Neither Agree nor Disagree" is categorized as Low. The extent to which a participant agrees with the advice is expected to influence the weight of the advice.

## Dependent Variable

The tax aggressiveness of tax director judgment is operationalized as the likelihood of taking an aggressive tax position (Likelihood). The aggressive tax position is the likelihood of including the cost of specific supplies (described in the tax scenario) as qualified research expenses for the Research and Development (R&D) credit calculation. The authoritative guidance provided in the experimental materials is ambiguous as to the appropriate tax treatment of supplies for the R&D credit.<sup>11</sup> Including the supplies in the R&D credit calculation would be advantageous for tax purposes. Thus, a greater likelihood of including the cost of supplies in R&D credit research expenses reflects more aggressive tax reporting.

Likelihood is used to calculate Weight of Advice. Weight of Advice is calculated as the absolute value of the difference between the 60% anchor from the in-house tax department and Likelihood, divided by the absolute value of the difference between the tax advisor's recommendation and the 60% anchor.<sup>12</sup> Weight of Advice is used to evaluate how much the tax advisor's recommendation influenced the participant's likelihood of taking an aggressive tax position.

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<sup>11</sup> The tax scenario in this study was intentionally designed such that the appropriate tax treatment is ambiguous. Conversations with a senior manager from a national firm suggest that, as anticipated, the tax scenario does not generate a clear-cut solution. Additionally, a few of the experienced corporate tax professionals contacted me after participating in the study to share their thoughts and opinions. Feedback suggests the tax treatment is subject to interpretation (i.e., ambiguous) and the case had sufficient detail and realism to engage the experienced corporate tax professionals.

<sup>12</sup> The weight of advice (WOA) is calculated as follows:  $WOA = \frac{|(Likelihood - Initial\ Anchor)|}{|(Recommendation - Initial\ Anchor)|}$  (Bonaccio and Dalal 2006). Initial Anchor equals 60%. In the *Conservative* Nature of Advice condition, Recommendation equals 0%. In the *Aggressive* Nature of Advice condition, Recommendation equals 100%. WOA values for Likelihood assessments falling outside the range bounded by the tax advisor's recommendation and the initial anchor are adjusted to zero.

## Results

### Manipulation Checks

The manipulation of *Tax Advisor Identity* was presented in the background information, which was provided to the participants before they read the tax scenario. The manipulation check was conducted at the end of the experimental materials to provide assurance that the participants were aware of facts vital to the successful manipulation of the variable. To verify the manipulation of tax advisor source, participants were asked, “Which best describes the party that reviewed your decision about the UltraX supplies?” Participants were asked to specify whether Maylor Corp’s tax advisors were “tax professionals at Firm A, which is also Maylor Corp’s audit firm” or “tax professionals at Firm A, which is not Maylor Corp’s audit firm.”

Additionally, there was a manipulation check to verify that participants knew the nature of the advice that Maylor Corp’s tax advisor provided: Maylor Corp should not include the supplies in the calculation (*Conservative Tax Advice*) or should include the supplies in the R&D credit calculation (*Aggressive Tax Advice*). To be included in the study, participants had to pass both manipulation check questions. A total of 119 participants are included in the study.<sup>13</sup>

### Tests of Hypotheses

This study predicts that advice affects tax director judgment differently depending on whether or not the advice is surprising, which is based upon the nature of the advice and the identity of the tax advisor. H1a predicts that conservative advice from the non-audit firm tax advisor (*Tax-Nonaudit*) will have a stronger effect on the corporate tax director’s judgment than

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<sup>13</sup> 139 participants completed the experimental materials. 18 participants failed manipulation check questions and are excluded. Additionally, two participants are excluded because their current job titles indicate they switched from taxation and currently work in audit (“VP, Internal Audit” and “Former Tax Director, currently Director of Audit”).

conservative advice from the audit firm tax advisor (*Tax-Audit*). H1b predicts that aggressive advice from the audit firm tax advisor (*Tax-Audit*) will have a stronger effect on the corporate tax director's judgment than aggressive advice from the non-audit firm tax advisor (*Tax-Nonaudit*). H1a and H1b are tested with an ANOVA measuring the effect of *Nature of Advice* and *Tax Advisor Identity* on *Weight of Advice*. Table 2 presents descriptive statistics (Panel A) and the results of the ANOVA (Panel B). *Nature of Advice* is significant in the model ( $F_{1, 115} = 12.987$ ,  $p < 0.000$ ). *Tax Advisor Identity* ( $F_{1, 115} = 0.012$ ,  $p = 0.912$ ) and the interaction of *Nature of Advice* x *Tax Advisor Identity* ( $F_{1, 115} = 0.149$ ,  $p = 0.700$ ) are not significant in the model. H1a and H1b are tested using a simple effects analysis (Table 2, Panel C). *Tax Advisor Identity* is not significant in the “conservative advice” ( $F = 0.129$ ,  $p = 0.720$ ) condition or the “aggressive advice” condition ( $F = 0.036$ ,  $p = 0.849$ ); thus, H1a and H1b are not supported.

#### Supplemental Analysis – Weight of Advice

Due to participants' considerable experience in corporate taxation, they may have formed their own strong opinions about the tax scenario. As such, participants were possibly less affected than intended by the anchor provided in the experimental materials via the tax department staff opinion. Thus, additional analysis is conducted to examine the influence of *Nature of Advice* and *Tax Advisor Identity* on *Weight of Advice* when the participant's agreement with the advice is high separately from when agreement with advice is low.

Table 3 presents descriptive statistics (Panel A) and the results of an ANOVA (Panel B) measuring the effect of *Tax Advisor Identity* on *Weight of Advice* and includes only participants who are categorized as “high” in *Agreement with Advice*. *Nature of Advice* is not significant in the model ( $F_{1, 73} = 0.079$ ,  $p = 0.779$ ). However, *Tax Advisor Identity* ( $F_{1, 73} = 4.750$ ,  $p = 0.033$ ) is

significant and the interaction of *Nature of Advice* x *Tax Advisor Identity* ( $F_{1, 73} = 3.568$ ,  $p = 0.063$ ) is found to be marginally significant in the model.

A simple effects analysis is conducted to further examine the effect of the interaction on *Weight of Advice* for those who agreed with the advice. *Tax Advisor Identity* is significant in the “conservative advice” condition ( $F = 6.277$ ,  $p = 0.014$ ); *Weight of Advice* for those in the Tax-Nonaudit condition has a mean (standard deviation) of 0.461 (0.406) and has a mean (standard deviation) of 0.800 (0.270) for those in the Tax-Audit condition. This indicates that conservative advice was given more weight when it came from a tax advisor who was also the auditor. Conversely, *Tax Advisor Identity* is not significant in the “aggressive advice” condition ( $F = 0.062$ ,  $p = 0.804$ ). *Weight of Advice* in the Tax-Nonaudit condition has a mean (standard deviation) of 0.595 (0.356) and a mean (standard deviation) of 0.619 (0.281) in the Tax-Audit condition.

Descriptive statistics for participants categorized as “low” in *Agreement with Advice* are presented in Table 4. As shown in Table 4, few participants disagreed with aggressive advice. This finding is particularly evident in the Tax-Nonaudit condition, in which only one participant disagreed with the aggressive advice. Of the 57 participants in the Aggressive advice condition, 50 agreed with the advice (87.7 percent) and only 7 disagreed with the advice (12.3 percent). No further analysis is conducted for low *Agreement with Advice* due to the small number of participants who disagreed with aggressive advice.

#### Supplemental Analysis – Likelihood

The main analysis in this study examines the effect of *Nature of Advice* and *Tax Advisor Identity* on *Weight of Advice*. The *Weight of Advice* dependent variable incorporates the initial

anchor provided in the experimental materials via the tax department staff opinion. As previously discussed, participants may have formed their own strong opinions about the tax scenario. To address potential concerns about the effectiveness of the initial anchor, supplemental analysis is conducted using *Likelihood* as the dependent variable. Table 5 presents ANOVA results of the effect of *Nature of Advice* and *Tax Advisor Identity* on *Likelihood*. *Nature of Advice* is significant in the model ( $F_{1, 115} = 28.965, p < 0.000$ ). *Tax Advisor Identity* ( $F_{1, 115} = 0.139, p = 0.710$ ) and the interaction of *Nature of Advice* x *Tax Advisor Identity* ( $F_{1, 115} = 0.095, p = 0.758$ ) are not found to be significant in the model. However, the analysis is more informative when split by whether *Agreement with Advice* is high or low.

Table 6 presents descriptive statistics and the results of an ANOVA measuring the effect of *Tax Advisor Identity* on *Likelihood* and includes only participants who are categorized as “high” in *Agreement with Advice*. *Nature of Advice* ( $F_{1, 73} = 143.865, p < 0.000$ ) and *Tax Advisor Identity* ( $F_{1, 73} = 4.155, p = 0.045$ ) are significant. Additionally, the interaction of *Nature of Advice* x *Tax Advisor Identity* ( $F_{1, 73} = 7.021, p = 0.010$ ) is significant. A simple effects analysis is conducted to further examine the effect of the interaction on *Likelihood*. *Tax Advisor Identity* is significant in the “conservative advice” condition ( $F = 8.335, p = 0.005$ ). When agreement with conservative advice is high, the mean (standard deviation) of *Likelihood* is 0.353 (0.285) in the Tax-Nonaudit condition and 0.120 (0.162) in the Tax-Audit condition. Meanwhile, *Tax Advisor Identity* is not significant in the “aggressive advice” condition ( $F = 0.274, p = 0.602$ ). *Likelihood* has a mean (standard deviation) of 0.817 (0.207) in the Tax-Nonaudit condition and 0.848 (0.112) in the Tax-Audit condition. Descriptive statistics for participants categorized as “low” in *Agreement with Advice* are presented in Table 7. Again, due to the small number of



participants who disagreed with aggressive advice, no further analysis is conducted on this group.

### Conclusion

The study targets actual corporate tax decision makers, such as tax directors, and is one of the first studies to employ an experimental design to examine corporate tax aggressiveness. The study draws upon social categorization theory and the belief-adjustment model to explore how tax advisor identity and the nature of tax advice may affect how tax advice influences corporate tax director judgment. The process of tax risk management entails that potential corporate tax risks should be identified and assessed as part of the process of optimizing tax risk (COSO 2004; Donohoe et al. 2014). Assessment of competing tax positions should be as unbiased as possible in order to appropriately synchronize a corporation's tax positions with overall corporate tax risk preference.

The study predicts that the influence of tax advice on corporate tax director judgment may differ depending on the nature of the advice and whether the tax advisor is from the audit firm or from a different firm. Findings suggest that when tax directors are provided with conservative tax advice (i.e., advised not to take a client-favorable tax position not clearly supported by the tax authority) and they agree with the conservative advice, the identity of the tax advisor influences the weight given to the advice. Tax directors in agreement with conservative tax advice weighted advice from the audit firm tax advisor ("tax-audit") more heavily than when advice came from a tax advisor from a different firm ("tax-nonaudit"). As such, tax directors that agreed with conservative advice indicated a smaller likelihood of taking

the position when the tax advisor was from the audit firm than when the tax advisor was from a different firm.

Though findings do not align with the study's predictions, the results may still be interpretable through the Belief-Adjustment model and social categorization theory. Perhaps the true "surprise" was not incongruence of the nature of advice provided given the identity of the tax advisor. Rather, the larger "surprise" for the tax directors in this study may have been receiving tax advice that did not align with the client-favored position (i.e., conservative tax advice). Thus, the more important context for the weight of advice may be the effect of tax advisor identity when advice is contrary to overall expectations (i.e., when advice is conservative). After the initial shock of receiving conservative advice, the weight of advice may then be influenced by tax advisor identity via differing professional roles. The categorization of a tax advisor as "tax-audit" may adjust the tax director's anchor towards an even more conservative tax position, compounding the belief adjustment from surprising conservative advice. Conversely, the categorization of a tax advisor as "tax-nonaudit" may adjust the tax director towards a more aggressive tax position, mitigating to some extent the belief adjustment from the surprising conservative advice. Ultimately, corporate tax directors should be made aware that the identity of the tax advisor may influence their interpretation of advice and evaluation of potential tax positions in the tax risk management process.

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## **STUDY TWO: CORPORATE TAX AGGRESSIVENESS: THE EFFECTS OF PROMOTION AND PREVENTION FOCUS ON INDIVIDUAL DECISION MAKING**

### Introduction

Regulatory agencies, such as the IRS and the SEC appear to be concerned about the aggressive tax reporting of business entities as evidenced by the shift towards increased disclosure of book-tax differences and uncertain tax positions. The introduction of Schedule M-3 (Net Income Reconciliation), Form 8886 (Reportable Transaction Disclosure Statement), and Schedule UTP (Uncertain Tax Position Statement) reflect the IRS's growing interest in the transparency of potentially aggressive tax reporting. Likewise, ASC 740 requires analysis of uncertain tax positions and reporting of unrecognized tax benefits in the tax footnote to the financial statements (FASB 2009). Not only is the IRS concerned with aggressive tax behavior of business entities, both financial accountants and auditors should be as well, given the complexity and risk associated with tax accounts in a corporation's financial statements.

Corporate tax aggressiveness<sup>14</sup> research has examined characteristics of corporations that engage in aggressive tax reporting behavior (Phillips 2003; Chen et al. 2010; Lisowsky 2010; Robinson et al. 2010; Lanis and Richardson 2011; Armstrong et al. 2012; Rego and Wilson 2012). These studies have linked corporate characteristics to the outcomes of aggressive tax behavior; however prior research has not examined the underlying individual judgment component of corporate tax behavior. Entity-level measures of corporate tax aggressiveness (tax shelter involvement, low effective tax rates, etc.) are a cumulative result of individual-level decisions made by corporate tax decision makers. Individuals make tax decisions that determine

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<sup>14</sup> As discussed in more detail later, the present study uses tax aggressiveness as a relative term describing where a tax position falls along the range of possible tax minimization. More aggressive tax positions have weaker underlying facts and lack clear support by relevant tax authority (Cuccia et al. 1995; Roberts 1998).



corporate tax aggressiveness, thus this study uses an experimental method to investigate the tax aggressiveness of business entities through an examination of individual-level judgment and behavior. The purpose of the study is to draw upon regulatory focus theory to examine how both the individual disposition of the corporate tax decision maker<sup>15</sup> and contextual factors of the tax decision environment influence the tax aggressiveness of corporate tax decision makers.

Regulatory focus theory refers to the manner in which individuals pursue the goals that they wish to achieve (Higgins 1997). Individuals with a promotion focus are motivated to achieve goals by maximizing successful outcomes, and individuals with a prevention focus are motivated to achieve goals by minimizing failed outcomes (Higgins 1997; Higgins et al. 2001). Regulatory focus theory is consistent with the view that an individual's trait<sup>16</sup> regulatory focus, a dispositional characteristic, may influence tax aggressiveness such that trait promotion-focused individuals will make more aggressive tax decisions than trait prevention-focused individuals (Higgins 1997).

Regulatory focus is exhibited as an individual *trait*; however, situational factors in the decision environment can activate a regulatory focus *state* (i.e., promotion state or prevention state) (Higgins 2000). This study also examines the influence of the framing of the external tax advisor<sup>17</sup> role (a situational factor) on an individual's regulatory focus state,<sup>18</sup> predicting that the corporate tax decision maker's perception of the external tax advisor's function will influence

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<sup>15</sup> In this study, the term "corporate tax decision maker" is intended to represent individuals such as the CFO, tax director, controller, tax senior manager, tax manager, or tax staff that make tax decisions inside the corporation.

<sup>16</sup> This study defines "trait" as a distinguishing personal quality. A trait is considered to be a chronic, personal characteristic.

<sup>17</sup> The term "tax advisor" is used throughout this study to describe the individuals that are engaged to assist taxpayers such as corporations with their tax work and is intended to encompass alternate terms such as external tax professional, tax preparer, tax service provider, and tax consultant. Tax advisors are not employees of the corporation; tax advisors are public accounting professionals.

<sup>18</sup> This study defines "state" as a mode or condition of being. A state is considered to be inducible.

the tax aggressiveness of decisions made on behalf of the corporation. Corporate management's view of the external tax advisor as an advocate (i.e., positive frame inducing promotion state) is expected to increase the tax aggressiveness of tax decision makers within the business entity.<sup>19</sup> Viewing the external tax advisor as an overseer (i.e., negative frame inducing prevention state) is expected to decrease decision maker tax aggressiveness. This study applies regulatory fit theory which suggests matching between the dispositional trait regulatory focus of the corporate tax decision maker and external tax advisor role framing (i.e., induced regulatory focus state) may amplify the effects of regulatory focus trait (promotion and prevention) on tax aggressiveness. A mismatch between regulatory focus trait and the framing of the external tax advisor may allow regulatory focus state to overshadow trait regulatory focus depending upon the relative strength of both state and trait, providing a possible avenue to reduce the tax aggressiveness of corporate tax decisions made by promotion-focused individuals (Lisjak et al. 2012).

To test the hypotheses, I conduct an experiment in which participant trait regulatory focus is measured and regulatory focus state is manipulated through whether management views the external tax advisor's role as more of an advocate (i.e., inducing a promotion state) or an overseer (i.e., inducing a prevention state). Study participants are recruited from graduate tax courses at two public universities. Based upon the responses of 58 graduate students, results suggest that tax advisor role may not directly affect decision maker tax aggressiveness as hypothesized. However, tax advisor role does affect judgment indirectly through the decision maker's perception of the tax advisor's client advocacy. Decision makers perceive a company's tax advisor to have significantly stronger client advocacy attitudes when management views the

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<sup>19</sup> When tax rules are ambiguous, an external tax advisor functioning as an "advocate" would seek to justify a tax minimizing position whereas an "overseer" would be more likely to adhere to a more conservative position favoring the taxing authority.

tax advisor as an advocate, compared to when management views the tax advisor as an overseer. Perceiving the tax advisor to be more of an advocate (i.e., a stronger promotion state) amplifies the influence of regulatory fit for trait promotion-focused decision makers. Compared to individuals with a lower trait promotion focus, tax decision makers with a greater trait promotion focus react more strongly to a situationally induced promotion focus state.

The present study contributes to research on tax compliance and decision making and also to the corporate tax avoidance/aggressiveness literature. Additionally, by examining the framing of the external tax advisor, this study begins to unravel how a tax advisor's dual role, as both an advocate and an oversight check-point, may influence decision making within a business entity (AICPA 2009). In particular, policy makers may be interested in how perceptions of external tax advisors as advocates of tax compliance have policy implications for corporate tax aggressiveness.

The following section of this research study contains a review of the relevant literature and development of the hypotheses. The subsequent section describes the research method. The third section presents results, and the final section draws conclusions.

## Theory and Hypotheses

### Corporate Tax Aggressiveness

The U. S. tax rules are comprised of various sources of authority, each of which may be vague and contradictory. Navigating tax law requires an in-depth analysis, which must be constrained to a specific set of facts in order to interpret the rules; however, the corporate tax rules are complex and often ambiguous, which makes interpretation difficult (Slemrod 2007). The complexity and ambiguity in the corporate tax environment can lead to various potential tax

positions with differing levels of tax minimization (Hanlon and Heitzman 2010; Lisowsky 2010). The present study considers tax aggressiveness to be a relative term describing where a tax position falls along the range of possible tax minimization. More aggressive tax positions have weaker underlying facts and lack clear support by relevant tax authority (Cuccia et al. 1995; Roberts 1998). Several metrics have been used to evaluate corporate-level tax aggressiveness (Hanlon and Heitzman 2010). One of the measures most commonly used in the tax literature is the effective tax rate (ETR).<sup>20</sup> Lower ETRs are associated with greater tax aggressiveness.

Several prior studies, primarily based upon archival data, have sought to identify determinants of corporate tax aggressiveness. Most prior work links aggressive tax behavior to firm-level characteristics. Tax shelter involvement and firm ownership structure are broad firm-level characteristics that have been shown to be associated with tax aggressiveness (Lisowsky 2010; Chen et al. 2010). Additionally, incentive structures such as equity risk incentives, board of director compensation, and tax director incentive-based compensation are also linked to more aggressive tax reporting (Rego and Wilson 2012; Lanis and Richardson 2011; Armstrong et al. 2012; Phillips 2003). Robinson, Sikes, and Weaver (2010) analyze tax department structure, another firm-level variable, and find evidence that profit centers (i.e., tax departments evaluated by contribution to financial income) are associated with more aggressive behavior than cost centers (i.e., tax departments evaluated on cost minimization). Additionally, Graham, Hanlon, Shevlin, and Shroff (2014) survey corporate executives, finding that company reputational concerns as well as the potential for negative financial statement effects may influence the likelihood of engaging in tax planning. Together, these studies suggest a link between corporate

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<sup>20</sup>The effective tax rate is book tax expense divided by book income. The effective tax rate should not to be confused with the statutory tax rate (from the tax rules), which is generally 35% for corporations.

tax decision maker incentives and tax aggressiveness; however, little is understood about the judgment of individuals making tax decisions on behalf of the corporation. The present study draws upon regulatory focus theory to investigate individual-level decision making in the corporate tax environment.

### Regulatory Focus

The foundation of regulatory focus theory originates in Higgins's (1997) examination of approach-avoidance motivation. Higgins critically analyzes motivation, reasoning that there must be a richer psychological explanation of the forces motivating individual goal pursuit than the simplistic concept that individuals seek to procure pleasure and avoid pain (Higgins 1997; Higgins et al. 2001). Rather, Higgins (1997) posits that individuals have two fundamentally different strategic ways of pursuing their goals (i.e., different self-regulatory mindsets or foci): promotion regulatory focus and prevention regulatory focus. Promotion focus reflects concern with maximizing successful attempts and ensuring against errors of omission for advancement purposes (Brockner and Higgins 2001; Crowe and Higgins 1997). Individuals with a promotion focus pay attention to the presence or absence of positive outcomes (Higgins et al. 2001). Prevention focus is characterized by attention to minimizing failed attempts and ensuring against errors of commission for safety and security purposes (Brockner and Higgins 2001; Crowe and Higgins 1997). Individuals with a prevention focus are concerned with the presence or absence of negative outcomes (Higgins et al. 2001). As an example, suppose two individuals have the same goal of advancing from supervisor to manager. If one has a promotion focus and the other a prevention focus, they would adopt dissimilar approaches to reach this goal. The individual with a promotion focus would likely display eagerness to learn more, attempting to achieve more

success. The individual with a prevention focus may choose to adhere to the job description of the desired manager position, attempting not to make any mistakes. A predisposition toward either a promotion or prevention focus represents a trait that impacts an individual's decisions.

When applied to a corporate tax setting, regulatory focus theory suggests that a corporate tax decision maker's regulatory focus may influence decision making. Promotion-focused decision makers seek to maximize successful attempts and ensure against errors of omission (i.e., avoid missed opportunities) (Brockner and Higgins 2001; Crowe and Higgins 1997). Thus, in a corporate tax setting, decision makers with a predisposition toward a promotion focus may concentrate on maximizing tax opportunities, leading judgment to be more tax aggressive on behalf of the corporation. Conversely, prevention-focused decision makers endeavor to minimize failed attempts and ensure against errors of commission (i.e., avoid mistakes) (Brockner and Higgins 2001; Crowe and Higgins 1997). Corporate tax decision makers with a predisposition toward a prevention focus may concentrate on minimizing exposure in the event of tax authority scrutiny, leading judgment to be less tax aggressive. Hypothesis 1 is stated formally as follows:

*H1: Corporate tax decision makers will make more (less) aggressive tax compliance decisions when they have a trait promotion (prevention) focus.*

Prior literature has viewed regulatory focus as both an individual trait and a decision-making state (Higgins 2000; Lanaj et al. 2012; Lisjak et al. 2012). As noted above, regulatory focus is an individual *trait* in that some individuals are generally more inclined to have a promotion focus or a prevention focus (Higgins 2000). However, situational factors in the decision task can activate either a promotion or prevention focus *state* (Higgins 2000). Indeed, different tasks may trigger either a promotion or prevention focus state depending upon the type of task (Van Dijk and Kluger 2011; Dimotakis et al. 2012). Prior research in persuasive

communication and management has examined how inducible regulatory focus state may be used to influence decision making and behavior (Zhu and Meyers-Levy 2007; Lanaj et al. 2012). Once induced, a regulatory focus state leads individuals to interpret information via underlying cognitive processes that are distinct for promotion focus versus prevention focus (Zhu and Meyers-Levy 2007). A promotion focus leads individuals to make connections between information items, clustering information into themes. Conversely, a prevention focus brings about attention to specific items and salience of distinct features of each specific item of information (Zhu and Meyers-Levy 2007).<sup>21</sup>

Though induced regulatory focus state has much the same effect on decision making as individual regulatory focus trait, the state may not completely cloak the influence of the trait (Lisjak et al. 2012). Rather, regulatory focus traits have persistent influence, creating interference with induced regulatory focus state when induced state differs from an individual's predominant regulatory focus trait (Lisjak et al. 2012). Thus, the overall influence of regulatory focus may depend upon both an individual's trait regulatory focus and situationally-induced regulatory focus state. Congruity between an individual's trait regulatory focus and situationally induced regulatory focus state leads to increased task engagement (Cesario et al. 2008). Incongruity between trait regulatory focus and induced regulatory focus state increases cognitive demands and negatively impacts performance (Lisjak et al. 2012).

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<sup>21</sup> Regulatory focus is distinct from risk propensity and risk perception. Risk propensity describes how individuals respond to risk in general, whereas trait regulatory focus differentiates two ways in which individuals may approach goal achievement, explaining individual differences in risk seeking propensity (Bryant and Dunford). The framing of information through either a positive or negative goal frame induces situational regulatory focus state, affecting risk perception. Promotion and prevention foci differentially affect an individual's perception of omission risk and commission risk (Bryant and Dunford 2008).

## Regulatory Fit

Regulatory focus theory relates to how an individual's regulatory focus influences motivation, decision making, and behavior. Regulatory fit theory extends regulatory focus theory, positing that "fit" (i.e., alignment) between an individual's promotion or prevention regulatory focus and the way in which a goal is framed increases motivation in goal pursuit (Higgins 2000; Higgins 2005). Goals may be framed as "ideal" goals (i.e., a positive frame) to align with a promotion focus or as "ought" goals (i.e., a negative frame) to align with a prevention focus (Shah et al. 1998; Higgins 2000). Comparison of oneself to one's ideal goals represents a positive goal frame as attention is directed at ensuring the presence of positive outcomes in maximizing advancement to the "ideal" self. Conversely, comparing oneself to how one ought to be is a negative goal frame as the individual seeks to minimize discrepancies with the "ought" self (Higgins 2000). Regulatory fit occurs when a promotion-focused individual's task has a positive goal frame and when a prevention-focused individual's task has a negative goal frame (Higgins 2000; Higgins 2005). Regulatory fit between a decision maker's regulatory focus and goal framing may enhance the perceived value of the decision, improving goal motivation, task engagement, and task performance (Shah et al. 1998; Higgins 2000). Figure 3 presents a conceptual model of regulatory fit, which was developed based upon Lanaj et al. (2012).



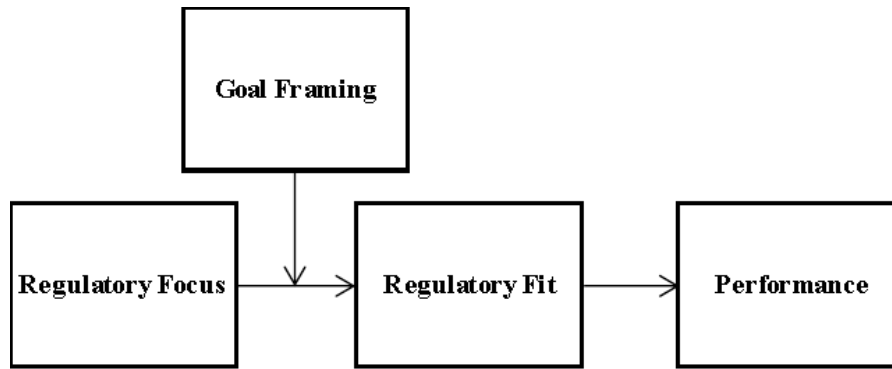


Figure 3: Conceptual Model of Regulatory Fit

Regulatory fit has been used in a tax setting to examine the effect of fit between taxpayer regulatory focus and the framing of information campaigns on taxpayer compliance (Hollar et al. 2008; Leder et al. 2010). If the tax authority’s goal is to increase compliance, the tax authority may attempt to do so either by emphasizing the benefits of high tax compliance (i.e., positive goal frame) or warning against the detriments of low tax compliance (i.e., negative goal frame) (Hollar et al. 2008). In either case the goal is to increase tax compliance; however, whether positive or negative goal framing is more effective for a particular individual depends upon the individual’s regulatory focus. Positive goal framing is more effective for individuals with a promotion focus and negative goal framing is more effective for individuals with a prevention focus (Hollar et al. 2008). The Hollar et al. (2008) study examined goal framing from the tax authority’s perspective. The present study examines goal framing from the corporate tax decision maker’s perspective.

## Tax Professionals

A tax professional working inside a corporate tax department may be a certified public accountant (CPA). A CPA has a dual role as both a client advocate and a regulatory entity. The AICPA's (2009) Statements on Standards for Tax Services state that tax professionals should act as advocates<sup>22</sup> on behalf of their clients. Tax professionals are also obligated to practice due diligence with regards to the accuracy of client information presented to the IRS (AICPA 2009). Thus, the potential for conflict exists between these two roles. Corporate tax decision makers within a corporation (e.g., a corporate tax department) may be assisted by tax advisors external to the corporation. External tax advisors are CPAs, and as such corporate management may view the tax advisor role as an advocacy or oversight function. Management's belief about the nature of the external tax advisor's role is predicted to influence corporate tax decision making such that framing as an overseer (i.e., negative goal frame) is expected to be associated with less aggressive tax behavior than framing as an advocate (i.e., positive goal frame).

*H2: Corporate tax decision makers will make less (more) aggressive tax compliance decisions when the external tax advisor is presented as an overseer (advocate).*

The present study applies regulatory fit to the context of individual-level decision making within the corporate tax environment. Regulatory fit theory indicates that a good "fit" between the framing of the external tax advisor as an advocate (positive frame) or an overseer (negative frame) and the regulatory focus of the corporate tax decision maker should result in increased motivation for goal pursuit. In the corporate tax environment, complexity and ambiguity make the corporate tax rules difficult to interpret (Slemrod 2007). Thus, the corporate tax environment

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<sup>22</sup> Mason and Levy (2001, 127) define client advocacy as "a state of mind in which one feels one's primary loyalty belongs to the taxpayer. It is exhibited by a desire to represent the taxpayer zealously within the bounds of the law, and by a desire to be a fighter on behalf of the taxpayer."

may provide few situational cues about the nature of the task to influence decision maker regulatory focus state, and individual regulatory focus traits may dominate absent additional cues from top management. However, the way in which management views the function of the corporation's external tax advisors may introduce situational cues, inducing a regulatory focus state. Situationally-induced regulatory focus state and trait regulatory focus may together determine the overall influence of regulatory focus on an individual's judgment. Congruity between an individual's inherent trait regulatory focus and situationally induced regulatory focus state is predicted to amplify the effect of trait regulatory focus on the tax aggressiveness of individual judgment. Incongruity between trait regulatory focus and induced regulatory focus state is expected to diminish the influence of trait regulatory focus on judgment. Stated formally:

*H3: Congruence between trait regulatory focus and regulatory focus state will amplify the effect of regulatory focus on the tax aggressiveness of corporate tax decision maker judgment.*

## Research Method

### Participants

Participants were recruited from graduate tax courses at two public universities using a multi-contact method (Dillman et al. 2009). The study was first announced in class, after which students received an email containing study information and a link to the study. Students also received a reminder about the opportunity to participate in the study. Students who elected to participate received extra credit in their graduate tax class. Fifty-eight graduate students completed the experiment and are included in the analysis. The majority of the participants are male (56.9 percent). Most participants are between 21-25 years old (63.8 percent), with others

age 26-30 (24.1 percent), age 31-35 (6.9 percent), and over age 35 (5.2 percent). The majority of the participants indicate having experience in public accounting (58.6 percent); 34.5 percent indicate public accounting experience specifically in tax. All participants have taken tax classes. Most have taken one to two classes (67.2 percent), some have three to four tax classes (13.8 percent) and five or more tax classes (19.0 percent). Participants are asked about the preparation of their most recent personal tax return. The majority prepared their own personal tax return (63.8 percent). Others hired a paid preparer (20.7 percent), received assistance from a friend or relative (12.1 percent), or did not need to file (3.4 percent). Table 9 presents demographic data. Study 2 tables are presented in Appendix C.

### Materials and Design

The experiment is computer-based and administered via Qualtrics software. Participants are free to complete the study at their convenience; however, they are asked to work independently and to complete the study in one sitting without outside interruptions. All participants are first provided with a link to begin the study in a study recruitment email. The opening screen of the Qualtrics study presents the explanation of research and the study overview. Individuals that agree to participate proceed to the next screen to begin the study.

The experimental materials consist of five sections: background information and a tax scenario about a hypothetical corporation (Sullivan-Reed Corp), select tax authority guidance relevant to the tax scenario, a participant response section, demographics, and a final response section measuring trait regulatory focus. See Figure 4 for a summary of the experimental procedures.

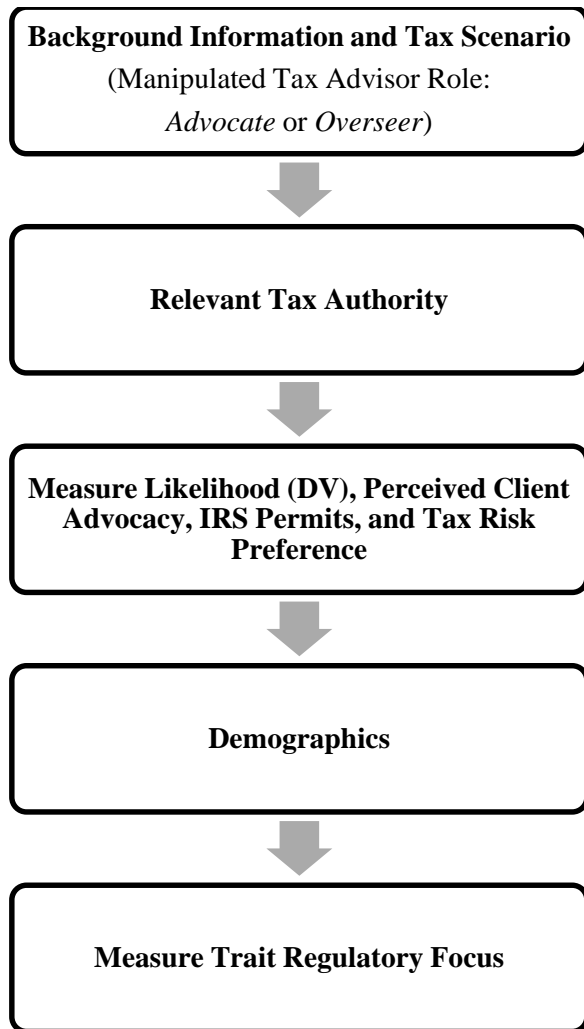


Figure 4: Diagram of Experimental Procedures

Participants are presented with background information for a hypothetical scenario in which they are asked to assume the role of a tax department staff member employed by a company named Sullivan-Reed Corp. The background information describes Sullivan-Reed Corp (e.g., publicly traded manufacturing company, headquartered in the U.S., etc.) and the duties and responsibilities of Sullivan-Reed Corp's in-house tax department. Additionally, the materials discuss external, third-party tax professionals hired by the company and their role in the

company's tax function. The materials note that research projects are often conducted in-house and then reviewed by the external tax professionals. Each participant received one of two possible variations of background information. The two variations differed only in the reason why Sullivan-Reed Corp's management hired the external tax professionals. Participants are told that Sullivan-Reed's CFO has stated that "the primary objective of hiring the external tax professionals at Firm A" is either to "help Sullivan-Reed Corp find the most advantageous tax opportunities" (advocate tax advisor role) or to "make sure Sullivan-Reed Corp follows the tax rules" (overseer tax advisor role).

After reading through the background information, all participants receive the same tax scenario. The tax scenario involves the Domestic Production Activities Deduction (DPAD) and the eligibility of certain activities for the DPAD. Specifically, the scenario indicates that Sullivan-Reed Corp has introduced a new product line consisting of hot cocoa sets containing gourmet, prepackaged items artfully arranged in decorative mugs. Participants are assigned the task of determining if the activities associated with assembling the hot cocoa product set line are eligible for the DPAD. The tax scenario presented in this study is based upon actual court cases on the eligibility of activities for the DPAD.<sup>23</sup> Participants are provided with relevant portions of tax authority (the Internal Revenue Code, Treasury Regulations, and court cases). The potential classification of the hot cocoa set product line activities as eligible for the DPAD is a matter of judgment as the treatment is not clearly resolved by the tax authority provided in the experimental materials. Thus, participants need to evaluate the scenario facts and tax authority to determine their opinion about the appropriate treatment for tax purposes.

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<sup>23</sup> *United States v. Dean*, 945 F. Supp 2d 1110 (U.S. District Court, C.D. Cal. May 7, 2013); *Precision Dose, Inc. v. United States*, No. 3:12-cv-50180 (U.S. District Court, N.D. Ill., September 24, 2015).

After reviewing the relevant tax authority, participants are asked “What is the likelihood that you would recommend that Sullivan-Reed Corp include the hot cocoa set product line in the Domestic Production Activities Deduction?” The instrument also includes an adapted measure of client advocacy, a measure of tax risk preference, a manipulation check, and demographic information. Following the demographics, the instrument collects a measure of trait regulatory focus. Experimental materials are included as Appendix D.

### Independent Variables

#### Tax Advisor Role

Tax Advisor Role is intended to induce a participant’s regulatory focus state by manipulating the participant’s perception of Sullivan-Reed Corp’s tax advisors (via Perceived Client Advocacy). Tax Advisor Role is manipulated within the background information that the participants receive about the tax scenario. The materials state that the corporation has external tax professionals from a Big 4 public accounting firm that prepare the corporate tax return and that work done in-house (i.e., by the participant and other corporate tax decision makers) is sent to them for review. The external tax advisor is either characterized as an *Advocate* or an *Overseer*. Participants in the *Advocate* condition are informed that “the CFO of Sullivan-Reed Corp states that ‘the primary objective of hiring the external tax professionals at Firm A is to help Sullivan-Reed Corp find the most advantageous tax opportunities in achieving our 30 percent target effective tax rate.’ ” Participants in the *Advocate* condition also learn that the CFO continues to use the firm’s tax services “primarily due to the Firm’s eagerness and resourcefulness in seeking optimal tax outcomes.”

Participants in the *Overseer* condition are informed that “the CFO of Sullivan-Reed Corp states that ‘the primary objective of hiring the external tax professionals at Firm A is to make sure Sullivan-Reed Corp follows the tax rules in achieving our 30 percent target effective tax rate.’ ” Additionally in the *Overseer* condition, the materials state that the CFO continues to use the firm’s tax services “primarily due to the Firm’s vigilance and attention to detail in maintaining tax compliance.”

### Trait Regulatory Focus

Trait Regulatory Focus is measured with an eighteen item scale developed by Lockwood et al. (2002) to measure an individual’s chronic, trait-like regulatory focus.<sup>24</sup> The measure is comprised of two sub-scales, with nine items measuring promotion focus and nine items measuring prevention focus. The promotion sub-scale items address individual hopes and aspirations and the prevention items assess safety and responsibility (Lockwood et al 2002). Each of the items uses a seven-point Likert-type scale with labeled points ranging from 1 “Strongly Disagree” to 7 “Strongly Agree.” Trait Regulatory Focus is a continuous measure calculated as the sum of the promotion focus items, less the sum of the prevention focus items. Cronbach’s alpha for the Trait Regulatory Focus scale is 0.765. Factor analysis indicates that, although Eigenvalues exceed 1 for multiple factors, the scree plot reveals the 18 item measure predominately captures two factors. Factor loadings suggest one factor consists primarily of promotion items and the other is comprised primarily of prevention items.

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<sup>24</sup> Though regulatory focus may be situationally induced, trait regulatory focus is a stable trait with persistent influence that creates interference with induced regulatory focus state (Lisjak et al. 2012).



## Additional Measures

### Perceived Client Advocacy

A nine item scale is adapted from the Mason and Levy (2001) measure of client advocacy. Cronbach's alpha for the Perceived Client Advocacy scale is 0.788. Factor analysis indicates that, although Eigenvalues exceed 1 for multiple factors, the scree plot reveals that the nine item measure predominately captures a single factor. Both the instructions for the scale and the scale items have been modified for use in this study. Similar to Stephenson (2007), the instructions are modified so participants are asked to answer the questions as they think Sullivan-Reed Corp's external tax advisors would respond. The original Mason and Levy (2001) items are worded to measure an individual's client advocacy attitude; however, the Perceived Client Advocacy items are rephrased so that each item measures participants' perceptions of how a corporation's external tax advisors would respond. Perceived Client Advocacy is expected to help explain how presentation of the external tax advisor as an advocate or an overseer may influence the tax aggressiveness of corporate tax decision maker judgment.

Manipulating the tax advisor role as either an advocate or an overseer should create a promotion or prevention regulatory focus state, and it should do this by affecting participants' perceptions of the client advocacy attitudes of Sullivan-Reed Corp's tax advisors (i.e., Perceived Client Advocacy). Thus, Perceived Client Advocacy is intended to be a situational factor in the corporate tax environment in which the participant is making his or her judgment. The perception of the tax advisor's client advocacy attitudes is expected to situationally induce a regulatory focus state. An "advocate" tax advisor role should lead to the perception that the tax advisor has *strong* client advocacy, a situational factor expected to induce a *promotion* focus state. An "overseer" tax advisor role should lead to the perception that the tax advisor has *weak*

client advocacy, inducing a *prevention* focus state. Perceived Client Advocacy is thus expected to mediate the effect of Tax Advisor Role on the dependent variable, Likelihood.

### IRS Permits

IRS Permits is a measure of the perceived likelihood that the IRS will permit the position evaluated in the tax scenario. IRS Permits is measured by asking participants, “In your opinion, if this position was examined by the IRS, what is the likelihood that the IRS would uphold the position that Sullivan Reed Corp’s hot cocoa set product line qualifies for the Domestic Production Activities Deduction?” IRS Permits is measured on an eleven-point scale with labeled points ranging from 0% “Not At All Likely” to 100% “Extremely Likely.” IRS Permits is presented as a percentage. Lower perceived likelihood that the IRS would permit the tax position of including the expenses represents greater perceived riskiness of the tax position. IRS Permits is expected to covary with the dependent variable, Likelihood.

### Tax Risk Preference

Tax Risk Preference is a measure of how certain an individual would want to be of his or her tax position. Tax Risk Preference is measured by asking, “as Sullivan-Reed’s tax department staff, how certain would you want to be of your tax position before including the hot cocoa set product line in the Domestic Production Activities Deduction?” The level of certainty is obtained using an eleven-point scale ranging from 0% “Not At All Certain” to 100% “Extremely Certain.” Tax Risk Preference is presented as a percentage. An individual desiring a higher degree of certainty is considered to have a lower tax risk preference. Responses are reverse coded so that a greater score reflects preference for greater tax risk. Personal Tax Risk Preference is measured as a possible control variable.

## Dependent Variable

The tax aggressiveness of decision maker judgment is operationalized as the participant's likelihood of taking an aggressive tax position (*Likelihood*). The aggressive tax position is the determination of certain activities (described in the tax scenario) as eligible for the Domestic Production Activities Deduction (DPAD). The authoritative guidance provided in the experimental materials is ambiguous as to the appropriate tax treatment of the activities for the DPAD. Considering the activities to be eligible for the DPAD would be advantageous for tax purposes. Thus, a greater likelihood of including the activities in the DPAD reflects greater tax aggressiveness. *Likelihood* is measured by asking, "What is the likelihood that you would recommend that Sullivan-Reed Corp include the hot cocoa set product line in the Domestic Production Activities Deduction?" Likelihood is measured using an eleven-point scale with labeled points ranging from 0% "Not At All Likely" to 100% "Extremely Likely." Likelihood is presented as a percentage. Greater likelihood of including the expenses represents greater tax aggressiveness.

## Results

### Manipulation Check

The manipulation of tax advisor role is presented in the background information, which is provided to the participants before they read the tax scenario. The manipulation check is conducted later in the experimental materials to provide assurance that the participants are aware of facts vital to the successful manipulation of the variable. To verify the manipulation of tax advisor role, participants are asked, "Based upon the tax scenario, which of the following more accurately describes the primary function of Sullivan-Reed Corp's external tax professionals at

Firm A?” Participants are asked to specify whether the primary function is either to “find the most advantageous tax opportunities for Sullivan-Reed Corp” or to “make sure Sullivan-Reed Corp follows the tax rules.” Participants had to pass the manipulation check question to be included in the study. A total of 58 participants are included in the study.<sup>25</sup>

### Descriptive Statistics

Table 10 presents descriptive statistics by Tax Advisor Role for the dependent variable Likelihood, the continuous predictor variable Trait Regulatory Focus, the possible mediator Perceived Client Advocacy, and the possible covariates IRS Permits and Tax Risk Preference. Participants in the Advocate condition report a mean (standard deviation) Likelihood of 57.81 percent (31.90), which is greater than the Likelihood of participants in the Overseer condition mean (standard deviation) of 50.77 percent (31.74); however, the difference is not significant ( $p = 0.406$ ). Trait Regulatory Focus has a mean (standard deviation) of 14.28 (11.63) in the Advocate condition and 17.00 (9.59) in the Overseer condition, a difference which is not significantly different. Though the Trait Regulatory Focus measure could theoretically range from -56 to + 56, Trait Regulatory Focus for participants in the sample was predominately positive, having an overall mean (standard deviation) of 15.50 (10.76) and ranging from -10 to +38, indicating that few participants had a prevention trait. As expected, Perceived Client Advocacy is significantly greater in the Advocate condition than in the Overseer Condition with mean (standard deviation) of 43.13 (8.79) and 37.73 (5.69), respectively ( $p = 0.007$ ). Neither IRS

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<sup>25</sup> 83 participants completed the experimental materials. 25 participants failed the manipulation check question and are excluded from the analysis.

Permits nor Tax Risk Preference differs significantly between the Advocate and Overseer conditions.

### Tests of Hypotheses

Correlation coefficients are presented in Table 11. Significant correlations exist between Tax Advisor Role and Perceived Client Advocacy, as well as between the dependent variable Likelihood and the covariate IRS Permits. Due to the presence of a continuous predictor variable, Trait Regulatory Focus, hypotheses are tested using regression. Table 12 reports the preliminary regression results with Likelihood as the dependent variable. The regression model is statistically significant at  $p < 0.000$ , with an adjusted  $R^2$  of 0.278. However, the regression model does not find support for study hypotheses as none of the variables in the model are statistically significant, with the exception of the covariate, IRS Permits, at  $p < 0.000$ . Although the study hypotheses do not include the mediator Perceived Client Advocacy, the Tax Advisor Role manipulation is designed to induce a regulatory focus state by influencing a participant's perception of the tax advisor's client advocacy (i.e., Perceived Client Advocacy). Perceived Client Advocacy may help explain how presentation of the external tax advisor as an advocate or an overseer influences the tax aggressiveness of corporate tax decision maker judgment. Thus, additional analysis incorporates mediation analysis of Perceived Client Advocacy into the model.

### Supplemental Analysis

The mediation model is tested using the SPSS PROCESS script (Hayes 2013). Variables in the model include the dependent variable Likelihood, a manipulated binary independent variable Tax Advisor Role, a continuous predictor variable Trait Regulatory Focus, the mediator

Perceived Client Advocacy, and a covariate IRS Permits. The mediation model is presented in Figure 5.

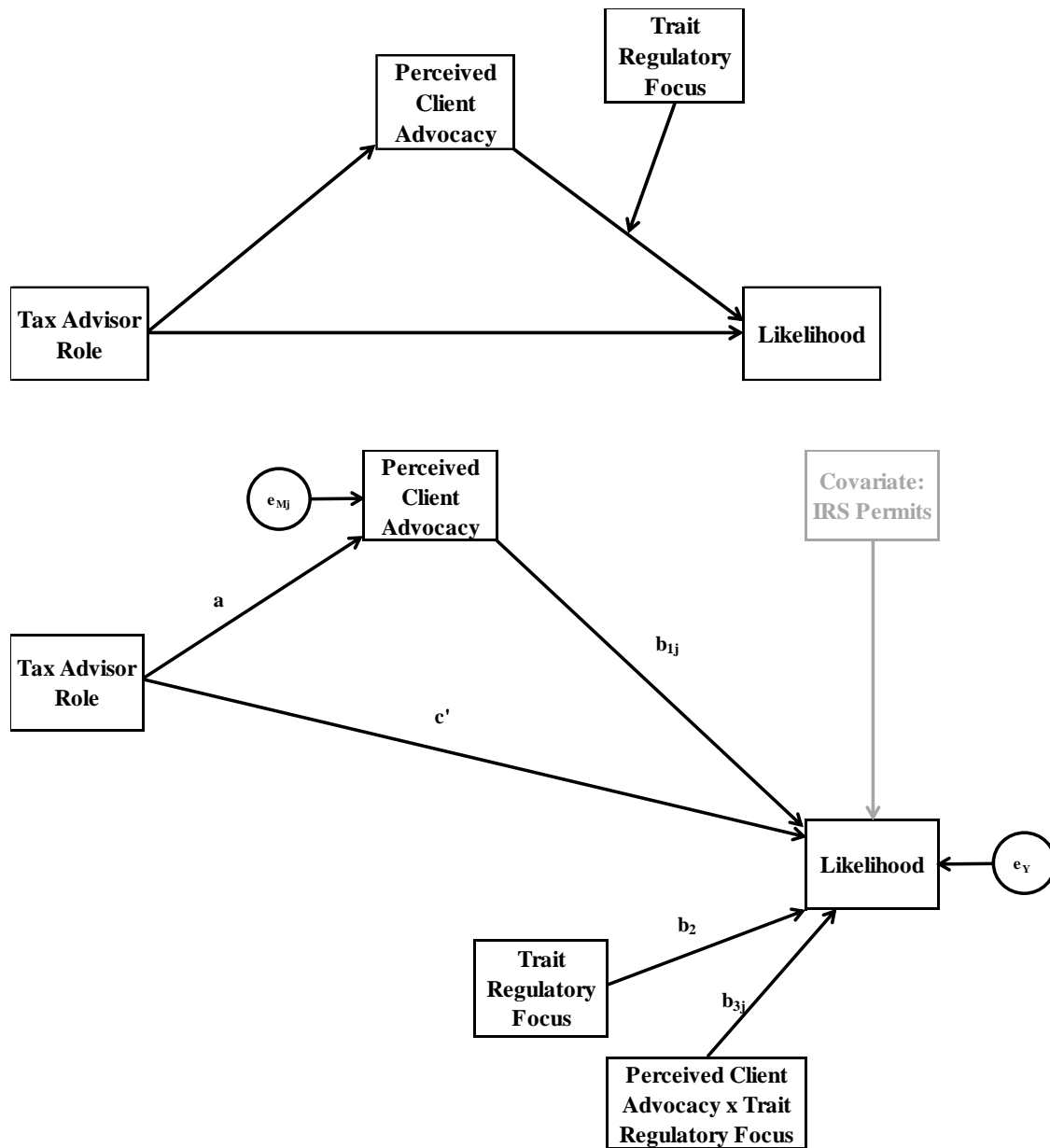


Figure 5: Mediation Model

Notes: Tax Advisor Role is the causal variable [X], Perceived Client Advocacy is the mediator [M<sub>j</sub>], and Likelihood is the outcome [Y].  $a$ ,  $b_{1j}$ ,  $b_2$ ,  $b_{3j}$ , and  $c'$  are the regression coefficients in the estimation models of Perceived Client Advocacy and Likelihood; and  $e_{Mj}$  and  $e_Y$  are errors in the estimates of Perceived Client Advocacy and Likelihood, respectively. The indirect effect of Tax Advisor Role on Likelihood through Perceived Client Advocacy is  $ab_{1j}$ . The direct effect of Tax Advisor Role on Likelihood after considering  $ab$  is  $c'$ . The figure is modified from Hayes (2013, 450) by insertion of variable names into the model.

Table 13 shows the results of the mediation analysis. The analysis includes two regressions and a test of the indirect effect of the manipulated variable on the dependent variable. Panel A presents the first regression, which shows that Tax Advisor Role is significantly related to the mediator Perceived Client Advocacy ( $p = 0.009$ ) with  $R^2 = 0.115$ . Panel B presents the second regression, which shows that Likelihood is a function of IRS Permits and is significantly related to Trait Regulatory Focus ( $p = 0.039$ ) and the interaction of Perceived Client Advocacy and Trait Regulatory Focus ( $p = 0.013$ ) with  $R^2 = 0.413$ . The indirect effect of Tax Advisor Role on Likelihood, presented in Panel C, is significant ( $p < 0.05$ ) at Trait Regulatory Focus values of 15.5000 (mean) and 26.2593 (mean plus one standard deviation) based on a 95 percent bootstrapped confidence interval using 1,000 iterations. Additionally, Panel D presents the index of moderated mediation; the moderation of the indirect effect of Tax Advisor Role on Likelihood by Trait Regulatory Focus is significant ( $p < 0.05$ ) based on a 95 percent bootstrapped confidence interval using 1,000 iterations.

Hypothesis 1 predicts that corporate tax decision makers will make more (less) aggressive tax compliance decisions when they have a trait promotion (prevention) focus. Trait Regulatory Focus is significant in Panel B of the mediation model; however, since there is a significant interaction between Trait Regulatory Focus and Perceived Client Advocacy, the interpretation of this coefficient is unclear. Hypothesis 2 predicts that corporate tax decision makers will make less (more) aggressive tax compliance decisions when the external tax advisor is presented as an overseer (advocate). Although not formally hypothesized, Perceived Client Advocacy may theoretically mediate the effect of Tax Advisor Role on the dependent variable, Likelihood. Presenting the external tax advisor as an overseer is expected to induce a prevention regulatory focus state. Presenting the external tax advisor as an advocate is expected to induce a



promotion regulatory focus state. Tax Advisor Role is an indicator variable equal to 0 in the Overseer condition and equal to 1 in the Advocate condition. As indicated in Panel D of Table 13, the indirect effect of Tax Advisor Role on Likelihood is significant with a positive coefficient.

The final hypothesis predicts an interaction between trait regulatory focus and regulatory focus state (induced by tax advisor role: overseer or advocate). Specifically, Hypothesis 3 states that congruence between trait regulatory focus and regulatory focus state will amplify the effect of regulatory focus on the tax aggressiveness of corporate tax decision maker judgment. Although Perceived Client Advocacy was not included in study hypotheses, Perceived Client Advocacy may essentially function as a measure of regulatory focus state, theoretically mediating the effect of Tax Advisor Role and interacting with Trait Regulatory Focus to influence the dependent variable, Likelihood. Table 13 Panel A indicates a significant positive relationship between Tax Advisor Role and Perceived Client Advocacy and Panel B shows that the interaction of Perceived Client Advocacy Role and Trait Regulatory Focus has a significant positive effect on the dependent variable Likelihood. Thus, Tax Advisor Role and Trait Regulatory focus interact through the mediator, Perceived Client Advocacy, to influence Likelihood. As indicated in Panel C of Table 13, the indirect effect of Tax Advisor Role on Likelihood is significant with a positive coefficient at higher values of Trait Regulatory Focus. Figure 6 presents the nature of the interaction's effect on Likelihood using a median split for the continuous variables Perceived Client Advocacy and Trait Regulatory Focus. Given that Trait Regulatory Focus is predominately positive (i.e., most participants had a promotion focus) in the study sample, this finding provides partial support for H3.

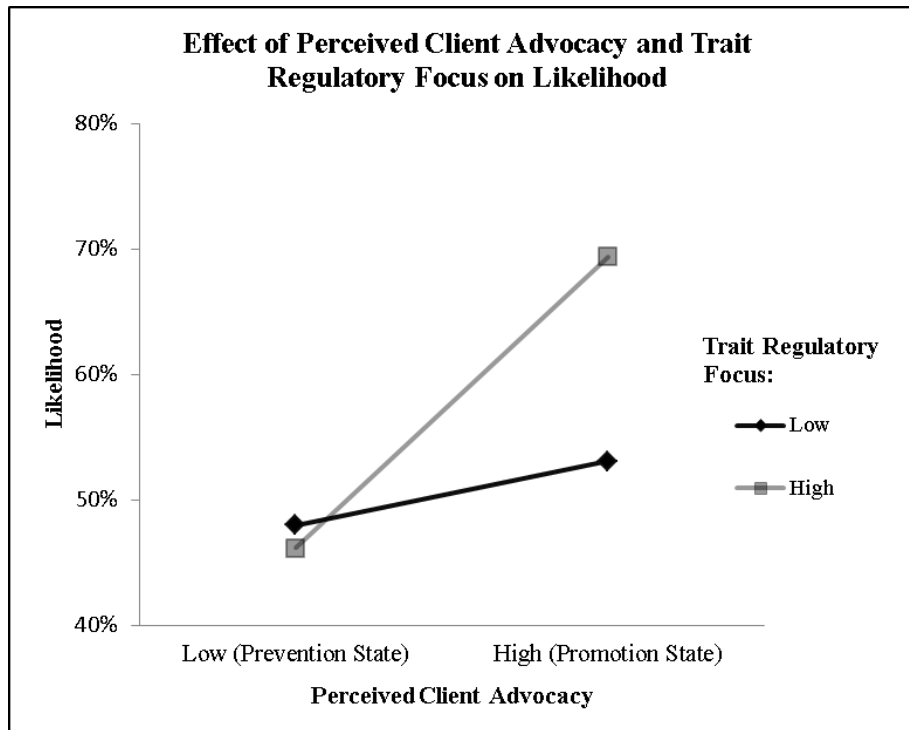


Figure 6: Presentation of Continuous Predictor Variables Split upon Median Values: Effect of Perceived Client Advocacy (Induced Regulatory Focus State) and Trait Regulatory Focus on Dependent Variable Likelihood

### Conclusion

This study examines the underlying individual judgment component of corporate tax aggressiveness. The study draws upon regulatory focus theory to explore how individual-level judgment may be influenced both by individual trait regulatory focus and also by regulatory focus state (via situational cues in the corporate tax environment). Regulatory focus theory involves an individual’s manner of goal pursuit (i.e., the lens through which an individual views goals and the means to obtain them). Thus the theory may be particularly relevant in the corporate tax setting as differing regulatory foci may influence a tax decision maker’s judgment in the application of ambiguous tax authority to complex corporate tax scenarios.

The study predicts that trait regulatory focus and regulatory focus state influence the tax aggressiveness of individual-level judgment. Specifically, a promotion focus is predicted to lead to greater tax aggressiveness than a prevention focus. The study also investigates the “fit” between trait and regulatory focus state. Dependent on “fit,” regulatory focus state is predicted to amplify or mitigate the influence of trait regulatory focus (e.g., management’s presentation of the external tax advisor as an overseer (prevention state) is expected to counter the tax aggressiveness of trait promotion-focused corporate tax decision makers). Study findings do not support these hypotheses; however, supplemental analysis suggests that perceived client advocacy (i.e., the degree to which the decision maker perceives the tax advisor to be a client advocate) mediates the influence of tax advisor role on decision maker judgment. Although tax advisor role may not directly affect decision maker tax aggressiveness, tax advisor role does affect judgment indirectly through the decision maker’s perception of the tax advisor’s client advocacy. Decision makers perceive a company’s tax advisor to have significantly stronger client advocacy when management views the tax advisor as more of an advocate than when management views the tax advisor as an overseer. Furthermore, perceiving the tax advisor to be more of an advocate (i.e., a stronger promotion state) amplifies the influence of regulatory fit for trait promotion-focused decision makers. Compared to individuals with a lower trait promotion focus, tax decision makers with a greater trait promotion focus react more strongly to situationally induced promotion focus state. This finding suggests that promotion-focused individuals may be particularly susceptible to the influence of situational factors in what should be an unbiased evaluation of tax positions.

Interpretation of results is subject to the following limitations. First, it is possible that the nature of the tax task influenced the regulatory state of study participants. Participants were

provided with tax authority and asked to determine if certain activities described in the tax scenario were eligible for a deduction. The task of determining if the company was *allowed* to take the deduction based upon guidance in the tax authority may have activated a prevention focus state, lessening the influence of the manipulated tax advisor role on regulatory focus state. However, to the extent this was the case, it would have diluted the manipulation, biasing the study against finding differences in the tax aggressiveness of decision maker judgment in promotion focus and prevention focus states. Another possible limitation is that study participants were graduate tax students rather than practitioners. Though they were not currently corporate tax professionals, many had experience in public accounting. Additionally, the experimental task involved forming a preliminary recommendation as a tax department staff and was designed to be appropriate for graduate student participants that may be similarly employed in the near future.

Given the importance of judgment in the corporate tax setting, decision makers should be made aware of how situational factors such as management's views may influence underlying interpretation in the evaluation of tax positions. Perhaps a constructive approach would be to structure tasks as neutrally as possible to reduce bias (i.e., unmeasured tax risk) so tax decisions may be made based upon an objective interpretation of tax authority, particularly regarding staff-level corporate tax decision makers. Thus, when staff work is later reviewed, tax risk preferences may be consciously applied by a more senior tax decision maker within the company.

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## **STUDY THREE: SELF-OTHER AND MULTI-AGENT DECISION MAKING IN TAXATION**

### Introduction

Accounting decisions are often made based upon input from multiple decision makers. Corporations and other business entities typically employ groups or teams of individuals to make accounting decisions. With respect to tax in particular, prior experimental studies have primarily examined these decisions from the perspective of individual decision makers, neglecting the potential influence of group decision making. Additionally, many tax decisions in practice are made on behalf of others (e.g., employees within corporate tax departments making tax decisions on behalf of the corporation). Most experimental studies that examine taxpayer decision making and compliance focus on how individual taxpayers make their *own* compliance decisions. Few studies have examined how the target of the decision (the decision maker or another entity) influences compliance. The purpose of this study is to extend research on tax decision making to the corporate tax setting by examining the effects of decision maker type (individual versus group) and decision target (making a decision for oneself versus making a decision on behalf of others) on a decision maker's tax compliance behavior.

The study draws upon diffusion of responsibility theory, which suggests that the presence of the group in group decisions diffuses felt responsibility between group members (Dion et al. 1970). Decreased felt responsibility in group decisions leads groups to make riskier decisions than when decisions are made individually (Mathes and Kahn 1975). As such, this study predicts that tax compliance decisions made in a group will be riskier than tax compliance decisions made individually. The study also relies upon construal level theory and social value theory to investigate the effects of self-other decision making. Construal level theory posits that increased



social distance between oneself and others influences how decision makers evaluate and interpret information (Trope et al. 2007; Trope and Liberman 2010). Increased social distance between oneself (a more concrete construal) and others (a more abstract construal) affects how decisions are made differently on behalf of others (Pronin and Ross 2006; Pronin et al. 2008). Decision makers are less loss averse when deciding for others than for themselves (Beisswanger et al. 2003; Polman 2012b). Reduced loss aversion may lead to more objective decision making on behalf of others, the effect of which may depend upon prevailing social values. Social value theory is used to interpret the way in which decision riskiness differs for oneself versus on behalf of others. Social values affect risk taking in groups more than in individual decisions (Stone and Allgaier 2008). Thus, the study predicts that the influence of self-other decision making on tax compliance decision riskiness depends upon whether decisions are made individually or in a group. Tax compliance decisions made individually are predicted to be riskier for oneself than for others. Tax compliance decisions made in a group are predicted to be riskier for others than for oneself.

A lab experiment is used to investigate how decision maker and decision target influence the riskiness of tax compliance decisions. Fifty-one undergraduate accounting students are endowed with income and asked to make a reporting decision. The type of decision maker is manipulated in the task by having participants make the reporting decision either individually or in a group. The target of the decision is manipulated by having the outcome of the decision affect the cash payout of either the decision maker or an entity other than the decision maker. The amount of income decision makers choose to report corresponds to the riskiness of their tax compliance decisions. Reporting less income (i.e., a higher unreported income) indicates a riskier decision. Contrary to predictions, findings suggest that decision maker type does not *directly*

influence the riskiness of tax compliance decisions; however, decision maker type does affect riskiness *indirectly* through feelings of responsibility for possible outcomes of the decision. Feelings of personal responsibility are significantly lower for group members than for individual decision makers. Feeling less personally responsible is associated with riskier tax compliance, suggesting that decision maker type influences decision riskiness through feelings of responsibility.

The study contributes to the sparse literature on decision making within the corporate tax environment by examining factors that differ between the individual and corporate tax decision making contexts. Hanlon and Heitzman (2010, p. 145) note that little is known about who is making corporate tax decisions and how these decisions are made, mentioning that “tax avoidance may be highly idiosyncratic and determined by a number of factors and interactions, not all of which can be measured.” This complexity combined with the fact that most experimental tax compliance research to date looks only at individual (rather than corporate) taxpayer decision making suggests a need for investigating decision making in a corporate tax setting. The present study is one of the first to examine both tax decision making *by* oneself versus *with* others and decision making *for* oneself versus *for* others. Additionally, this study contributes to tax policy by showing how individual and corporate taxpayer decisions may differ.

The following section of this research study contains a review of the relevant literature and development of the hypotheses. The subsequent section describes the research method. The third section presents results, and the final section draws conclusions.

## Theory and Hypotheses

### Group Decision Making and the Diffusion of Responsibility

Diffusion of responsibility theory suggests increasing the number of decision makers involved in a decision decreases the responsibility felt by each, reducing fear of failure and leading groups to make riskier decisions than individual decision makers (Dion et al. 1970). The concept of responsibility diffusion stems from bystander intervention research examining how group size affects observers' behavior in emergency situations (Darley and Latane 1968). The presence of multiple observers reduces each observer's felt responsibility and lengthens the response time of observers who decide to help someone in need of emergency assistance (Darley and Latane 1968). The effect of a group on felt responsibility persists in virtual environments and in computer-mediated communication such as emails addressed to a group (Markey 2000; Blair et al. 2005). When others are perceived as available to help, an observer feels less responsibility to help (Fleishman 1980). Diffusion of responsibility theory incorporates the concept of felt responsibility from the bystander intervention literature and focuses on the influence of groups on risk preferences in judgment and decision making (Mathes and Kahn 1975).

Differing levels of felt responsibility between individual decision makers and group members may be motivated by blame avoidance (Mynatt and Sherman 1975). An attribution effect has been observed in which self-attribution of responsibility decreases when the outcome of a group decision is unfavorable (Mynatt and Sherman 1975). Additionally, group size influences perceptions of how responsibility should be assigned to group members (Teigen and Brun 2011). Compared to a sole individual decision maker, assessed responsibility is lower for each member of a group regardless of group size; however, as group size increases, total assigned responsibility exceeds 100 percent, suggesting that group size distorts perceptions of

responsibility (Teigen and Brun 2011). Decision makers may be concerned with how responsible they are perceived to be if an unfavorable outcome can be linked back to the decision.

Concern with external responsibility assessments may influence decision maker risk preferences. Decision makers in a group are less risk averse (i.e., they have a greater risk preference) (Brunette et al. 2015). Group decision makers may be willing to make riskier decisions than individual decision makers because some of the blame from an unfavorable outcome may be deflected to other group members involved in the decision. Congruence with perceived norms for risky decision making may also influence riskiness. Group decisions are more risky when widely-held values are perceived to favor risk and group members consider themselves to be riskier than the average decision maker (Stoner 1968). Though most prior research finds groups to make riskier decisions than individuals, group decisions may actually be less risky (than individual decisions) when widely-held values are perceived to favor caution and group members consider themselves to be relatively more cautious (Stoner 1968).

In a tax setting, prior research suggests that individual taxpayers are generally more compliant than they should be based upon economic models of rational behavior (Alm and Torgler 2011). However, prior research has not examined tax compliance decision making in a corporate tax setting, namely how group decision making might affect corporate tax decision makers. Carnes et al. (1996) examine tax professional decision making and find evidence of a group polarization effect, a finding consistent with the Stoner (1968) study. Ambiguous tax scenarios that were rated independently by tax advisors as client-favorable were rated as even more favorable after a group discussion, and client-unfavorable ambiguous scenarios were rated as even more unfavorable after group discussion (Carnes et al. 1996). The Carnes et al. (1996) study investigates the influence of group decision making; however, the study does not examine

tax compliance decisions made by *taxpayers* in a group setting as in the present study. The present study makes the following prediction about the influence of decision maker type on the riskiness of tax compliance decisions:

***H1:** Decision makers will make riskier tax compliance decisions when decisions are made in a group than when decisions are made individually.*

### Self-Other Decision Making

Prior research suggests that decision riskiness may also differ for decisions made for oneself versus made on behalf of others. On the surface, the effect of self-other decision making does not appear to be consistent across prior studies. In some studies decisions for self are riskier than decisions on behalf of others (McCauley et al. 1971; Teger and Kogan 1975; Fernandez-Duque and Wifall 2007); however, studies have also found that decisions on behalf of others are riskier (Beisswanger et al. 2003; Wray and Stone 2005). Additionally, Stone et al. (2002) found no evidence of a self-other effect. The present study draws upon construal level theory and social value theory to disentangle the effects of self-other decision making.

Construal level theory is a broad theory about how individuals think about events and entities across four dimensions of psychological distance (temporal, spatial, social, and hypotheticality) in comparison to their own egocentric view (Trope and Liberman 2010). As psychological distances increases, an individual thinks about events/entities at a more abstract level, which influences how an individual evaluates and interprets information as well as individual decision making and behavior (Trope et al. 2007; Trope and Liberman 2010). Increasing distance in any of the four dimensions increases psychological distance, moving the construal level from more concrete to more abstract (Trope and Liberman 2010). In particular,

the social dimension of psychological distance pertains to self-other decision making examined in the proposed study. See Weisner (2015) for a review of construal level theory literature pertaining to the accounting domain.

Psychological distance is greater for “other” than for “self” (Pronin and Ross 2006; Pronin et al. 2008). Increasing psychological distance through an increase in social distance between oneself and others increases the construal’s level of abstraction in mental accounting: “self” is more concrete and “other” is more abstract (Hsee and Weber 1997; Polman 2012a). Construal level affects loss aversion<sup>26</sup> such that decision makers are less loss averse when deciding for others (i.e., more abstract construal) than when deciding for themselves (i.e., more concrete construal) (Beisswanger et al. 2003; Polman 2012b). Thus, reduced loss aversion for “other” decisions may lead decisions on behalf of others to be less susceptible to this cognitive bias than decisions for oneself; however, the effect on risk preference (whether or not risk preference is greater for others than for oneself) may depend upon prevailing social values<sup>27</sup> (Stone and Allgaier 2008). Indeed, social values for risk influence decisions on behalf of others more than decisions for oneself (Stone and Allgaier 2008). When risk taking is valued, a decision is *more* risky on behalf of others than for oneself, but when risk aversion is valued, a decision is *less* risky on behalf of others than for oneself (Stone et al. 2013).

Social values may influence decisions differently in the individual and corporate tax settings. Cohen et al. (2013) manipulated whether the prevailing social norm was for a more aggressive (i.e., more risky) or conservative (i.e., less risky) tax treatment and examined taxpayer

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<sup>26</sup> Loss aversion is the tendency of decision makers to weight possible losses more heavily than equivalent possible gains, preferring to avoid losses more than to acquire gains (Kahneman and Tversky 1984).

<sup>27</sup> This study considers social values to be beliefs about what people would deem to be desirable. Social values influence social norms for behavior (Stone and Allgaier 2008).

decision making for self versus on behalf of a group containing self and others. When the social norm was for aggressive tax treatment, a tax decision maker was more aggressive on behalf of others than for self (Cohen et al. 2013). Similarly, Brink and White (2014) also examine taxpayer decision making for oneself versus on behalf of a group containing self and another individual, finding that taxpayers in an individual decision-making setting are less likely to evade taxes on behalf of a group containing themselves than when making the evasion decision for only themselves. The present study targets not only *individual* self-other decision making, as in the Cohen et al. (2013) and Brink and White (2014) studies, but also *group* self-other decision making.

Few studies have examined both the effect of the decision maker (individual or group) and self-other decision making in a single study. Wallach et al. (1964) investigate some of the possible configurations of individual/group and self-other decision making through examination of choice shift. Choice shift is measured by the difference in a decision maker's risk taking in one condition compared to that same decision maker's risk taking in a different condition. An increase in risk taking between conditions is termed a risky shift and a decrease in risk taking between conditions is termed a conservative shift (Wallach et al. 1964). Wallach et al. (1964) find that compared to an individual decision on behalf of oneself, an individual decision on behalf of others displayed a conservative shift and group decisions on behalf of self or others displayed a risky shift. Similarly, Zaleska and Kogan (1971) also examine choice shift and find a conservative shift for decisions made individually on behalf of others and a risky shift for group decisions on behalf of self or others. Group decisions on behalf of the decision making group (i.e., self) had a stronger risky shift than group decisions on behalf of another group (i.e., others) (Zaleska and Kogan 1971). These studies suggest that the influence of self-other decision making

on decision riskiness may differ when the decision maker is an individual or a group; however, research to date has not examined both of these components in a single tax compliance setting.

Tax law may be more complex and ambiguous in the corporate tax setting (Slemrod 2007; Barney et al. 2012). When faced with ambiguous tax law, a corporate tax decision-making group may substitute the group consensus in place of undeterminable widely-held social values (i.e., group think effect). Indeed, this polarization effect is evident in the Carnes et al. (1996) study in which tax professionals made decisions individually on behalf of hypothetical others. The present study predicts that decision riskiness differs when tax compliance decisions are made for oneself than when decisions are made on behalf of others; however, the direction of the difference (more or less risky) depends upon whether the decisions are made individually or in a group. Stated formally:

***H2a:** When tax compliance decisions are made individually, decisions made for oneself will be riskier than decisions made on behalf of others.*

***H2b:** When tax compliance decisions are made in a group, decisions made on behalf of others will be riskier than decisions made for oneself.*

## Research Method

### Participants

Participants were recruited from an undergraduate tax class at a public university using a multi-contact method (Dillman et al. 2009). The lab experiment was conducted on campus in a behavioral laboratory to maintain a controlled experimental environment; thus, students who elected to participate were required to do so in person during one of several offered sessions. The study was first announced in class, after which students received an email containing study



information and a link to register for a study session. Students also received a reminder about the opportunity to participate in the study. Students who elected to participate received extra credit in their undergraduate course. In addition to receiving extra credit, participants were eligible to receive a cash payout based upon their decisions in the lab experiment task. Cash payouts ranged from \$0 to \$12.50 in US dollars with an average cash payout of \$6.31.

Fifty-one undergraduate students completed the experiment and are included in the analysis. The majority of the participants are female (56.9 percent). Most participants are between 21-25 years old (64.7 percent), with others age 18-20 (13.7 percent), age 26-30 (9.8 percent), age 31-35 (3.9 percent), and over age 35 (5.9 percent). One participant elected not to provide age. Some of the participants have experience in public accounting (13.7 percent); however, most of the participants do not yet have experience in public accounting (86.3 percent). The majority of participants intend to take the CPA exam in the future (88.2 percent). Most participants have taken one to two tax classes (98.0 percent). The majority of participants prepared their most recent personal tax return (51.0 percent). Others hired a paid preparer (23.6 percent), received assistance from a friend or relative (11.7 percent), or did not need to file (13.7 percent). Table 14 presents demographic data. Study 3 tables are presented in Appendix E.

### Materials and Design

The design of the experimental task is inspired by the Allingham and Sandmo (1972) model of income tax evasion.<sup>28</sup> The income tax evasion model is structured as a tax system in which reported income is subject to a tax rate, unreported income is subject to a penalty in

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<sup>28</sup> Allingham and Sandmo (1972) model a tax compliance decision as  $E[U] = (1-p) U(Y) + p U(Z)$ , where  $E[U]$  is the expected utility of the reported income for a probability  $p$  that the report will be inspected.  $Y$  represents post-tax income if not inspected and  $Z$  represents post-tax income if inspected.

addition to the regular tax rate, and only a percentage of reports are examined by the taxing authority (Allingham and Sandmo 1972). The income tax evasion model suggests that a taxpayer should maximize expected utility, which is a taxpayer's optimal amount of reported income based upon personal risk preferences and risk aversion under uncertainty, given a fixed tax rate, penalty rate, and probability of examination (Allingham and Sandmo 1972). In the present study, the experimental task involves endowing participants with Francs and asking them to decide how much to report. The Allingham and Sandmo (1972) income tax evasion model was used to select values for tax rate, penalty rate, and probability of examination that would result in equal expected value<sup>29</sup> calculations for all levels of reported/unreported income in the experimental task. Thus, participants' decisions about how much income to report should not be driven by differences in the expected value of the income reporting options. Instead, reported income should be linked to risk preference via changes in the range in possible post-tax net income (i.e., a mean-preserving spread): the maximum possible post-tax net income (report not selected for inspection) and the minimum possible post-tax net income (report selected for inspection). The range in possible post-tax net income increases as unreported income increases; thus, the risk taking in the tax compliance decision increases as unreported income increases. Figure 7 presents calculations of the expected value and range of possible post-tax net income for the reported income options.

The computer-based experiment is administered with Qualtrics software in the controlled environment of a behavioral laboratory. The experimental procedure consists of six sections: task

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<sup>29</sup> Expected value is the optimal amount of taxable income to report to a taxing authority as *calculated mathematically* based upon the probability of inspection given a fixed tax rate and penalty rate. Expected value is the same for all decision makers. Expected utility incorporates personal risk preferences and risk aversion under uncertainty and other items that may be included in a decision maker's utility function such as ethical values and social norms, in addition to expected value. Thus, expected utility theoretically differs among decision makers.

instructions, income reporting task, covariate questionnaire, notification of inspection, demographic questionnaire, and participant payouts. See Figure 8 for a diagram of the experimental procedure. Complete experimental materials are presented in Appendix F.

| <b>Reported Income</b>   | <b>10,000</b> | <b>9,000</b> | <b>8,000</b> | <b>7,000</b> | <b>6,000</b> | <b>5,000</b> | <b>4,000</b> | <b>3,000</b> | <b>2,000</b> | <b>1,000</b> | <b>0</b>      |
|--|---------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|
| <b>Calculation of Expected Value:</b>  |               |              |              |              |              |              |              |              |              |              |               |
| Taxes  | 5,000         | 4,500        | 4,000        | 3,500        | 3,000        | 2,500        | 2,000        | 1,500        | 1,000        | 500          | 0             |
| Penalties  | 0             | 1,000        | 2,000        | 3,000        | 4,000        | 5,000        | 6,000        | 7,000        | 8,000        | 9,000        | 10,000        |
| Income if Inspected  | 5,000         | 4,500        | 4,000        | 3,500        | 3,000        | 2,500        | 2,000        | 1,500        | 1,000        | 500          | 0             |
| Income if <u>Not</u> Inspected   | 5,000         | 5,500        | 6,000        | 6,500        | 7,000        | 7,500        | 8,000        | 8,500        | 9,000        | 9,500        | 10,000        |
| <b>Expected Value</b>  | <b>5,000</b>  | <b>5,000</b> | <b>5,000</b> | <b>5,000</b> | <b>5,000</b> | <b>5,000</b> | <b>5,000</b> | <b>5,000</b> | <b>5,000</b> | <b>5,000</b> | <b>5,000</b>  |
| <b>Calculation of Range of Possible Net Income:</b>  |               |              |              |              |              |              |              |              |              |              |               |
| Maximum Possible Net Income  | 5,000         | 5,500        | 6,000        | 6,500        | 7,000        | 7,500        | 8,000        | 8,500        | 9,000        | 9,500        | 10,000        |
| Minimum Possible Net Income  | 5,000         | 4,500        | 4,000        | 3,500        | 3,000        | 2,500        | 2,000        | 1,500        | 1,000        | 500          | 0             |
| <b>Range of Possible Net Income</b>  | <b>0</b>      | <b>1,000</b> | <b>2,000</b> | <b>3,000</b> | <b>4,000</b> | <b>5,000</b> | <b>6,000</b> | <b>7,000</b> | <b>8,000</b> | <b>9,000</b> | <b>10,000</b> |
| <p>Taxes = Reported Income x Tax Rate;<br/> Penalties = Unreported Income x Penalty Rate;<br/> Income if Inspected = Reported Income – Taxes – Penalties;<br/> Income if Not Inspected = Reported Income – Taxes;<br/> Expected Value = (Income if Inspected x Inspection Probability) + (Income if Not Inspected x (1 – Inspection Probability));<br/> Maximum Possible Net Income = Income if Not Inspected;<br/> Minimum Possible Net Income = Income if Inspected;<br/> Range of Possible Net Income = Maximum Possible Net Income - Minimum Possible Net Income.</p> <p><sup>a</sup> Participants will be given 10,000 Francs (experimental currency) and the following rates will be use for the experimental task: Tax rate = 50%, Penalty rate (includes tax rate) = 100%, and Audit rate = 50%.</p> |               |              |              |              |              |              |              |              |              |              |               |

Figure 7: Expected Value and Range of Possible Net Income by Reported Income

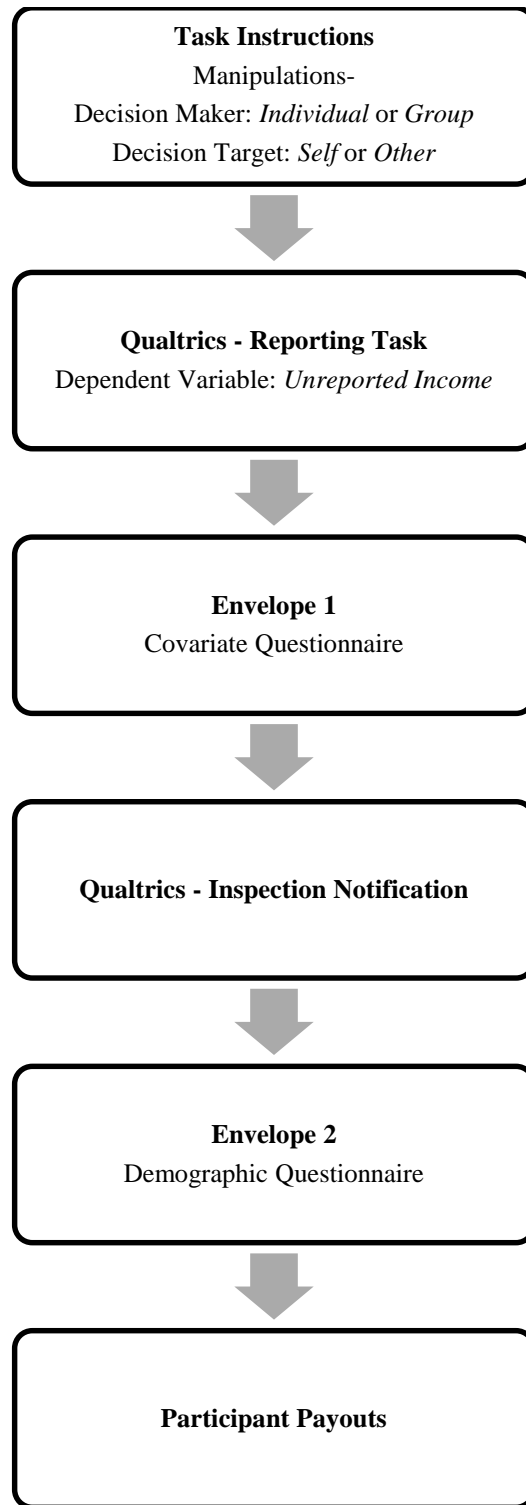


Figure 8: Diagram of Experimental Procedures

The experiment uses task instructions to convey the parameters of the reporting task. Prior to beginning the task, the study administrator read the task instructions aloud to the participants. The task instructions inform participants that they will be given Francs (units of experimental currency) and will be asked to make a decision about how much of the Francs they wish to report on a form. The income reporting task is presented in this intentionally generic context to minimize contextual differences between conditions to avoid confounding the deliberately manipulated variables (decision maker and decision task) as this study seeks to investigate only these two key differences in individual and corporate tax settings. The task instructions indicate that after participants have made their reporting decision, they will be notified about whether or not their form was selected for inspection. Francs reported on the form are subject to a 50 percent fee. Francs not reported on the form are not subject to a fee unless the form is selected for inspection. If the form is selected for inspection, the amount of Francs reported is compared to the initial amount of Francs provided, and any Francs not reported on the form are subject to a 100% fee. Thus, fees will not be assessed on unreported amounts unless the report is selected for inspection. The task instructions state that forms have a 50 percent chance of being selected for inspection and that inspections are determined completely at random and do not depend on the participant's decisions or the decisions of others. Net Francs remaining after the inspection period are calculated at the decision maker level as the initial Francs provided, less total fees. The task instructions indicate that Net Francs will be converted into dollars using a positive conversion rate and participants will be paid at the conclusion of the task. Additionally, participants in the group condition are instructed that payouts will be divided equally between group members.

The manipulations of decision maker (individual or group) and decision target (self or other) occur within the task instructions.<sup>30</sup> Decision maker type is manipulated by having participants make the reporting decision either individually or in groups of two. Each participant in the *Individual* condition makes the reporting decision alone as the sole decision maker. Participants in the *Group* condition make the reporting decision together within their two-member group. Decision target is manipulated through who is affected by the reporting decision. The instructions indicate the reporting decision affects either the decision maker's own cash payout (i.e., *Self*) or the payout of others not involved in making that reporting decision (i.e., *Other*).<sup>31</sup> The manipulation of decision maker (individual or group) and decision target (self or other) results in four versions of the task instructions: Individual-Self, Individual-Other, Group-Self, and Group-Other. Each participant receives only one version of the task instructions.

After hearing the task instructions, participants begin the income reporting task. Decision makers (as either individuals or groups) are endowed with Francs and asked to decide how much they wish to report.<sup>32</sup> Decision makers may report an amount from zero Francs up to the total amount of endowed Francs. Greater unreported income reflects greater risk taking.

Individual decision makers are endowed with 10,000 Francs. Each individual decision maker is asked to share his or her thought process (via a text box in Qualtrics) when deciding how much to report. Decision makers in the *Individual* condition report any amount from 0

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<sup>30</sup> Prior studies such as Wallach et al. (1964) and Zaleska and Kogan (1971) have employed a choice shift design; however, a choice shift design creates order effects such that decision making first for self and then on behalf of others has a stronger shift than other-self, complicating the effects of self-other decision making (McCauley et al. 1971). Thus, the present study uses a between-participant design.

<sup>31</sup> To prevent reciprocity from influencing decision making in the *Other* condition, participants are informed that assignment is completely random and that they should assume the person (or group) deciding on their behalf is not the same person (or group) for whom they are deciding.

<sup>32</sup> Endowing participants with Francs (rather than having participants earn Francs) is an experimental design choice made in consideration of the corporate tax environment, which is the primary focus of the present study.

Francs to 10,000 Francs in increments of 1,000 Francs. In the *Group* condition, a two-member group of decision makers is endowed with 20,000 Francs.<sup>33</sup> Group members are asked to communicate electronically (i.e., type back and forth within a text box in Qualtrics) to reach a consensus on how much the group wishes to report. Groups are asked not to discuss aloud to keep their conversation private. No time limit is placed upon reaching a group consensus. One group member is randomly assigned to input the group's decision. Groups may report any amount from 0 Francs to 20,000 Francs in increments of 2,000 Francs.

After completing the reporting task, participants individually complete a paper-based questionnaire measuring potential covariates. After completing the covariate questionnaire, participants return to the Qualtrics survey for notification of whether or not their report was selected for inspection and learn the amount of Net Francs after inspection. Net Francs are calculated as the initial Francs less the total fees. If selected for inspection, total fees are calculated as 50 percent of the amount reported on the form, plus 100 percent of the amount not reported on the form. If not selected for inspection, total fees are simply 50 percent of the amount reported on the form.

Following the inspection notification, all participants complete a paper-based demographics questionnaire. While participants are completing the demographics questionnaire,

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<sup>33</sup> Upon entering the laboratory, participants are randomly assigned to a group rather than self-selecting. Additionally, to increase identification within the group, groups are assigned a group name that is a color. The experimental materials include two different paper-based questionnaires per person, enclosed in separate envelopes, which are provided to participants at the beginning of the experiment. In the group condition, envelope labels are printed using paper that matches the group name color. For example, members of the Blue group receive envelopes with labels printed on blue paper.



the study administrator converts Net Francs into dollars to determine cash payout amounts.<sup>34</sup> The experiment concludes with cash payouts to participants.

## Independent Variables

### Decision Maker

The decision maker is manipulated by structuring the decision to be made by either one decision maker (*Individual*) or by a group of decision makers (*Group*). Each participant in the *Individual* condition makes the reporting decision alone as the sole decision maker. Participants in the *Group* condition make the decision after reaching a group consensus.

### Decision Target

The target of the decision is manipulated as whether the decision is made on behalf of the decision maker (*Self*) or on behalf of a different entity (*Other*). The experimental materials inform participants that the reporting decision will result in a net amount of experimental currency, which will be converted to dollars and paid to the decision target. In the *Self* condition, the decision maker is the decision target and receives any payout from the decision task. In the *Other* condition, another participant(s) (not the decision maker) is the decision target and receives any payout from the decision task. Participants in the *Other* condition are compensated based upon random assignment as targets for other participants in the same condition. Assignments avoid reciprocal pairs, and this design feature is communicated to participants so that reciprocity concerns do not influence decision making.

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<sup>34</sup> The cash payouts are calculated using a conversion rate of 800 Francs to 1 US dollar. Cash payouts are rounded up to the next \$0.25 increment.

Manipulating both *Decision Maker* and *Decision Target* creates four conditions: Individual-Self, Individual-Other, Group-Self, and Group-Other. In the Individual-Self condition, a participant is making a decision individually for oneself. Individual-Self aligns with a tax context in which an individual taxpayer is making decisions for his or her own personal tax return. In the Individual-Other condition, a participant is making a decision individually for another individual. This condition represents a single decision maker such as a sole tax decision maker in a corporation making tax decisions on behalf of the corporation. Participants in the Group-Self condition communicate electronically to make a unanimous group decision, the outcome of which affects the decision-making group. Group-Self aligns with a group of owners making tax decisions for their pass through business entity such as a partnership or S-corporation. In the Group-Other condition, participants communicate electronically to make a unanimous group decision that will affect a group other than the decision-making group. Group-Other corresponds to a corporate tax context in which a corporate tax department is making tax decisions on behalf of the corporation. The alignment of the experimental manipulations with tax decision-making contexts is summarized in Figure 9.

|                         | <b>Decision Maker:</b>  |   |
|-------------------------|---|---|
| <b>Decision Target:</b> | <b><u>Individual</u></b>  | <b><u>Group</u></b>   |
| <b><u>Self</u></b>      | <b>Individual making decision for self</b><br>(An individual taxpayer making tax decisions for own personal tax return)                           | <b>Group making decision for self</b><br>(A group of owners making tax decisions for their pass through business entity)        |
| <b><u>Other</u></b>     | <b>Individual making decision on behalf of other</b><br>(A corporation's sole tax decision maker making tax decisions on behalf of a corporation) | <b>Group making decision on behalf of other</b><br>(A corporate tax department making tax decisions on behalf of a corporation) |

Figure 9: Alignment of Experimental Manipulations with Tax Decision-Making Contexts

## Additional Measures

### Felt Responsibility

*Felt Responsibility* is a measure of how personally responsible a decision maker feels for possible outcomes of the decision (Hackman and Oldham 1974; Mathes and Kahn 1975). *Felt Responsibility* is assessed before participants discover the outcome of their decision (i.e., whether or not they were inspected) to avoid the potential influence of hindsight bias on their responses. Following Hackman and Oldham (1974), *Felt Responsibility* is initially measured using a four item scale presented in Appendix G. Each item uses a seven-point Likert-type scale with labeled points ranging from 1 “Strongly Disagree” to 7 “Strongly Agree.” Confirmatory factor analysis shows the four items do not load on a single factor and Cronbach’s alpha for the *Felt Responsibility* scale is 0.685 when including all four items. Thus, Item 1 was dropped from the scale to obtain a single factor with a Cronbach’s alpha of 0.743 for the remaining three-item measure of *Felt Responsibility*.

Diffusion of responsibility theory suggests that decision makers in a group will feel less responsible for their decisions than individual decision makers as the presence of the group reduces self-attribution of responsibility. As such, the manipulation of *Decision Maker* is expected to influence how personally responsible participants feel for possible outcomes of their decisions. The “group” decision maker condition should lead to lower felt responsibility than the “individual” decision maker condition. *Felt Responsibility* is expected to help explain how tax compliance riskiness differs in individual versus group decisions; participants in the “group” condition should make riskier decisions than those in the “individual” condition. *Felt Responsibility* is thus expected to mediate the effect of *Decision Maker* on the dependent variable, *Unreported Income*.

### Relative Perceived Risk

*Relative Perceived Risk* is a measure of a decision maker's self-perceived riskiness compared to other individuals and is designed to capture a decision maker's perception of widely-held social values. Participants are asked "Compared to the average person, how risky was the decision you just made?" *Relative Perceived Risk* is measured on a seven-point scale ranging from 1 "Much less risky than average" to 7 "Much more risky than average." Self-rating as less risky than others signifies a perception that the socially-valued position is to be less risky. Self-rating as more risky than others signifies a perception that the socially-valued position is to be more risky. Social values for risk influence decisions on behalf of others more than decisions for oneself (Stone and Allgaier 2008); as such, *Relative Perceived Risk* is expected to help explain how tax compliance riskiness differs for self-other decisions based upon whether the decision is an individual or group decision. Thus, *Relative Perceived Risk* may help explain the moderating effect of Decision Maker on the influence of Decision Target on the riskiness of tax compliance decisions.

### Fear of Negative Outcome

*Fear of Negative Outcome* is a measure of how concerned a decision maker is about the possibility of the report being selected for inspection. Participants are asked "When deciding how many Francs to report on the form, how concerned were you about the possibility that the report would be inspected?" The measure uses a five-point Likert-type scale with labeled points ranging from 1 "Not At All Concerned" to 5 "Extremely Concerned." *Fear of Negative Outcome* is expected to covary with the dependent variable, *Unreported Income*, and is measured as a possible control variable.

## Risk Attitude

*Risk Attitude* is a four item scale adopted from the Weber et al. (2002) measure of risk attitude in the gambling domain, a subscale in the domain-specific risk attitude scale, which is presented in Appendix G. Cronbach's alpha for the *Risk Attitude* scale is 0.919. Participants indicate their likelihood of engaging in different activities or behaviors; each item is measured on a seven-point scale ranging from 1 "Very Unlikely" to 7 "Very Likely." *Risk Attitude* is measured as a potential control variable.

## Dependent Variable

Participants in the experimental task are provided with experimental currency and then asked, "How much of the 10,000 [20,000 for two-member groups] Francs would you like to report?" Decision riskiness is operationalized as the amount of experimental currency that a decision maker decides to report. Reported income is measured on an 11-point scale; an individual decision maker may decide to report amounts from zero to 10,000 Francs in increments of 1,000 and a group may decide to report amounts from zero to 20,000 Francs in increments of 2,000. Reporting less income reflects greater risk taking. Reported income is reverse coded so that greater *Unreported Income* reflects greater risk taking.

The expected value is the same for each of the reporting options; however, the range between the maximum and minimum possible net income differs for the reporting options. Reported income reflects risk taking because a decision to report less income generates a larger gap between the possible maximum and minimum outcomes. The range for each option is determined by calculating net income if *not* selected for inspection (i.e., the maximum possible net income) and by calculating net income if selected for inspection (i.e., the minimum possible

net income). For example in the *Individual* condition, a participant reporting all 10,000 Francs would have the smallest range of possible outcomes, receiving the same net income whether or not selected for inspection. Conversely, reporting zero income would generate the largest range between the possible maximum and minimum net income outcomes; a participant reporting zero net income would have zero net income if selected for inspection but would have all 10,000 remaining if not inspected. Thus a participant deciding to report zero net income would display the greatest risk taking.

## Results

### Manipulation Checks

*Decision Maker* and *Decision Target* are manipulated through the structure of the income reporting task, which is conveyed to participants through the task instructions. Manipulation checks are conducted to measure whether participants were cognizant of task information important to the successful manipulation of the variables. To verify the manipulations, participants are asked, “Which best describes how your payment is determined for this study?” Participants are asked to select one of the following options: “Based on a reporting decision I made” (Individual-Self), “Based on a reporting decision that someone else made” (Individual-Other), “Based on a reporting decision that my group made” (Group-Self), or “Based on a reporting decision that another group made” (Group-Other). Participants had to pass the manipulation check question to be included in the study.

A total of 123 participants completed the experimental materials as follows: Individual-Self = 18 participants, Individual-Other = 21 participants, Group-Self = 21 two-member groups (42 participants), and Group-Other = 21 two-member groups (42 participants). Analysis of the

manipulation check question suggests that although the *Decision Maker* manipulation was generally successful, the *Decision Target* manipulation (self-other) was not successful for the majority of the participants. Of the 63 participants originally in the *Decision Target-Other* condition, 35 participants failed the manipulation check, a failure rate of 55.6 percent. The manipulation check proved to be even more stringent in the group conditions as both members of each group were required to pass the manipulation check for the group to be included in the study. Due to the high failure rate of the *Decision Target-Other* manipulation, all 63 participants in the Self-Other and Group-Other conditions are excluded from the analysis; thus, H2 cannot be tested.<sup>35</sup> Of the 60 remaining participants in the *Decision Target-Self* condition, 9 participants failed the manipulation check as follows: Individual-Self 1 participant and Group-Self 4 two-member groups (8 participants). Thus, a total of 51 participants are included in the study.

### Descriptive Statistics

Table 15 presents descriptive statistics by *Decision Maker* (Individual or Group) for the dependent variable *Unreported Income*, the mediator *Felt Responsibility*, and the possible covariates *Relative Perceived Risk*, *Fear of Negative Outcome*, and *Risk Attitude*. Participants in the Group condition report a mean (standard deviation) *Unreported Income* of 3.71 (2.97), which is not statistically different than the *Unreported Income* of participants in the Individual condition mean (standard deviation) of 3.12 (3.52). As expected, *Felt Responsibility* is significantly greater in the Individual condition than in the Group Condition with mean (standard deviation) of 15.94 (3.29) and 13.44 (2.94), respectively ( $p = 0.026$ ). Neither *Relative Perceived*

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<sup>35</sup> After removing participants that failed the manipulation check, participants per condition were as follows: Individual-Self = 17, Individual-Other = 8, Group-Self = 17 two-member groups, Group-Other = 6 two-member groups. As discussed above, the manipulation of Decision Target was unsuccessful in the “Other” conditions, thus those participants are excluded from the study.

*Risk*, *Fear of Negative Outcome*, nor *Risk Attitude* differs significantly between the Individual and Group conditions.

### Tests of Hypotheses

Correlation coefficients are presented in Table 16. Significant correlations exist between *Decision Maker* and *Felt Responsibility*, as well as between *Felt Responsibility* and the dependent variable *Unreported Income*. Additionally, the dependent variable *Unreported Income* is significantly correlated with the covariates *Relative Perceived Risk* and *Risk Attitude*, which are also significantly correlated with each other.

Hypothesis 1 predicts that decision makers will make riskier tax compliance decisions when decisions are made in a group than when decisions are made individually. Table 17 reports the ANCOVA results with *Unreported Income* as the dependent variable, *Decision Maker* as the independent variable and *Relative Perceived Risk* as the covariate. The model is statistically significant at  $p < 0.000$ , with an adjusted  $R^2$  of 0.396. However, the ANCOVA model does not find support for H1 as only the covariate *Relative Perceived Risk* is statistically significant ( $p < 0.000$ ).<sup>36</sup> *Decision Maker* is not significant in the model ( $p = 0.989$ ).<sup>37</sup> Although the study hypotheses do not include the mediator *Felt Responsibility*, Felt Responsibility theory suggests that decision maker type should affect feelings of personal responsibility, which may influence the riskiness of decision maker judgment. Thus, additional analysis incorporates mediation analysis of *Felt Responsibility* into the model.

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<sup>36</sup> *Risk Attitude* (measured as a possible control variable) is excluded from the ANCOVA model as the variable is not statistically significant when the covariate *Relative Perceived Risk* is included in the model ( $p = 0.867$ ).

<sup>37</sup> H2a and H2b cannot be tested because all participants in the *Decision Target-Other* conditions were excluded.



## Supplemental Analysis

The mediation model is tested using the SPSS PROCESS script (Hayes 2013). Variables in the model include the dependent variable *Unreported Income*, a manipulated binary independent variable *Decision Maker*, the mediator *Felt Responsibility*, and a covariate *Relative Perceived Risk*. The mediation model is presented in Figure 10.

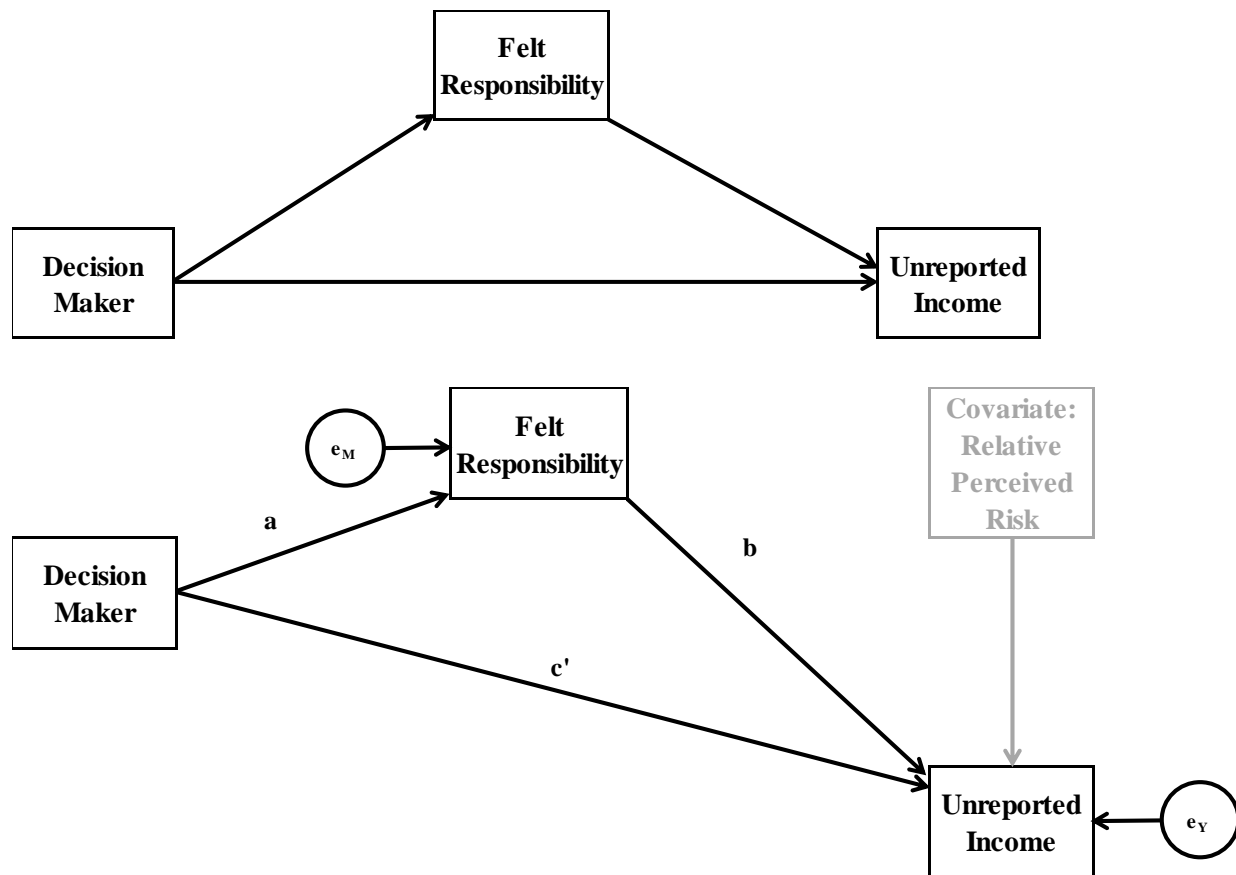


Figure 10: Mediation Model

Notes: Decision Maker is the causal variable [X], Felt Responsibility is the mediator [M], and Unreported Income is the outcome [Y]. a, b, and c' are the regression coefficients in the estimation models of Felt Responsibility and Unreported Income; and  $e_M$  and  $e_Y$  are errors in the estimates of Felt Responsibility and Unreported Income, respectively. The indirect effect of Decision Maker on Unreported Income through Felt Responsibility is ab. The direct effect of Decision Maker on Unreported Income after considering ab is c'. The figure is modified from Hayes (2013, 445) by insertion of variable names into the model.

Table 18 shows the results of the mediation analysis. The analysis includes two regressions and a test of the indirect effect of the manipulated variable on the dependent variable. Panel A presents the first regression, which shows that *Decision Maker* is significantly related to the mediator *Felt Responsibility* ( $p = 0.026$ ) with  $R^2 = 0.146$ . Panel B presents the second regression, which shows that *Unreported Income* is a function of *Relative Perceived Risk* and is significantly related to *Felt Responsibility* ( $p = 0.048$ ) with  $R^2 = 0.503$ . The indirect effect of *Decision Maker* on *Unreported Income*, presented in Panel C, is significant ( $p < 0.05$ ) based on a 95 percent bootstrapped confidence interval using 1,000 iterations.

Hypothesis 1 predicts that decision makers will make riskier tax compliance decisions when decisions are made in a group than when decisions are made individually. Although not formally hypothesized, *Felt Responsibility* may theoretically mediate the effect of *Decision Maker* on the dependent variable, *Unreported Income*. Felt Responsibility theory suggests that *Decision Maker* should influence *Felt Responsibility* (i.e., how responsible participants personally feel for possible outcomes of their decisions), leading a “group” decision maker to feel less responsible for the decision than an “individual” decision maker. As such, participants in the “group” condition should make riskier decisions than those in the “individual” condition. *Decision Maker* is an indicator variable equal to 0 in the Individual condition and equal to 1 in the Group condition. Table 18 Panel A indicates a significant negative relationship between *Decision Maker* and *Felt Responsibility*, signifying that *Felt Responsibility* is significantly lower in the Group condition than the Individual condition. Table 18 Panel B shows that *Felt Responsibility* has a significant negative effect on the dependent variable *Unreported Income*, signifying that *Unreported Income* is significantly greater when *Felt Responsibility* is lower. As

indicated in Panel C of Table 18, the indirect effect of *Decision Maker* on *Unreported Income* is significant with a positive coefficient, thus providing partial support for H1.<sup>38</sup>

### Conclusion

This study examines the effect of decision maker type (whether an individual is the sole decision maker or a group is making the decision) on the riskiness of tax compliance decisions. The study draws upon diffusion of responsibility theory, which suggests that the presence of the group in group decisions diffuses felt responsibility between group members (Dion et al. 1970). Decreased felt responsibility in group decisions leads groups to make riskier decisions compared to when decisions are made individually (Mathes and Kahn 1975). This study predicts that tax compliance decisions made in a group will be riskier than tax compliance decisions made individually. Supplemental analysis suggests that although decision maker type does not directly influence the riskiness of tax compliance decisions, decision maker type does affect riskiness indirectly through feelings of responsibility for possible outcomes of the decision. Group members report significantly lower levels of felt responsibility than individual decision makers. Furthermore, lower levels of felt responsibility lead to riskier tax compliance. The study's findings suggest that a group of decision makers, such as a tax department, may actually make riskier tax compliance decisions together than when compliance decisions are made individually, as merely sharing the decision may decrease each group member's feelings of personal responsibility.

Interpretation of the results is subject to the following limitations. It is possible that the abstract nature of the task may limit the ability of the results to generalize to the different tax

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<sup>38</sup> H2a and H2b cannot be tested because all participants in the *Decision Target-Other* conditions were excluded.

decision-making contexts. However, the study examines one specific factor that differs between tax decision-making contexts: decision maker type. As such, a key strength of this study is the controlled nature of the experimental design. The experimental procedure is designed to be as rigid as possible (e.g., conducted in a behavioral lab using a script, includes detailed task instructions with minimal context), differing only for the manipulated variables. My reason for avoiding overly contextual tax language in this study (e.g., “placing” participants into a role within a tax scenario) is that factors such as the social value placed upon risky tax compliance decisions may differ in an individual tax context compared to other tax contexts, namely the corporate tax context. Thus, using more contextual tax language could have confounded the intended manipulation. Given the vast differences between individual and business tax environments, I chose a clean, minimal design to intentionally minimize the differences and sought only to determine the effect of the specific contextual factors of interest.

This study was also intended to examine the combined effect of decision maker type and decision target on the riskiness of tax compliance decision, predicting that decision maker type will moderate the effect of decision target on riskiness. Individual decision makers are predicted to make riskier decisions for themselves than on behalf of others, and groups are predicted to make riskier decisions for other groups than for their own group. However, these hypotheses could not be tested because all participants in the *Decision Target-Other* conditions were excluded. Future research should examine the influence of decision target on decision riskiness as theory suggests this factor may be important to our understanding of decision making in different tax contexts.

The study attempts to make inroads into the emerging area of behavioral corporate tax research, furthering our understanding of how tax compliance decisions may differ in the

business tax environment compared to individual tax. Due to the complexity and ambiguity of the corporate taxation, few corporate tax decisions may be made by only one individual without input from others such as in corporate tax departments. As such this study contributes to the groundwork for future studies in this area by isolating one of the primary differences between individual and corporate tax decision makers: the type of decision maker.

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## GENERAL CONCLUSION

The three studies in this dissertation examine corporate tax aggressiveness at the decision maker level. The first two studies focus on the individual *judgment* involved in making decisions on behalf of a corporation. Specifically, these two studies examine individual assessments of tax positions based upon tax scenario facts and tax authority. The first study examines the influence of external tax advisor recommendations on the tax aggressiveness of decisions made by in-house corporate tax professionals. The second study examines the judgment and decision making processes of individuals in a corporate tax environment, investigating how individual traits and situational factors interact to affect individual-level tax aggressiveness. The third study extends the investigation of situational factors from individual-level decision making to a group-level analysis, examining decision making in individual and group tax compliance settings.

In the first study, I conduct an experiment with corporate tax directors with a great deal of experience making decisions for their company. Study 1 uses an experiment to create an exchange between two key actors in corporate tax decision making: the in-house corporate decision maker (e.g., tax director) and the third-party external tax advisor. This study investigates the influence of tax advisors on tax directors' judgments, specifically whether the nature of the advice and the identity of the tax advisor (whether from the company's audit firm or a different firm) affect how tax directors weight the advice. Corporate tax directors review a tax scenario, receive a recommendation from the company's tax advisor, and are subsequently asked to provide their assessment of the tax position. Findings suggest that when tax directors are provided with conservative tax advice (i.e., advised *not* to take a client-favorable tax position not clearly supported by the tax authority) and they agree with the conservative advice, the identity

of the tax advisor influences the weight given to the advice. Tax directors in agreement with conservative tax advice weight advice from the audit firm tax advisor (“tax-audit”) more heavily than when advice comes from a tax advisor from a different firm (“tax-nonaudit”). As such, tax directors that agree with conservative advice indicate a smaller likelihood of taking the position when the tax advisor is from the audit firm than when tax advisor is from a different firm.

Overall, findings suggest that even experienced corporate tax decision makers may be influenced by not only by the nature of advice, but also by the identity of the tax advice, a situational factor in the decision environment under corporate management’s control.

The second study continues the examination of individual-level judgment in corporate taxation by delving into the processes underlying evidence evaluation. As Study 1 conveys that advice may directly influence the judgment of high-level corporate tax decision makers, Study 2 continues to examine the influence of the tax advisor, a situational factor, on evaluations made by less experienced decision makers acting as tax department staff within the experiment’s tax scenario. Study 2 also includes an examination of an individual dispositional trait, trait regulatory focus. Study 2 finds that “fit” occurs indirectly between the regulatory focus *state* induced by the tax advisor role (i.e., advocate or overseer) and the decision maker’s *trait* regulatory focus, through the decision maker’s perceptions of client advocacy. Thus, perceived client advocacy (i.e., the degree to which the decision maker perceives the tax advisor to be a client advocate) mediates the influence of tax advisor role on decision maker judgment. Decision makers perceive a company’s tax advisor to have significantly stronger client advocacy when management views the tax advisor as more of an advocate than when management views the tax advisor as an overseer, and perceiving the tax advisor to be more of an advocate (i.e., a stronger promotion state) amplifies the influence of regulatory fit for trait promotion-focused decision

makers. Compared to individuals with a lower trait promotion focus, tax decision makers with a greater trait promotion focus react more strongly to situationally induced promotion focus state.

In addition to findings from Study 1 that tax advisors and advice influence high-level decision makers, Study 2 findings suggest that preliminary evaluations made by staff-level decision makers may be influenced by their superior's view of the tax advisors. Junior staff-level decision makers conduct preliminary evaluations of tax positions given to higher-level decision makers within the corporation, potentially introducing additional unmeasured risk into the tax function. Studies 1 and 2 examine the judgment of decision makers in isolation. Participants in the Study 1 and 2 experiments are provided with a detailed tax scenario and are asked to immerse themselves into assigned roles in which they either receive a recommendation *from* another person (e.g., Study 1) or prepare to send a preliminary recommendation *to* another person (e.g., Study 2). Decision makers in neither of these two studies are actually interacting with other decision makers. Thus Study 3 of this dissertation extends the investigation of corporate tax decision making to a group-level analysis. Additionally, corporate tax aggressiveness has been primarily examined by archival studies which typically calculate tax aggressiveness using corporate level metrics obtained from company financial statements. Thus these studies are largely unable to distinguish decision maker intentions from subjective professional judgment in measures of corporate tax aggressiveness. Study 3 employs a tax reporting task with minimal context and explicitly presented reportable income to examine the riskiness of tax decisions. Removing the judgment element (i.e., evaluation of the tax scenario and tax authority evidence) allows Study 3 to examine the intentional noncompliance decision element of tax aggressiveness.

Findings from Study 3 suggest that decision maker type (i.e., individual decision maker or group decision maker) affects riskiness *indirectly* through feelings of responsibility for possible outcomes of the decision. Group members report significantly lower levels of felt responsibility than individual decision makers. Lower levels of felt responsibility lead to riskier tax compliance. Thus, a group of decision makers, such as a tax department, may actually make riskier tax compliance decisions together than when compliance decisions are made individually, as merely sharing the decision may decrease each group member's feelings of personal responsibility.

Results reported in this dissertation collectively suggest that both situational factors in the corporate tax environment and individual characteristics influence the tax aggressiveness of individual-level tax judgment and decision making. Corporate tax decision makers that wish to reduce unmeasured risk should consider how components of the decision making environment (e.g., situational factors, dispositional characteristics, advice, and advisor characteristics) influence interpretation of evidence, potentially impacting objectivity. This dissertation contains studies which are some of the first to employ experimental methods to examine *why* these specific components of the decision making environment influence the tax aggressiveness of decision maker judgment. Future research should continue to bridge the primarily archival corporate tax literature with other literature streams such as psychology-based behavioral research to further examine the underlying judgment and decision making processes of individuals acting on behalf of the corporation.

## **APPENDIX A: STUDY 1 TABLES**

Table 1: Demographics

(n = 119)

|   | <b>n</b> | <b>%</b> |
|---|----------|----------|
| <b>Job Title</b>  |          |          |
| Vice President, Tax   | 33       | 27.7     |
| Tax Director  | 51       | 42.9     |
| Tax Manager   | 35       | 29.4     |
| <b>Work Experience in Taxation</b>  |          |          |
| More than 7 years*  | 115      | 96.7     |
| 5 – 7 Years   | 1        | 0.8      |
| 3 – 5 Years   | 1        | 0.8      |
| No Response   | 2        | 1.7      |
| <p>*Participants with more than 7 years of experience were asked to specify total years of experience. 96 participants responded with a mean (standard deviation) of 23.9 years (7.87).</p> |          |          |
| <b>Experience in Public Accounting</b>  |          |          |
| Yes – Big 4 Public Accounting Firm  | 77       | 64.7     |
| Yes – Other Public Accounting Firm  | 11       | 9.2      |
| No  | 29       | 24.4     |
| No Response   | 2        | 1.7      |
| <b>Current Employer Company Type</b>  |          |          |
| Multinational (US-Based)  | 95       | 79.9     |
| Multinational (Foreign-Based)   | 6        | 5.0      |
| Domestic US (Multistate)  | 18       | 15.1     |
| Domestic US (Single State)  | 0        | 0.0      |
| <b>Public Accounting Firm Audits Company's Financial Statements</b>   |          |          |
| Yes   | 118      | 99.2     |
| No  | 0        | 0.0      |
| No Response   | 1        | 0.8      |
| <b>Company's Provision of Tax Services</b>  |          |          |
| Different Firms for Tax and Audit Services  | 66       | 55.5     |
| Same Firm for Tax and Audit Services  | 52       | 43.7     |
| No Response   | 1        | 0.8      |
| <b>Company's Percentage of Tax Services Outsourced (Not Conducted In-House)</b>   |          |          |
| <p>118 participants responded with a mean (standard deviation) of 33.0 percent (22.54).</p>   |          |          |

**(n = 119)**

|               | <b>n</b> | <b>%</b> |
|---------------|----------|----------|
| <b>Gender</b> |          |          |
| Male          | 78       | 65.5     |
| Female        | 37       | 31.1     |
| No Response   | 4        | 3.4      |
| <b>Age</b>    |          |          |
| Less than 35  | 5        | 4.2      |
| 35 – 44       | 30       | 25.2     |
| 45 – 54       | 38       | 31.9     |
| 55 – 64       | 36       | 30.3     |
| 65 and over   | 4        | 3.4      |
| No Response   | 6        | 5.0      |

Table 2: Main Analysis

**Panel A: Descriptive Statistics by Nature of Advice and Tax Advisor Identity: Means (Standard Deviation)**

|                                      | Conservative Advice |                  |                  | Aggressive Advice |                  |                  | All Advice       |                  |                  |
|--------------------------------------|---------------------|------------------|------------------|-------------------|------------------|------------------|------------------|------------------|------------------|
|                                      | Tax-<br>Nonaudit    | Tax-<br>Audit    | Total            | Tax-<br>Nonaudit  | Tax-<br>Audit    | Total            | Tax-<br>Nonaudit | Tax-<br>Audit    | Total            |
| <b>N</b>                             | 29                  | 33               | 62               | 30                | 27               | 57               | 59               | 60               | 119              |
| <b>Percent Include</b>               | 51.7%               | 60.6%            | 56.5%            | 93.3%             | 88.9%            | 91.2%            | 72.9%            | 73.3%            | 73.1%            |
| <b>Likelihood</b>                    | 0.503<br>(0.310)    | 0.500<br>(0.354) | 0.502<br>(0.331) | 0.807<br>(0.212)  | 0.770<br>(0.254) | 0.789<br>(0.231) | 0.658<br>(0.304) | 0.622<br>(0.339) | 0.639<br>(0.321) |
| <b>Weight of Advice</b>              | 0.293<br>(0.387)    | 0.328<br>(0.432) | 0.312<br>(0.409) | 0.575<br>(0.366)  | 0.556<br>(0.335) | 0.566<br>(0.349) | 0.436<br>(0.400) | 0.431<br>(0.405) | 0.433<br>(0.400) |
| <b>IRS Permits</b>                   | 0.386<br>(0.212)    | 0.409<br>(0.220) | 0.398<br>(0.215) | 0.567<br>(0.167)  | 0.489<br>(0.217) | 0.530<br>(0.195) | 0.478<br>(0.209) | 0.445<br>(0.220) | 0.461<br>(0.215) |
| <b>Perceived<br/>Client Advocacy</b> | 42.17<br>(7.06)     | 38.58<br>(9.31)  | 40.26<br>(8.46)  | 41.27<br>(8.33)   | 41.63<br>(8.50)  | 41.44<br>(8.34)  | 41.71<br>(7.68)  | 39.95<br>(9.01)  | 40.82<br>(8.39)  |
| <b>Tax Risk Preference</b>           | 4.66<br>(1.79)      | 4.36<br>(1.37)   | 4.50<br>(1.57)   | 4.17<br>(1.02)    | 4.07<br>(1.27)   | 4.12<br>(1.14)   | 4.41<br>(1.45)   | 4.23<br>(1.32)   | 4.32<br>(1.38)   |
| <b>Agreement with<br/>Advice</b>     | 0.586<br>(0.501)    | 0.303<br>(0.467) | 0.435<br>(0.500) | 0.967<br>(0.183)  | 0.778<br>(0.424) | 0.877<br>(0.331) | 0.780<br>(0.418) | 0.517<br>(0.504) | 0.647<br>(0.480) |

**Panel B: Results of ANOVA: Effect of Tax Advisor Identity on Weight of Advice**

| Source of Variation                     | Sum of Squares | df  | Mean Square | F      | p       |
|---|----------------|-----|-------------|--------|---------|
| Nature of Advice                        | 1.918          | 1   | 1.918       | 12.987 | < 0.000 |
| Tax Advisor Identity                    | 0.002          | 1   | 0.002       | 0.012  | 0.912   |
| Nature of Advice x Tax Advisor Identity | 0.022          | 1   | 0.022       | 0.149  | 0.700   |
| Error                                   | 16.985         | 115 | 0.148       |        |         |

**Panel C: Simple Effects for Weight of Advice**

| Source of Variation                            | Sum of Squares | df | Mean Square | F     | p     |
|--|----------------|----|-------------|-------|-------|
| Conservative (H1a): Tax-Nonaudit vs. Tax-Audit | 0.019          | 1  | 0.019       | 0.129 | 0.720 |
| Aggressive (H1b): Tax-Nonaudit vs. Tax-Audit   | 0.005          | 1  | 0.005       | 0.036 | 0.849 |

Notes: See Table 8 for variable definitions. All p-values are two-tailed.



Table 3: Supplemental Analysis of Weight of Advice when Agreement with Advice is High

**Panel A: Descriptive Statistics by Nature of Advice and Tax Advisor Identity: Means (Standard Deviation)**

|                                  | Conservative Advice |                  |                  | Aggressive Advice |                  |                  | All Advice       |                  |                  |
|----------------------------------|---------------------|------------------|------------------|-------------------|------------------|------------------|------------------|------------------|------------------|
|                                  | Tax-Nonaudit        | Tax-Audit        | Total            | Tax-Nonaudit      | Tax-Audit        | Total            | Tax-Nonaudit     | Tax-Audit        | Total            |
| <b>N</b>                         | 17                  | 10               | 27               | 29                | 21               | 50               | 46               | 31               | 77               |
| <b>Percent Include</b>           | 23.5%               | 0%               | 14.8%            | 96.6%             | 100%             | 98.0%            | 69.6%            | 67.7%            | 68.8%            |
| <b>Likelihood</b>                | 0.353<br>(0.285)    | 0.120<br>(0.162) | 0.267<br>(0.269) | 0.817<br>(0.207)  | 0.848<br>(0.112) | 0.830<br>(0.173) | 0.646<br>(0.327) | 0.613<br>(0.369) | 0.632<br>(0.342) |
| <b>Weight of Advice</b>          | 0.461<br>(0.406)    | 0.800<br>(0.270) | 0.586<br>(0.393) | 0.595<br>(0.356)  | 0.619<br>(0.281) | 0.605<br>(0.324) | 0.545<br>(0.377) | 0.677<br>(0.286) | 0.598<br>(0.347) |
| <b>IRS Permits</b>               | 0.300<br>(0.226)    | 0.230<br>(0.170) | 0.274<br>(0.207) | 0.579<br>(0.154)  | 0.552<br>(0.181) | 0.568<br>(0.165) | 0.476<br>(0.227) | 0.448<br>(0.232) | 0.465<br>(0.228) |
| <b>Perceived Client Advocacy</b> | 42.24<br>(6.63)     | 33.30<br>(9.76)  | 38.93<br>(8.91)  | 41.76<br>(8.02)   | 42.81<br>(8.78)  | 42.20<br>(8.28)  | 41.93<br>(7.46)  | 39.74<br>(10.02) | 41.05<br>(8.59)  |
| <b>Tax Risk Preference</b>       | 4.18<br>(1.91)      | 3.70<br>(1.77)   | 4.00<br>(1.84)   | 4.14<br>(1.03)    | 4.14<br>(1.24)   | 4.14<br>(1.11)   | 4.15<br>(1.40)   | 4.00<br>(1.41)   | 4.09<br>(1.40)   |

**Panel B: Results of ANOVA: Effect of Tax Advisor Identity on Weight of Advice**

| Source of Variation                     | Sum of Squares | df | Mean Square | F     | p     |
|---|----------------|----|-------------|-------|-------|
| Nature of Advice                        | 0.009          | 1  | 0.009       | 0.079 | 0.779 |
| Tax Advisor Identity                    | 0.548          | 1  | 0.548       | 4.750 | 0.033 |
| Nature of Advice x Tax Advisor Identity | 0.412          | 1  | 0.412       | 3.568 | 0.063 |
| Error                                   | 8.425          | 73 | 0.115       |       |       |

**Panel C: Simple Effects for Weight of Advice**

| Source of Variation                      | Sum of Squares | df | Mean Square | F     | p     |
|--|----------------|----|-------------|-------|-------|
| Conservative: Tax-Nonaudit vs. Tax-Audit | 0.724          | 1  | 0.724       | 6.277 | 0.014 |
| Aggressive: Tax-Nonaudit vs. Tax-Audit   | 0.007          | 1  | 0.007       | 0.062 | 0.804 |

Notes:

See Table 8 for variable definitions. All p-values are two-tailed.

Table 4: Supplemental Analysis of Weight of Advice when Agreement with Advice is Low

**Descriptive Statistics by Nature of Advice and Tax Advisor Identity: Means (Standard Deviation)**

|                                      | Conservative Advice |                  |                  | Aggressive Advice |                  |                  | All Advice       |                  |                  |
|--------------------------------------|---------------------|------------------|------------------|-------------------|------------------|------------------|------------------|------------------|------------------|
|                                      | Tax-<br>Nonaudit    | Tax-<br>Audit    | Total            | Tax-<br>Nonaudit  | Tax-<br>Audit    | Total            | Tax-<br>Nonaudit | Tax-<br>Audit    | Total            |
| <b>N</b>                             | 12                  | 23               | 35               | 1                 | 6                | 7                | 13               | 29               | 42               |
| <b>Percent Include</b>               | 91.7%               | 87.0%            | 88.6%            | 0.0%              | 50.0%            | 42.9%            | 84.6%            | 79.3%            | 81.0%            |
| <b>Likelihood</b>                    | 0.717<br>(0.204)    | 0.665<br>(0.277) | 0.683<br>(0.253) | 0.500<br>(0.000)  | 0.500<br>(0.415) | 0.500<br>(0.379) | 0.700<br>(0.204) | 0.631<br>(0.309) | 0.652<br>(0.280) |
| <b>Weight of Advice</b>              | 0.056<br>(0.192)    | 0.123<br>(0.311) | 0.100<br>(0.275) | 0.000<br>(0.000)  | 0.333<br>(0.438) | 0.286<br>(0.419) | 0.051<br>(0.185) | 0.167<br>(0.343) | 0.131<br>(0.305) |
| <b>IRS Permits</b>                   | 0.508<br>(0.108)    | 0.489<br>(0.194) | 0.494<br>(0.168) | 0.200<br>(0.000)  | 0.267<br>(0.197) | 0.257<br>(0.181) | 0.485<br>(0.134) | 0.441<br>(0.211) | 0.455<br>(0.190) |
| <b>Perceived<br/>Client Advocacy</b> | 42.08<br>(7.93)     | 40.87<br>(8.30)  | 41.29<br>(8.08)  | 27.00<br>(0.00)   | 37.50<br>(6.44)  | 36.00<br>(7.10)  | 40.92<br>(8.67)  | 40.17<br>(7.97)  | 40.40<br>(8.09)  |
| <b>Tax Risk Preference</b>           | 5.33<br>(1.37)      | 4.65<br>(1.07)   | 4.89<br>(1.21)   | 5.00<br>(0.00)    | 3.83<br>(1.47)   | 4.00<br>(1.41)   | 5.31<br>(1.32)   | 4.48<br>(1.18)   | 4.74<br>(1.27)   |

Notes:

See Table 8 for variable definitions.

Participants receiving aggressive advice were more likely to agree with the aggressive advice than disagree. No further analysis conducted for Agreement with Advice = Low due to cell size in the Aggressive Advice condition.

Table 5: Supplemental Analysis of Likelihood

**Panel A: Likelihood by Nature of Advice and Tax Advisor Identity: Means (Standard Deviation)**

|                   | Conservative Advice |                  |                  | Aggressive Advice |                  |                  | All Advice       |                  |                  |
|-------------------|---------------------|------------------|------------------|-------------------|------------------|------------------|------------------|------------------|------------------|
|                   | Tax-Nonaudit        | Tax-Audit        | Total            | Tax-Nonaudit      | Tax-Audit        | Total            | Tax-Nonaudit     | Tax-Audit        | Total            |
| <b>N</b>          | 29                  | 33               | 62               | 30                | 27               | 57               | 59               | 60               | 119              |
| <b>Likelihood</b> | 0.503<br>(0.310)    | 0.500<br>(0.354) | 0.502<br>(0.331) | 0.807<br>(0.212)  | 0.770<br>(0.254) | 0.789<br>(0.231) | 0.658<br>(0.304) | 0.622<br>(0.339) | 0.639<br>(0.321) |

**Panel B: Results of ANOVA: Effect of Tax Advisor Identity on Likelihood**

| Source of Variation                     | Sum of Squares | df  | Mean Square | F      | p       |
|---|----------------|-----|-------------|--------|---------|
| Nature of Advice                        | 2.434          | 1   | 2.434       | 28.965 | < 0.000 |
| Tax Advisor Identity                    | 0.012          | 1   | 0.012       | 0.139  | 0.710   |
| Nature of Advice x Tax Advisor Identity | 0.008          | 1   | 0.008       | 0.095  | 0.758   |
| Error                                   | 9.665          | 115 | 0.084       |        |         |

**Panel C: Simple Effects for Likelihood**

| Source of Variation                      | Sum of Squares | df | Mean Square | F     | p     |
|--|----------------|----|-------------|-------|-------|
| Conservative: Tax-Nonaudit vs. Tax-Audit | 0.000          | 1  | 0.000       | 0.002 | 0.963 |
| Aggressive: Tax-Nonaudit vs. Tax-Audit   | 0.019          | 1  | 0.019       | 0.023 | 0.638 |

Notes:

See Table 8 for variable definitions.

All p-values are two-tailed.

Table 6: Supplemental Analysis of Likelihood when Agreement with Advice is High

**Panel A: Likelihood by Nature of Advice and Tax Advisor Identity: Means (Standard Deviation)**

|                   | Conservative Advice |                  |                  | Aggressive Advice |                  |                  | All Advice       |                  |                  |
|-------------------|---------------------|------------------|------------------|-------------------|------------------|------------------|------------------|------------------|------------------|
|                   | Tax-<br>Nonaudit    | Tax-<br>Audit    | Total            | Tax-<br>Nonaudit  | Tax-<br>Audit    | Total            | Tax-<br>Nonaudit | Tax-<br>Audit    | Total            |
| <b>N</b>          | 17                  | 10               | 27               | 29                | 21               | 50               | 46               | 31               | 77               |
| <b>Likelihood</b> | 0.353<br>(0.285)    | 0.120<br>(0.162) | 0.267<br>(0.269) | 0.817<br>(0.207)  | 0.848<br>(0.112) | 0.830<br>(0.173) | 0.646<br>(0.327) | 0.613<br>(0.369) | 0.632<br>(0.342) |

**Panel B: Results of ANOVA: Effect of Tax Advisor Identity on Likelihood**

| Source of Variation                     | Sum of Squares | df | Mean Square | F       | p       |
|---|----------------|----|-------------|---------|---------|
| Nature of Advice                        | 5.897          | 1  | 5.897       | 143.865 | < 0.000 |
| Tax Advisor Identity                    | 0.170          | 1  | 0.170       | 4.155   | 0.045   |
| Nature of Advice x Tax Advisor Identity | 0.288          | 1  | 0.288       | 7.021   | 0.010   |
| Error                                   | 2.992          | 73 | 0.041       |         |         |

**Panel C: Simple Effects for Likelihood**

| Source of Variation                      | Sum of Squares | df | Mean Square | F     | p     |
|--|----------------|----|-------------|-------|-------|
| Conservative: Tax-Nonaudit vs. Tax-Audit | 0.342          | 1  | 0.342       | 8.335 | 0.005 |
| Aggressive: Tax-Nonaudit vs. Tax-Audit   | 0.011          | 1  | 0.011       | 0.274 | 0.602 |

Notes:

See Table 8 for variable definitions.

All p-values are two-tailed.

Table 7: Supplemental Analysis of Likelihood when Agreement with Advice is Low

**Likelihood by Nature of Advice and Tax Advisor Identity: Means (Standard Deviation)**

|                   | Conservative Advice |                  |                  | Aggressive Advice |                  |                  | All Advice       |                  |                  |
|-------------------|---------------------|------------------|------------------|-------------------|------------------|------------------|------------------|------------------|------------------|
|                   | Tax-<br>Nonaudit    | Tax-<br>Audit    | Total            | Tax-<br>Nonaudit  | Tax-<br>Audit    | Total            | Tax-<br>Nonaudit | Tax-<br>Audit    | Total            |
| <b>N</b>          | 12                  | 23               | 35               | 1                 | 6                | 7                | 13               | 29               | 42               |
| <b>Likelihood</b> | 0.717<br>(0.204)    | 0.665<br>(0.277) | 0.683<br>(0.253) | 0.500<br>(0.000)  | 0.500<br>(0.415) | 0.500<br>(0.379) | 0.700<br>(0.204) | 0.631<br>(0.309) | 0.652<br>(0.280) |

Notes:

See Table 8 for variable definitions.

Participants receiving aggressive advice were more likely to agree with the aggressive advice than disagree. No further analysis conducted for Agreement with Advice = Low due to cell size in the Aggressive Advice condition.

Table 8: Variable Definitions

|                                  |  |
|----------------------------------|--|
| <b>Nature of Advice</b>          | Nature of Advice is manipulated as the type of tax position recommended by Maylor Corp’s tax advisor. In the <i>Conservative</i> condition, Maylor Corp’s tax advisor recommends that the company <u>should not</u> include the supplies in the R&D credit calculation. In the <i>Aggressive</i> condition, Maylor Corp’s tax advisor recommends that the company <u>should</u> include the supplies in the R&D credit calculation.  |
| <b>Tax Advisor Identity</b>      | Tax Advisor Identity is manipulated by describing the corporation’s tax advisor as either from the same public accounting firm that audits the corporation’s financial statements ( <i>Tax-Audit</i> ) or from a different public accounting firm ( <i>Tax-Nonaudit</i> ).   |
| <b>Percent Include</b>           | Participants are asked, “What do you think Maylor Corp should do?” Percent Include is measured as the percentage of participants that indicate that “Maylor Corp <u>should</u> include the UltraX supplies as qualified research expenses in the R&D Credit calculation.”  |
| <b>Likelihood</b>                | Likelihood is measured by asking, “What is the likelihood that you would include the UltraX supplies as qualified research expenses for Maylor Corp’s Research & Development Credit?” Likelihood uses an eleven-point scale with labeled points ranging from 0% “Not At All Likely” to 100% “Extremely Likely.” Greater likelihood of including the expenses represents greater tax aggressiveness.  |
| <b>Weight of Advice</b>          | Weight of Advice = $ (Likelihood - Initial Anchor)  /  (Recommendation - Initial Anchor) $ . Initial Anchor is the 60% tax department staff preliminary opinion. Recommendation is 100% for aggressive advice and 0% for conservative advice. Weight of Advice values for Likelihood assessments falling outside the range bounded by the tax advisor’s recommendation and the initial anchor are adjusted to zero.  |
| <b>IRS Permits</b>               | IRS Permits is measured by asking participants, “If this position was examined by the IRS, what is the likelihood that the IRS would permit the position that the UltraX supplies are qualified research expenses for Maylor Corp’s Research & Development Credit?” IRS Permits uses an eleven-point scale with labeled points ranging from 0% “Not At All Likely” to 100% “Extremely Likely.” Lower perceived likelihood that the IRS would permit the tax position of including the expenses represents greater perceived riskiness of the tax position. |
| <b>Perceived Client Advocacy</b> | Client Advocacy is measured as the sum of a nine item scale adapted from the Mason and Levy (2001) measure of client advocacy. Greater Client Advocacy scores reflect a stronger belief that the tax advisor in the experimental scenario is a client advocate.  |

|                              |   |
|------------------------------|---|
| <b>Tax Risk Preference</b>   | Tax Risk Preference is measured by asking “How certain would you want to be of your tax position before including the UltraX supplies as qualified research expenses for the R&D Credit?” The item uses an eleven-point scale with labeled points ranging from 0% “Not At All Certain” to 100% “Extremely Certain.” Responses are reverse coded such that a greater score reflects a greater risk preference (i.e., a preference for more uncertainty). |
| <b>Agreement with Advice</b> | Agreement is measured by asking participants, “To what extent do you agree or disagree with the recommendation of the external tax professionals?” Agreement uses a seven-point Likert-type scale with labeled points ranging from 1 “Strongly Disagree” to 7 “Strongly Agree.” Responses are dichotomized into <i>High</i> or <i>Low</i> Agreement with Advice.  |

## **APPENDIX B: STUDY 1 EXPERIMENTAL MATERIALS**



Condition 1: Tax-Nonaudit / Conservative

**[SCREEN 1]**

**Explanation of Research**

Title of Project: Corporate Tax Decision Makers

Principal Investigator: Bonnie Brown

Faculty Supervisor: Vicky Arnold

You are being invited to take part in a research project conducted by Bonnie Brown, Doctoral Candidate, and Dr. Vicky Arnold, Faculty Supervisor. You will be asked to answer questions that will take about 20 minutes of your time. The purpose of this research is to examine judgments by corporate tax decision makers. You will be asked to read a tax scenario involving a hypothetical corporation. You will then be provided with some tax authority guidance and be asked to answer questions about the tax scenario.

Please note that participation in this study is completely voluntary and your responses will be completely anonymous. If you decide to participate, you have the right to withdraw your consent or discontinue participation at any time. There are no anticipated potential risks associated with this study. You must be 18 years of age or older to take part in this research study.

If you have questions, concerns, or complaints you may contact: Bonnie Brown, Doctoral Candidate, Kenneth G. Dixon School of Accounting, College of Business Administration, (407) 823-1478 or by email at [bonnie.brown@ucf.edu](mailto:bonnie.brown@ucf.edu) or Dr. Vicky Arnold, Faculty Supervisor, Kenneth G. Dixon School of Accounting, College of Business Administration, at (407) 823-3192 or by email at [vicky.arnold@ucf.edu](mailto:vicky.arnold@ucf.edu).

Since this research involves human participants, it has been reviewed and approved by the Institutional Review Board (IRB) at the University of Central Florida. For information about the rights of people who take part in research, please contact: Institutional Review Board, University of Central Florida, Office of Research & Commercialization, 12201 Research Parkway, Suite 501, Orlando, FL 32826-3246 or by telephone at (407) 823-2901.

**By clicking ">>" you are indicating that you wish to participate in this study.**

[SCREEN 2]

[Screening Questions]

**Before we get started, please answer a few questions about yourself. These questions relate to your experiences while employed in-house by a company. Please note these questions are not asking about any experience you may have had working for a public accounting firm.**

Do you have experience making in-house tax decisions for a company?

- Yes
- No

Have you been responsible for the in-house supervision of a company's income tax return preparation and filing?

- Yes
- No

Have you researched income tax matters on behalf of a company for which you worked?

- Yes
- No

Have you conducted tax planning on behalf of a company for which you worked?

- Yes
- No

Have you prepared or reviewed a company's tax provision calculations while you were employed in-house by that company?

- Yes
- No

**[SCREEN 3]**

**YOUR TASK**

As a participant in this study, you will be asked to read a hypothetical tax scenario and then respond to questions related to the scenario, share your attitudes and opinions in general, and provide demographic information. We ask that you place yourself into the role of an in-house Tax Director employed by a hypothetical corporation, Maylor Corp. Over the next several screens you will read background information about Maylor Corp, your role as Maylor Corp's Tax Director, and a hypothetical tax research project. We anticipate it will take about 10 minutes to read through this information. We sincerely appreciate receiving input from individuals with your level of expertise, and your responses are very important to us. Thank you in advance for your time!

**Please note that the first few screens will require reading. The remaining screens will be mostly questions.**

After you have finished reading, please click below to continue to the next screen.

[SCREEN 4]

### **MAYLOR CORP & TAX DIRECTOR ROLE**

Maylor Corp is a publicly traded manufacturing company with headquarters in the United States. The company has operations in six U.S. states and also in a few other countries; consequently, the company files tax returns with numerous taxing authorities. Over the past several years, Maylor Corp has averaged annual gross revenue of around \$200 million. Maylor Corp historically has had taxable income, and it does not have any net operating loss carryforwards. The GAAP effective tax rate generally hovers around 30 percent.

Again, please envision yourself in the role of Maylor Corp's Tax Director. You have worked as Maylor Corp's Tax Director for three years. As Tax Director, you lead tax planning and tax compliance for Maylor Corp and manage a team of dedicated staff. You work on matters related to the company's federal, international, and state income tax returns, as well as franchise, use, and property taxes. In addition to tax compliance responsibilities, a significant portion of your time is spent on tax planning, tax authority audits of federal and state income tax filings, and accounting for income taxes for financial statement purposes. You are satisfied with your work environment at Maylor Corp and feel that the company provides you with the resources necessary to meet your job responsibilities. Further, your opinion appears to be valued within the company and you currently have no plans to leave Maylor Corp.

You report to the CFO and work with both the management team within Maylor Corp as well as third-party tax professionals external to Maylor Corp. For the last eight years, Maylor Corp's tax returns have been prepared and signed by Firm A, a Big 4 accounting firm. **Sizable research projects are often conducted in-house by Maylor Corp's tax department and then reviewed by the external tax professionals at Firm A. Maylor Corp's financial statements are audited by Firm B, a different Big 4 accounting firm.**

After you have finished reading, please click below to continue to the next screen.

[SCREEN 5]

**CURRENT PROJECT**

You are presently working on a project to review the methods that have been used in Maylor Corp's Research and Development (R&D) Credit calculations. Maylor Corp currently takes the R&D Credit, but the calculation is based upon an analysis conducted several years ago. After consultation with the CFO, it was decided that the R&D Credit calculations should be updated. In particular, you are considering how Maylor Corp should treat supplies related to a research and development project conducted during the current tax year for UltraX, a new prototype product.

ULTRAX SUPPLIES

Maylor Corp has spent \$4.2 million on a project to develop a new prototype product, called UltraX. Included in this amount is \$950,000 of supplies. Maylor Corp had originally purchased the supplies for production of the old model product, but later allocated these supplies to the UltraX project. Maylor Corp has not capitalized or depreciated the cost of these supplies. The supplies were used in the development of UltraX; however, none of the supplies were damaged by the development process and thus were available for reuse during subsequent production of UltraX. Following successful testing, Maylor Corp manufactured UltraX and is now selling it to customers. **Including the cost of the UltraX supplies in the R&D Credit calculation would be advantageous for tax purposes.** You need to determine if the UltraX supplies can be included as qualified research expenses in the R&D Credit calculation.

You assign the task of gathering relevant tax authority to Maylor Corp's tax department staff. Once you review the preliminary opinion of your tax department staff, **you will send this information to the tax professionals at Firm A, a Big 4 accounting firm which is not Maylor Corp's audit firm, and they will provide their recommendation on the treatment of UltraX supplies for the R&D credit calculation.** You will then evaluate the treatment of UltraX supplies for the R&D credit calculation and make your decision.

After you have finished reading, please click below to continue to the next screen.

[SCREEN 6]

### **TAX DEPARTMENT STAFF PRELIMINARY OPINION**

The tax department staff has evaluated whether or not the UltraX supplies should be included as qualified research expenses for the R&D Credit. After considering the internal revenue code, regulations, and other authority, Maylor Corp's tax department staff concludes that the primary uncertainty regarding the treatment of the supplies relates to whether the supplies were "*used* in the conduct of qualified research." **They estimate that, should Maylor take the position that the supplies are a qualified research expense, there is a 60% likelihood that the position would be successfully upheld.** The relevant authority related to whether supplies were "used" or not is briefly summarized below:

Internal Revenue Code Section 41 indicates that qualified research expenses can include in-house research expenses, including any amount paid or incurred for supplies *used in the conduct of qualified research*. Regulation §1.41-2(b) says that supplies are used in the conduct of qualified research if they are used in the performance of qualified services by an employee of the taxpayer; however, expenditures for supplies that are indirect research expenditures or general and administrative expenses do not qualify. The rules do not define indirect research expenditures. The IRS has adopted the position that "used" means consumed, though nowhere in the tax rules is used defined as consumed. The courts have thus far largely remained silent on the definition of "used." Instead, courts have focused on identifying the specific business component for which the company is conducting qualified research, and then determining if supplies are used in that specific business component or a different business component.

After receiving this information from your tax department, you next confer with your external tax advisor, Firm A. Please click below to continue to the next screen to receive Firm A's recommendation.

[SCREEN 7]

### **RECOMMENDATION FROM EXTERNAL TAX PROFESSIONALS**

Thank you for asking us for advice regarding your R&D Credit. We always appreciate the opportunity to provide tax services to Maylor Corp. We have read through the information that your tax department staff compiled regarding the UltraX supplies and the calculation of Maylor Corp's R&D Credit. In evaluating the possibility of including the UltraX supplies as qualified research expenses for the R&D Credit, it may be helpful to consider the potential disclosure requirements both for tax and financial statement purposes. Generally, disclosure is required in the tax return if a tax position has a reasonable basis but not substantial authority; however, in this case disclosure (on Schedule UTP) would be required if a reserve is recorded in the financial statements for taking the new tax position. Essentially, the disclosure threshold for including the UltraX supplies in the R&D Credit would be the more-likely-than-not threshold for both tax and financial statement purposes.

There is a great deal of ambiguity in the tax rules on the topic of supplies as qualified research expenses for the Research and Development Credit, thus the decision regarding the UltraX supplies should depend in part upon your interpretation of the risk involved and your comfort level. Given the facts that you provided, it appears that the inclusion of the UltraX supplies as qualified expenses for the R&D Credit will hinge on whether these supplies were "used" in qualified research. The Courts have not sufficiently defined the term "used" as it pertains to supplies and the R&D Credit. The Courts have not addressed whether reused supplies qualify, nor is it clear whether supplies that were not consumed qualify as "used" during research and development activities. **Given the inconclusive authority, our recommendation is that Maylor Corp SHOULD NOT include the UltraX supplies in the R&D credit calculation.** You may however conclude that you are comfortable with including them in the calculation.

After you have finished reading, please click below to continue to the next page.

[SCREEN 8]

**RESPONSE SECTION I: Please respond to the following questions as if you are Maylor Corp's Tax Director.**

What is the likelihood that you would include the UltraX supplies as qualified research expenses for Maylor Corp's Research & Development Credit?

|                         |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                     |
|-------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|---------------------|
| Not<br>At All<br>Likely |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | Extremely<br>Likely |
| 0%                      | 10%                   | 20%                   | 30%                   | 40%                   | 50%                   | 60%                   | 70%                   | 80%                   | 90%                   | 100%                  |                     |
| <input type="radio"/>   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |                     |

Continuing to envision yourself as Maylor Corp's Tax Director, what do you think Maylor Corp should do?

- Maylor Corp should include the UltraX supplies as qualified research expenses in the R&D Credit calculation.
- Maylor Corp should not include the UltraX supplies qualified research expenses in the R&D Credit calculation.

If this position was examined by the IRS, what is the likelihood that the IRS would permit the position that the UltraX supplies are qualified research expenses for Maylor Corp's Research & Development Credit?

|                         |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                     |
|-------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|---------------------|
| Not<br>At All<br>Likely |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | Extremely<br>Likely |
| 0%                      | 10%                   | 20%                   | 30%                   | 40%                   | 50%                   | 60%                   | 70%                   | 80%                   | 90%                   | 100%                  |                     |
| <input type="radio"/>   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |                     |



To what extent do you agree or disagree with the following statement: The advice from Firm A is what I was expecting.

- Strongly Agree
- Agree
- Somewhat Agree
- Neither Agree nor Disagree
- Somewhat Disagree
- Disagree
- Strongly Disagree

[SCREEN 9]

Please continue to respond to the following questions as if you are Maylor Corp's Tax Director.

How certain would you want to be of your tax position before including the UltraX supplies as qualified research expenses for the R&D Credit?

| Not<br>At All<br>Certain |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | Extremely<br>Certain  |
|--------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 0%                       | 10%                   | 20%                   | 30%                   | 40%                   | 50%                   | 60%                   | 70%                   | 80%                   | 90%                   | 100%                  |                       |
| <input type="radio"/>    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

To what extent do you agree or disagree with the recommendation of the external tax professionals?

- Strongly Agree
- Agree
- Somewhat Agree
- Neither Agree nor Disagree
- Somewhat Disagree
- Disagree
- Strongly Disagree

How confident are you in the advice provided by the external tax professionals at Firm A?

- Extremely Confident
- Moderately Confident
- Somewhat Confident
- Slightly Confident
- Not At All Confident

**[SCREEN 10]**

**RESPONSE SECTION II:** In this study, Maylor Corp engages external tax professionals at Firm A, which is not Maylor Corp’s audit firm, to assist with the tax work. Please answer the following items as you think a corporation’s external tax professionals would respond in arrangements such as this when the corporation’s external tax professionals are not from the audit firm.]

*[Client Advocacy]*

|   | <b>Strongly Disagree</b> | <b>Disagree</b>       | <b>Somewhat Disagree</b> | <b>Neither Agree nor Disagree</b> | <b>Somewhat Agree</b> | <b>Agree</b>          | <b>Strongly Agree</b> |
|---|--------------------------|-----------------------|--------------------------|-----------------------------------|-----------------------|-----------------------|-----------------------|
| In an instance where no judicial authority exists with respect to an issue and where the Code and Regulations are ambiguous, tax professionals should believe that the taxpayer is entitled to take the most favorable tax treatment. | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Generally speaking, tax professionals' loyalties should be first to the tax system, then to the taxpayer.   | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Tax professionals should apply ambiguous tax law to the taxpayer's benefit.   | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| When examining a tax return, tax professionals should point out to taxpayers reasonable positions they could have taken which would have contributed to minimizing their tax liability.   | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Tax professionals should believe it is important to encourage the taxpayer to pay the least amount of taxes payable.  | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Tax professionals should always interpret unclear/ambiguous laws in favor of the taxpayer.  | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Tax professionals should use trends in the law by trying to establish a pattern of more favorable treatment for the taxpayer and then extending the pattern to the taxpayer's position.   | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Where no judicial authority exists with respect to an issue, tax professionals should feel that the taxpayer is entitled to take the most favorable tax treatment.  | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Tax professionals should structure transactions in ways that yield the best tax result, even if the law is unclear in an area.  | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

**[SCREEN 11]**

[Manipulation Check Questions]

Regarding your role as Maylor Corp's Tax Director, which best describes the external tax professionals that provided advice about the UltraX supplies?

- Tax professionals at Firm A, which is also Maylor Corp's audit firm
- Tax professionals at Firm A, which is not Maylor Corp's audit firm

Which of the following is more accurate based upon the tax scenario?

- You were advised by the tax professionals at Firm A that Maylor Corp SHOULD include the UltraX supplies in the R&D Credit calculation.
- You were advised by the tax professionals at Firm A that Maylor Corp SHOULD NOT include the UltraX supplies in the R&D Credit calculation.

The tax professionals at Firm A advised you about whether or not the UltraX supplies should be included in the R&D Credit calculation. Please evaluate the recommendation of the tax professionals at Firm A.

- Very Aggressive
- Aggressive
- Somewhat Aggressive
- Neither Aggressive nor Conservative
- Somewhat Conservative
- Conservative
- Very Conservative

**[SCREEN 12]**

[Demographic Questions]

**To help us categorize your responses, can you please answer a few final questions about yourself. All responses will be completely anonymous.**

Please indicate your present job title within the company.

- Chief Financial Officer
- Vice President, Tax
- Tax Director
- Tax Controller
- Tax Manager
- Other (please specify)\_\_\_\_\_

Which best describes the company for which you currently work?

- Domestic US only; Operations in one state
- Domestic US only; Operations in multiple states
- Multinational based in the US
- Multinational based outside of the US
- Other (please specify)\_\_\_\_\_

Regarding the company for which you currently work, which best describes the company's general attitude towards Federal income taxation?

- Very Aggressive
- Aggressive
- Somewhat Aggressive
- Neither Aggressive nor Conservative
- Somewhat Conservative
- Conservative
- Very Conservative

Regarding your company's approach to US income tax reporting, how important is minimizing the company's risk of controversy with the IRS?

- Extremely Important
- Moderately Important
- Somewhat Important
- Slightly Important
- Not At All Important

Does your company produce financial statements that are audited by a public accounting firm?

- Yes
- No

[Show this item if the response to the previous item is "Yes"]

Does the same public accounting firm engaged to audit your company's financial statements also provide your company with tax services?

- Yes
- No

How much of your company's tax planning and compliance work is handled by third-party tax professionals (rather than in-house)?

- |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| None                  |                       |                       |                       |                       |                       |                       |                       |                       |                       | All                   |
| 0%                    | 10%                   | 20%                   | 30%                   | 40%                   | 50%                   | 60%                   | 70%                   | 80%                   | 90%                   | 100%                  |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

[Show this item if the response to the previous item is not “0%”]

How important are each of the following factors in the selection of your company’s current tax service provider?

|   | <b>Not at all Important</b> | <b>Slightly Important</b> | <b>Somewhat Important</b> | <b>Moderately Important</b> | <b>Extremely Important</b> |
|---|-----------------------------|---------------------------|---------------------------|-----------------------------|----------------------------|
| Expertise in your company’s industry                  | <input type="radio"/>       | <input type="radio"/>     | <input type="radio"/>     | <input type="radio"/>       | <input type="radio"/>      |
| History of established relationship with your company | <input type="radio"/>       | <input type="radio"/>     | <input type="radio"/>     | <input type="radio"/>       | <input type="radio"/>      |
| Fees for total accounting and tax services            | <input type="radio"/>       | <input type="radio"/>     | <input type="radio"/>     | <input type="radio"/>       | <input type="radio"/>      |
| Independence from the audit firm                      | <input type="radio"/>       | <input type="radio"/>     | <input type="radio"/>     | <input type="radio"/>       | <input type="radio"/>      |

[Show this item if the response to the previous item is “0%”]

If your company were to hire a third-party tax service provider, how important would each of the following factors be in the selection of a tax service provider?

|   | <b>Not at all Important</b> | <b>Slightly Important</b> | <b>Somewhat Important</b> | <b>Moderately Important</b> | <b>Extremely Important</b> |
|---|-----------------------------|---------------------------|---------------------------|-----------------------------|----------------------------|
| Expertise in your company’s industry                  | <input type="radio"/>       | <input type="radio"/>     | <input type="radio"/>     | <input type="radio"/>       | <input type="radio"/>      |
| History of established relationship with your company | <input type="radio"/>       | <input type="radio"/>     | <input type="radio"/>     | <input type="radio"/>       | <input type="radio"/>      |
| Fees for total accounting and tax services            | <input type="radio"/>       | <input type="radio"/>     | <input type="radio"/>     | <input type="radio"/>       | <input type="radio"/>      |
| Independence from the audit firm                      | <input type="radio"/>       | <input type="radio"/>     | <input type="radio"/>     | <input type="radio"/>       | <input type="radio"/>      |

Before participating in this study, how familiar were you with the Research and Development Credit?

- Extremely Familiar
- Moderately Familiar
- Somewhat Familiar
- Slightly Familiar
- Not At All Familiar

Before participating in this study, how familiar were you with the tax authority relating to supplies as qualified research expenses for the Research and Development Credit?

- Extremely Familiar
- Moderately Familiar
- Somewhat Familiar
- Slightly Familiar
- Not At All Familiar

Are you a Certified Public Accountant?

- Yes
- No

How much total work experience have you had in the area of taxation?

- No tax experience
- Less than 3 years
- 3 to less than 5 years
- 5 to less than 7 years
- 7 or more years (Please specify how many years.) \_\_\_\_\_

Have you worked in public accounting?

- Yes
- No

[Show this item if “Yes” response to “Have you worked in public accounting?”]

What size public accounting firm did you work for? Check all that apply.

- Big 4
- International/National
- Regional/Local
- Sole Proprietorship
- Other (please specify) \_\_\_\_\_



[Show this item if “Yes” response to “Have you worked in public accounting?”]

How much public accounting work experience have you had in taxation?

- No work experience in tax
- Less than 3 years
- 3 to less than 5 years
- 5 to less than 7 years
- 7 or more years (Please specify how many years.) \_\_\_\_\_

[Show this item if “Yes” response to “Have you worked in public accounting?”]

How much public accounting work experience have you had in auditing?

- No work experience in auditing
- Less than 3 years
- 3 to less than 5 years
- 5 to less than 7 years
- 7 or more years (Please specify how many years.) \_\_\_\_\_

If you were evaluating a potential tax deduction for your individual tax return, how certain would you want to be of your tax position before taking a deduction?

|                          |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                      |
|--------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------------------|
| Not<br>At All<br>Certain |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | Extremely<br>Certain |
| 0%                       | 10%                   | 20%                   | 30%                   | 40%                   | 50%                   | 60%                   | 70%                   | 80%                   | 90%                   | 100%                  |                      |
| <input type="radio"/>    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |                      |

If you were evaluating a potential tax deduction for your individual tax return and engaged a paid tax preparer for assistance, how certain would you want your paid preparer to be of your tax position before taking a deduction?

| Not<br>At All<br>Certain |                       |                       |                       |                       |                       |                       |                       |                       |                       | Extremely<br>Certain  |  |
|--------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|--|
| 0%                       | 10%                   | 20%                   | 30%                   | 40%                   | 50%                   | 60%                   | 70%                   | 80%                   | 90%                   | 100%                  |  |
| <input type="radio"/>    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |  |

What is your gender?

- Male
- Female

What is your age?

- Less than 35
- 35 - 44
- 45 - 54
- 55 - 64
- 65 and over
- I would prefer not to answer

What is the highest level of education that you have completed?

- High School
- Bachelor's or other undergraduate-level degree
- Master's or other graduate-level degree
- Doctoral degree or other advanced graduate work
- I would prefer not to answer

Please make any comments that you think would be helpful in understanding your responses.

**Thank you so much for your participation!**

Condition 2: Tax-Nonaudit / Aggressive

**[SCREEN 1]**

**Explanation of Research**

Title of Project: Corporate Tax Decision Makers

Principal Investigator: Bonnie Brown

Faculty Supervisor: Vicky Arnold

You are being invited to take part in a research project conducted by Bonnie Brown, Doctoral Candidate, and Dr. Vicky Arnold, Faculty Supervisor. You will be asked to answer questions that will take about 20 minutes of your time. The purpose of this research is to examine judgments by corporate tax decision makers. You will be asked to read a tax scenario involving a hypothetical corporation. You will then be provided with some tax authority guidance and be asked to answer questions about the tax scenario.

Please note that participation in this study is completely voluntary and your responses will be completely anonymous. If you decide to participate, you have the right to withdraw your consent or discontinue participation at any time. There are no anticipated potential risks associated with this study. You must be 18 years of age or older to take part in this research study.

If you have questions, concerns, or complaints you may contact: Bonnie Brown, Doctoral Candidate, Kenneth G. Dixon School of Accounting, College of Business Administration, (407) 823-1478 or by email at [bonnie.brown@ucf.edu](mailto:bonnie.brown@ucf.edu) or Dr. Vicky Arnold, Faculty Supervisor, Kenneth G. Dixon School of Accounting, College of Business Administration, at (407) 823-3192 or by email at [vicky.arnold@ucf.edu](mailto:vicky.arnold@ucf.edu).

Since this research involves human participants, it has been reviewed and approved by the Institutional Review Board (IRB) at the University of Central Florida. For information about the rights of people who take part in research, please contact: Institutional Review Board, University of Central Florida, Office of Research & Commercialization, 12201 Research Parkway, Suite 501, Orlando, FL 32826-3246 or by telephone at (407) 823-2901.

**By clicking ">>" you are indicating that you wish to participate in this study.**

[SCREEN 2]

[Screening Questions]

**Before we get started, please answer a few questions about yourself. These questions relate to your experiences while employed in-house by a company. Please note these questions are not asking about any experience you may have had working for a public accounting firm.**

Do you have experience making in-house tax decisions for a company?

- Yes
- No

Have you been responsible for the in-house supervision of a company's income tax return preparation and filing?

- Yes
- No

Have you researched income tax matters on behalf of a company for which you worked?

- Yes
- No

Have you conducted tax planning on behalf of a company for which you worked?

- Yes
- No

Have you prepared or reviewed a company's tax provision calculations while you were employed in-house by that company?

- Yes
- No

**[SCREEN 3]**

**YOUR TASK**

As a participant in this study, you will be asked to read a hypothetical tax scenario and then respond to questions related to the scenario, share your attitudes and opinions in general, and provide demographic information. We ask that you place yourself into the role of an in-house Tax Director employed by a hypothetical corporation, Maylor Corp. Over the next several screens you will read background information about Maylor Corp, your role as Maylor Corp's Tax Director, and a hypothetical tax research project. We anticipate it will take about 10 minutes to read through this information. We sincerely appreciate receiving input from individuals with your level of expertise, and your responses are very important to us. Thank you in advance for your time!

**Please note that the first few screens will require reading. The remaining screens will be mostly questions.**

After you have finished reading, please click below to continue to the next screen.

[SCREEN 4]

### **MAYLOR CORP & TAX DIRECTOR ROLE**

Maylor Corp is a publicly traded manufacturing company with headquarters in the United States. The company has operations in six U.S. states and also in a few other countries; consequently, the company files tax returns with numerous taxing authorities. Over the past several years, Maylor Corp has averaged annual gross revenue of around \$200 million. Maylor Corp historically has had taxable income, and it does not have any net operating loss carryforwards. The GAAP effective tax rate generally hovers around 30 percent.

Again, please envision yourself in the role of Maylor Corp's Tax Director. You have worked as Maylor Corp's Tax Director for three years. As Tax Director, you lead tax planning and tax compliance for Maylor Corp and manage a team of dedicated staff. You work on matters related to the company's federal, international, and state income tax returns, as well as franchise, use, and property taxes. In addition to tax compliance responsibilities, a significant portion of your time is spent on tax planning, tax authority audits of federal and state income tax filings, and accounting for income taxes for financial statement purposes. You are satisfied with your work environment at Maylor Corp and feel that the company provides you with the resources necessary to meet your job responsibilities. Further, your opinion appears to be valued within the company and you currently have no plans to leave Maylor Corp.

You report to the CFO and work with both the management team within Maylor Corp as well as third-party tax professionals external to Maylor Corp. For the last eight years, Maylor Corp's tax returns have been prepared and signed by Firm A, a Big 4 accounting firm. **Sizable research projects are often conducted in-house by Maylor Corp's tax department and then reviewed by the external tax professionals at Firm A. Maylor Corp's financial statements are audited by Firm B, a different Big 4 accounting firm.**

After you have finished reading, please click below to continue to the next screen.

[SCREEN 5]

**CURRENT PROJECT**

You are presently working on a project to review the methods that have been used in Maylor Corp's Research and Development (R&D) Credit calculations. Maylor Corp currently takes the R&D Credit, but the calculation is based upon an analysis conducted several years ago. After consultation with the CFO, it was decided that the R&D Credit calculations should be updated. In particular, you are considering how Maylor Corp should treat supplies related to a research and development project conducted during the current tax year for UltraX, a new prototype product.

ULTRAX SUPPLIES

Maylor Corp has spent \$4.2 million on a project to develop a new prototype product, called UltraX. Included in this amount is \$950,000 of supplies. Maylor Corp had originally purchased the supplies for production of the old model product, but later allocated these supplies to the UltraX project. Maylor Corp has not capitalized or depreciated the cost of these supplies. The supplies were used in the development of UltraX; however, none of the supplies were damaged by the development process and thus were available for reuse during subsequent production of UltraX. Following successful testing, Maylor Corp manufactured UltraX and is now selling it to customers. **Including the cost of the UltraX supplies in the R&D Credit calculation would be advantageous for tax purposes.** You need to determine if the UltraX supplies can be included as qualified research expenses in the R&D Credit calculation.

You assign the task of gathering relevant tax authority to Maylor Corp's tax department staff. Once you review the preliminary opinion of your tax department staff, **you will send this information to the tax professionals at Firm A, a Big 4 accounting firm which is not Maylor Corp's audit firm, and they will provide their recommendation on the treatment of UltraX supplies for the R&D credit calculation.** You will then evaluate the treatment of UltraX supplies for the R&D credit calculation and make your decision.

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[SCREEN 6]

### **TAX DEPARTMENT STAFF PRELIMINARY OPINION**

The tax department staff has evaluated whether or not the UltraX supplies should be included as qualified research expenses for the R&D Credit. After considering the internal revenue code, regulations, and other authority, Maylor Corp's tax department staff concludes that the primary uncertainty regarding the treatment of the supplies relates to whether the supplies were "*used* in the conduct of qualified research." **They estimate that, should Maylor take the position that the supplies are a qualified research expense, there is a 60% likelihood that the position would be successfully upheld.** The relevant authority related to whether supplies were "used" or not is briefly summarized below:

Internal Revenue Code Section 41 indicates that qualified research expenses can include in-house research expenses, including any amount paid or incurred for supplies *used in the conduct of qualified research*. Regulation §1.41-2(b) says that supplies are used in the conduct of qualified research if they are used in the performance of qualified services by an employee of the taxpayer; however, expenditures for supplies that are indirect research expenditures or general and administrative expenses do not qualify. The rules do not define indirect research expenditures. The IRS has adopted the position that "used" means consumed, though nowhere in the tax rules is used defined as consumed. The courts have thus far largely remained silent on the definition of "used." Instead, courts have focused on identifying the specific business component for which the company is conducting qualified research, and then determining if supplies are used in that specific business component or a different business component.

After receiving this information from your tax department, you next confer with your external tax advisor, Firm A. Please click below to continue to the next screen to receive Firm A's recommendation.



[SCREEN 7]

### **RECOMMENDATION FROM EXTERNAL TAX PROFESSIONALS**

Thank you for asking us for advice regarding your R&D Credit. We always appreciate the opportunity to provide tax services to Maylor Corp. We have read through the information that your tax department staff compiled regarding the UltraX supplies and the calculation of Maylor Corp's R&D Credit. In evaluating the possibility of including the UltraX supplies as qualified research expenses for the R&D Credit, it may be helpful to consider the potential disclosure requirements both for tax and financial statement purposes. Generally, disclosure is required in the tax return if a tax position has a reasonable basis but not substantial authority; however, in this case disclosure (on Schedule UTP) would be required if a reserve is recorded in the financial statements for taking the new tax position. Essentially, the disclosure threshold for including the UltraX supplies in the R&D Credit would be the more-likely-than-not threshold for both tax and financial statement purposes.

There is a great deal of ambiguity in the tax rules on the topic of supplies as qualified research expenses for the Research and Development Credit, thus the decision regarding the UltraX supplies should depend in part upon your interpretation of the risk involved and your comfort level. Given the facts that you provided, it appears that the inclusion of the UltraX supplies as qualified expenses for the R&D Credit will hinge on whether these supplies were "used" in qualified research. The Courts have not sufficiently defined the term "used" as it pertains to supplies and the R&D Credit. The Courts have not indicated that reused supplies do not qualify, nor is it clear that supplies must be consumed to qualify as "used" during research and development activities. **Given the inconclusive authority, our recommendation is that Maylor Corp SHOULD include the UltraX supplies in the R&D credit calculation.** You may however conclude that you are not comfortable with including them in the calculation.

After you have finished reading, please click below to continue to the next page.

[SCREEN 8]

**RESPONSE SECTION I: Please respond to the following questions as if you are Maylor Corp's Tax Director.**

What is the likelihood that you would include the UltraX supplies as qualified research expenses for Maylor Corp's Research & Development Credit?

|                         |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |
|-------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Not<br>At All<br>Likely |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | Extremely<br>Likely   |
| 0%                      | 10%                   | 20%                   | 30%                   | 40%                   | 50%                   | 60%                   | 70%                   | 80%                   | 90%                   | 100%                  |                       |
| <input type="radio"/>   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Continuing to envision yourself as Maylor Corp's Tax Director, what do you think Maylor Corp should do?

- Maylor Corp should include the UltraX supplies as qualified research expenses in the R&D Credit calculation.
- Maylor Corp should not include the UltraX supplies qualified research expenses in the R&D Credit calculation.

If this position was examined by the IRS, what is the likelihood that the IRS would permit the position that the UltraX supplies are qualified research expenses for Maylor Corp's Research & Development Credit?

|                         |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |
|-------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Not<br>At All<br>Likely |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | Extremely<br>Likely   |
| 0%                      | 10%                   | 20%                   | 30%                   | 40%                   | 50%                   | 60%                   | 70%                   | 80%                   | 90%                   | 100%                  |                       |
| <input type="radio"/>   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

To what extent do you agree or disagree with the following statement: The advice from Firm A is what I was expecting.

- Strongly Agree
- Agree
- Somewhat Agree
- Neither Agree nor Disagree
- Somewhat Disagree
- Disagree
- Strongly Disagree

[SCREEN 9]

Please continue to respond to the following questions as if you are Maylor Corp's Tax Director.

How certain would you want to be of your tax position before including the UltraX supplies as qualified research expenses for the R&D Credit?

| Not<br>At All<br>Certain |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | Extremely<br>Certain  |
|--------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 0%                       | 10%                   | 20%                   | 30%                   | 40%                   | 50%                   | 60%                   | 70%                   | 80%                   | 90%                   | 100%                  |                       |
| <input type="radio"/>    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

To what extent do you agree or disagree with the recommendation of the external tax professionals?

- Strongly Agree
- Agree
- Somewhat Agree
- Neither Agree nor Disagree
- Somewhat Disagree
- Disagree
- Strongly Disagree

How confident are you in the advice provided by the external tax professionals at Firm A?

- Extremely Confident
- Moderately Confident
- Somewhat Confident
- Slightly Confident
- Not At All Confident

**[SCREEN 10]**

**RESPONSE SECTION II:** In this study, Maylor Corp engages external tax professionals at Firm A, which is not Maylor Corp’s audit firm, to assist with the tax work. Please answer the following items as you think a corporation’s external tax professionals would respond in arrangements such as this when the corporation’s external tax professionals are not from the audit firm.]

*[Client Advocacy]*

|   | <b>Strongly Disagree</b> | <b>Disagree</b>       | <b>Somewhat Disagree</b> | <b>Neither Agree nor Disagree</b> | <b>Somewhat Agree</b> | <b>Agree</b>          | <b>Strongly Agree</b> |
|---|--------------------------|-----------------------|--------------------------|-----------------------------------|-----------------------|-----------------------|-----------------------|
| In an instance where no judicial authority exists with respect to an issue and where the Code and Regulations are ambiguous, tax professionals should believe that the taxpayer is entitled to take the most favorable tax treatment. | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Generally speaking, tax professionals' loyalties should be first to the tax system, then to the taxpayer.   | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Tax professionals should apply ambiguous tax law to the taxpayer's benefit.   | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| When examining a tax return, tax professionals should point out to taxpayers reasonable positions they could have taken which would have contributed to minimizing their tax liability.   | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Tax professionals should believe it is important to encourage the taxpayer to pay the least amount of taxes payable.  | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Tax professionals should always interpret unclear/ambiguous laws in favor of the taxpayer.  | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Tax professionals should use trends in the law by trying to establish a pattern of more favorable treatment for the taxpayer and then extending the pattern to the taxpayer's position.   | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Where no judicial authority exists with respect to an issue, tax professionals should feel that the taxpayer is entitled to take the most favorable tax treatment.  | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Tax professionals should structure transactions in ways that yield the best tax result, even if the law is unclear in an area.  | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

**[SCREEN 11]**

[Manipulation Check Questions]

Regarding your role as Maylor Corp's Tax Director, which best describes the external tax professionals that provided advice about the UltraX supplies?

- Tax professionals at Firm A, which is also Maylor Corp's audit firm
- Tax professionals at Firm A, which is not Maylor Corp's audit firm

Which of the following is more accurate based upon the tax scenario?

- You were advised by the tax professionals at Firm A that Maylor Corp SHOULD include the UltraX supplies in the R&D Credit calculation.
- You were advised by the tax professionals at Firm A that Maylor Corp SHOULD NOT include the UltraX supplies in the R&D Credit calculation.

The tax professionals at Firm A advised you about whether or not the UltraX supplies should be included in the R&D Credit calculation. Please evaluate the recommendation of the tax professionals at Firm A.

- Very Aggressive
- Aggressive
- Somewhat Aggressive
- Neither Aggressive nor Conservative
- Somewhat Conservative
- Conservative
- Very Conservative

**[SCREEN 12]**

[Demographic Questions]

**To help us categorize your responses, can you please answer a few final questions about yourself. All responses will be completely anonymous.**

Please indicate your present job title within the company.

- Chief Financial Officer
- Vice President, Tax
- Tax Director
- Tax Controller
- Tax Manager
- Other (please specify)\_\_\_\_\_

Which best describes the company for which you currently work?

- Domestic US only; Operations in one state
- Domestic US only; Operations in multiple states
- Multinational based in the US
- Multinational based outside of the US
- Other (please specify)\_\_\_\_\_

Regarding the company for which you currently work, which best describes the company's general attitude towards Federal income taxation?

- Very Aggressive
- Aggressive
- Somewhat Aggressive
- Neither Aggressive nor Conservative
- Somewhat Conservative
- Conservative
- Very Conservative

Regarding your company's approach to US income tax reporting, how important is minimizing the company's risk of controversy with the IRS?

- Extremely Important
- Moderately Important
- Somewhat Important
- Slightly Important
- Not At All Important

Does your company produce financial statements that are audited by a public accounting firm?

- Yes
- No

[Show this item if the response to the previous item is "Yes"]

Does the same public accounting firm engaged to audit your company's financial statements also provide your company with tax services?

- Yes
- No

How much of your company's tax planning and compliance work is handled by third-party tax professionals (rather than in-house)?

- |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| None                  |                       |                       |                       |                       |                       |                       |                       |                       |                       | All                   |
| 0%                    | 10%                   | 20%                   | 30%                   | 40%                   | 50%                   | 60%                   | 70%                   | 80%                   | 90%                   | 100%                  |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |



[Show this item if the response to the previous item is not “0%”]

How important are each of the following factors in the selection of your company’s current tax service provider?

|   | <b>Not at all Important</b> | <b>Slightly Important</b> | <b>Somewhat Important</b> | <b>Moderately Important</b> | <b>Extremely Important</b> |
|---|-----------------------------|---------------------------|---------------------------|-----------------------------|----------------------------|
| Expertise in your company’s industry                  | <input type="radio"/>       | <input type="radio"/>     | <input type="radio"/>     | <input type="radio"/>       | <input type="radio"/>      |
| History of established relationship with your company | <input type="radio"/>       | <input type="radio"/>     | <input type="radio"/>     | <input type="radio"/>       | <input type="radio"/>      |
| Fees for total accounting and tax services            | <input type="radio"/>       | <input type="radio"/>     | <input type="radio"/>     | <input type="radio"/>       | <input type="radio"/>      |
| Independence from the audit firm                      | <input type="radio"/>       | <input type="radio"/>     | <input type="radio"/>     | <input type="radio"/>       | <input type="radio"/>      |

[Show this item if the response to the previous item is “0%”]

If your company were to hire a third-party tax service provider, how important would each of the following factors be in the selection of a tax service provider?

|   | <b>Not at all Important</b> | <b>Slightly Important</b> | <b>Somewhat Important</b> | <b>Moderately Important</b> | <b>Extremely Important</b> |
|---|-----------------------------|---------------------------|---------------------------|-----------------------------|----------------------------|
| Expertise in your company’s industry                  | <input type="radio"/>       | <input type="radio"/>     | <input type="radio"/>     | <input type="radio"/>       | <input type="radio"/>      |
| History of established relationship with your company | <input type="radio"/>       | <input type="radio"/>     | <input type="radio"/>     | <input type="radio"/>       | <input type="radio"/>      |
| Fees for total accounting and tax services            | <input type="radio"/>       | <input type="radio"/>     | <input type="radio"/>     | <input type="radio"/>       | <input type="radio"/>      |
| Independence from the audit firm                      | <input type="radio"/>       | <input type="radio"/>     | <input type="radio"/>     | <input type="radio"/>       | <input type="radio"/>      |

Before participating in this study, how familiar were you with the Research and Development Credit?

- Extremely Familiar
- Moderately Familiar
- Somewhat Familiar
- Slightly Familiar
- Not At All Familiar

Before participating in this study, how familiar were you with the tax authority relating to supplies as qualified research expenses for the Research and Development Credit?

- Extremely Familiar
- Moderately Familiar
- Somewhat Familiar
- Slightly Familiar
- Not At All Familiar

Are you a Certified Public Accountant?

- Yes
- No

How much total work experience have you had in the area of taxation?

- No tax experience
- Less than 3 years
- 3 to less than 5 years
- 5 to less than 7 years
- 7 or more years (Please specify how many years.) \_\_\_\_\_

Have you worked in public accounting?

- Yes
- No

[Show this item if “Yes” response to “Have you worked in public accounting?”]

What size public accounting firm did you work for? Check all that apply.

- Big 4
- International/National
- Regional/Local
- Sole Proprietorship
- Other (please specify) \_\_\_\_\_

[Show this item if “Yes” response to “Have you worked in public accounting?”]

How much public accounting work experience have you had in taxation?

- No work experience in tax
- Less than 3 years
- 3 to less than 5 years
- 5 to less than 7 years
- 7 or more years (Please specify how many years.) \_\_\_\_\_

[Show this item if “Yes” response to “Have you worked in public accounting?”]

How much public accounting work experience have you had in auditing?

- No work experience in auditing
- Less than 3 years
- 3 to less than 5 years
- 5 to less than 7 years
- 7 or more years (Please specify how many years.) \_\_\_\_\_

If you were evaluating a potential tax deduction for your individual tax return, how certain would you want to be of your tax position before taking a deduction?

|                          |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                      |
|--------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------------------|
| Not<br>At All<br>Certain |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | Extremely<br>Certain |
| 0%                       | 10%                   | 20%                   | 30%                   | 40%                   | 50%                   | 60%                   | 70%                   | 80%                   | 90%                   | 100%                  |                      |
| <input type="radio"/>    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |                      |

If you were evaluating a potential tax deduction for your individual tax return and engaged a paid tax preparer for assistance, how certain would you want your paid preparer to be of your tax position before taking a deduction?

| Not<br>At All<br>Certain |                       |                       |                       |                       |                       |                       |                       |                       |                       | Extremely<br>Certain  |  |
|--------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|--|
| 0%                       | 10%                   | 20%                   | 30%                   | 40%                   | 50%                   | 60%                   | 70%                   | 80%                   | 90%                   | 100%                  |  |
| <input type="radio"/>    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |  |

What is your gender?

- Male
- Female

What is your age?

- Less than 35
- 35 - 44
- 45 - 54
- 55 - 64
- 65 and over
- I would prefer not to answer

What is the highest level of education that you have completed?

- High School
- Bachelor's or other undergraduate-level degree
- Master's or other graduate-level degree
- Doctoral degree or other advanced graduate work
- I would prefer not to answer

Please make any comments that you think would be helpful in understanding your responses.

**Thank you so much for your participation!**

Condition 3: Tax-Audit / Conservative

**[SCREEN 1]**

**Explanation of Research**

Title of Project: Corporate Tax Decision Makers

Principal Investigator: Bonnie Brown

Faculty Supervisor: Vicky Arnold

You are being invited to take part in a research project conducted by Bonnie Brown, Doctoral Candidate, and Dr. Vicky Arnold, Faculty Supervisor. You will be asked to answer questions that will take about 20 minutes of your time. The purpose of this research is to examine judgments by corporate tax decision makers. You will be asked to read a tax scenario involving a hypothetical corporation. You will then be provided with some tax authority guidance and be asked to answer questions about the tax scenario.

Please note that participation in this study is completely voluntary and your responses will be completely anonymous. If you decide to participate, you have the right to withdraw your consent or discontinue participation at any time. There are no anticipated potential risks associated with this study. You must be 18 years of age or older to take part in this research study.

If you have questions, concerns, or complaints you may contact: Bonnie Brown, Doctoral Candidate, Kenneth G. Dixon School of Accounting, College of Business Administration, (407) 823-1478 or by email at [bonnie.brown@ucf.edu](mailto:bonnie.brown@ucf.edu) or Dr. Vicky Arnold, Faculty Supervisor, Kenneth G. Dixon School of Accounting, College of Business Administration, at (407) 823-3192 or by email at [vicky.arnold@ucf.edu](mailto:vicky.arnold@ucf.edu).

Since this research involves human participants, it has been reviewed and approved by the Institutional Review Board (IRB) at the University of Central Florida. For information about the rights of people who take part in research, please contact: Institutional Review Board, University of Central Florida, Office of Research & Commercialization, 12201 Research Parkway, Suite 501, Orlando, FL 32826-3246 or by telephone at (407) 823-2901.

**By clicking ">>" you are indicating that you wish to participate in this study.**

[SCREEN 2]

[Screening Questions]

**Before we get started, please answer a few questions about yourself. These questions relate to your experiences while employed in-house by a company. Please note these questions are not asking about any experience you may have had working for a public accounting firm.**

Do you have experience making in-house tax decisions for a company?

- Yes
- No

Have you been responsible for the in-house supervision of a company's income tax return preparation and filing?

- Yes
- No

Have you researched income tax matters on behalf of a company for which you worked?

- Yes
- No

Have you conducted tax planning on behalf of a company for which you worked?

- Yes
- No

Have you prepared or reviewed a company's tax provision calculations while you were employed in-house by that company?

- Yes
- No

**[SCREEN 3]**

**YOUR TASK**

As a participant in this study, you will be asked to read a hypothetical tax scenario and then respond to questions related to the scenario, share your attitudes and opinions in general, and provide demographic information. We ask that you place yourself into the role of an in-house Tax Director employed by a hypothetical corporation, Maylor Corp. Over the next several screens you will read background information about Maylor Corp, your role as Maylor Corp's Tax Director, and a hypothetical tax research project. We anticipate it will take about 10 minutes to read through this information. We sincerely appreciate receiving input from individuals with your level of expertise, and your responses are very important to us. Thank you in advance for your time!

**Please note that the first few screens will require reading. The remaining screens will be mostly questions.**

After you have finished reading, please click below to continue to the next screen.

[SCREEN 4]

### **MAYLOR CORP & TAX DIRECTOR ROLE**

Maylor Corp is a publicly traded manufacturing company with headquarters in the United States. The company has operations in six U.S. states and also in a few other countries; consequently, the company files tax returns with numerous taxing authorities. Over the past several years, Maylor Corp has averaged annual gross revenue of around \$200 million. Maylor Corp historically has had taxable income, and it does not have any net operating loss carryforwards. The GAAP effective tax rate generally hovers around 30 percent.

Again, please envision yourself in the role of Maylor Corp's Tax Director. You have worked as Maylor Corp's Tax Director for three years. As Tax Director, you lead tax planning and tax compliance for Maylor Corp and manage a team of dedicated staff. You work on matters related to the company's federal, international, and state income tax returns, as well as franchise, use, and property taxes. In addition to tax compliance responsibilities, a significant portion of your time is spent on tax planning, tax authority audits of federal and state income tax filings, and accounting for income taxes for financial statement purposes. You are satisfied with your work environment at Maylor Corp and feel that the company provides you with the resources necessary to meet your job responsibilities. Further, your opinion appears to be valued within the company and you currently have no plans to leave Maylor Corp.

You report to the CFO and work with both the management team within Maylor Corp as well as third-party tax professionals external to Maylor Corp. For the last eight years, Maylor Corp's tax returns have been prepared and signed by Firm A, a Big 4 accounting firm. **Sizable research projects are often conducted in-house by Maylor Corp's tax department and then reviewed by the external tax professionals at Firm A. Maylor Corp's financial statements are audited by Firm A, the same Big 4 accounting firm.**

After you have finished reading, please click below to continue to the next screen.



[SCREEN 5]

**CURRENT PROJECT**

You are presently working on a project to review the methods that have been used in Maylor Corp's Research and Development (R&D) Credit calculations. Maylor Corp currently takes the R&D Credit, but the calculation is based upon an analysis conducted several years ago. After consultation with the CFO, it was decided that the R&D Credit calculations should be updated. In particular, you are considering how Maylor Corp should treat supplies related to a research and development project conducted during the current tax year for UltraX, a new prototype product.

**ULTRAX SUPPLIES**

Maylor Corp has spent \$4.2 million on a project to develop a new prototype product, called UltraX. Included in this amount is \$950,000 of supplies. Maylor Corp had originally purchased the supplies for production of the old model product, but later allocated these supplies to the UltraX project. Maylor Corp has not capitalized or depreciated the cost of these supplies. The supplies were used in the development of UltraX; however, none of the supplies were damaged by the development process and thus were available for reuse during subsequent production of UltraX. Following successful testing, Maylor Corp manufactured UltraX and is now selling it to customers. **Including the cost of the UltraX supplies in the R&D Credit calculation would be advantageous for tax purposes.** You need to determine if the UltraX supplies can be included as qualified research expenses in the R&D Credit calculation.

You assign the task of gathering relevant tax authority to Maylor Corp's tax department staff. Once you review the preliminary opinion of your tax department staff, **you will send this information to the tax professionals at Firm A, a Big 4 accounting firm which is also Maylor Corp's audit firm, and they will provide their recommendation on the treatment of UltraX supplies for the R&D credit calculation.** You will then evaluate the treatment of UltraX supplies for the R&D credit calculation and make your decision.

After you have finished reading, please click below to continue to the next screen.

[SCREEN 6]

### **TAX DEPARTMENT STAFF PRELIMINARY OPINION**

The tax department staff has evaluated whether or not the UltraX supplies should be included as qualified research expenses for the R&D Credit. After considering the internal revenue code, regulations, and other authority, Maylor Corp's tax department staff concludes that the primary uncertainty regarding the treatment of the supplies relates to whether the supplies were "*used* in the conduct of qualified research." **They estimate that, should Maylor take the position that the supplies are a qualified research expense, there is a 60% likelihood that the position would be successfully upheld.** The relevant authority related to whether supplies were "used" or not is briefly summarized below:

Internal Revenue Code Section 41 indicates that qualified research expenses can include in-house research expenses, including any amount paid or incurred for supplies *used in the conduct of qualified research*. Regulation §1.41-2(b) says that supplies are used in the conduct of qualified research if they are used in the performance of qualified services by an employee of the taxpayer; however, expenditures for supplies that are indirect research expenditures or general and administrative expenses do not qualify. The rules do not define indirect research expenditures. The IRS has adopted the position that "used" means consumed, though nowhere in the tax rules is used defined as consumed. The courts have thus far largely remained silent on the definition of "used." Instead, courts have focused on identifying the specific business component for which the company is conducting qualified research, and then determining if supplies are used in that specific business component or a different business component.

After receiving this information from your tax department, you next confer with your external tax advisor, Firm A. Please click below to continue to the next screen to receive Firm A's recommendation.

[SCREEN 7]

### **RECOMMENDATION FROM EXTERNAL TAX PROFESSIONALS**

Thank you for asking us for advice regarding your R&D Credit. We always appreciate the opportunity to provide tax and audit services to Maylor Corp. We have read through the information that your tax department staff compiled regarding the UltraX supplies and the calculation of Maylor Corp's R&D Credit. In evaluating the possibility of including the UltraX supplies as qualified research expenses for the R&D Credit, it may be helpful to consider the potential disclosure requirements both for tax and financial statement purposes. Generally, disclosure is required in the tax return if a tax position has a reasonable basis but not substantial authority; however, in this case disclosure (on Schedule UTP) would be required if a reserve is recorded in the financial statements for taking the new tax position. Essentially, the disclosure threshold for including the UltraX supplies in the R&D Credit would be the more-likely-than-not threshold for both tax and financial statement purposes.

There is a great deal of ambiguity in the tax rules on the topic of supplies as qualified research expenses for the Research and Development Credit, thus the decision regarding the UltraX supplies should depend in part upon your interpretation of the risk involved and your comfort level. Given the facts that you provided, it appears that the inclusion of the UltraX supplies as qualified expenses for the R&D Credit will hinge on whether these supplies were "used" in qualified research. The Courts have not sufficiently defined the term "used" as it pertains to supplies and the R&D Credit. The Courts have not addressed whether reused supplies qualify, nor is it clear whether supplies that were not consumed qualify as "used" during research and development activities. **Given the inconclusive authority, our recommendation is that Maylor Corp SHOULD NOT include the UltraX supplies in the R&D credit calculation.** You may however conclude that you are comfortable with including them in the calculation.

After you have finished reading, please click below to continue to the next page.

[SCREEN 8]

**RESPONSE SECTION I: Please respond to the following questions as if you are Maylor Corp's Tax Director.**

What is the likelihood that you would include the UltraX supplies as qualified research expenses for Maylor Corp's Research & Development Credit?

|                         |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |
|-------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Not<br>At All<br>Likely |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | Extremely<br>Likely   |
| 0%                      | 10%                   | 20%                   | 30%                   | 40%                   | 50%                   | 60%                   | 70%                   | 80%                   | 90%                   | 100%                  |                       |
| <input type="radio"/>   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Continuing to envision yourself as Maylor Corp's Tax Director, what do you think Maylor Corp should do?

- Maylor Corp should include the UltraX supplies as qualified research expenses in the R&D Credit calculation.
- Maylor Corp should not include the UltraX supplies qualified research expenses in the R&D Credit calculation.

If this position was examined by the IRS, what is the likelihood that the IRS would permit the position that the UltraX supplies are qualified research expenses for Maylor Corp's Research & Development Credit?

|                         |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |
|-------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Not<br>At All<br>Likely |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | Extremely<br>Likely   |
| 0%                      | 10%                   | 20%                   | 30%                   | 40%                   | 50%                   | 60%                   | 70%                   | 80%                   | 90%                   | 100%                  |                       |
| <input type="radio"/>   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

To what extent do you agree or disagree with the following statement: The advice from Firm A is what I was expecting.

- Strongly Agree
- Agree
- Somewhat Agree
- Neither Agree nor Disagree
- Somewhat Disagree
- Disagree
- Strongly Disagree

[SCREEN 9]

Please continue to respond to the following questions as if you are Maylor Corp's Tax Director.

How certain would you want to be of your tax position before including the UltraX supplies as qualified research expenses for the R&D Credit?

| Not<br>At All<br>Certain |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | Extremely<br>Certain  |
|--------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 0%                       | 10%                   | 20%                   | 30%                   | 40%                   | 50%                   | 60%                   | 70%                   | 80%                   | 90%                   | 100%                  |                       |
| <input type="radio"/>    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

To what extent do you agree or disagree with the recommendation of the external tax professionals?

- Strongly Agree
- Agree
- Somewhat Agree
- Neither Agree nor Disagree
- Somewhat Disagree
- Disagree
- Strongly Disagree

How confident are you in the advice provided by the external tax professionals at Firm A?

- Extremely Confident
- Moderately Confident
- Somewhat Confident
- Slightly Confident
- Not At All Confident

**[SCREEN 10]**

**RESPONSE SECTION II:** In this study, Maylor Corp engages external tax professionals at Firm A, which is also Maylor Corp’s audit firm, to assist with the tax work. Please answer the following items as you think a corporation’s external tax professionals would respond in arrangements such as this when the corporation’s external tax professionals are from the audit firm.

*[Client Advocacy]*

|   | <b>Strongly Disagree</b> | <b>Disagree</b>       | <b>Somewhat Disagree</b> | <b>Neither Agree nor Disagree</b> | <b>Somewhat Agree</b> | <b>Agree</b>          | <b>Strongly Agree</b> |
|---|--------------------------|-----------------------|--------------------------|-----------------------------------|-----------------------|-----------------------|-----------------------|
| In an instance where no judicial authority exists with respect to an issue and where the Code and Regulations are ambiguous, tax professionals should believe that the taxpayer is entitled to take the most favorable tax treatment. | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Generally speaking, tax professionals' loyalties should be first to the tax system, then to the taxpayer.   | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Tax professionals should apply ambiguous tax law to the taxpayer's benefit.   | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| When examining a tax return, tax professionals should point out to taxpayers reasonable positions they could have taken which would have contributed to minimizing their tax liability.   | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Tax professionals should believe it is important to encourage the taxpayer to pay the least amount of taxes payable.  | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Tax professionals should always interpret unclear/ambiguous laws in favor of the taxpayer.  | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Tax professionals should use trends in the law by trying to establish a pattern of more favorable treatment for the taxpayer and then extending the pattern to the taxpayer's position.   | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Where no judicial authority exists with respect to an issue, tax professionals should feel that the taxpayer is entitled to take the most favorable tax treatment.  | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Tax professionals should structure transactions in ways that yield the best tax result, even if the law is unclear in an area.  | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

**[SCREEN 11]**

[Manipulation Check Questions]

Regarding your role as Maylor Corp's Tax Director, which best describes the external tax professionals that provided advice about the UltraX supplies?

- Tax professionals at Firm A, which is also Maylor Corp's audit firm
- Tax professionals at Firm A, which is not Maylor Corp's audit firm

Which of the following is more accurate based upon the tax scenario?

- You were advised by the tax professionals at Firm A that Maylor Corp SHOULD include the UltraX supplies in the R&D Credit calculation.
- You were advised by the tax professionals at Firm A that Maylor Corp SHOULD NOT include the UltraX supplies in the R&D Credit calculation.

The tax professionals at Firm A advised you about whether or not the UltraX supplies should be included in the R&D Credit calculation. Please evaluate the recommendation of the tax professionals at Firm A.

- Very Aggressive
- Aggressive
- Somewhat Aggressive
- Neither Aggressive nor Conservative
- Somewhat Conservative
- Conservative
- Very Conservative



**[SCREEN 12]**

[Demographic Questions]

**To help us categorize your responses, can you please answer a few final questions about yourself. All responses will be completely anonymous.**

Please indicate your present job title within the company.

- Chief Financial Officer
- Vice President, Tax
- Tax Director
- Tax Controller
- Tax Manager
- Other (please specify)\_\_\_\_\_

Which best describes the company for which you currently work?

- Domestic US only; Operations in one state
- Domestic US only; Operations in multiple states
- Multinational based in the US
- Multinational based outside of the US
- Other (please specify)\_\_\_\_\_

Regarding the company for which you currently work, which best describes the company's general attitude towards Federal income taxation?

- Very Aggressive
- Aggressive
- Somewhat Aggressive
- Neither Aggressive nor Conservative
- Somewhat Conservative
- Conservative
- Very Conservative

Regarding your company's approach to US income tax reporting, how important is minimizing the company's risk of controversy with the IRS?

- Extremely Important
- Moderately Important
- Somewhat Important
- Slightly Important
- Not At All Important

Does your company produce financial statements that are audited by a public accounting firm?

- Yes
- No

[Show this item if the response to the previous item is "Yes"]

Does the same public accounting firm engaged to audit your company's financial statements also provide your company with tax services?

- Yes
- No

How much of your company's tax planning and compliance work is handled by third-party tax professionals (rather than in-house)?

- |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| None                  |                       |                       |                       |                       |                       |                       |                       |                       |                       | All                   |
| 0%                    | 10%                   | 20%                   | 30%                   | 40%                   | 50%                   | 60%                   | 70%                   | 80%                   | 90%                   | 100%                  |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

[Show this item if the response to the previous item is not “0%”]

How important are each of the following factors in the selection of your company’s current tax service provider?

|   | <b>Not at all Important</b> | <b>Slightly Important</b> | <b>Somewhat Important</b> | <b>Moderately Important</b> | <b>Extremely Important</b> |
|---|-----------------------------|---------------------------|---------------------------|-----------------------------|----------------------------|
| Expertise in your company’s industry                  | <input type="radio"/>       | <input type="radio"/>     | <input type="radio"/>     | <input type="radio"/>       | <input type="radio"/>      |
| History of established relationship with your company | <input type="radio"/>       | <input type="radio"/>     | <input type="radio"/>     | <input type="radio"/>       | <input type="radio"/>      |
| Fees for total accounting and tax services            | <input type="radio"/>       | <input type="radio"/>     | <input type="radio"/>     | <input type="radio"/>       | <input type="radio"/>      |
| Independence from the audit firm                      | <input type="radio"/>       | <input type="radio"/>     | <input type="radio"/>     | <input type="radio"/>       | <input type="radio"/>      |

[Show this item if the response to the previous item is “0%”]

If your company were to hire a third-party tax service provider, how important would each of the following factors be in the selection of a tax service provider?

|   | <b>Not at all Important</b> | <b>Slightly Important</b> | <b>Somewhat Important</b> | <b>Moderately Important</b> | <b>Extremely Important</b> |
|---|-----------------------------|---------------------------|---------------------------|-----------------------------|----------------------------|
| Expertise in your company’s industry                  | <input type="radio"/>       | <input type="radio"/>     | <input type="radio"/>     | <input type="radio"/>       | <input type="radio"/>      |
| History of established relationship with your company | <input type="radio"/>       | <input type="radio"/>     | <input type="radio"/>     | <input type="radio"/>       | <input type="radio"/>      |
| Fees for total accounting and tax services            | <input type="radio"/>       | <input type="radio"/>     | <input type="radio"/>     | <input type="radio"/>       | <input type="radio"/>      |
| Independence from the audit firm                      | <input type="radio"/>       | <input type="radio"/>     | <input type="radio"/>     | <input type="radio"/>       | <input type="radio"/>      |

Before participating in this study, how familiar were you with the Research and Development Credit?

- Extremely Familiar
- Moderately Familiar
- Somewhat Familiar
- Slightly Familiar
- Not At All Familiar

Before participating in this study, how familiar were you with the tax authority relating to supplies as qualified research expenses for the Research and Development Credit?

- Extremely Familiar
- Moderately Familiar
- Somewhat Familiar
- Slightly Familiar
- Not At All Familiar

Are you a Certified Public Accountant?

- Yes
- No

How much total work experience have you had in the area of taxation?

- No tax experience
- Less than 3 years
- 3 to less than 5 years
- 5 to less than 7 years
- 7 or more years (Please specify how many years.) \_\_\_\_\_

Have you worked in public accounting?

- Yes
- No

[Show this item if “Yes” response to “Have you worked in public accounting?”]

What size public accounting firm did you work for? Check all that apply.

- Big 4
- International/National
- Regional/Local
- Sole Proprietorship
- Other (please specify) \_\_\_\_\_

[Show this item if “Yes” response to “Have you worked in public accounting?”]

How much public accounting work experience have you had in taxation?

- No work experience in tax
- Less than 3 years
- 3 to less than 5 years
- 5 to less than 7 years
- 7 or more years (Please specify how many years.) \_\_\_\_\_

[Show this item if “Yes” response to “Have you worked in public accounting?”]

How much public accounting work experience have you had in auditing?

- No work experience in auditing
- Less than 3 years
- 3 to less than 5 years
- 5 to less than 7 years
- 7 or more years (Please specify how many years.) \_\_\_\_\_

If you were evaluating a potential tax deduction for your individual tax return, how certain would you want to be of your tax position before taking a deduction?

|                          |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                      |
|--------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------------------|
| Not<br>At All<br>Certain |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | Extremely<br>Certain |
| 0%                       | 10%                   | 20%                   | 30%                   | 40%                   | 50%                   | 60%                   | 70%                   | 80%                   | 90%                   | 100%                  |                      |
| <input type="radio"/>    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |                      |

If you were evaluating a potential tax deduction for your individual tax return and engaged a paid tax preparer for assistance, how certain would you want your paid preparer to be of your tax position before taking a deduction?

| Not<br>At All<br>Certain |                       |                       |                       |                       |                       |                       |                       |                       |                       | Extremely<br>Certain  |  |
|--------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|--|
| 0%                       | 10%                   | 20%                   | 30%                   | 40%                   | 50%                   | 60%                   | 70%                   | 80%                   | 90%                   | 100%                  |  |
| <input type="radio"/>    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |  |

What is your gender?

- Male
- Female

What is your age?

- Less than 35
- 35 - 44
- 45 - 54
- 55 - 64
- 65 and over
- I would prefer not to answer

What is the highest level of education that you have completed?

- High School
- Bachelor's or other undergraduate-level degree
- Master's or other graduate-level degree
- Doctoral degree or other advanced graduate work
- I would prefer not to answer

Please make any comments that you think would be helpful in understanding your responses.

**Thank you so much for your participation!**

Condition 4: Tax-Audit / Aggressive

**[SCREEN 1]**

**Explanation of Research**

Title of Project: Corporate Tax Decision Makers

Principal Investigator: Bonnie Brown

Faculty Supervisor: Vicky Arnold

You are being invited to take part in a research project conducted by Bonnie Brown, Doctoral Candidate, and Dr. Vicky Arnold, Faculty Supervisor. You will be asked to answer questions that will take about 20 minutes of your time. The purpose of this research is to examine judgments by corporate tax decision makers. You will be asked to read a tax scenario involving a hypothetical corporation. You will then be provided with some tax authority guidance and be asked to answer questions about the tax scenario.

Please note that participation in this study is completely voluntary and your responses will be completely anonymous. If you decide to participate, you have the right to withdraw your consent or discontinue participation at any time. There are no anticipated potential risks associated with this study. You must be 18 years of age or older to take part in this research study.

If you have questions, concerns, or complaints you may contact: Bonnie Brown, Doctoral Candidate, Kenneth G. Dixon School of Accounting, College of Business Administration, (407) 823-1478 or by email at [bonnie.brown@ucf.edu](mailto:bonnie.brown@ucf.edu) or Dr. Vicky Arnold, Faculty Supervisor, Kenneth G. Dixon School of Accounting, College of Business Administration, at (407) 823-3192 or by email at [vicky.arnold@ucf.edu](mailto:vicky.arnold@ucf.edu).

Since this research involves human participants, it has been reviewed and approved by the Institutional Review Board (IRB) at the University of Central Florida. For information about the rights of people who take part in research, please contact: Institutional Review Board, University of Central Florida, Office of Research & Commercialization, 12201 Research Parkway, Suite 501, Orlando, FL 32826-3246 or by telephone at (407) 823-2901.

**By clicking ">>" you are indicating that you wish to participate in this study.**

**[SCREEN 2]**

[Screening Questions]

**Before we get started, please answer a few questions about yourself. These questions relate to your experiences while employed in-house by a company. Please note these questions are not asking about any experience you may have had working for a public accounting firm.**

Do you have experience making in-house tax decisions for a company?

- Yes
- No

Have you been responsible for the in-house supervision of a company's income tax return preparation and filing?

- Yes
- No

Have you researched income tax matters on behalf of a company for which you worked?

- Yes
- No

Have you conducted tax planning on behalf of a company for which you worked?

- Yes
- No

Have you prepared or reviewed a company's tax provision calculations while you were employed in-house by that company?

- Yes
- No



**[SCREEN 3]**

**YOUR TASK**

As a participant in this study, you will be asked to read a hypothetical tax scenario and then respond to questions related to the scenario, share your attitudes and opinions in general, and provide demographic information. We ask that you place yourself into the role of an in-house Tax Director employed by a hypothetical corporation, Maylor Corp. Over the next several screens you will read background information about Maylor Corp, your role as Maylor Corp's Tax Director, and a hypothetical tax research project. We anticipate it will take about 10 minutes to read through this information. We sincerely appreciate receiving input from individuals with your level of expertise, and your responses are very important to us. Thank you in advance for your time!

**Please note that the first few screens will require reading. The remaining screens will be mostly questions.**

After you have finished reading, please click below to continue to the next screen.

[SCREEN 4]

### **MAYLOR CORP & TAX DIRECTOR ROLE**

Maylor Corp is a publicly traded manufacturing company with headquarters in the United States. The company has operations in six U.S. states and also in a few other countries; consequently, the company files tax returns with numerous taxing authorities. Over the past several years, Maylor Corp has averaged annual gross revenue of around \$200 million. Maylor Corp historically has had taxable income, and it does not have any net operating loss carryforwards. The GAAP effective tax rate generally hovers around 30 percent.

Again, please envision yourself in the role of Maylor Corp's Tax Director. You have worked as Maylor Corp's Tax Director for three years. As Tax Director, you lead tax planning and tax compliance for Maylor Corp and manage a team of dedicated staff. You work on matters related to the company's federal, international, and state income tax returns, as well as franchise, use, and property taxes. In addition to tax compliance responsibilities, a significant portion of your time is spent on tax planning, tax authority audits of federal and state income tax filings, and accounting for income taxes for financial statement purposes. You are satisfied with your work environment at Maylor Corp and feel that the company provides you with the resources necessary to meet your job responsibilities. Further, your opinion appears to be valued within the company and you currently have no plans to leave Maylor Corp.

You report to the CFO and work with both the management team within Maylor Corp as well as third-party tax professionals external to Maylor Corp. For the last eight years, Maylor Corp's tax returns have been prepared and signed by Firm A, a Big 4 accounting firm. **Sizable research projects are often conducted in-house by Maylor Corp's tax department and then reviewed by the external tax professionals at Firm A. Maylor Corp's financial statements are audited by Firm A, the same Big 4 accounting firm.**

After you have finished reading, please click below to continue to the next screen.

[SCREEN 5]

**CURRENT PROJECT**

You are presently working on a project to review the methods that have been used in Maylor Corp's Research and Development (R&D) Credit calculations. Maylor Corp currently takes the R&D Credit, but the calculation is based upon an analysis conducted several years ago. After consultation with the CFO, it was decided that the R&D Credit calculations should be updated. In particular, you are considering how Maylor Corp should treat supplies related to a research and development project conducted during the current tax year for UltraX, a new prototype product.

**ULTRAX SUPPLIES**

Maylor Corp has spent \$4.2 million on a project to develop a new prototype product, called UltraX. Included in this amount is \$950,000 of supplies. Maylor Corp had originally purchased the supplies for production of the old model product, but later allocated these supplies to the UltraX project. Maylor Corp has not capitalized or depreciated the cost of these supplies. The supplies were used in the development of UltraX; however, none of the supplies were damaged by the development process and thus were available for reuse during subsequent production of UltraX. Following successful testing, Maylor Corp manufactured UltraX and is now selling it to customers. **Including the cost of the UltraX supplies in the R&D Credit calculation would be advantageous for tax purposes.** You need to determine if the UltraX supplies can be included as qualified research expenses in the R&D Credit calculation.

You assign the task of gathering relevant tax authority to Maylor Corp's tax department staff. Once you review the preliminary opinion of your tax department staff, **you will send this information to the tax professionals at Firm A, a Big 4 accounting firm which is also Maylor Corp's audit firm, and they will provide their recommendation on the treatment of UltraX supplies for the R&D credit calculation.** You will then evaluate the treatment of UltraX supplies for the R&D credit calculation and make your decision.

After you have finished reading, please click below to continue to the next screen.

[SCREEN 6]

### **TAX DEPARTMENT STAFF PRELIMINARY OPINION**

The tax department staff has evaluated whether or not the UltraX supplies should be included as qualified research expenses for the R&D Credit. After considering the internal revenue code, regulations, and other authority, Maylor Corp's tax department staff concludes that the primary uncertainty regarding the treatment of the supplies relates to whether the supplies were "*used* in the conduct of qualified research." **They estimate that, should Maylor take the position that the supplies are a qualified research expense, there is a 60% likelihood that the position would be successfully upheld.** The relevant authority related to whether supplies were "used" or not is briefly summarized below:

Internal Revenue Code Section 41 indicates that qualified research expenses can include in-house research expenses, including any amount paid or incurred for supplies *used in the conduct of qualified research*. Regulation §1.41-2(b) says that supplies are used in the conduct of qualified research if they are used in the performance of qualified services by an employee of the taxpayer; however, expenditures for supplies that are indirect research expenditures or general and administrative expenses do not qualify. The rules do not define indirect research expenditures. The IRS has adopted the position that "used" means consumed, though nowhere in the tax rules is used defined as consumed. The courts have thus far largely remained silent on the definition of "used." Instead, courts have focused on identifying the specific business component for which the company is conducting qualified research, and then determining if supplies are used in that specific business component or a different business component.

After receiving this information from your tax department, you next confer with your external tax advisor, Firm A. Please click below to continue to the next screen to receive Firm A's recommendation.

[SCREEN 7]

### **RECOMMENDATION FROM EXTERNAL TAX PROFESSIONALS**

Thank you for asking us for advice regarding your R&D Credit. We always appreciate the opportunity to provide tax and audit services to Maylor Corp. We have read through the information that your tax department staff compiled regarding the UltraX supplies and the calculation of Maylor Corp's R&D Credit. In evaluating the possibility of including the UltraX supplies as qualified research expenses for the R&D Credit, it may be helpful to consider the potential disclosure requirements both for tax and financial statement purposes. Generally, disclosure is required in the tax return if a tax position has a reasonable basis but not substantial authority; however, in this case disclosure (on Schedule UTP) would be required if a reserve is recorded in the financial statements for taking the new tax position. Essentially, the disclosure threshold for including the UltraX supplies in the R&D Credit would be the more-likely-than-not threshold for both tax and financial statement purposes.

There is a great deal of ambiguity in the tax rules on the topic of supplies as qualified research expenses for the Research and Development Credit, thus the decision regarding the UltraX supplies should depend in part upon your interpretation of the risk involved and your comfort level. Given the facts that you provided, it appears that the inclusion of the UltraX supplies as qualified expenses for the R&D Credit will hinge on whether these supplies were "used" in qualified research. The Courts have not sufficiently defined the term "used" as it pertains to supplies and the R&D Credit. The Courts have not indicated that reused supplies do not qualify, nor is it clear that supplies must be consumed to qualify as "used" during research and development activities. **Given the inconclusive authority, our recommendation is that Maylor Corp SHOULD include the UltraX supplies in the R&D credit calculation.** You may however conclude that you are not comfortable with including them in the calculation.

After you have finished reading, please click below to continue to the next page.

[SCREEN 8]

**RESPONSE SECTION I: Please respond to the following questions as if you are Maylor Corp's Tax Director.**

What is the likelihood that you would include the UltraX supplies as qualified research expenses for Maylor Corp's Research & Development Credit?

|                         |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |
|-------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Not<br>At All<br>Likely |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | Extremely<br>Likely   |
| 0%                      | 10%                   | 20%                   | 30%                   | 40%                   | 50%                   | 60%                   | 70%                   | 80%                   | 90%                   | 100%                  |                       |
| <input type="radio"/>   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Continuing to envision yourself as Maylor Corp's Tax Director, what do you think Maylor Corp should do?

- Maylor Corp should include the UltraX supplies as qualified research expenses in the R&D Credit calculation.
- Maylor Corp should not include the UltraX supplies qualified research expenses in the R&D Credit calculation.

If this position was examined by the IRS, what is the likelihood that the IRS would permit the position that the UltraX supplies are qualified research expenses for Maylor Corp's Research & Development Credit?

|                         |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |
|-------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Not<br>At All<br>Likely |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | Extremely<br>Likely   |
| 0%                      | 10%                   | 20%                   | 30%                   | 40%                   | 50%                   | 60%                   | 70%                   | 80%                   | 90%                   | 100%                  |                       |
| <input type="radio"/>   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

To what extent do you agree or disagree with the following statement: The advice from Firm A is what I was expecting.

- Strongly Agree
- Agree
- Somewhat Agree
- Neither Agree nor Disagree
- Somewhat Disagree
- Disagree
- Strongly Disagree

[SCREEN 9]

Please continue to respond to the following questions as if you are Maylor Corp's Tax Director.

How certain would you want to be of your tax position before including the UltraX supplies as qualified research expenses for the R&D Credit?

| Not<br>At All<br>Certain |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | Extremely<br>Certain  |
|--------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 0%                       | 10%                   | 20%                   | 30%                   | 40%                   | 50%                   | 60%                   | 70%                   | 80%                   | 90%                   | 100%                  |                       |
| <input type="radio"/>    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

To what extent do you agree or disagree with the recommendation of the external tax professionals?

- Strongly Agree
- Agree
- Somewhat Agree
- Neither Agree nor Disagree
- Somewhat Disagree
- Disagree
- Strongly Disagree

How confident are you in the advice provided by the external tax professionals at Firm A?

- Extremely Confident
- Moderately Confident
- Somewhat Confident
- Slightly Confident
- Not At All Confident



**[SCREEN 10]**

**RESPONSE SECTION II:** In this study, Maylor Corp engages external tax professionals at Firm A, which is also Maylor Corp’s audit firm, to assist with the tax work. Please answer the following items as you think a corporation’s external tax professionals would respond in arrangements such as this when the corporation’s external tax professionals are from the audit firm.

*[Client Advocacy]*

|   | <b>Strongly Disagree</b> | <b>Disagree</b>       | <b>Somewhat Disagree</b> | <b>Neither Agree nor Disagree</b> | <b>Somewhat Agree</b> | <b>Agree</b>          | <b>Strongly Agree</b> |
|---|--------------------------|-----------------------|--------------------------|-----------------------------------|-----------------------|-----------------------|-----------------------|
| In an instance where no judicial authority exists with respect to an issue and where the Code and Regulations are ambiguous, tax professionals should believe that the taxpayer is entitled to take the most favorable tax treatment. | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Generally speaking, tax professionals' loyalties should be first to the tax system, then to the taxpayer.   | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Tax professionals should apply ambiguous tax law to the taxpayer's benefit.   | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| When examining a tax return, tax professionals should point out to taxpayers reasonable positions they could have taken which would have contributed to minimizing their tax liability.   | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Tax professionals should believe it is important to encourage the taxpayer to pay the least amount of taxes payable.  | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Tax professionals should always interpret unclear/ambiguous laws in favor of the taxpayer.  | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Tax professionals should use trends in the law by trying to establish a pattern of more favorable treatment for the taxpayer and then extending the pattern to the taxpayer's position.   | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Where no judicial authority exists with respect to an issue, tax professionals should feel that the taxpayer is entitled to take the most favorable tax treatment.  | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Tax professionals should structure transactions in ways that yield the best tax result, even if the law is unclear in an area.  | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

**[SCREEN 11]**

[Manipulation Check Questions]

Regarding your role as Maylor Corp's Tax Director, which best describes the external tax professionals that provided advice about the UltraX supplies?

- Tax professionals at Firm A, which is also Maylor Corp's audit firm
- Tax professionals at Firm A, which is not Maylor Corp's audit firm

Which of the following is more accurate based upon the tax scenario?

- You were advised by the tax professionals at Firm A that Maylor Corp SHOULD include the UltraX supplies in the R&D Credit calculation.
- You were advised by the tax professionals at Firm A that Maylor Corp SHOULD NOT include the UltraX supplies in the R&D Credit calculation.

The tax professionals at Firm A advised you about whether or not the UltraX supplies should be included in the R&D Credit calculation. Please evaluate the recommendation of the tax professionals at Firm A.

- Very Aggressive
- Aggressive
- Somewhat Aggressive
- Neither Aggressive nor Conservative
- Somewhat Conservative
- Conservative
- Very Conservative

**[SCREEN 12]**

[Demographic Questions]

**To help us categorize your responses, can you please answer a few final questions about yourself. All responses will be completely anonymous.**

Please indicate your present job title within the company.

- Chief Financial Officer
- Vice President, Tax
- Tax Director
- Tax Controller
- Tax Manager
- Other (please specify)\_\_\_\_\_

Which best describes the company for which you currently work?

- Domestic US only; Operations in one state
- Domestic US only; Operations in multiple states
- Multinational based in the US
- Multinational based outside of the US
- Other (please specify)\_\_\_\_\_

Regarding the company for which you currently work, which best describes the company's general attitude towards Federal income taxation?

- Very Aggressive
- Aggressive
- Somewhat Aggressive
- Neither Aggressive nor Conservative
- Somewhat Conservative
- Conservative
- Very Conservative

Regarding your company's approach to US income tax reporting, how important is minimizing the company's risk of controversy with the IRS?

- Extremely Important
- Moderately Important
- Somewhat Important
- Slightly Important
- Not At All Important

Does your company produce financial statements that are audited by a public accounting firm?

- Yes
- No

[Show this item if the response to the previous item is "Yes"]

Does the same public accounting firm engaged to audit your company's financial statements also provide your company with tax services?

- Yes
- No

How much of your company's tax planning and compliance work is handled by third-party tax professionals (rather than in-house)?

- |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| None                  |                       |                       |                       |                       |                       |                       |                       |                       |                       | All                   |
| 0%                    | 10%                   | 20%                   | 30%                   | 40%                   | 50%                   | 60%                   | 70%                   | 80%                   | 90%                   | 100%                  |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

[Show this item if the response to the previous item is not “0%”]

How important are each of the following factors in the selection of your company’s current tax service provider?

|   | <b>Not at all Important</b> | <b>Slightly Important</b> | <b>Somewhat Important</b> | <b>Moderately Important</b> | <b>Extremely Important</b> |
|---|-----------------------------|---------------------------|---------------------------|-----------------------------|----------------------------|
| Expertise in your company’s industry                  | <input type="radio"/>       | <input type="radio"/>     | <input type="radio"/>     | <input type="radio"/>       | <input type="radio"/>      |
| History of established relationship with your company | <input type="radio"/>       | <input type="radio"/>     | <input type="radio"/>     | <input type="radio"/>       | <input type="radio"/>      |
| Fees for total accounting and tax services            | <input type="radio"/>       | <input type="radio"/>     | <input type="radio"/>     | <input type="radio"/>       | <input type="radio"/>      |
| Independence from the audit firm                      | <input type="radio"/>       | <input type="radio"/>     | <input type="radio"/>     | <input type="radio"/>       | <input type="radio"/>      |

[Show this item if the response to the previous item is “0%”]

If your company were to hire a third-party tax service provider, how important would each of the following factors be in the selection of a tax service provider?

|   | <b>Not at all Important</b> | <b>Slightly Important</b> | <b>Somewhat Important</b> | <b>Moderately Important</b> | <b>Extremely Important</b> |
|---|-----------------------------|---------------------------|---------------------------|-----------------------------|----------------------------|
| Expertise in your company’s industry                  | <input type="radio"/>       | <input type="radio"/>     | <input type="radio"/>     | <input type="radio"/>       | <input type="radio"/>      |
| History of established relationship with your company | <input type="radio"/>       | <input type="radio"/>     | <input type="radio"/>     | <input type="radio"/>       | <input type="radio"/>      |
| Fees for total accounting and tax services            | <input type="radio"/>       | <input type="radio"/>     | <input type="radio"/>     | <input type="radio"/>       | <input type="radio"/>      |
| Independence from the audit firm                      | <input type="radio"/>       | <input type="radio"/>     | <input type="radio"/>     | <input type="radio"/>       | <input type="radio"/>      |

Before participating in this study, how familiar were you with the Research and Development Credit?

- Extremely Familiar
- Moderately Familiar
- Somewhat Familiar
- Slightly Familiar
- Not At All Familiar

Before participating in this study, how familiar were you with the tax authority relating to supplies as qualified research expenses for the Research and Development Credit?

- Extremely Familiar
- Moderately Familiar
- Somewhat Familiar
- Slightly Familiar
- Not At All Familiar

Are you a Certified Public Accountant?

- Yes
- No

How much total work experience have you had in the area of taxation?

- No tax experience
- Less than 3 years
- 3 to less than 5 years
- 5 to less than 7 years
- 7 or more years (Please specify how many years.) \_\_\_\_\_

Have you worked in public accounting?

- Yes
- No

[Show this item if “Yes” response to “Have you worked in public accounting?”]

What size public accounting firm did you work for? Check all that apply.

- Big 4
- International/National
- Regional/Local
- Sole Proprietorship
- Other (please specify) \_\_\_\_\_

[Show this item if “Yes” response to “Have you worked in public accounting?”]

How much public accounting work experience have you had in taxation?

- No work experience in tax
- Less than 3 years
- 3 to less than 5 years
- 5 to less than 7 years
- 7 or more years (Please specify how many years.) \_\_\_\_\_

[Show this item if “Yes” response to “Have you worked in public accounting?”]

How much public accounting work experience have you had in auditing?

- No work experience in auditing
- Less than 3 years
- 3 to less than 5 years
- 5 to less than 7 years
- 7 or more years (Please specify how many years.) \_\_\_\_\_

If you were evaluating a potential tax deduction for your individual tax return, how certain would you want to be of your tax position before taking a deduction?

|                          |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                      |
|--------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------------------|
| Not<br>At All<br>Certain |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | Extremely<br>Certain |
| 0%                       | 10%                   | 20%                   | 30%                   | 40%                   | 50%                   | 60%                   | 70%                   | 80%                   | 90%                   | 100%                  |                      |
| <input type="radio"/>    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |                      |

If you were evaluating a potential tax deduction for your individual tax return and engaged a paid tax preparer for assistance, how certain would you want your paid preparer to be of your tax position before taking a deduction?

| Not<br>At All<br>Certain |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | Extremely<br>Certain  |
|--------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 0%                       | 10%                   | 20%                   | 30%                   | 40%                   | 50%                   | 60%                   | 70%                   | 80%                   | 90%                   | 100%                  |                       |
| <input type="radio"/>    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

What is your gender?

- Male
- Female

What is your age?

- Less than 35
- 35 - 44
- 45 - 54
- 55 - 64
- 65 and over
- I would prefer not to answer

What is the highest level of education that you have completed?

- High School
- Bachelor's or other undergraduate-level degree
- Master's or other graduate-level degree
- Doctoral degree or other advanced graduate work
- I would prefer not to answer

Please make any comments that you think would be helpful in understanding your responses.

**Thank you so much for your participation!**



## **APPENDIX C: STUDY 2 TABLES**

Table 9: Demographics

(n = 58)

|   | <b>n</b> | <b>%</b> |
|---|----------|----------|
| <b>Age</b>  |          |          |
| 21-25   | 37       | 63.8     |
| 26-30   | 14       | 24.1     |
| 31-35   | 4        | 6.9      |
| Over 35   | 3        | 5.2      |
| <b>Gender</b>   |          |          |
| Male  | 33       | 56.9     |
| Female  | 25       | 43.1     |
| <b>Work Experience in Public Accounting - All</b>     |          |          |
| No public accounting experience                       | 24       | 41.4     |
| Less than 6 months                                    | 21       | 36.2     |
| 6 months – 12 months                                  | 7        | 12.1     |
| Greater than 1 year                                   | 6        | 10.3     |
| <b>Work Experience in Public Accounting - Tax</b>     |          |          |
| No public accounting experience in tax                | 38       | 65.5     |
| Less than 6 months                                    | 12       | 20.7     |
| 6 months – 12 months                                  | 4        | 6.9      |
| Greater than 1 year                                   | 4        | 6.9      |
| <b>Preparation of Most Recent Personal Tax Return</b> |          |          |
| Prepared own return                                   | 37       | 63.8     |
| Hired a paid preparer                                 | 12       | 20.7     |
| Friend or relative prepared                           | 7        | 12.1     |
| Did not need to file                                  | 2        | 3.4      |
| <b>Number of Tax Classes Taken</b>                    |          |          |
| 1-2   | 39       | 67.2     |
| 3-4   | 8        | 13.8     |
| 5+  | 11       | 19.0     |

Table 10: Descriptive Statistics by Tax Advisor Role: Means (Standard Deviation)

|                                  | <b>Advocate</b> | <b>Overseer</b> | <b>Total</b>   |
|----------------------------------|-----------------|-----------------|----------------|
| <b>Number of Observations</b>    | 32              | 26              | 58             |
| <b>Likelihood</b>                | 57.81% (31.90)  | 50.77% (31.74)  | 54.66% (31.75) |
| <b>Trait Regulatory Focus</b>    | 14.28 (11.63)   | 17.00 (9.59)    | 15.50 (10.76)  |
| <b>Perceived Client Advocacy</b> | 43.13* (8.79)   | 37.73 (5.69)    | 40.71 (7.97)   |
| <b>IRS Permits</b>               | 29.38% (25.39)  | 31.15% (29.03)  | 30.17% (26.85) |
| <b>Tax Risk Preference</b>       | 25.63% (18.48)  | 25.38% (22.67)  | 25.51% (20.28) |

\* Mean of Perceived Client Advocacy in the advocate condition is significantly greater than overseer condition ( $p < 0.01$ , two-tailed)

Variable Definitions:

*Tax Advisor Role* is manipulated by characterizing Sullivan-Reed Corp’s external tax advisor as either an “advocate” or an “overseer” to induce a regulatory focus state. In the Advocate condition (promotion focus state), participants are informed that the company’s CFO states “the primary objective of hiring the external tax professionals at Firm A is to help Sullivan-Reed Corp find the most advantageous tax opportunities in achieving our 30 percent target effective tax rate. In fact, we have continued to employ Firm A’s tax services primarily due to the Firm’s eagerness and resourcefulness in seeking optimal tax outcomes.” In the Overseer condition (prevention focus state), participants are informed that the company’s CFO states “the primary objective of hiring the external tax professionals at Firm A is to make sure Sullivan-Reed Corp follows the tax rules in achieving our 30 percent target effective tax rate. In fact, we have continued to employ Firm A’s tax services primarily due to the Firm’s vigilance and attention to detail in maintaining tax compliance.”

*Likelihood* is measured by asking, “What is the likelihood that you would recommend that Sullivan-Reed Corp include the hot cocoa set product line in the Domestic Production Activities Deduction?” Likelihood uses an eleven-point scale with labeled points ranging from 0% “Not At All Likely” to 100% “Extremely Likely.” Likelihood is presented as a percentage. Greater likelihood of including the expenses indicates greater tax aggressiveness.

*Trait Regulatory Focus* is measured using an eighteen item scale (Lockwood et al 2002). Nine of the items measure promotion focus and the other nine items measure prevention focus. Each of the items use a seven-point Likert-type scale with labeled points ranging from 1 “Strongly Disagree” to 7 “Strongly Agree.” Trait Regulatory Focus is the sum of the promotion focus items, less the sum of the prevention focus items and could theoretically range from -56 to 56.

*Perceived Client Advocacy* is measured as the sum of a nine item scale adapted from the Mason and Levy (2001) measure of client advocacy. Each of the items use a seven-point Likert-type scale with labeled points ranging from 1 “Strongly Disagree” to 7 “Strongly Agree.” Greater Client Advocacy scores reflect a stronger belief that the tax advisor in the experimental scenario is a client advocate.

*IRS Permits* is measured by asking participants, “In your opinion, if this position was examined by the IRS, what is the likelihood that the IRS would uphold the position that Sullivan Reed Corp’s hot cocoa set product line qualifies for the Domestic Production Activities Deduction?” IRS Permits uses an eleven-point scale with labeled points ranging from 0% “Not At All Likely” to 100% “Extremely Likely.” Lower perceived likelihood that the IRS would permit the tax position represents greater perceived riskiness of the tax position.

*Tax Risk Preference* is measured by asking “As Sullivan-Reed’s tax department staff, how certain would you want to be of your tax position before including the hot cocoa set product line in the Domestic Production Activities Deduction?” The item uses an eleven-point scale with labeled points ranging from 0% “Not At All Certain” to 100% “Extremely Certain.” Responses are reverse coded such that a greater score reflects a greater risk preference (i.e., a preference for more uncertainty).

Table 11: Correlation Coefficients

|                                     | (1)          | (2)    | (3)          | (4)          | (5)          | (6)    |
|-------------------------------------|--------------|--------|--------------|--------------|--------------|--------|
| <b>1. Likelihood</b>                | 1            | 0.180  | 0.111        | 0.196        | <b>0.426</b> | 0.123  |
| <b>2. Trait Regulatory Focus</b>    | 0.179        | 1      | -0.120       | 0.072        | -0.035       | -0.021 |
| <b>3. Tax Advisor Role</b>          | 0.111        | -0.127 | 1            | <b>0.326</b> | -0.007       | 0.039  |
| <b>4. Perceived Client Advocacy</b> | 0.109        | 0.048  | <b>0.340</b> | 1            | -0.091       | 0.189  |
| <b>5. IRS Permits</b>               | <b>0.489</b> | -0.128 | -0.033       | -0.131       | 1            | 0.104  |
| <b>6. Tax Risk Preference</b>       | 0.139        | -0.031 | 0.006        | 0.137        | 0.098        | 1      |

Notes:

Table values are Spearman's Rho above the diagonal and Pearson Correlation Coefficients below the diagonal.

Bold correlations are significant at  $p < 0.05$  (two-tailed).

See Table 10 for variable definitions.

Table 12: Regression Results: Dependent Variable – Likelihood

|  | <b>Coefficient Estimate</b> | <b>Standard Error</b> | <b>t-statistic</b> | <b>p-value</b> |
|--|-----------------------------|-----------------------|--------------------|----------------|
| <b>Constant</b>                                  | 0.220                       | 0.116                 | 1.901              | 0.063          |
| <b>Trait Regulatory Focus</b>                    | 0.005                       | 0.006                 | 0.933              | 0.355          |
| <b>Tax Advisor Role</b>                          | 0.037                       | 0.134                 | 0.276              | 0.784          |
| <b>Trait Regulatory Focus x Tax Advisor Role</b> | 0.004                       | 0.007                 | 0.583              | 0.563          |
| <b>IRS Permits</b>                               | 0.638                       | 0.136                 | 4.683              | < 0.000        |
|  |                             |                       |                    |                |
| <b>Adjusted R<sup>2</sup></b>                    | 0.278                       |                       |                    |                |
| <b>F Statistic</b>                               | 6.484                       |                       |                    |                |
| <b>n</b>   | 58                          |                       |                    |                |

Notes:

All p-values are two-tailed.

See Table 10 for variable definitions.

Table 13: Supplemental Analysis: Mediation Analysis Using PROCESS Procedure

**Panel A: Regression of Perceived Client Advocacy on Tax Advisor Role**

|                         | <b>Coefficient Estimate</b> | <b>Standard Error</b> | <b>t-statistic</b> | <b>p-value</b> |
|-------------------------|-----------------------------|-----------------------|--------------------|----------------|
| <b>Constant</b>         | 37.731                      | 1.483                 | 25.440             | < 0.000        |
| <b>Tax Advisor Role</b> | 5.394                       | 1.997                 | 2.702              | 0.009          |
| <b>R<sup>2</sup></b>    | 0.115                       |                       |                    |                |
| <b>F Statistic</b>      | 7.299                       |                       |                    |                |
| <b>n</b>                | 58                          |                       |                    |                |

**Panel B: Regression of Likelihood on Perceived Client Advocacy, Tax Advisor Role, Trait Regulatory Focus, Perceived Client Advocacy x Trait Regulatory Focus, and IRS Permits**

|   | <b>Coefficient Estimate</b> | <b>Standard Error</b> | <b>t-statistic</b> | <b>p-value</b> |
|---|-----------------------------|-----------------------|--------------------|----------------|
| <b>Constant</b>   | 0.548                       | 0.291                 | 1.882              | 0.066          |
| <b>Perceived Client Advocacy</b>                          | -0.008                      | 0.007                 | -1.166             | 0.249          |
| <b>Tax Advisor Role</b>                                   | 0.063                       | 0.073                 | 0.871              | 0.388          |
| <b>Trait Regulatory Focus</b>                             | -0.039                      | 0.019                 | -2.117             | 0.039          |
| <b>Perceived Client Advocacy x Trait Regulatory Focus</b> | 0.001                       | 0.001                 | 2.564              | 0.013          |
| <b>IRS Permits</b>  | 0.549                       | 0.133                 | 4.137              | < 0.000        |
| <b>R<sup>2</sup></b>                                      | 0.413                       |                       |                    |                |
| <b>F Statistic</b>  | 7.302                       |                       |                    |                |
| <b>n</b>  | 58                          |                       |                    |                |

**Panel C: Conditional Indirect Effect of Tax Advisor Role on Likelihood at Values of Trait Regulatory Focus\***

|                               |                        |                | <b>Bootstrapped 95% Confidence Interval (1000 iterations)</b> |                    |
|-------------------------------|------------------------|----------------|---|--------------------|
| <b>Trait Regulatory Focus</b> | <b>Indirect Effect</b> | <b>Boot SE</b> | <b>Lower Limit</b>  | <b>Upper Limit</b> |
| 4.7407                        | -0.0135                | 0.0323         | -0.0899   | 0.0283             |
| 15.5000                       | 0.0533                 | 0.0352         | 0.0025  | 0.1474             |
| 26.2593                       | 0.1200                 | 0.0687         | 0.0189  | 0.2991             |

**Panel D: Index of Moderated Mediation**

|                        |                | <b>Bootstrapped 95% Confidence Interval (1000 iterations)</b> |                    |
|------------------------|----------------|---|--------------------|
| <b>Indirect Effect</b> | <b>Boot SE</b> | <b>Lower Limit</b>  | <b>Upper Limit</b> |
| 0.0062                 | 0.0038         | 0.0007  | 0.0154             |

Notes:

\*Values for the mediator, Trait Regulatory Focus, are the mean and plus/minus one SD from mean.

Mediation Analysis uses PROCESS procedure (Hayes 2013).

All p-values are two-tailed.

See Table 10 for variable definitions.

## **APPENDIX D: STUDY 2 EXPERIMENTAL MATERIALS**



Condition 1: Advocate

**[SCREEN 1]**

**Explanation of Research**

Title of Project: Corporate Tax and Individual Decision Making

Principal Investigator: Bonnie Brown

Faculty Supervisor: Vicky Arnold

You are being invited to take part in a research project conducted by Bonnie Brown, Doctoral Candidate, and Dr. Vicky Arnold, Faculty Supervisor. You will be asked to answer questions that will take about 20 minutes of your time. The purpose of this research is to examine judgments related to corporate taxation. You will be asked to read a tax scenario involving a hypothetical corporation. You will then be provided with some tax authority guidance and be asked to answer questions about the tax scenario.

Please note that participation in this study is completely voluntary and your responses will be completely anonymous. If you decide to participate, you have the right to withdraw your consent or discontinue participation at any time. There are no anticipated potential risks associated with this study. You must be 18 years of age or older to take part in this research study.

If you have questions, concerns, or complaints you may contact: Bonnie Brown, Doctoral Candidate, Kenneth G. Dixon School of Accounting, College of Business Administration, (407) 823-1478 or by email at [bonnie.brown@ucf.edu](mailto:bonnie.brown@ucf.edu) or Dr. Vicky Arnold, Faculty Supervisor, Kenneth G. Dixon School of Accounting, College of Business Administration, at (407) 823-3192 or by email at [vicky.arnold@ucf.edu](mailto:vicky.arnold@ucf.edu).

Since this research involves human participants, it has been reviewed and approved by the Institutional Review Board (IRB) at the University of Central Florida. For information about the rights of people who take part in research, please contact: Institutional Review Board, University of Central Florida, Office of Research & Commercialization, 12201 Research Parkway, Suite 501, Orlando, FL 32826-3246 or by telephone at (407) 823-2901.

**By clicking ">>" you are indicating that you wish to participate in this study.**

**[SCREEN 2]**

**YOUR TASK**

As a participant in this study, you will be asked to read a hypothetical scenario and then respond to questions related to the scenario, share your attitudes and opinions in general, and provide demographic information.

We ask that you place yourself into the role of a tax professional employed by a hypothetical corporation, Sullivan-Reed Corp. Over the next several screens you will read background information about Sullivan-Reed Corp, your role within Sullivan-Reed Corp's tax department, and a hypothetical tax research project. So that we do not take up too much of your time, we have not included all of the information you would typically have when making similar decisions. However, the information provided should be sufficient to make an informed judgment. We sincerely appreciate receiving your input, and your responses are very important to us. Thank you in advance for your time!

**Please note that the first few screens will require reading that should take about 10 to 15 minutes. The remaining screens will be mostly questions.**

After you have finished reading, please click below to continue to the next screen.

[SCREEN 3]

### **SULLIVAN-REED CORP & TAX DEPARTMENT**

Sullivan-Reed Corp is a publicly traded manufacturing company with headquarters in the United States. The company has operations in six U.S. states and also in a few other countries; consequently, the company files tax returns with numerous taxing authorities. Over the past several years, Sullivan-Reed Corp has averaged annual gross receipts of around \$200 million. Sullivan-Reed Corp historically has had taxable income, and it does not have any net operating loss carryforwards. The GAAP effective tax rate generally hovers around 30 percent. Sullivan-Reed Corp's in-house tax department coordinates the company's tax function, outsourcing some of the work to third-party tax professionals. Within the company, the Tax Director leads tax planning and compliance and is supported by a dedicated team of tax department staff. In addition to income tax compliance responsibilities, the tax department is also responsible for tax planning, tax authority audits of federal and state income tax filings, and accounting for income taxes for financial statement purposes.

You have served as an in-house tax department staff member for a year and a half. You primarily assist with matters related to the company's income tax returns - federal, state/local, and international filings. You report to the Tax Director, who reports to the CFO and works with both the management team within Sullivan-Reed Corp as well as third-party tax professionals external to Sullivan-Reed Corp. For the last eight years, Sullivan-Reed Corp's tax returns have been prepared and signed by Firm A, a Big 4 accounting firm. Sullivan-Reed Corp's financial statements are audited by a different Big 4 accounting firm. Research projects are often conducted in-house by Sullivan-Reed Corp's tax department and then reviewed by the external tax professionals at Firm A.

In a recent staff meeting, the CFO of Sullivan-Reed Corp stated that *“the primary objective of hiring the external tax professionals at Firm A is to help Sullivan-Reed Corp find the most advantageous tax opportunities in achieving our 30 percent target effective tax rate. In fact, we have continued to employ Firm A's tax services primarily due to the Firm's eagerness and resourcefulness in seeking optimal tax outcomes.”*

Please click to indicate that you have read the information shown above.

- I have read the information

[SCREEN 4]

**CURRENT PROJECT**

You are presently working on a project related to a new product line that Sullivan-Reed Corp introduced during the current tax year. The new product line consists of hot cocoa sets containing gourmet melting chocolate (dark and milk chocolate) on stir sticks, handcrafted marshmallows, and mix-ins such as peppermint sugar sprinkles, cinnamon candies, hot fudge, and caramel sauce. The company conducts market research to predict successful item combinations for the hot cocoa sets. Sullivan-Reed Corp does not manufacture any of the hot cocoa set components; rather the company purchases all of the prepackaged items (chocolate, marshmallows, and mix-ins) as well as oversized deluxe mugs and filler packaging from various vendors. The company has no input into the design of any hot cocoa set items, filler, or packaging. Further, they purchase these items in bulk “off the shelf” from vendors. Sullivan-Reed Corp developed design templates to standardize the assembly of the hot cocoa sets. Company employees arrange the individually packaged items in the mugs according to the design templates to create the hot cocoa sets.

**You have been assigned the task of determining if the activities associated with assembling the hot cocoa set product line are eligible for the Domestic Production Activities Deduction.** Sullivan-Reed Corp has previously taken the Domestic Production Activities Deduction for other products; however, prior to the new hot cocoa set product line, the company had only manufactured products onsite. The production process for the hot cocoa sets (purchase premade components and assemble onsite) differs substantially from actually manufacturing products onsite. Including the hot cocoa set in the Domestic Production Activities Deduction would be advantageous for tax purposes.

After doing some initial research, you have identified five particularly relevant items. Summaries and excerpts of these authorities are displayed on the next screens.

Please click to indicate that you have read the information shown above.

- I have read the information

**[SCREEN 5]**

**RELEVANT TAX AUTHORITY**

Summaries and excerpts from the relevant authorities you have found (listed below) are provided on the next several screens. Please read these authorities to make your recommendation about whether Sullivan-Reed Corp should take the Domestic Production Activities Deduction for the hot cocoa set product line. Please note there is no back button; however, you will have an opportunity later to review the tax authority and information about the hot cocoa product line again before making your recommendation.

- A. Internal Revenue Code Section 199 (Effective January 1, 2005)
- B. Regulation §1.199-3(e) (Effective June 1, 2006)
- C. *United States v. Dean* (May 7, 2013)
- D. Proposed Amendment to Regulation §1.199-3 (August 27, 2015)
- E. *Precision Dose, Inc. v. United States* (September 24, 2015)

[SCREEN 6]

**A. Internal Revenue Code Section 199**

*How is the Domestic Production Activities Deduction calculated?*

There shall be allowed as a deduction an amount equal to 9 percent of the lesser of the qualified production activities income of the taxpayer for the taxable year, or taxable income (determined without regard to this section) for the taxable year (Sec. 199(a)). The amount of the deduction allowable under subsection (a) for any taxable year shall not exceed 50 percent of the W-2 wages of the taxpayer for the taxable year (Sec. 199(b)(1)).

*What activities qualify for the Domestic Production Activities Deduction?*

...any lease, rental, license, sale, exchange, or other disposition of qualifying production property which was **manufactured, produced, grown, or extracted** by the taxpayer in whole or in significant part within the United States... (Sec. 199(c)(4)).

*How is “manufactured, produced, grown, or extracted” (MPGE) defined? What activities qualify as MPGE activities?*

The Secretary shall prescribe such regulations as are necessary to carry out the purposes of this section... (Sec. 199(d)(10)).

Please click to indicate that you have read the information shown above.

I have read the information

[SCREEN 7]

**B. Regulation §1.199-3(e): *Definition of manufactured, produced, grown, or extracted***

(1) *In general.*—...the term *MPGE* includes manufacturing, producing, growing, extracting, installing, developing, improving, and creating QPP [qualified production property]; making QPP out of scrap, salvage, or junk material as well as from new or raw material by processing, manipulating, refining, or changing the form of an article, or by combining or assembling two or more articles...

(2) *Packaging, repackaging, labeling, or minor assembly.*— If a taxpayer packages, repackages, labels, or performs minor assembly of QPP [qualified production property] and the taxpayer engages in no other MPGE activity with respect to that QPP, the taxpayer's packaging, repackaging, labeling, or minor assembly does not qualify as MPGE with respect to that QPP.

Please click to indicate that you have read the information shown above.

I have read the information

[SCREEN 8]

C. *United States v. Dean*, 945 F. Supp. 2d 1110 (U.S. District Court, C.D. Cal. May 7, 2013)

**Summary of *United States v. Dean*:**

Houdini, Inc., a company engaged in the design, assembly, and sale of gift baskets and gift towers, claimed deductions for domestic production activities. Houdini, Inc. argued that they *manufactured* or *produced* gift baskets and gift towers. The government argued that Houdini, Inc. was merely packaging and repackaging products, activities which would not qualify as MPGE (“manufactured, produced, grown, or extracted”). The Court rejected the government’s argument. The court stated that “the final products, gift baskets and towers, are distinct in form and purpose from the individual items inside.” The Court reasoned that Houdini, Inc.’s production process *changed the form* of the product in accordance with the definition of MPGE within Treasury Regulation §1.199-3.

**Excerpts from *United States v. Dean*:**

In 1989, Dean and O'Brien incorporated their business as Houdini, Inc. (“Houdini”). Houdini describes its business as the design, assembly, and sale of gift baskets and gift towers through both wholesale and retail channels. A “gift tower” is a set of decorative boxes into which different food items are placed. During the holiday season, Houdini can complete up to 80,000 baskets in a day.

...

Designing a Houdini gift basket involves, among other things, selecting the basket and the items to be placed inside, as well as the “void fill” that holds everything together. Houdini orders its baskets from suppliers in China. When it orders baskets, Houdini reviews samples and then provides the manufacturer with exact specifications for them. Houdini also purchases containers from suppliers in the United States. The void fill in a Houdini gift basket is a cardboard form or Styrofoam base that is placed inside the basket; the other items are in turn placed inside. Houdini generally designs the cardboard forms, indicating where the cuts and folds should be made; it then hires another company to make the cardboard forms.

...

Houdini purchases the items that are placed inside the baskets from other companies.

...

Houdini's assembly line consists of workers who place the individual food items into baskets in accordance with detailed work instructions prepared by Houdini. In preparing a finished gift basket, employees at several different stations on the line put different items into the basket. After the items have been placed inside the basket, a plastic wrapping is heated to shrink around the basket. Once the plastic wrapping is completed, a bow is placed on the basket, if called for in the design of the basket. For a gift tower, the food-safe packages are placed directly into decorative boxes. The boxes in the gift tower are then connected either through cardboard tabs or through sticky-dot adhesives.

...



Defendants argue that Houdini's production process "chang[es] the form of an article" within the meaning of Treasury Regulation §1.199-3(e)(1). The Court agrees. Houdini first selects various items—chocolates, cookies, candy, cheeses, crackers, wine or alcohol, packaging materials, and a basket or boxes—for its final products. Next, the individual items are assembled in a gift basket or gift tower based on one of many detailed plans. This complex production process relies on both assembly line workers and machines. The final products, gift baskets and gift towers, are distinct in form and purpose from the individual items inside. The individual items would typically be purchased by consumers as ordinary groceries. But after Houdini's production process, they are transformed into a gift that is usually given during the holiday season.

Please click to indicate that you have read the information shown above.

I have read the information

[SCREEN 9]

**D. Proposed Amendment to Regulation §1.199-3, August 27, 2015**

(Proposed Regulations do not have the force of the law and carry little weight in the litigation process until they are finalized, however they do reflect the IRS's position on an issue.)

Section 1.199-3(e)(2) provides that if a taxpayer packages, repackages, labels, or performs minor assembly of QPP [qualified production property] and the taxpayer engages in no other MPGE activities with respect to that QPP, the taxpayer's packaging, repackaging, labeling, or minor assembly does not qualify as MPGE with respect to that QPP. This rule has been the subject of recent litigation. See *United States v. Dean*, 945 F. Supp. 2d 1110 (C.D. Cal. 2013) (concluding that the taxpayer's activity of preparing gift baskets was a manufacturing activity and not solely packaging or repackaging for purposes of section 199). The Treasury Department and the IRS disagree with the interpretation of §1.199-3(e)(2) adopted by the court in *United States v. Dean*, and the proposed regulations add an example (*Example 9*) that illustrates the appropriate application of this rule in a situation in which the taxpayer is engaged in no other MPGE activities with respect to the QPP other than those described in §1.199-3(e)(2).

...

*Example 9.* X is in the business of selling gift baskets containing various products that are packaged together. X purchases the baskets and the products included within the baskets from unrelated third parties. X plans where and how the products should be arranged into the baskets. On an assembly line in a gift basket production facility, X arranges the products into the baskets according to that plan, sometimes relabeling the products before placing them into the baskets. X engages in no other activity besides packaging, repackaging, labeling, or minor assembly with respect to the gift baskets. Therefore, X is not considered to have engaged in the MPGE of QPP under paragraph (e)(2) of this section.

Please click to indicate that you have read the information shown above.

- I have read the information

[SCREEN 10]

**E. *Precision Dose, Inc. v. United States*, No. 3:12-cv-50180 (U.S. District Court, N.D. Ill. September 24, 2015)**

**Summary of *Precision Dose, Inc. v. United States*:**

Precision Dose, Inc. purchased certain drugs in bulk and then sold them as unit doses (drugs in single-dose containers). The company had a complex production process involving extensive research about demand for medications, appropriate materials for containers, and drug storage. The company worked with vendors to produce containers according to precise specifications and dedicated significant resources to dose standardization and process documentation. As in *United States v. Dean*, the government argued that the company was merely packaging and repackaging products, activities which would not qualify as MPGE (“manufactured, produced, grown, or extracted”). The Court determined that Precision Dose, Inc. engaged in a “complex production process” that resulted in a “distinct final product” and permitted the domestic production activity deduction.

**Excerpts from *Precision Dose, Inc. v. United States*:**

The facts show plaintiff looks for drugs it believes it can successfully process into and sell as unit doses. Drug manufacturers do not seek bids from companies to repackage their drugs into small packages. Plaintiff engages in market research to determine which drugs to buy to turn into unit doses. Plaintiff works with potential customers to identify needs for new unit dose products. Plaintiff acquires sample drugs and tests them for suitability to be processed into unit doses. Plaintiff prepares specifications and works with vendors to develop cups and syringes that are suitable to use for unit doses for each drug that it buys. Sometimes existing cups or syringes are used and sometimes new ones are created through the joint efforts of plaintiff's personnel and vendor personnel. Plaintiff conducts mixing studies to determine the best mixing procedures to use to obtain the proper suspension of the active ingredient in each unit dose and whether the drug can be mixed in such a way that the proper suspension can be obtained at all. It tests plastics to determine compatibility with specific drugs for use in the cups or syringes. The cups, lidding, trays and product inserts are produced by vendors using plaintiff's proprietary design. For cups for which plaintiff owns the designs vendors use molds owned by plaintiff to produce the cups, for trays, which are designed by plaintiff, vendors use molds owned by plaintiff. For lidding which is designed by plaintiff, the vendors use cutting dies owned by plaintiff.

...

This brief recitation of portions of plaintiff's activities in producing the unit doses show, that like in *Dean*, plaintiff engages in a “complex production process that results in a distinct final product.” The government argues *Dean* is wrongly decided. It contends the *Dean* court failed to understand that all Houdini's activities were just part of the repackaging process and thus did not take those activities outside the (e)(2) exception. However, the court disagrees. *Dean* correctly determined that Houdini was creating an entirely new product – a gift basket or gift tower – which was not simply a method of repackaging the components included in the baskets or

towers. A gift basket is not simply a container of stuff – like a grocery cart in which the items had been dropped when pulled from the shelf. It is a unique product itself. Likewise, a unit dose is a unique product. Plaintiff is entitled to the Section 199 deduction.

Please click to indicate that you have read the information shown above.

I have read the information

**[SCREEN 11]**

Now that you have reviewed these authorities, you will be asked to evaluate whether the hot cocoa set product line is eligible for the Domestic Production Activities Deduction and make your recommendation to the Tax Director. After receiving your recommendation, the Tax Director will likely consult the company's external tax professionals at Firm A who were hired to help the company find the most advantageous tax opportunities.

[SCREEN 12]

**RESPONSE SECTION I: Please respond to the following questions as if you are a member of Sullivan-Reed Corp's tax department staff.**

For your reference, the relevant tax authority is provided again below. Clicking "Review Tax Authority" will allow you to open a PDF document in a separate window.

[Review Tax Authority](#)

Information about your current project, the hot cocoa set product line, is provided again below. Clicking "Review Current Project Facts" will allow you to open a PDF document in a separate window.

[Review Current Project Facts](#)

What is the likelihood that you would recommend that Sullivan-Reed Corp include the hot cocoa set product line in the Domestic Production Activities Deduction?

|                         |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |
|-------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Not<br>At All<br>Likely |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | Extremely<br>Likely   |
| 0%                      | 10%                   | 20%                   | 30%                   | 40%                   | 50%                   | 60%                   | 70%                   | 80%                   | 90%                   | 100%                  |                       |
| <input type="radio"/>   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

To what extent do you agree or disagree with the following statement: The hot cocoa set product line is eligible for the Domestic Production Activities Deduction.

|                       |                       |                       |                               |                       |                       |                       |
|-----------------------|-----------------------|-----------------------|-------------------------------|-----------------------|-----------------------|-----------------------|
| Strongly<br>Disagree  | Disagree              | Somewhat<br>Disagree  | Neither Agree<br>nor Disagree | Somewhat<br>Agree     | Agree                 | Strongly<br>Agree     |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

In your opinion, if this position was examined by the IRS, what is the likelihood that the IRS would uphold the position that Sullivan Reed Corp's hot cocoa set product line qualifies for the Domestic Production Activities Deduction?

|                         |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                     |
|-------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|---------------------|
| Not<br>At All<br>Likely |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | Extremely<br>Likely |
| 0%                      | 10%                   | 20%                   | 30%                   | 40%                   | 50%                   | 60%                   | 70%                   | 80%                   | 90%                   | 100%                  |                     |
| <input type="radio"/>   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |                     |

In your opinion, if this position was examined in court, what is the likelihood that the Court would uphold the position that Sullivan Reed Corp's hot cocoa set product line qualifies for the Domestic Production Activities Deduction?

|                         |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                     |
|-------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|---------------------|
| Not<br>At All<br>Likely |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | Extremely<br>Likely |
| 0%                      | 10%                   | 20%                   | 30%                   | 40%                   | 50%                   | 60%                   | 70%                   | 80%                   | 90%                   | 100%                  |                     |
| <input type="radio"/>   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |                     |

As Sullivan-Reed Corp's tax department staff, how certain would you want to be of your tax position before including the hot cocoa set product line in the Domestic Production Activities Deduction?

|                          |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                      |
|--------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------------------|
| Not<br>At All<br>Certain |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | Extremely<br>Certain |
| 0%                       | 10%                   | 20%                   | 30%                   | 40%                   | 50%                   | 60%                   | 70%                   | 80%                   | 90%                   | 100%                  |                      |
| <input type="radio"/>    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |                      |

**[SCREEN 13]**

How important were each of the following authorities in your evaluation of whether the hot cocoa set product line is eligible for the Domestic Production Activities Deduction?

|  | <b>Not at all Important</b> | <b>Slightly Important</b> | <b>Somewhat Important</b> | <b>Moderately Important</b> | <b>Extremely Important</b> |
|--|-----------------------------|---------------------------|---------------------------|-----------------------------|----------------------------|
| Internal Revenue Code Section 199                  | <input type="radio"/>       | <input type="radio"/>     | <input type="radio"/>     | <input type="radio"/>       | <input type="radio"/>      |
| Regulation §1.199-3(e)                             | <input type="radio"/>       | <input type="radio"/>     | <input type="radio"/>     | <input type="radio"/>       | <input type="radio"/>      |
| <i>United States v. Dean</i> (Gift baskets)        | <input type="radio"/>       | <input type="radio"/>     | <input type="radio"/>     | <input type="radio"/>       | <input type="radio"/>      |
| Proposed Amendment to Regulation §1.199-3          | <input type="radio"/>       | <input type="radio"/>     | <input type="radio"/>     | <input type="radio"/>       | <input type="radio"/>      |
| Precision Dose, Inc. v. United States (Unit doses) | <input type="radio"/>       | <input type="radio"/>     | <input type="radio"/>     | <input type="radio"/>       | <input type="radio"/>      |



**[SCREEN 14]**

These statements relate to your job at Sullivan-Reed Corp. Continuing to envision yourself as a member of Sullivan-Reed Corp’s tax department staff, please rate how often you could imagine yourself focusing on these thoughts and activities while you are working.

*[Regulatory Focus State: Regulatory Focus at Work Scale (RWS)]*

| <b>I focus on...</b>                                     | <b>Never</b>          | <b>Rarely</b>         | <b>Sometimes</b>      | <b>Often</b>          | <b>Constantly</b>     |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Following rules and regulations at work                  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Completing work tasks correctly                          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Doing my duty at work                                    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| My work responsibilities                                 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Fulfilling my work obligations                           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| The details of my work                                   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Accomplishing a lot at work                              | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Getting my work done no matter what                      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Getting a lot of work finished in a short amount of time | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Work activities that allow me to get ahead at work       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| My work accomplishments                                  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| How many job tasks I can complete                        | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

**[SCREEN 15]**

In this study, Sullivan-Reed Corp engages external tax professionals at Firm A to assist with the tax work. Please answer the following items as you think Sullivan-Reed Corp’s external tax professionals at Firm A would respond.

*[Client Advocacy]*

|   | <b>Strongly Disagree</b> | <b>Disagree</b>       | <b>Somewhat Disagree</b> | <b>Neither Agree nor Disagree</b> | <b>Somewhat Agree</b> | <b>Agree</b>          | <b>Strongly Agree</b> |
|---|--------------------------|-----------------------|--------------------------|-----------------------------------|-----------------------|-----------------------|-----------------------|
| In an instance where no judicial authority exists with respect to an issue and where the Code and Regulations are ambiguous, tax professionals should believe that the taxpayer is entitled to take the most favorable tax treatment. | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Generally speaking, tax professionals' loyalties should be first to the tax system, then to the taxpayer.   | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Tax professionals should apply ambiguous tax law to the taxpayer's benefit.   | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| When examining a tax return, tax professionals should point out to taxpayers reasonable positions they could have taken which would have contributed to minimizing their tax liability.   | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Tax professionals should believe it is important to encourage the taxpayer to pay the least amount of taxes payable.  | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Tax professionals should always interpret unclear/ambiguous laws in favor of the taxpayer.  | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Tax professionals should use trends in the law by trying to establish a pattern of more favorable treatment for the taxpayer and then extending the pattern to the taxpayer's position.   | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Where no judicial authority exists with respect to an issue, tax professionals should feel that the taxpayer is entitled to take the most favorable tax treatment.  | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Tax professionals should structure transactions in ways that yield the best tax result, even if the law is unclear in an area.  | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

**[SCREEN 16]**

[Manipulation Check Question]

Based upon the tax scenario, which of the following more accurately describes the primary function of Sullivan-Reed Corp's external tax professionals at Firm A?

The primary function of the tax professionals at Firm A is to...

- find the most advantageous tax opportunities for Sullivan-Reed Corp
- make sure Sullivan-Reed Corp follows the tax rules

[SCREEN 17]

**DEMOGRAPHIC QUESTIONS: Now moving away from the scenario, please provide the following information. All responses to this survey are anonymous and confidential.**

How many tax classes have you taken? Include the current semester.

- 0
- 1 - 2
- 3 - 4
- 5 or more

Please select your graduate degree program.

- MACC, Tax Track
- MACC, BMA Track
- MSA
- Other (Please specify)\_\_\_\_\_

Do you plan to work in taxation?

- Yes
- No

How much total work experience have you had in public accounting?

- No experience in public accounting
- Less than 6 months
- 6 – 12 months
- More than a year (Please specify how many years)\_\_\_\_\_

How much work experience have you had in public accounting, specifically in tax?

- No tax experience in public accounting
- Less than 6 months
- 6 – 12 months
- More than a year (Please specify how many years)\_\_\_\_\_

What size public accounting firm did you work for? Check all that apply.

- No experience in public accounting
- Big 4
- International/National
- Regional/Local
- Sole Proprietorship
- Other (Please specify)\_\_\_\_\_

Before participating in this study, how familiar were you with the Domestic Production Activities Deduction?

- Very Familiar
- Familiar
- Neither Familiar nor Unfamiliar
- Unfamiliar
- Very Unfamiliar

Before participating in this study, how familiar were you with the tax authority relating to activities that qualify for the Domestic Production Activities Deduction?

- Very Familiar
- Familiar
- Neither Familiar nor Unfamiliar
- Unfamiliar
- Very Unfamiliar

If you were evaluating a potential tax deduction for your individual tax return, how certain would you want to be of your tax position before taking a deduction?

|                          |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                      |
|--------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------------------|
| Not<br>At All<br>Certain |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | Extremely<br>Certain |
| 0%                       | 10%                   | 20%                   | 30%                   | 40%                   | 50%                   | 60%                   | 70%                   | 80%                   | 90%                   | 100%                  |                      |
| <input type="radio"/>    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |                      |

If you were evaluating a potential tax deduction for your individual tax return and engaged a paid tax preparer for assistance, how certain would you want your paid preparer to be of your tax position before taking a deduction?

| Not<br>At All<br>Certain |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | Extremely<br>Certain |
|--------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------------------|
| 0%                       | 10%                   | 20%                   | 30%                   | 40%                   | 50%                   | 60%                   | 70%                   | 80%                   | 90%                   | 100%                  |                      |
| <input type="radio"/>    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |                      |

Who prepared your most recent individual income tax return?

- I prepared my own tax return
- I hired a paid preparer
- A friend or relative prepared my tax return
- I do not file a tax return
- Other (Please specify)\_\_\_\_\_

What is your age?

- 18 - 20
- 21 - 25
- 26 - 30
- 31 - 35
- 36 and over

What is your gender?

- Male
- Female

**[SCREEN 18]**

**FINAL RESPONSE SECTION:** Please use the scale to indicate your response to each of the items below. There are no right or wrong answers. Therefore, please respond as honestly and accurately as possible.

*[Trait Regulatory Focus: General Regulatory Focus Measure (GRFM)]*

|  | <b>Strongly Disagree</b> | <b>Disagree</b>       | <b>Somewhat Disagree</b> | <b>Neither Agree nor Disagree</b> | <b>Somewhat Agree</b> | <b>Agree</b>          | <b>Strongly Agree</b> |
|--|--------------------------|-----------------------|--------------------------|-----------------------------------|-----------------------|-----------------------|-----------------------|
| In general, I am focused on preventing negative events in my life.   | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I am anxious that I will fall short of my responsibilities and obligations.  | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I frequently imagine how I will achieve my hopes and aspirations.  | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I often think about the person I am afraid I might become in the future.   | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I often think about the person I would ideally like to be in the future.   | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I typically focus on the success I hope to achieve in the future.  | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I often worry that I will fail to accomplish my academic goals.  | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I often think about how I will achieve academic success.   | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I often imagine myself experiencing bad things that I fear might happen to me.   | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I frequently think about how I can prevent failures in my life.  | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I am more oriented toward preventing losses than I am toward achieving gains.  | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| My major goal in school right now is to achieve my academic ambitions.   | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| My major goal in school right now is to avoid becoming an academic failure.  | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I see myself as someone who is primarily striving to reach my “ideal self”—to fulfill my hopes, wishes, and aspirations. | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

|   | <b>Strongly Disagree</b> | <b>Disagree</b>       | <b>Somewhat Disagree</b> | <b>Neither Agree nor Disagree</b> | <b>Somewhat Agree</b> | <b>Agree</b>          | <b>Strongly Agree</b> |
|---|--------------------------|-----------------------|--------------------------|-----------------------------------|-----------------------|-----------------------|-----------------------|
| I see myself as someone who is primarily striving to become the self I “ought” to be—to fulfill my duties, responsibilities, and obligations. | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| In general, I am focused on achieving positive outcomes in my life.   | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I often imagine myself experiencing good things that I hope will happen to me.  | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Overall, I am more oriented toward achieving success than preventing failure.   | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Please make any comments you think would be helpful in understanding your responses.



Condition 2: Overseer

**[SCREEN 1]**

**Explanation of Research**

Title of Project: Corporate Tax and Individual Decision Making

Principal Investigator: Bonnie Brown

Faculty Supervisor: Vicky Arnold

You are being invited to take part in a research project conducted by Bonnie Brown, Doctoral Candidate, and Dr. Vicky Arnold, Faculty Supervisor. You will be asked to answer questions that will take about 20 minutes of your time. The purpose of this research is to examine judgments related to corporate taxation. You will be asked to read a tax scenario involving a hypothetical corporation. You will then be provided with some tax authority guidance and be asked to answer questions about the tax scenario.

Please note that participation in this study is completely voluntary and your responses will be completely anonymous. If you decide to participate, you have the right to withdraw your consent or discontinue participation at any time. There are no anticipated potential risks associated with this study. You must be 18 years of age or older to take part in this research study.

If you have questions, concerns, or complaints you may contact: Bonnie Brown, Doctoral Candidate, Kenneth G. Dixon School of Accounting, College of Business Administration, (407) 823-1478 or by email at [bonnie.brown@ucf.edu](mailto:bonnie.brown@ucf.edu) or Dr. Vicky Arnold, Faculty Supervisor, Kenneth G. Dixon School of Accounting, College of Business Administration, at (407) 823-3192 or by email at [vicky.arnold@ucf.edu](mailto:vicky.arnold@ucf.edu).

Since this research involves human participants, it has been reviewed and approved by the Institutional Review Board (IRB) at the University of Central Florida. For information about the rights of people who take part in research, please contact: Institutional Review Board, University of Central Florida, Office of Research & Commercialization, 12201 Research Parkway, Suite 501, Orlando, FL 32826-3246 or by telephone at (407) 823-2901.

**By clicking ">>" you are indicating that you wish to participate in this study.**

**[SCREEN 2]**

**YOUR TASK**

As a participant in this study, you will be asked to read a hypothetical scenario and then respond to questions related to the scenario, share your attitudes and opinions in general, and provide demographic information.

We ask that you place yourself into the role of a tax professional employed by a hypothetical corporation, Sullivan-Reed Corp. Over the next several screens you will read background information about Sullivan-Reed Corp, your role within Sullivan-Reed Corp's tax department, and a hypothetical tax research project. So that we do not take up too much of your time, we have not included all of the information you would typically have when making similar decisions. However, the information provided should be sufficient to make an informed judgment. We sincerely appreciate receiving your input, and your responses are very important to us. Thank you in advance for your time!

**Please note that the first few screens will require reading that should take about 10 to 15 minutes. The remaining screens will be mostly questions.**

After you have finished reading, please click below to continue to the next screen.

[SCREEN 3]

### **SULLIVAN-REED CORP & TAX DEPARTMENT**

Sullivan-Reed Corp is a publicly traded manufacturing company with headquarters in the United States. The company has operations in six U.S. states and also in a few other countries; consequently, the company files tax returns with numerous taxing authorities. Over the past several years, Sullivan-Reed Corp has averaged annual gross receipts of around \$200 million. Sullivan-Reed Corp historically has had taxable income, and it does not have any net operating loss carryforwards. The GAAP effective tax rate generally hovers around 30 percent. Sullivan-Reed Corp's in-house tax department coordinates the company's tax function, outsourcing some of the work to third-party tax professionals. Within the company, the Tax Director leads tax planning and compliance and is supported by a dedicated team of tax department staff. In addition to income tax compliance responsibilities, the tax department is also responsible for tax planning, tax authority audits of federal and state income tax filings, and accounting for income taxes for financial statement purposes.

You have served as an in-house tax department staff member for a year and a half. You primarily assist with matters related to the company's income tax returns - federal, state/local, and international filings. You report to the Tax Director, who reports to the CFO and works with both the management team within Sullivan-Reed Corp as well as third-party tax professionals external to Sullivan-Reed Corp. For the last eight years, Sullivan-Reed Corp's tax returns have been prepared and signed by Firm A, a Big 4 accounting firm. Sullivan-Reed Corp's financial statements are audited by a different Big 4 accounting firm. Research projects are often conducted in-house by Sullivan-Reed Corp's tax department and then reviewed by the external tax professionals at Firm A.

In a recent staff meeting, the CFO of Sullivan-Reed Corp stated that *"the primary objective of hiring the external tax professionals at Firm A is to make sure Sullivan-Reed Corp follows the tax rules in achieving our 30 percent target effective tax rate. In fact, we have continued to employ Firm A's tax services primarily due to the Firm's vigilance and attention to detail in maintaining tax compliance."*

Please click to indicate that you have read the information shown above.

- I have read the information

**[SCREEN 4]**

**CURRENT PROJECT**

You are presently working on a project related to a new product line that Sullivan-Reed Corp introduced during the current tax year. The new product line consists of hot cocoa sets containing gourmet melting chocolate (dark and milk chocolate) on stir sticks, handcrafted marshmallows, and mix-ins such as peppermint sugar sprinkles, cinnamon candies, hot fudge, and caramel sauce. The company conducts market research to predict successful item combinations for the hot cocoa sets. Sullivan-Reed Corp does not manufacture any of the hot cocoa set components; rather the company purchases all of the prepackaged items (chocolate, marshmallows, and mix-ins) as well as oversized deluxe mugs and filler packaging from various vendors. The company has no input into the design of any hot cocoa set items, filler, or packaging. Further, they purchase these items in bulk “off the shelf” from vendors. Sullivan-Reed Corp developed design templates to standardize the assembly of the hot cocoa sets. Company employees arrange the individually packaged items in the mugs according to the design templates to create the hot cocoa sets.

**You have been assigned the task of determining if the activities associated with assembling the hot cocoa set product line are eligible for the Domestic Production Activities Deduction.** Sullivan-Reed Corp has previously taken the Domestic Production Activities Deduction for other products; however, prior to the new hot cocoa set product line, the company had only manufactured products onsite. The production process for the hot cocoa sets (purchase premade components and assemble onsite) differs substantially from actually manufacturing products onsite. Including the hot cocoa set in the Domestic Production Activities Deduction would be advantageous for tax purposes.

After doing some initial research, you have identified five particularly relevant items. Summaries and excerpts of these authorities are displayed on the next screens.

Please click to indicate that you have read the information shown above.

- I have read the information

**[SCREEN 5]**

**RELEVANT TAX AUTHORITY**

Summaries and excerpts from the relevant authorities you have found (listed below) are provided on the next several screens. Please read these authorities to make your recommendation about whether Sullivan-Reed Corp should take the Domestic Production Activities Deduction for the hot cocoa set product line. Please note there is no back button; however, you will have an opportunity later to review the tax authority and information about the hot cocoa product line again before making your recommendation.

- F. Internal Revenue Code Section 199 (Effective January 1, 2005)
- G. Regulation §1.199-3(e) (Effective June 1, 2006)
- H. *United States v. Dean* (May 7, 2013)
- I. Proposed Amendment to Regulation §1.199-3 (August 27, 2015)
- J. *Precision Dose, Inc. v. United States* (September 24, 2015)

[SCREEN 6]

**A. Internal Revenue Code Section 199**

*How is the Domestic Production Activities Deduction calculated?*

There shall be allowed as a deduction an amount equal to 9 percent of the lesser of the qualified production activities income of the taxpayer for the taxable year, or taxable income (determined without regard to this section) for the taxable year (Sec. 199(a)). The amount of the deduction allowable under subsection (a) for any taxable year shall not exceed 50 percent of the W-2 wages of the taxpayer for the taxable year (Sec. 199(b)(1)).

*What activities qualify for the Domestic Production Activities Deduction?*

...any lease, rental, license, sale, exchange, or other disposition of qualifying production property which was **manufactured, produced, grown, or extracted** by the taxpayer in whole or in significant part within the United States... (Sec. 199(c)(4)).

*How is “manufactured, produced, grown, or extracted” (MPGE) defined? What activities qualify as MPGE activities?*

The Secretary shall prescribe such regulations as are necessary to carry out the purposes of this section... (Sec. 199(d)(10)).

Please click to indicate that you have read the information shown above.

I have read the information

[SCREEN 7]

**B. Regulation §1.199-3(e): *Definition of manufactured, produced, grown, or extracted***

(1) *In general.*—...the term *MPGE* includes manufacturing, producing, growing, extracting, installing, developing, improving, and creating QPP [qualified production property]; making QPP out of scrap, salvage, or junk material as well as from new or raw material by processing, manipulating, refining, or changing the form of an article, or by combining or assembling two or more articles...

(2) *Packaging, repackaging, labeling, or minor assembly.*— If a taxpayer packages, repackages, labels, or performs minor assembly of QPP [qualified production property] and the taxpayer engages in no other MPGE activity with respect to that QPP, the taxpayer's packaging, repackaging, labeling, or minor assembly does not qualify as MPGE with respect to that QPP.

Please click to indicate that you have read the information shown above.

I have read the information

[SCREEN 8]

**C. *United States v. Dean*, 945 F. Supp. 2d 1110 (U.S. District Court, C.D. Cal. May 7, 2013)**

**Summary of *United States v. Dean*:**

Houdini, Inc., a company engaged in the design, assembly, and sale of gift baskets and gift towers, claimed deductions for domestic production activities. Houdini, Inc. argued that they *manufactured* or *produced* gift baskets and gift towers. The government argued that Houdini, Inc. was merely packaging and repackaging products, activities which would not qualify as MPGE (“manufactured, produced, grown, or extracted”). The Court rejected the government’s argument. The court stated that “the final products, gift baskets and towers, are distinct in form and purpose from the individual items inside.” The Court reasoned that Houdini, Inc.’s production process *changed the form* of the product in accordance with the definition of MPGE within Treasury Regulation §1.199-3.

**Excerpts from *United States v. Dean*:**

In 1989, Dean and O'Brien incorporated their business as Houdini, Inc. (“Houdini”). Houdini describes its business as the design, assembly, and sale of gift baskets and gift towers through both wholesale and retail channels. A “gift tower” is a set of decorative boxes into which different food items are placed. During the holiday season, Houdini can complete up to 80,000 baskets in a day.

...

Designing a Houdini gift basket involves, among other things, selecting the basket and the items to be placed inside, as well as the “void fill” that holds everything together. Houdini orders its baskets from suppliers in China. When it orders baskets, Houdini reviews samples and then provides the manufacturer with exact specifications for them. Houdini also purchases containers from suppliers in the United States. The void fill in a Houdini gift basket is a cardboard form or Styrofoam base that is placed inside the basket; the other items are in turn placed inside. Houdini generally designs the cardboard forms, indicating where the cuts and folds should be made; it then hires another company to make the cardboard forms.

...

Houdini purchases the items that are placed inside the baskets from other companies.

...

Houdini's assembly line consists of workers who place the individual food items into baskets in accordance with detailed work instructions prepared by Houdini. In preparing a finished gift basket, employees at several different stations on the line put different items into the basket. After the items have been placed inside the basket, a plastic wrapping is heated to shrink around the basket. Once the plastic wrapping is completed, a bow is placed on the basket, if called for in the design of the basket. For a gift tower, the food-safe packages are placed directly into decorative boxes. The boxes in the gift tower are then connected either through cardboard tabs or through sticky-dot adhesives.

...



Defendants argue that Houdini's production process “chang[es] the form of an article” within the meaning of Treasury Regulation §1.199-3(e)(1). The Court agrees. Houdini first selects various items—chocolates, cookies, candy, cheeses, crackers, wine or alcohol, packaging materials, and a basket or boxes—for its final products. Next, the individual items are assembled in a gift basket or gift tower based on one of many detailed plans. This complex production process relies on both assembly line workers and machines. The final products, gift baskets and gift towers, are distinct in form and purpose from the individual items inside. The individual items would typically be purchased by consumers as ordinary groceries. But after Houdini's production process, they are transformed into a gift that is usually given during the holiday season.

Please click to indicate that you have read the information shown above.

I have read the information

[SCREEN 9]

**D. Proposed Amendment to Regulation §1.199-3, August 27, 2015**

(Proposed Regulations do not have the force of the law and carry little weight in the litigation process until they are finalized, however they do reflect the IRS's position on an issue.)

Section 1.199-3(e)(2) provides that if a taxpayer packages, repackages, labels, or performs minor assembly of QPP [qualified production property] and the taxpayer engages in no other MPGE activities with respect to that QPP, the taxpayer's packaging, repackaging, labeling, or minor assembly does not qualify as MPGE with respect to that QPP. This rule has been the subject of recent litigation. See *United States v. Dean*, 945 F. Supp. 2d 1110 (C.D. Cal. 2013) (concluding that the taxpayer's activity of preparing gift baskets was a manufacturing activity and not solely packaging or repackaging for purposes of section 199). The Treasury Department and the IRS disagree with the interpretation of §1.199-3(e)(2) adopted by the court in *United States v. Dean*, and the proposed regulations add an example (*Example 9*) that illustrates the appropriate application of this rule in a situation in which the taxpayer is engaged in no other MPGE activities with respect to the QPP other than those described in §1.199-3(e)(2).

...

*Example 9.* X is in the business of selling gift baskets containing various products that are packaged together. X purchases the baskets and the products included within the baskets from unrelated third parties. X plans where and how the products should be arranged into the baskets. On an assembly line in a gift basket production facility, X arranges the products into the baskets according to that plan, sometimes relabeling the products before placing them into the baskets. X engages in no other activity besides packaging, repackaging, labeling, or minor assembly with respect to the gift baskets. Therefore, X is not considered to have engaged in the MPGE of QPP under paragraph (e)(2) of this section.

Please click to indicate that you have read the information shown above.

- I have read the information

[SCREEN 10]

**E. *Precision Dose, Inc. v. United States*, No. 3:12-cv-50180 (U.S. District Court, N.D. Ill. September 24, 2015)**

**Summary of *Precision Dose, Inc. v. United States*:**

Precision Dose, Inc. purchased certain drugs in bulk and then sold them as unit doses (drugs in single-dose containers). The company had a complex production process involving extensive research about demand for medications, appropriate materials for containers, and drug storage. The company worked with vendors to produce containers according to precise specifications and dedicated significant resources to dose standardization and process documentation. As in *United States v. Dean*, the government argued that the company was merely packaging and repackaging products, activities which would not qualify as MPGE (“manufactured, produced, grown, or extracted”). The Court determined that Precision Dose, Inc. engaged in a “complex production process” that resulted in a “distinct final product” and permitted the domestic production activity deduction.

**Excerpts from *Precision Dose, Inc. v. United States*:**

The facts show plaintiff looks for drugs it believes it can successfully process into and sell as unit doses. Drug manufacturers do not seek bids from companies to repackage their drugs into small packages. Plaintiff engages in market research to determine which drugs to buy to turn into unit doses. Plaintiff works with potential customers to identify needs for new unit dose products. Plaintiff acquires sample drugs and tests them for suitability to be processed into unit doses. Plaintiff prepares specifications and works with vendors to develop cups and syringes that are suitable to use for unit doses for each drug that it buys. Sometimes existing cups or syringes are used and sometimes new ones are created through the joint efforts of plaintiff's personnel and vendor personnel. Plaintiff conducts mixing studies to determine the best mixing procedures to use to obtain the proper suspension of the active ingredient in each unit dose and whether the drug can be mixed in such a way that the proper suspension can be obtained at all. It tests plastics to determine compatibility with specific drugs for use in the cups or syringes. The cups, lidding, trays and product inserts are produced by vendors using plaintiff's proprietary design. For cups for which plaintiff owns the designs vendors use molds owned by plaintiff to produce the cups, for trays, which are designed by plaintiff, vendors use molds owned by plaintiff. For lidding which is designed by plaintiff, the vendors use cutting dies owned by plaintiff.

...

This brief recitation of portions of plaintiff's activities in producing the unit doses show, that like in *Dean*, plaintiff engages in a “complex production process that results in a distinct final product.” The government argues *Dean* is wrongly decided. It contends the *Dean* court failed to understand that all Houdini's activities were just part of the repackaging process and thus did not take those activities outside the (e)(2) exception. However, the court disagrees. *Dean* correctly determined that Houdini was creating an entirely new product – a gift basket or gift tower – which was not simply a method of repackaging the components included in the baskets or

towers. A gift basket is not simply a container of stuff – like a grocery cart in which the items had been dropped when pulled from the shelf. It is a unique product itself. Likewise, a unit dose is a unique product. Plaintiff is entitled to the Section 199 deduction.

Please click to indicate that you have read the information shown above.

I have read the information

**[SCREEN 11]**

Now that you have reviewed these authorities, you will be asked to evaluate whether the hot cocoa set product line is eligible for the Domestic Production Activities Deduction and make your recommendation to the Tax Director. After receiving your recommendation, the Tax Director will likely consult the company's external tax professionals at Firm A who were hired to make sure the company follows the tax rules.

[SCREEN 12]

**RESPONSE SECTION I: Please respond to the following questions as if you are a member of Sullivan-Reed Corp's tax department staff.**

For your reference, the relevant tax authority is provided again below. Clicking "Review Tax Authority" will allow you to open a PDF document in a separate window.

[Review Tax Authority](#)

Information about your current project, the hot cocoa set product line, is provided again below. Clicking "Review Current Project Facts" will allow you to open a PDF document in a separate window.

[Review Current Project Facts](#)

What is the likelihood that you would recommend that Sullivan-Reed Corp include the hot cocoa set product line in the Domestic Production Activities Deduction?

|                         |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |
|-------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Not<br>At All<br>Likely |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | Extremely<br>Likely   |
| 0%                      | 10%                   | 20%                   | 30%                   | 40%                   | 50%                   | 60%                   | 70%                   | 80%                   | 90%                   | 100%                  |                       |
| <input type="radio"/>   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

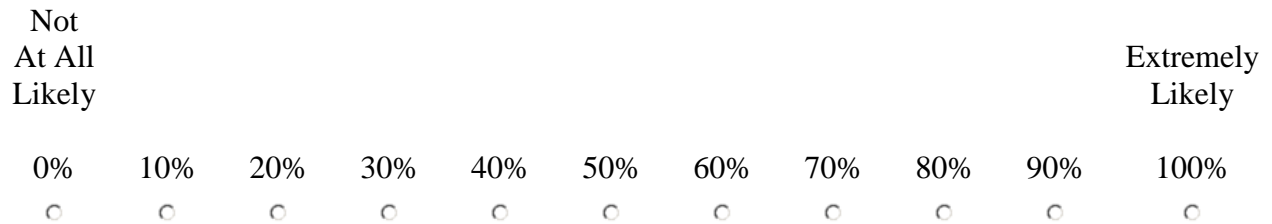
To what extent do you agree or disagree with the following statement: The hot cocoa set product line is eligible for the Domestic Production Activities Deduction.

|                       |                       |                       |                               |                       |                       |                       |
|-----------------------|-----------------------|-----------------------|-------------------------------|-----------------------|-----------------------|-----------------------|
| Strongly<br>Disagree  | Disagree              | Somewhat<br>Disagree  | Neither Agree<br>nor Disagree | Somewhat<br>Agree     | Agree                 | Strongly<br>Agree     |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

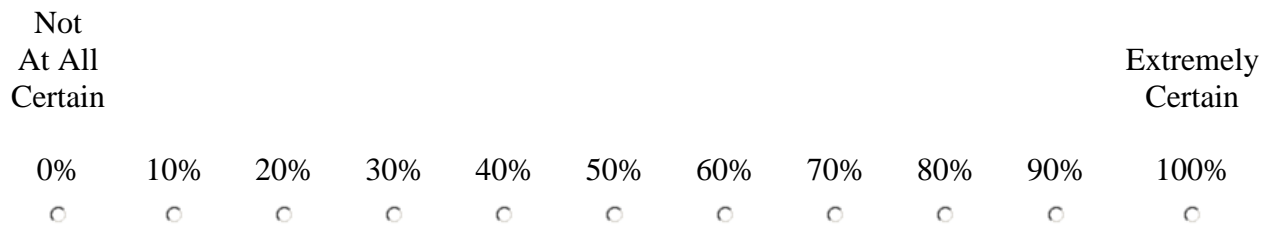
In your opinion, if this position was examined by the IRS, what is the likelihood that the IRS would uphold the position that Sullivan Reed Corp's hot cocoa set product line qualifies for the Domestic Production Activities Deduction?



In your opinion, if this position was examined in court, what is the likelihood that the Court would uphold the position that Sullivan Reed Corp's hot cocoa set product line qualifies for the Domestic Production Activities Deduction?



As Sullivan-Reed Corp's tax department staff, how certain would you want to be of your tax position before including the hot cocoa set product line in the Domestic Production Activities Deduction?



**[SCREEN 13]**

How important were each of the following authorities in your evaluation of whether the hot cocoa set product line is eligible for the Domestic Production Activities Deduction?

|  | <b>Not at all Important</b> | <b>Slightly Important</b> | <b>Somewhat Important</b> | <b>Moderately Important</b> | <b>Extremely Important</b> |
|--|-----------------------------|---------------------------|---------------------------|-----------------------------|----------------------------|
| Internal Revenue Code Section 199                  | <input type="radio"/>       | <input type="radio"/>     | <input type="radio"/>     | <input type="radio"/>       | <input type="radio"/>      |
| Regulation §1.199-3(e)                             | <input type="radio"/>       | <input type="radio"/>     | <input type="radio"/>     | <input type="radio"/>       | <input type="radio"/>      |
| <i>United States v. Dean</i> (Gift baskets)        | <input type="radio"/>       | <input type="radio"/>     | <input type="radio"/>     | <input type="radio"/>       | <input type="radio"/>      |
| Proposed Amendment to Regulation §1.199-3          | <input type="radio"/>       | <input type="radio"/>     | <input type="radio"/>     | <input type="radio"/>       | <input type="radio"/>      |
| Precision Dose, Inc. v. United States (Unit doses) | <input type="radio"/>       | <input type="radio"/>     | <input type="radio"/>     | <input type="radio"/>       | <input type="radio"/>      |



**[SCREEN 14]**

These statements relate to your job at Sullivan-Reed Corp. Continuing to envision yourself as a member of Sullivan-Reed Corp’s tax department staff, please rate how often you could imagine yourself focusing on these thoughts and activities while you are working.

*[Regulatory Focus State: Regulatory Focus at Work Scale (RWS)]*

| <b>I focus on...</b>                                     | <b>Never</b>          | <b>Rarely</b>         | <b>Sometimes</b>      | <b>Often</b>          | <b>Constantly</b>     |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Following rules and regulations at work                  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Completing work tasks correctly                          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Doing my duty at work                                    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| My work responsibilities                                 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Fulfilling my work obligations                           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| The details of my work                                   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Accomplishing a lot at work                              | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Getting my work done no matter what                      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Getting a lot of work finished in a short amount of time | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Work activities that allow me to get ahead at work       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| My work accomplishments                                  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| How many job tasks I can complete                        | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

**[SCREEN 15]**

In this study, Sullivan-Reed Corp engages external tax professionals at Firm A to assist with the tax work. Please answer the following items as you think Sullivan-Reed Corp’s external tax professionals at Firm A would respond.

*[Client Advocacy]*

|   | <b>Strongly Disagree</b> | <b>Disagree</b>       | <b>Somewhat Disagree</b> | <b>Neither Agree nor Disagree</b> | <b>Somewhat Agree</b> | <b>Agree</b>          | <b>Strongly Agree</b> |
|---|--------------------------|-----------------------|--------------------------|-----------------------------------|-----------------------|-----------------------|-----------------------|
| In an instance where no judicial authority exists with respect to an issue and where the Code and Regulations are ambiguous, tax professionals should believe that the taxpayer is entitled to take the most favorable tax treatment. | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Generally speaking, tax professionals' loyalties should be first to the tax system, then to the taxpayer.   | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Tax professionals should apply ambiguous tax law to the taxpayer's benefit.   | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| When examining a tax return, tax professionals should point out to taxpayers reasonable positions they could have taken which would have contributed to minimizing their tax liability.   | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Tax professionals should believe it is important to encourage the taxpayer to pay the least amount of taxes payable.  | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Tax professionals should always interpret unclear/ambiguous laws in favor of the taxpayer.  | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Tax professionals should use trends in the law by trying to establish a pattern of more favorable treatment for the taxpayer and then extending the pattern to the taxpayer's position.   | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Where no judicial authority exists with respect to an issue, tax professionals should feel that the taxpayer is entitled to take the most favorable tax treatment.  | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Tax professionals should structure transactions in ways that yield the best tax result, even if the law is unclear in an area.  | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

**[SCREEN 16]**

[Manipulation Check Question]

Based upon the tax scenario, which of the following more accurately describes the primary function of Sullivan-Reed Corp's external tax professionals at Firm A?

The primary function of the tax professionals at Firm A is to...

- find the most advantageous tax opportunities for Sullivan-Reed Corp
- make sure Sullivan-Reed Corp follows the tax rules

[SCREEN 17]

**DEMOGRAPHIC QUESTIONS: Now moving away from the scenario, please provide the following information. All responses to this survey are anonymous and confidential.**

How many tax classes have you taken? Include the current semester.

- 0
- 1 - 2
- 3 - 4
- 5 or more

Please select your graduate degree program.

- MACC, Tax Track
- MACC, BMA Track
- MSA
- Other (Please specify)\_\_\_\_\_

Do you plan to work in taxation?

- Yes
- No

How much total work experience have you had in public accounting?

- No experience in public accounting
- Less than 6 months
- 6 – 12 months
- More than a year (Please specify how many years)\_\_\_\_\_

How much work experience have you had in public accounting, specifically in tax?

- No tax experience in public accounting
- Less than 6 months
- 6 – 12 months
- More than a year (Please specify how many years)\_\_\_\_\_

What size public accounting firm did you work for? Check all that apply.

- No experience in public accounting
- Big 4
- International/National
- Regional/Local
- Sole Proprietorship
- Other (Please specify)\_\_\_\_\_

Before participating in this study, how familiar were you with the Domestic Production Activities Deduction?

- Very Familiar
- Familiar
- Neither Familiar nor Unfamiliar
- Unfamiliar
- Very Unfamiliar

Before participating in this study, how familiar were you with the tax authority relating to activities that qualify for the Domestic Production Activities Deduction?

- Very Familiar
- Familiar
- Neither Familiar nor Unfamiliar
- Unfamiliar
- Very Unfamiliar

If you were evaluating a potential tax deduction for your individual tax return, how certain would you want to be of your tax position before taking a deduction?

|                          |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                      |
|--------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------------------|
| Not<br>At All<br>Certain |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | Extremely<br>Certain |
| 0%                       | 10%                   | 20%                   | 30%                   | 40%                   | 50%                   | 60%                   | 70%                   | 80%                   | 90%                   | 100%                  |                      |
| <input type="radio"/>    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |                      |

If you were evaluating a potential tax deduction for your individual tax return and engaged a paid tax preparer for assistance, how certain would you want your paid preparer to be of your tax position before taking a deduction?

| Not At All Certain    |                       |                       |                       |                       |                       |                       |                       |                       |                       | Extremely Certain     |  |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|--|
| 0%                    | 10%                   | 20%                   | 30%                   | 40%                   | 50%                   | 60%                   | 70%                   | 80%                   | 90%                   | 100%                  |  |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |  |

Who prepared your most recent individual income tax return?

- I prepared my own tax return
- I hired a paid preparer
- A friend or relative prepared my tax return
- I do not file a tax return
- Other (Please specify)\_\_\_\_\_

What is your age?

- 18 - 20
- 21 - 25
- 26 - 30
- 31 - 35
- 36 and over

What is your gender?

- Male
- Female

**[SCREEN 18]**

**FINAL RESPONSE SECTION:** Please use the scale to indicate your response to each of the items below. There are no right or wrong answers. Therefore, please respond as honestly and accurately as possible.

*[Trait Regulatory Focus: General Regulatory Focus Measure (GRFM)]*

|  | <b>Strongly Disagree</b> | <b>Disagree</b>       | <b>Somewhat Disagree</b> | <b>Neither Agree nor Disagree</b> | <b>Somewhat Agree</b> | <b>Agree</b>          | <b>Strongly Agree</b> |
|--|--------------------------|-----------------------|--------------------------|-----------------------------------|-----------------------|-----------------------|-----------------------|
| In general, I am focused on preventing negative events in my life.   | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I am anxious that I will fall short of my responsibilities and obligations.  | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I frequently imagine how I will achieve my hopes and aspirations.  | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I often think about the person I am afraid I might become in the future.   | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I often think about the person I would ideally like to be in the future.   | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I typically focus on the success I hope to achieve in the future.  | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I often worry that I will fail to accomplish my academic goals.  | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I often think about how I will achieve academic success.   | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I often imagine myself experiencing bad things that I fear might happen to me.   | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I frequently think about how I can prevent failures in my life.  | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I am more oriented toward preventing losses than I am toward achieving gains.  | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| My major goal in school right now is to achieve my academic ambitions.   | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| My major goal in school right now is to avoid becoming an academic failure.  | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I see myself as someone who is primarily striving to reach my “ideal self”—to fulfill my hopes, wishes, and aspirations. | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

|   | <b>Strongly Disagree</b> | <b>Disagree</b>       | <b>Somewhat Disagree</b> | <b>Neither Agree nor Disagree</b> | <b>Somewhat Agree</b> | <b>Agree</b>          | <b>Strongly Agree</b> |
|---|--------------------------|-----------------------|--------------------------|-----------------------------------|-----------------------|-----------------------|-----------------------|
| I see myself as someone who is primarily striving to become the self I “ought” to be—to fulfill my duties, responsibilities, and obligations. | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| In general, I am focused on achieving positive outcomes in my life.   | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I often imagine myself experiencing good things that I hope will happen to me.  | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Overall, I am more oriented toward achieving success than preventing failure.   | <input type="radio"/>    | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Please make any comments you think would be helpful in understanding your responses.



## **APPENDIX E: STUDY 3 TABLES**

Table 14: Demographics

(n = 51)\*

|   | <b>n</b> | <b>%</b> |
|---|----------|----------|
| <b>Age</b>  |          |          |
| 18-20   | 7        | 13.7     |
| 21-25   | 33       | 64.7     |
| 26-30   | 5        | 9.8      |
| 31-35   | 2        | 3.9      |
| Over 35   | 3        | 5.9      |
| Prefer not to answer                                  | 1        | 2.0      |
| <b>Gender</b>   |          |          |
| Male  | 22       | 43.1     |
| Female  | 29       | 56.9     |
| <b>Work Experience in Public Accounting - All</b>     |          |          |
| No public accounting experience                       | 44       | 86.3     |
| Less than 6 months                                    | 4        | 7.8      |
| 6 months – 12 months                                  | 3        | 5.9      |
| <b>Work Experience in Public Accounting - Tax</b>     |          |          |
| No public accounting experience in tax                | 44       | 86.3     |
| Less than 6 months                                    | 6        | 11.7     |
| 6 months – 12 months                                  | 1        | 2.0      |
| <b>Preparation of Most Recent Personal Tax Return</b> |          |          |
| Prepared own return                                   | 26       | 51.0     |
| Hired a paid preparer                                 | 12       | 23.6     |
| Friend or relative prepared                           | 6        | 11.7     |
| Did not need to file                                  | 7        | 13.7     |
| <b>Number of Tax Classes Taken</b>                    |          |          |
| 1-2   | 50       | 98.0     |
| None  | 1        | 2.0      |

|   | <u>n</u> | <u>%</u> |
|---|----------|----------|
| <b>CPA Intentions</b>                   |          |          |
| Plan to take the CPA exam in the future | 45       | 88.2     |
| Do not plan to be a CPA                 | 6        | 11.8     |

Notes: \* n = 51 includes 17 participants in the individual decision maker condition and 34 participants in the group decision maker condition (forming 17 two-member groups).

Table 15: Descriptive Statistics by Decision Maker: Means (Standard Deviation)

|                                 | <b>Individual</b> | <b>Group</b> | <b>Total</b> |
|---------------------------------|-------------------|--------------|--------------|
| <b>Number of Observations</b>   | 17                | 17           | 34           |
| <b>Unreported Income</b>        | 3.12 (3.52)       | 3.71 (2.97)  | 3.41 (3.22)  |
| <b>Felt Responsibility</b>      | 15.94* (3.29)     | 13.44 (2.94) | 14.69 (3.32) |
| <b>Relative Perceived Risk</b>  | 3.24 (2.36)       | 3.79 (1.51)  | 3.52 (1.97)  |
| <b>Fear of Negative Outcome</b> | 3.71 (1.21)       | 3.62 (0.70)  | 3.66 (0.97)  |
| <b>Risk Attitude</b>            | 1.74 (1.39)       | 1.83 (1.00)  | 1.78 (1.19)  |

Notes:

\* Mean of Felt Responsibility is significantly greater for the Individual condition than the Group condition ( $p = 0.026$ , two-tailed)

Variable Definitions:

*Decision Maker* is manipulated by structuring the decision to be made by either one decision maker (Individual) or by a group of decision makers (Group). Each participant in the Individual condition makes the reporting decision alone as the sole decision maker. Participants in the Group condition make the decision together as a group after reaching a group consensus.

*Unreported Income* is measured as follows: Participants in the experimental task are provided with experimental currency and then asked, "How much of the 10,000 Francs [20,000 Francs for the Group condition] would you like to report?" Reported income is measured on an 11-point scale; an individual decision maker may decide to report amounts from zero to 10,000 Francs in increments of 1,000 and a group may decide to report amounts from zero to 20,000 Francs in increments of 2,000. Reporting less income reflects greater risk taking. Reported income is reverse coded so that greater *Unreported Income* reflects greater risk taking.

*Felt Responsibility* is the sum of a three item scale adapted from Hackman and Oldham (1974) to measure how personally responsible a decision maker feels for possible outcomes of the decision. Each of the items uses a seven-point Likert-type scale with labeled points ranging from 1 "Strongly Disagree" to 7 "Strongly Agree." Greater *Felt Responsibility* scores reflect stronger feelings of personal responsibility. *Felt Responsibility* is expected to mediate the effect of *Decision Maker* on *Unreported Income*.

*Relative Perceived Risk* is a measure of a decision maker's self-perceived riskiness compared to other individuals and is designed to capture a decision maker's perception of widely-held social values. Participants are asked "Compared to the average person, how risky was the decision you just made?" *Relative Perceived Risk* is measured on a seven-point scale ranging from 1 "Much less risky than average" to 7 "Much more risky than average." Self-rating as less risky than others signifies a perception that the socially-valued position is to be less risky. Self-rating as more risky than others signifies a perception that the socially-valued position is to be more risky.

*Fear of Negative Outcome* is measured by asking, "When deciding how many Francs to report on the form, how concerned were you about the possibility that the report would be inspected?" Fear of negative outcome is measured on a five-point Likert-type scale with labeled points ranging from 1 "Not At All Concerned" to 5 "Extremely Concerned."

*Risk Attitude* is a four item measure adopted from the Weber et al. (2002) measure of risk attitude in the gambling domain, a subscale in the domain-specific risk attitude scale. Participants are asked to indicate their likelihood of engaging in different activities or behaviors; each item is measured on a seven-point scale ranging from 1 "Very Unlikely" to 7 "Very Likely." *Risk Attitude* is measured as a potential control variable.

Table 16: Correlation Coefficients

|                                    | (1)           | (2)           | (3)           | (4)           | (5)           | (6)           |
|------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| <b>1. Unreported Income</b>        | 1             | 0.173         | <b>-0.427</b> | <b>0.628</b>  | <b>-0.441</b> | <b>0.433</b>  |
| <b>2. Decision Maker</b>           | 0.093         | 1             | <b>-0.400</b> | 0.185         | -0.175        | 0.194         |
| <b>3. Felt Responsibility</b>      | <b>-0.451</b> | <b>-0.382</b> | 1             | <b>-0.351</b> | 0.314         | <b>-0.396</b> |
| <b>4. Relative Perceived Risk</b>  | <b>0.658</b>  | 0.144         | -0.330        | 1             | -0.247        | <b>0.533</b>  |
| <b>5. Fear of Negative Outcome</b> | -0.268        | -0.046        | 0.130         | -0.084        | 1             | -0.216        |
| <b>6. Risk Attitude</b>            | <b>0.360</b>  | 0.041         | -0.269        | <b>0.576</b>  | -0.080        | 1             |

Notes:

Table values are Spearman's Rho above the diagonal and Pearson Correlation Coefficients below the diagonal.

Bold correlations are significant at  $p < 0.05$  (two-tailed).

See Table 15 for variable definitions.

Table 17: Results of ANOVA: Effect of Decision Maker on Unreported Income

| <b>Source of Variation</b>     | <b>Sum of Squares</b> | <b>df</b> | <b>Mean Square</b> | <b>F</b> | <b>p</b>          |
|--------------------------------|-----------------------|-----------|--------------------|----------|-------------------|
| <b>Decision Maker</b>          | 0.001                 | 1         | 0.001              | 0.000    | <b>0.989</b>      |
| <b>Relative Perceived Risk</b> | 145.117               | 1         | 145.117            | 23.168   | <b>&lt; 0.000</b> |
| <b>Error</b>                   | 16.985                | 115       | 0.148              |          |                   |

Notes:

All p-values are two-tailed.

See Table 15 for variable definitions.

Table 18: Supplemental Analysis: Mediation Analysis Using PROCESS Procedure

**Panel A: Regression of Felt Responsibility on Decision Maker**

|                       | <b>Coefficient Estimate</b> | <b>Standard Error</b> | <b>t-statistic</b> | <b>p-value</b> |
|-----------------------|-----------------------------|-----------------------|--------------------|----------------|
| <b>Constant</b>       | 15.941                      | 0.757                 | 21.070             | < 0.000        |
| <b>Decision Maker</b> | -2.500                      | 1.070                 | -2.337             | 0.026          |
|                       |                             |                       |                    |                |
| <b>R<sup>2</sup></b>  | 0.146                       |                       |                    |                |
| <b>F Statistic</b>    | 5.460                       |                       |                    |                |
| <b>n</b>              | 34                          |                       |                    |                |

**Panel B: Regression of Unreported Income on Felt Responsibility and Decision Maker with Relative Perceived Risk**

|                                | <b>Coefficient Estimate</b> | <b>Standard Error</b> | <b>t-statistic</b> | <b>p-value</b> |
|--------------------------------|-----------------------------|-----------------------|--------------------|----------------|
| <b>Constant</b>                | 4.745                       | 2.630                 | 1.805              | 0.081          |
| <b>Felt Responsibility</b>     | -0.292                      | 0.141                 | -2.066             | 0.048          |
| <b>Decision Maker</b>          | -0.666                      | 0.884                 | -0.753             | 0.457          |
| <b>Relative Perceived Risk</b> | 0.937                       | 0.223                 | 4.205              | < 0.000        |
|                                |                             |                       |                    |                |
| <b>R<sup>2</sup></b>           | 0.503                       |                       |                    |                |
| <b>F Statistic</b>             | 10.132                      |                       |                    |                |
| <b>n</b>                       | 34                          |                       |                    |                |

**Panel C: Indirect Effect of Decision Maker on Unreported Income**

|                        |                | <b>Bootstrapped 95% Confidence Interval (1000 iterations)</b> |                    |
|------------------------|----------------|---|--------------------|
| <b>Indirect Effect</b> | <b>Boot SE</b> | <b>Lower Limit</b>  | <b>Upper Limit</b> |
| 0.7304                 | 0.4682         | 0.0892  | 2.1021             |

Notes:  
 Mediation Analysis uses PROCESS procedure (Hayes 2013).  
 All p-values are two-tailed.  
 See Table 15 for variable definitions.

## **APPENDIX F: STUDY 3 EXPERIMENTAL MATERIALS**



Condition 1: Individual / Self

[*Paper format*]

**Explanation of Research**

Title of Project: Decision Making and Reporting

Principal Investigator: Bonnie Brown

Faculty Supervisor: Vicky Arnold

You are being invited to take part in a research study. Whether you take part is up to you. Your professor has agreed to award you extra credit for your participation. If you wish to earn extra credit in your class, but do not wish to participate in the research study or are under 18 years of age, your professor will provide you with an alternate assignment of comparable time and effort. If you have decided to participate in this project, please understand that your participation is voluntary and that you have the right to withdraw your consent or discontinue participation at any time without penalty. Refusal to participate will involve no penalty or loss of benefits to which you are otherwise entitled. The purpose of this research is to examine individual decision making and reporting. You will be asked to read instructions for a decision involving reporting. You will then be asked to make your decision and answer some questions about your opinions and demographic questions. This research study will be conducted in a behavioral lab. The estimated time to complete this study is approximately 30 minutes.

You must be 18 years of age or older to take part in this research study.

Study contact for questions about the study or to report a problem: If you have questions, concerns, or complaints: Bonnie Brown, Doctoral Candidate, Kenneth G. Dixon School of Accounting, College of Business Administration, (407) 823-1478 or by email at [bonnie.brown@ucf.edu](mailto:bonnie.brown@ucf.edu) or Dr. Vicky Arnold, Faculty Supervisor, Kenneth G. Dixon School of Accounting, College of Business Administration, (407) 823-3192 or by email at [vicky.arnold@ucf.edu](mailto:vicky.arnold@ucf.edu).

IRB contact about your rights in the study or to report a complaint: Research at the University of Central Florida involving human participants is carried out under the oversight of the Institutional Review Board (UCF IRB). This research has been reviewed and approved by the IRB. For information about the rights of people who take part in research, please contact: Institutional Review Board, University of Central Florida, Office of Research & Commercialization, 12201 Research Parkway, Suite 501, Orlando, FL 32826-3246 or by telephone at (407) 823-2901.

## TASK INSTRUCTIONS [*Paper format*]

You will be participating in a task in which you are provided with Francs and then are asked to make a reporting decision. Note that Francs are the experimental currency, and there are no right or wrong answers.

The Francs will belong to you, and you will make the reporting decision for yourself. At the conclusion of the task, Francs will be converted into dollars using a positive conversion rate and you will be paid based upon the net Francs from your decision. In other words, **your decision affects the payout that you will receive.**

After being provided with Francs, you will decide how much of the Francs to report on a form, ranging from zero Francs to all of the Francs. Francs reported on the form are subject to a 50% fee. Francs that you decide not to report on the form are not subject to a fee unless the form is selected for inspection. If the form is selected for inspection, the amount of Francs reported is compared to the initial amount of Francs provided, and any Francs not reported on the form are subject to a 100% fee. The form has a 50% chance of being selected for inspection. Inspections are determined completely at random and do not depend on your decisions or the decisions of others.

After you have decided the amount of Francs to report and have submitted your form, you will be notified whether or not the form was selected for inspection. After the inspection period, net Francs will be calculated as the initial Francs provided, less total fees (**Net Francs = Initial Francs - Total Fees**). Thus, any fees assessed reduce your payout at the end of the task. Total Fees depend upon both the amount you decide to report on the form and whether the form is selected for inspection:

**If selected for inspection,** Total Fees equals 50% of the Francs reported on the form, plus 100% of the Francs not reported on the form.

**If not selected for inspection,** Total Fees equals 50% of the amount reported on the form.

## PRACTICE REPORTING DECISION

Just for practice, imagine you are provided with 2,000 Francs and are asked to decide what amount to report on a form, ranging from 0 Francs to 2,000 Francs (in 200 Franc increments). The 2,000 Francs will belong to you, and you will make the reporting decision for yourself.

The following chart has been provided to help you decide how much of the 2,000 Francs you want to report. The chart presents examples of both the maximum and minimum Net Francs that may be possible outcomes, given the Francs you decide to report.

| Francs You Could Choose to Report  | 0     | 200   | 400   | 600   | 800   | 1,000 | 1,200 | 1,400 | 1,600 | 1,800 | 2,000 |
|------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| <u>Maximum</u> Possible Net Francs | 2,000 | 1,900 | 1,800 | 1,700 | 1,600 | 1,500 | 1,400 | 1,300 | 1,200 | 1,100 | 1,000 |
| <u>Minimum</u> Possible Net Francs | 0     | 100   | 200   | 300   | 400   | 500   | 600   | 700   | 800   | 900   | 1,000 |

Several amounts are shown on the top row of the chart as “Francs you could choose to report.” For each reporting option, the chart presents both the maximum (no inspection) and minimum (inspection) possible net Francs if you choose to report that particular amount.

EXAMPLE 1: Note (towards the top right of the chart) if you decide to report all 2,000 Francs, net Francs would be 1,000 Francs regardless of whether the form is selected for inspection.

EXAMPLE 2: On the other end of the chart, note that if you decide to report 0 Francs, net Francs depend upon *whether the form is selected for inspection*.

If the form is selected for inspection and you have decided to report 0 Francs, net Francs would be 0 Francs, calculated as follows:

Total fees equal 50% of the 0 Francs reported on the form, plus 100% of the 2,000 Francs not reported on the form, so Total Fees equal 2,000. Net Francs are calculated as the 2,000 Initial Francs, less 2,000 Total Fees, so Net Francs equal 0.

If the form is not selected for inspection and you have decided to report 0 Francs, net Francs would be 2,000 Francs, calculated as follows:

Total fees equal 50% of the 0 Francs reported on the form, so Total Fees equal 0. Net Francs are calculated as the 2,000 Initial Francs, less 0 Total Fees, so Net Francs equal 2,000.

As shown in the chart, the other reporting options fall between these two examples. Please take a few minutes to review this chart.

*[End of Task Instructions – Blank page intentional spacer]*

**[QUALTRICS PORTION; SCREEN 1]**

**Your participant number is displayed on the outside of the envelopes you were given. Do not open the envelopes.**

**Please locate your PARTICIPANT NUMBER and enter it in the space provided below.**

---

[SCREEN 2]

**YOU HAVE NOW BEEN PROVIDED WITH 10,000 FRANCS**

Your task is to decide how much of the 10,000 Francs you would like to report. The 10,000 Francs will belong to you, and you will make the reporting decision for yourself. Please feel free to refer back to your paper hardcopy of the Task Instructions.

The following chart has been provided to help you decide how much of the 10,000 Francs you want to report. The chart presents examples of both the maximum and minimum Net Francs that may be possible, given the Francs you decide to report.

**Possible Net Francs**

| Francs You Could Choose to Report     | 0      | 1,000 | 2,000 | 3,000 | 4,000 | 5,000 | 6,000 | 7,000 | 8,000 | 9,000 | 10,000 |
|---------------------------------------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|
| <u>Maximum</u><br>Possible Net Francs | 10,000 | 9,500 | 9,000 | 8,500 | 8,000 | 7,500 | 7,000 | 6,500 | 6,000 | 5,500 | 5,000  |
| <u>Minimum</u><br>Possible Net Francs | 0      | 500   | 1,000 | 1,500 | 2,000 | 2,500 | 3,000 | 3,500 | 4,000 | 4,500 | 5,000  |

Please type in the textbox provided below to share your thought process as you decide how much of the 10,000 Francs to report.

How much of the 10,000 Francs would you like to report?

- 0    1,000    2,000    3,000    4,000    5,000    6,000    7,000    8,000    9,000    10,000
-

[*SCREEN 3*]

**Please open Envelope 1 and complete the contents individually on your own. Only open “Envelope 1” at this time. Once complete, place materials back inside the envelope and wait for further instruction.**

**WAIT Do not click on the computer until the person administering the study tells you to proceed in the computer survey.**

Please remain quiet. After everyone is ready, you will be instructed to continue.

**[SCREEN 4]**

**INSPECTION PERIOD**

**Reports will now be randomly selected for inspection. On the next screen, you will be notified whether or not your report was selected for inspection.**



**[SCREEN 5]**

**Your report was selected for inspection.**

**[Your report was not selected for inspection.]**

**Net Francs = [Insert Net Francs]**

**Please click “>>” below to proceed.**

[*SCREEN 6 – Custom Final Qualtrics Screen*]

**Please WAIT here for further instruction.**

**As a reminder, please remain quiet while you are waiting.  
After everyone is ready, you will be instructed how to proceed.**

*[End of Qualtrics Study – Blank page intentional spacer]*

# **ENVELOPE 1**

[*Contains Covariate Questionnaire*]

[Envelope 1 Outside Label]

**IMPORTANT – Do not open this envelope until instructed to do so.**

YOUR PARTICIPANT NUMBER IS: **000000**

[Covariate Questionnaire]

Please enter your PARTICIPANT NUMBER in the space provided below.

PARTICIPANT NUMBER: \_\_\_\_\_

**ADDITIONAL RESPONSE QUESTIONS: Please respond to the following questions. There are no right or wrong answers. Therefore, please respond as honestly and accurately as possible.**

Regarding the reporting decision that you just made, please indicate your agreement or disagreement with the following statements:

|  | Strongly Disagree     | Disagree              | Somewhat Disagree     | Neither Agree nor Disagree | Somewhat Agree        | Agree                 | Strongly Agree        |
|--|-----------------------|-----------------------|-----------------------|----------------------------|-----------------------|-----------------------|-----------------------|
| It was hard for me to care very much about whether or not a good reporting decision was made.          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I felt a very high degree of <u>personal</u> responsibility for the decision about how much to report. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I feel I should personally take the credit or blame for the results of the reporting decision.         | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Whether or not a good reporting decision was made is clearly <u>my</u> responsibility.                 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

When deciding how many Francs to report on the form, how concerned were you about the possibility that the report would be inspected?

- Extremely Concerned
- Moderately Concerned
- Somewhat Concerned
- Slightly Concerned
- Not at all Concerned

Compared to the average person, how risky was the decision you just made?

- Much more risky than average
- More risky than average
- Somewhat more risky than average
- Neither more or less risky than average
- Somewhat less risky than average
- Less risky than average
- Much less risky than average

Which best describes how your payment is determined for this study?

- Based on a reporting decision I made
- Based on a reporting decision that someone else made
- Based on a reporting decision that my group made
- Based on a reporting decision that another group made

*[End of Envelope 1 Covariate Questionnaire– Blank page intentional spacer]*

## **ENVELOPE 2**

[*Contains Demographics Questionnaire*]

[Envelope 2 Outside Label]

**IMPORTANT – Do not open this envelope until instructed to do so.**

YOUR PARTICIPANT IS: **000000**



***[Demographics Questionnaire]***

**Please enter your PARTICIPANT NUMBER in the space provided below.**

**PARTICIPANT NUMBER: \_\_\_\_\_**

**DEMOGRAPHIC QUESTIONS: Please tell us a little about yourself to help categorize your responses. All responses to this survey are anonymous and confidential.**

What is your age?

- 18 - 20
- 21 - 25
- 26 - 30
- 31 - 35
- 36 and over
- I would prefer not to answer

What is your gender?

- Male
- Female

How many tax classes have you taken? Include the current semester.

- 0
- 1 - 2
- 3 - 4
- 5 or more

How much total work experience have you had in public accounting?

- No experience in public accounting
- Less than 6 months
- 6 – 12 months
- More than a year (Please specify how many years)\_\_\_\_\_

How much work experience have you had in public accounting, specifically in tax?

- No tax experience in public accounting
- Less than 6 months
- 6 – 12 months
- More than a year (Please specify how many years)\_\_\_\_\_

What size public accounting firm did you work for? Check all that apply.

- Big 4
- International/National (does not include Big 4)
- Regional/Local
- Sole Proprietorship
- Other (Please specify)\_\_\_\_\_
- No experience in public accounting

What is your status regarding becoming a Certified Public Accountant (CPA)?

- Currently a licensed CPA
- Passed the CPA exam but not yet licensed
- Plan to take CPA exam in the future
- Do not plan to be a CPA

If you were evaluating a potential tax deduction for your personal tax return, how certain would you want to be of your tax position before taking a deduction?

|                          |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                      |
|--------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------------------|
| Not<br>At All<br>Certain |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | Extremely<br>Certain |
| 0%                       | 10%                   | 20%                   | 30%                   | 40%                   | 50%                   | 60%                   | 70%                   | 80%                   | 90%                   | 100%                  |                      |
| <input type="radio"/>    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |                      |

If you were evaluating a potential tax deduction for your personal tax return and engaged a paid tax preparer for assistance, how certain would you want your paid preparer to be of your tax position before taking a deduction?

|                          |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                      |
|--------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------------------|
| Not<br>At All<br>Certain |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | Extremely<br>Certain |
| 0%                       | 10%                   | 20%                   | 30%                   | 40%                   | 50%                   | 60%                   | 70%                   | 80%                   | 90%                   | 100%                  |                      |
| <input type="radio"/>    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |                      |

Who prepared your most recent individual income tax return?

- I prepared my own tax return
- I hired a paid preparer
- A friend or relative prepared my tax return
- I do not file a tax return
- Other (Please specify)\_\_\_\_\_

For each of the following statements, please indicate your **likelihood** of engaging in each activity or behavior.

|   | Very Unlikely         | Unlikely              | Somewhat Unlikely     | Neither Likely nor Unlikely | Somewhat Likely       | Likely                | Very Likely           |
|---|-----------------------|-----------------------|-----------------------|-----------------------------|-----------------------|-----------------------|-----------------------|
| Admitting that your tastes are different from those of your friends.                            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Betting a day's income at the horse races.  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Investing 10% of your annual income in a moderate growth mutual fund.                           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Disagreeing with your father on a major issue.  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Betting a day's income at a high stake poker game.  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Arguing with a friend about an issue on which he or she has a very different opinion.           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Investing 5% of your annual income in a very speculative stock.                                 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Approaching your boss to ask for a raise.   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Betting a day's income on the outcome of a sporting event (e.g. baseball, soccer, or football). | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Telling a friend if his or her significant other has made a pass at you.                        | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Investing 5% of your annual income in a conservative stock.                                     | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Wearing shocking or unconventional clothes on occasion.   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Investing 10% of your annual income in government bonds (treasury bills).                       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Gambling a week's income at a casino.   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Taking a job that you enjoy over one that is prestigious but less enjoyable.                    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Defending an unpopular issue that you believe in at a social occasion.                          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Thank you for participating in this study! Please place this questionnaire back into Envelope 2 and remain seated until the person administering the study instructs you to line up for payout.

To ensure that you receive your payout, please have the following materials ready to bring with you:

- Envelope 1 containing completed questions
- Envelope 2 containing completed questions
- Acknowledgement of Payment form – print your name, sign your name, and leave the “amount received” blank

*[End of Envelope 2 Demographics Questionnaire – Blank page intentional spacer]*

## **ACKNOWLEDGEMENT OF PAYMENT**

Thank you for participating in this study on reporting decisions conducted by Bonnie Brown. Please sign below to acknowledge receipt of payment for your participation in this study.

**In addition, by signing below you acknowledge that you will NOT discuss the study with other students.** To get valid and useful results, we need each participant's honest and unfiltered reactions to his/her experiences in the study. Thank you very much for your cooperation.

**Session Date and Time: [Insert Date] ([Insert Day of the Week]) [Insert Time]**

---

**Amount Received (in U.S. dollars)**

---

**Printed Name**

---

**Signed Name**

Thank you very much for your participation!

Condition 2: Individual / Other

[Paper format]

**Explanation of Research**

Title of Project: Decision Making and Reporting

Principal Investigator: Bonnie Brown

Faculty Supervisor: Vicky Arnold

You are being invited to take part in a research study. Whether you take part is up to you. Your professor has agreed to award you extra credit for your participation. If you wish to earn extra credit in your class, but do not wish to participate in the research study or are under 18 years of age, your professor will provide you with an alternate assignment of comparable time and effort. If you have decided to participate in this project, please understand that your participation is voluntary and that you have the right to withdraw your consent or discontinue participation at any time without penalty. Refusal to participate will involve no penalty or loss of benefits to which you are otherwise entitled. The purpose of this research is to examine individual decision making and reporting. You will be asked to read instructions for a decision involving reporting. You will then be asked to make your decision and answer some questions about your opinions and demographic questions. This research study will be conducted in a behavioral lab. The estimated time to complete this study is approximately 30 minutes.

You must be 18 years of age or older to take part in this research study.

Study contact for questions about the study or to report a problem: If you have questions, concerns, or complaints: Bonnie Brown, Doctoral Candidate, Kenneth G. Dixon School of Accounting, College of Business Administration, (407) 823-1478 or by email at [bonnie.brown@ucf.edu](mailto:bonnie.brown@ucf.edu) or Dr. Vicky Arnold, Faculty Supervisor, Kenneth G. Dixon School of Accounting, College of Business Administration, (407) 823-3192 or by email at [vicky.arnold@ucf.edu](mailto:vicky.arnold@ucf.edu).

IRB contact about your rights in the study or to report a complaint: Research at the University of Central Florida involving human participants is carried out under the oversight of the Institutional Review Board (UCF IRB). This research has been reviewed and approved by the IRB. For information about the rights of people who take part in research, please contact: Institutional Review Board, University of Central Florida, Office of Research & Commercialization, 12201 Research Parkway, Suite 501, Orlando, FL 32826-3246 or by telephone at (407) 823-2901.



## TASK INSTRUCTIONS [*Paper format*]

You will be participating in a task in which you are provided with Francs and then are asked to make a reporting decision. Note that Francs are the experimental currency, and there are no right or wrong answers.

The Francs will belong to another person, and you will make the reporting decision for that other person. At the conclusion of the task, Francs will be converted into dollars using a positive conversion rate and the other person will be paid based upon the net Francs from your decision. In other words, **your decision affects the payout that someone else will receive**. Your own payout will be based upon the net Francs of another person deciding on your behalf. Assignment is completely random – you should assume the person deciding on your behalf is not the same person for whom you are deciding.

After being provided with Francs, you will decide how much of the Francs to report on a form, ranging from zero Francs to all of the Francs. Francs reported on the form are subject to a 50% fee. Francs that you decide not to report on the form are not subject to a fee unless the form is selected for inspection. If the form is selected for inspection, the amount of Francs reported is compared to the initial amount of Francs provided, and any Francs not reported on the form are subject to a 100% fee. The form has a 50% chance of being selected for inspection. Inspections are determined completely at random and do not depend on your decisions or the decisions of others.

After you have decided the amount of Francs to report and have submitted the form on behalf of another person, you will be notified whether or not the form was selected for inspection. After the inspection period, net Francs will be calculated as the initial Francs provided, less total fees (**Net Francs = Initial Francs - Total Fees**). Thus, any fees assessed reduce the other person's payout at the end of the task. Total Fees depend upon both the amount you decide to report on the form and whether the form is selected for inspection:

**If selected for inspection**, Total Fees equals 50% of the Francs reported on the form, plus 100% of the Francs not reported on the form.

**If not selected for inspection**, Total Fees equals 50% of the amount reported on the form.

## PRACTICE REPORTING DECISION

Just for practice, imagine you are provided with 2,000 Francs and are asked to decide what amount to report on a form, ranging from 0 Francs to 2,000 Francs (in 200 Franc increments). The 2,000 Francs will belong to another person, and you will make the reporting decision for that other person.

The following chart has been provided to help you decide how much of the 2,000 Francs you want to report. The chart presents examples of both the maximum and minimum Net Francs that may be possible outcomes, given the Francs you decide to report.

| Francs You Could Choose to Report  | 0     | 200   | 400   | 600   | 800   | 1,000 | 1,200 | 1,400 | 1,600 | 1,800 | 2,000 |
|------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| <u>Maximum</u> Possible Net Francs | 2,000 | 1,900 | 1,800 | 1,700 | 1,600 | 1,500 | 1,400 | 1,300 | 1,200 | 1,100 | 1,000 |
| <u>Minimum</u> Possible Net Francs | 0     | 100   | 200   | 300   | 400   | 500   | 600   | 700   | 800   | 900   | 1,000 |

Several amounts are shown on the top row of the chart as “Francs you could choose to report.” For each reporting option, the chart presents both the maximum (no inspection) and minimum (inspection) possible net Francs if you choose to report that particular amount.

EXAMPLE 1: Note (towards the top right of the chart) if you decide to report all 2,000 Francs, net Francs would be 1,000 Francs regardless of whether the form is selected for inspection.

EXAMPLE 2: On the other end of the chart, note that if you decide to report 0 Francs, net Francs depend upon *whether the form is selected for inspection*.

If the form is selected for inspection and you have decided to report 0 Francs, net Francs would be 0 Francs, calculated as follows:

Total fees equal 50% of the 0 Francs reported on the form, plus 100% of the 2,000 Francs not reported on the form, so Total Fees equal 2,000. Net Francs are calculated as the 2,000 Initial Francs, less 2,000 Total Fees, so Net Francs equal 0.

If the form is not selected for inspection and you have decided to report 0 Francs, net Francs would be 2,000 Francs, calculated as follows:

Total fees equal 50% of the 0 Francs reported on the form, so Total Fees equal 0. Net Francs are calculated as the 2,000 Initial Francs, less 0 Total Fees, so Net Francs equal 2,000.

As shown in the chart, the other reporting options fall between these two examples. Please take a few minutes to review this chart.

*[End of Task Instructions – Blank page intentional spacer]*

**[QUALTRICS PORTION; SCREEN 1]**

**Your participant number is displayed on the outside of the envelopes you were given. Do not open the envelopes.**

**Please locate your PARTICIPANT NUMBER and enter it in the space provided below.**

---

[SCREEN 2]

**YOU HAVE NOW BEEN PROVIDED WITH 10,000 FRANCS**

Your task is to decide how much of the 10,000 Francs you would like to report. The 10,000 Francs will belong to another person, and you will make the reporting decision for that other person.  
Please feel free to refer back to your paper hardcopy of the Task Instructions.

The following chart has been provided to help you decide how much of the 10,000 Francs you want to report. The chart presents examples of both the maximum and minimum Net Francs that may be possible, given the Francs you decide to report.

**Possible Net Francs**

| Francs You Could Choose to Report     | 0      | 1,000 | 2,000 | 3,000 | 4,000 | 5,000 | 6,000 | 7,000 | 8,000 | 9,000 | 10,000 |
|---------------------------------------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|
| <u>Maximum</u><br>Possible Net Francs | 10,000 | 9,500 | 9,000 | 8,500 | 8,000 | 7,500 | 7,000 | 6,500 | 6,000 | 5,500 | 5,000  |
| <u>Minimum</u><br>Possible Net Francs | 0      | 500   | 1,000 | 1,500 | 2,000 | 2,500 | 3,000 | 3,500 | 4,000 | 4,500 | 5,000  |

Please type in the textbox provided below to share your thought process as you decide how much of the 10,000 Francs to report.

How much of the 10,000 Francs would you like to report?

- 0    1,000    2,000    3,000    4,000    5,000    6,000    7,000    8,000    9,000    10,000
-

[*SCREEN 3*]

**Please open Envelope 1 and complete the contents individually on your own. Only open “Envelope 1” at this time. Once complete, place materials back inside the envelope and wait for further instruction.**

**WAIT Do not click on the computer until the person administering the study tells you to proceed in the computer survey.**

Please remain quiet. After everyone is ready, you will be instructed to continue.

[*SCREEN 4*]

**INSPECTION PERIOD**

**Reports will now be randomly selected for inspection. On the next screen, you will be notified whether or not your report was selected for inspection.**

**[SCREEN 5]**

**Your report was selected for inspection.**

**[Your report was not selected for inspection.]**

**Net Francs = [Insert Net Francs]**

**Please click “>>” below to proceed.**



[*SCREEN 6 – Custom Final Qualtrics Screen*]

**Please WAIT here for further instruction.**

**As a reminder, please remain quiet while you are waiting.  
After everyone is ready, you will be instructed how to proceed.**

*[End of Qualtrics Study – Blank page intentional spacer]*

# **ENVELOPE 1**

[*Contains Covariate Questionnaire*]

[Envelope 1 Outside Label]

**IMPORTANT – Do not open this envelope until instructed to do so.**

YOUR PARTICIPANT NUMBER IS: **000000**

[Covariate Questionnaire]

Please enter your PARTICIPANT NUMBER in the space provided below.

PARTICIPANT NUMBER: \_\_\_\_\_

**ADDITIONAL RESPONSE QUESTIONS: Please respond to the following questions. There are no right or wrong answers. Therefore, please respond as honestly and accurately as possible.**

Regarding the reporting decision that you just made, please indicate your agreement or disagreement with the following statements:

|  | Strongly Disagree     | Disagree              | Somewhat Disagree     | Neither Agree nor Disagree | Somewhat Agree        | Agree                 | Strongly Agree        |
|--|-----------------------|-----------------------|-----------------------|----------------------------|-----------------------|-----------------------|-----------------------|
| It was hard for me to care very much about whether or not a good reporting decision was made.          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I felt a very high degree of <u>personal</u> responsibility for the decision about how much to report. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I feel I should personally take the credit or blame for the results of the reporting decision.         | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Whether or not a good reporting decision was made is clearly <u>my</u> responsibility.                 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

When deciding how many Francs to report on the form, how concerned were you about the possibility that the report would be inspected?

- Extremely Concerned
- Moderately Concerned
- Somewhat Concerned
- Slightly Concerned
- Not at all Concerned

Compared to the average person, how risky was the decision you just made?

- Much more risky than average
- More risky than average
- Somewhat more risky than average
- Neither more or less risky than average
- Somewhat less risky than average
- Less risky than average
- Much less risky than average

Which best describes how your payment is determined for this study?

- Based on a reporting decision I made
- Based on a reporting decision that someone else made
- Based on a reporting decision that my group made
- Based on a reporting decision that another group made

*[End of Envelope 1 Covariate Questionnaire– Blank page intentional spacer]*

## **ENVELOPE 2**

*[Contains Demographics Questionnaire]*

[Envelope 2 Outside Label]

**IMPORTANT – Do not open this envelope until instructed to do so.**

YOUR PARTICIPANT IS: **000000**

***[Demographics Questionnaire]***

**Please enter your PARTICIPANT NUMBER in the space provided below.**

**PARTICIPANT NUMBER: \_\_\_\_\_**



**DEMOGRAPHIC QUESTIONS: Please tell us a little about yourself to help categorize your responses. All responses to this survey are anonymous and confidential.**

What is your age?

- 18 - 20
- 21 - 25
- 26 - 30
- 31 - 35
- 36 and over
- I would prefer not to answer

What is your gender?

- Male
- Female

How many tax classes have you taken? Include the current semester.

- 0
- 1 - 2
- 3 - 4
- 5 or more

How much total work experience have you had in public accounting?

- No experience in public accounting
- Less than 6 months
- 6 – 12 months
- More than a year (Please specify how many years)\_\_\_\_\_

How much work experience have you had in public accounting, specifically in tax?

- No tax experience in public accounting
- Less than 6 months
- 6 – 12 months
- More than a year (Please specify how many years)\_\_\_\_\_

What size public accounting firm did you work for? Check all that apply.

- Big 4
- International/National (does not include Big 4)
- Regional/Local
- Sole Proprietorship
- Other (Please specify)\_\_\_\_\_
- No experience in public accounting

What is your status regarding becoming a Certified Public Accountant (CPA)?

- Currently a licensed CPA
- Passed the CPA exam but not yet licensed
- Plan to take CPA exam in the future
- Do not plan to be a CPA

If you were evaluating a potential tax deduction for your personal tax return, how certain would you want to be of your tax position before taking a deduction?

|                          |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                      |
|--------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------------------|
| Not<br>At All<br>Certain |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | Extremely<br>Certain |
| 0%                       | 10%                   | 20%                   | 30%                   | 40%                   | 50%                   | 60%                   | 70%                   | 80%                   | 90%                   | 100%                  |                      |
| <input type="radio"/>    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |                      |

If you were evaluating a potential tax deduction for your personal tax return and engaged a paid tax preparer for assistance, how certain would you want your paid preparer to be of your tax position before taking a deduction?

|                          |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                      |
|--------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------------------|
| Not<br>At All<br>Certain |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | Extremely<br>Certain |
| 0%                       | 10%                   | 20%                   | 30%                   | 40%                   | 50%                   | 60%                   | 70%                   | 80%                   | 90%                   | 100%                  |                      |
| <input type="radio"/>    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |                      |

Who prepared your most recent individual income tax return?

- I prepared my own tax return
- I hired a paid preparer
- A friend or relative prepared my tax return
- I do not file a tax return
- Other (Please specify)\_\_\_\_\_

For each of the following statements, please indicate your **likelihood** of engaging in each activity or behavior.

|   | Very Unlikely         | Unlikely              | Somewhat Unlikely     | Neither Likely nor Unlikely | Somewhat Likely       | Likely                | Very Likely           |
|---|-----------------------|-----------------------|-----------------------|-----------------------------|-----------------------|-----------------------|-----------------------|
| Admitting that your tastes are different from those of your friends.                            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Betting a day's income at the horse races.  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Investing 10% of your annual income in a moderate growth mutual fund.                           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Disagreeing with your father on a major issue.  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Betting a day's income at a high stake poker game.  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Arguing with a friend about an issue on which he or she has a very different opinion.           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Investing 5% of your annual income in a very speculative stock.                                 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Approaching your boss to ask for a raise.   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Betting a day's income on the outcome of a sporting event (e.g. baseball, soccer, or football). | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Telling a friend if his or her significant other has made a pass at you.                        | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Investing 5% of your annual income in a conservative stock.                                     | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Wearing shocking or unconventional clothes on occasion.   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Investing 10% of your annual income in government bonds (treasury bills).                       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Gambling a week's income at a casino.   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Taking a job that you enjoy over one that is prestigious but less enjoyable.                    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Defending an unpopular issue that you believe in at a social occasion.                          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Thank you for participating in this study! Please place this questionnaire back into Envelope 2 and remain seated until the person administering the study instructs you to line up for payout.

To ensure that you receive your payout, please have the following materials ready to bring with you:

- Envelope 1 containing completed questions
- Envelope 2 containing completed questions
- Acknowledgement of Payment form – print your name, sign your name, and leave the “amount received” blank

*[End of Envelope 2 Demographics Questionnaire – Blank page intentional spacer]*

## **ACKNOWLEDGEMENT OF PAYMENT**

Thank you for participating in this study on reporting decisions conducted by Bonnie Brown. Please sign below to acknowledge receipt of payment for your participation in this study.

**In addition, by signing below you acknowledge that you will NOT discuss the study with other students.** To get valid and useful results, we need each participant's honest and unfiltered reactions to his/her experiences in the study. Thank you very much for your cooperation.

**Session Date and Time: [Insert Date] ([Insert Day of the Week]) [Insert Time]**

---

**Amount Received (in U.S. dollars)**

---

**Printed Name**

---

**Signed Name**

Thank you very much for your participation!

### Condition 3: Group / Self

[*Paper format*]

#### **Explanation of Research**

Title of Project: Decision Making and Reporting

Principal Investigator: Bonnie Brown

Faculty Supervisor: Vicky Arnold

You are being invited to take part in a research study. Whether you take part is up to you. Your professor has agreed to award you extra credit for your participation. If you wish to earn extra credit in your class, but do not wish to participate in the research study or are under 18 years of age, your professor will provide you with an alternate assignment of comparable time and effort. If you have decided to participate in this project, please understand that your participation is voluntary and that you have the right to withdraw your consent or discontinue participation at any time without penalty. Refusal to participate will involve no penalty or loss of benefits to which you are otherwise entitled. The purpose of this research is to examine individual decision making and reporting. You will be asked to read instructions for a decision involving reporting. You will then be asked to make your decision and answer some questions about your opinions and demographic questions. This research study will be conducted in a behavioral lab. The estimated time to complete this study is approximately 30 minutes.

You must be 18 years of age or older to take part in this research study.

Study contact for questions about the study or to report a problem: If you have questions, concerns, or complaints: Bonnie Brown, Doctoral Candidate, Kenneth G. Dixon School of Accounting, College of Business Administration, (407) 823-1478 or by email at [bonnie.brown@ucf.edu](mailto:bonnie.brown@ucf.edu) or Dr. Vicky Arnold, Faculty Supervisor, Kenneth G. Dixon School of Accounting, College of Business Administration, (407) 823-3192 or by email at [vicky.arnold@ucf.edu](mailto:vicky.arnold@ucf.edu).

IRB contact about your rights in the study or to report a complaint: Research at the University of Central Florida involving human participants is carried out under the oversight of the Institutional Review Board (UCF IRB). This research has been reviewed and approved by the IRB. For information about the rights of people who take part in research, please contact: Institutional Review Board, University of Central Florida, Office of Research & Commercialization, 12201 Research Parkway, Suite 501, Orlando, FL 32826-3246 or by telephone at (407) 823-2901.

## TASK INSTRUCTIONS [*Paper format*]

You will be participating in a task in which your group is provided with Francs and then is asked to make a reporting decision. Note that Francs are the experimental currency, and there are no right or wrong answers.

The Francs will belong to your group, and your two member group will make the reporting decision together for your entire group. At the conclusion of the task, Francs will be converted into dollars using a positive conversion rate and your group will be paid based upon the net Francs from your group's decision. In other words, **your group's decision affects the payout that your group will receive**. Payouts will be divided equally between group members.

After being provided with Francs, your group will decide how much of the Francs to report on a form, ranging from zero Francs to all of the Francs. Francs reported on the form are subject to a 50% fee. Francs that you decide not to report on the form are not subject to a fee unless the form is selected for inspection. If the form is selected for inspection, the amount of Francs reported is compared to the initial amount of Francs provided, and any Francs not reported on the form are subject to a 100% fee. The form has a 50% chance of being selected for inspection. Inspections are determined completely at random and do not depend on your group's decisions or the decisions of other groups.

After your group has decided the amount of Francs to report and has submitted your form, you will be notified whether or not the form was selected for inspection. After the inspection period, net Francs will be calculated as the initial Francs provided, less total fees (**Net Francs = Initial Francs - Total Fees**). Thus, any fees assessed reduce your group's payout at the end of the task. Total Fees depend upon both the amount your group decides to report on the form and whether the form is selected for inspection:

**If selected for inspection**, Total Fees equal 50% of the Francs reported on the form, plus 100% of the Francs not reported on the form.

**If not selected for inspection**, Total Fees equal 50% of the amount reported on the form.



## PRACTICE REPORTING DECISION

Just for practice, imagine your group is provided with 4,000 Francs and is asked to decide what amount to report on a form, ranging from 0 Francs to 4,000 Francs (in 400 Franc increments). The 4,000 Francs will belong to your group, and your two member group will make the reporting decision together for your entire group. Payouts will be divided equally between group members.

The following chart has been provided to help your group decide how much of the 4,000 Francs you want to report. The chart presents examples of both the maximum and minimum Net Francs that may be possible outcomes, given the Francs your group decides to report.

| Francs You Could Choose to Report  | 0     | 400   | 800   | 1,200 | 1,600 | 2,000 | 2,400 | 2,800 | 3,200 | 3,600 | 4,000 |
|------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| <b>Maximum Possible Net Francs</b> | 4,000 | 3,800 | 3,600 | 3,400 | 3,200 | 3,000 | 2,800 | 2,600 | 2,400 | 2,200 | 2,000 |
| <b>Minimum Possible Net Francs</b> | 0     | 200   | 400   | 600   | 800   | 1,000 | 1,200 | 1,400 | 1,600 | 1,800 | 2,000 |

Several amounts are shown on the top row of the chart as “Francs you could choose to report.” For each reporting option, the chart presents both the maximum (no inspection) and minimum (inspection) possible net Francs if your group chooses to report that particular amount.

EXAMPLE 1: Note (towards the top right of the chart) if your group decides to report all 4,000 Francs, net Francs would be 2,000 Francs regardless of whether the form is selected for inspection.

EXAMPLE 2: On the other end of the chart, note that if your group decides to report 0 Francs, net Francs depend upon *whether the form is selected for inspection*.

If the form is selected for inspection and you have decided to report 0 Francs, net Francs would be 0 Francs, calculated as follows:

Total fees equal 50% of the 0 Francs reported on the form, plus 100% of the 4,000 Francs not reported on the form, so Total Fees equal 4,000. Net Francs are calculated as the 4,000 Initial Francs, less 4,000 Total Fees, so Net Francs equal 0.

If the form is not selected for inspection and you have decided to report 0 Francs, net Francs would be 4,000 Francs, calculated as follows:

Total fees equal 50% of the 0 Francs reported on the form, so Total Fees equal 0. Net Francs are calculated as the 4,000 Initial Francs, less 0 Total Fees, so Net Francs equal 4,000.

As shown in the chart, the other reporting options fall between these two examples. Please take a few minutes to review this chart.

*[End of Task Instructions – Blank page intentional spacer]*

**[QUALTRICS PORTION; SCREEN 1]**

**Your group name and participant number are displayed on the outside of the envelopes you were given. Do not open the envelopes.**

**Please locate your GROUP NAME and enter it in the space provided below.**

\_\_\_\_\_

**Please locate both of your PARTICIPANT NUMBERS and enter them in the spaces provided below.**

1<sup>st</sup> PARTICIPANT NUMBER

\_\_\_\_\_

2<sup>nd</sup> PARTICIPANT NUMBER

\_\_\_\_\_

[SCREEN 2]

**YOUR GROUP HAS NOW BEEN PROVIDED WITH 20,000 FRANCS**

Your task is to decide as a group how much of the 20,000 Francs your group would like to report.

The 20,000 Francs will belong to your group, and your two member group will make the reporting decision together for your entire group. Payouts will be divided equally between group members.

Please feel free to refer back to your paper hardcopy of the Task Instructions.

The following chart has been provided to help your group decide how much of the 20,000 Francs you want to report. The chart presents examples of both the maximum and minimum Net Francs that may be possible, given the Francs your group decides to report.

**Possible Net Francs**

| Francs You Could Choose to Report     | 0      | 2,000  | 4,000  | 6,000  | 8,000  | 10,000 | 12,000 | 14,000 | 16,000 | 18,000 | 20,000 |
|---------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| <u>Maximum</u><br>Possible Net Francs | 20,000 | 19,000 | 18,000 | 17,000 | 16,000 | 15,000 | 14,000 | 13,000 | 12,000 | 11,000 | 10,000 |
| <u>Minimum</u><br>Possible Net Francs | 0      | 1,000  | 2,000  | 3,000  | 4,000  | 5,000  | 6,000  | 7,000  | 8,000  | 9,000  | 10,000 |

Please do not comment out loud. Rather, to keep your conversation private, please take turns typing in the textbox provided below to share your thought process to reach a group decision about how much of the 20,000 Francs to report.

How much of the 20,000 Francs would your group like to report?

- 0    2,000    4,000    6,000    8,000    10,000    12,000    14,000    16,000    18,000    20,000
-

[*SCREEN 3*]

**Please open Envelope 1 and complete the contents individually on your own. Only open “Envelope 1” at this time. Once complete, place materials back inside the envelope and wait for further instruction.**

**WAIT Do not click on the computer until the person administering the study tells you to proceed in the computer survey.**

Please remain quiet. After everyone is ready, you will be instructed to continue.

[*SCREEN 4*]

**INSPECTION PERIOD**

**Reports will now be randomly selected for inspection. On the next screen, you will be notified whether or not your report was selected for inspection.**

**[SCREEN 5]**

**Your report was selected for inspection.**

**[Your report was not selected for inspection.]**

**Net Francs = [Insert Net Francs]**

**Please click “>>” below to proceed.**

[*SCREEN 6 – Custom Final Qualtrics Screen*]

**Please WAIT here for further instruction.**

**As a reminder, please remain quiet while you are waiting.  
After everyone is ready, you will be instructed how to proceed.**



*[End of Qualtrics Study – Blank page intentional spacer]*

# ENVELOPE 1

[Contains Covariate Questionnaire]

[Envelope 1 Outside Label (Label color matches group name color)]

**IMPORTANT – Do not open this envelope until instructed to do so.**

YOUR PARTICIPANT NUMBER IS: **000000**

You are a member of a two person group. YOUR GROUP IS **BLUE**

[Covariate Questionnaire]

Please enter your **GROUP NAME** in the space provided below.

GROUP NAME: \_\_\_\_\_

Please enter your **PARTICIPANT NUMBER** in the space provided below.

PARTICIPANT NUMBER: \_\_\_\_\_

**ADDITIONAL RESPONSE QUESTIONS:** Please respond to the following questions. There are no right or wrong answers. Therefore, please respond as honestly and accurately as possible.

Regarding the reporting decision that you just made, please indicate your agreement or disagreement with the following statements:

|  | Strongly Disagree     | Disagree              | Somewhat Disagree     | Neither Agree nor Disagree | Somewhat Agree        | Agree                 | Strongly Agree        |
|--|-----------------------|-----------------------|-----------------------|----------------------------|-----------------------|-----------------------|-----------------------|
| It was hard for me to care very much about whether or not a good reporting decision was made.          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I felt a very high degree of <u>personal</u> responsibility for the decision about how much to report. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I feel I should personally take the credit or blame for the results of the reporting decision.         | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Whether or not a good reporting decision was made is clearly <u>my</u> responsibility.                 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

When deciding how many Francs to report on the form, how concerned were you about the possibility that the report would be inspected?

- Extremely Concerned
- Moderately Concerned
- Somewhat Concerned
- Slightly Concerned
- Not at all Concerned

Compared to the average person, how risky was the decision you just made?

- Much more risky than average
- More risky than average
- Somewhat more risky than average
- Neither more or less risky than average
- Somewhat less risky than average
- Less risky than average
- Much less risky than average

Which best describes how your payment is determined for this study?

- Based on a reporting decision I made
- Based on a reporting decision that someone else made
- Based on a reporting decision that my group made
- Based on a reporting decision that another group made

*[End of Envelope 1 Covariate Questionnaire– Blank page intentional spacer]*

## **ENVELOPE 2**

*[Contains Demographics Questionnaire]*

[Envelope 2 Outside Label (Label color matches group name color)]

**IMPORTANT – Do not open this envelope until instructed to do so.**

YOUR PARTICIPANT IS: **000000**

You are a member of a two person group. YOUR GROUP IS **BLUE**

***[Demographics Questionnaire]***

**Please enter your GROUP NAME in the space provided below.**

GROUP NAME: \_\_\_\_\_

**Please enter your PARTICIPANT NUMBER in the space provided below.**

PARTICIPANT NUMBER: \_\_\_\_\_

**DEMOGRAPHIC QUESTIONS: Please tell us a little about yourself to help categorize your responses. All responses to this survey are anonymous and confidential.**

What is your age?

- 18 - 20
- 21 - 25
- 26 - 30
- 31 - 35
- 36 and over
- I would prefer not to answer

What is your gender?

- Male
- Female

How many tax classes have you taken? Include the current semester.

- 0
- 1 - 2
- 3 - 4
- 5 or more

How much total work experience have you had in public accounting?

- No experience in public accounting
- Less than 6 months
- 6 – 12 months
- More than a year (Please specify how many years)\_\_\_\_\_

How much work experience have you had in public accounting, specifically in tax?

- No tax experience in public accounting
- Less than 6 months
- 6 – 12 months
- More than a year (Please specify how many years)\_\_\_\_\_



What size public accounting firm did you work for? Check all that apply.

- Big 4
- International/National (does not include Big 4)
- Regional/Local
- Sole Proprietorship
- Other (Please specify)\_\_\_\_\_
- No experience in public accounting

What is your status regarding becoming a Certified Public Accountant (CPA)?

- Currently a licensed CPA
- Passed the CPA exam but not yet licensed
- Plan to take CPA exam in the future
- Do not plan to be a CPA

If you were evaluating a potential tax deduction for your personal tax return, how certain would you want to be of your tax position before taking a deduction?

|                          |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                      |
|--------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------------------|
| Not<br>At All<br>Certain |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | Extremely<br>Certain |
| 0%                       | 10%                   | 20%                   | 30%                   | 40%                   | 50%                   | 60%                   | 70%                   | 80%                   | 90%                   | 100%                  |                      |
| <input type="radio"/>    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |                      |

If you were evaluating a potential tax deduction for your personal tax return and engaged a paid tax preparer for assistance, how certain would you want your paid preparer to be of your tax position before taking a deduction?

|                          |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                      |
|--------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------------------|
| Not<br>At All<br>Certain |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | Extremely<br>Certain |
| 0%                       | 10%                   | 20%                   | 30%                   | 40%                   | 50%                   | 60%                   | 70%                   | 80%                   | 90%                   | 100%                  |                      |
| <input type="radio"/>    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |                      |

Who prepared your most recent individual income tax return?

- I prepared my own tax return
- I hired a paid preparer
- A friend or relative prepared my tax return
- I do not file a tax return
- Other (Please specify)\_\_\_\_\_

For each of the following statements, please indicate your **likelihood** of engaging in each activity or behavior.

|   | Very Unlikely         | Unlikely              | Somewhat Unlikely     | Neither Likely nor Unlikely | Somewhat Likely       | Likely                | Very Likely           |
|---|-----------------------|-----------------------|-----------------------|-----------------------------|-----------------------|-----------------------|-----------------------|
| Admitting that your tastes are different from those of your friends.                            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Betting a day's income at the horse races.  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Investing 10% of your annual income in a moderate growth mutual fund.                           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Disagreeing with your father on a major issue.  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Betting a day's income at a high stake poker game.  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Arguing with a friend about an issue on which he or she has a very different opinion.           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Investing 5% of your annual income in a very speculative stock.                                 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Approaching your boss to ask for a raise.   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Betting a day's income on the outcome of a sporting event (e.g. baseball, soccer, or football). | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Telling a friend if his or her significant other has made a pass at you.                        | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Investing 5% of your annual income in a conservative stock.                                     | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Wearing shocking or unconventional clothes on occasion.   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Investing 10% of your annual income in government bonds (treasury bills).                       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Gambling a week's income at a casino.   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Taking a job that you enjoy over one that is prestigious but less enjoyable.                    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Defending an unpopular issue that you believe in at a social occasion.                          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Thank you for participating in this study! Please place this questionnaire back into Envelope 2 and remain seated until the person administering the study instructs you to line up for payout.

To ensure that you receive your payout, please have the following materials ready to bring with you:

- Envelope 1 containing completed questions
- Envelope 2 containing completed questions
- Acknowledgement of Payment form – print your name, sign your name, and leave the “amount received” blank

*[End of Envelope 2 Demographics Questionnaire – Blank page intentional spacer]*

## **ACKNOWLEDGEMENT OF PAYMENT**

Thank you for participating in this study on reporting decisions conducted by Bonnie Brown. Please sign below to acknowledge receipt of payment for your participation in this study.

**In addition, by signing below you acknowledge that you will NOT discuss the study with other students.** To get valid and useful results, we need each participant's honest and unfiltered reactions to his/her experiences in the study. Thank you very much for your cooperation.

**Session Date and Time: [Insert Date] ([Insert Day of the Week]) [Insert Time]**

---

**Amount Received (in U.S. dollars)**

---

**Printed Name**

---

**Signed Name**

Thank you very much for your participation!

Condition 4: Group / Other

[Paper format]

**Explanation of Research**

Title of Project: Decision Making and Reporting

Principal Investigator: Bonnie Brown

Faculty Supervisor: Vicky Arnold

You are being invited to take part in a research study. Whether you take part is up to you. Your professor has agreed to award you extra credit for your participation. If you wish to earn extra credit in your class, but do not wish to participate in the research study or are under 18 years of age, your professor will provide you with an alternate assignment of comparable time and effort. If you have decided to participate in this project, please understand that your participation is voluntary and that you have the right to withdraw your consent or discontinue participation at any time without penalty. Refusal to participate will involve no penalty or loss of benefits to which you are otherwise entitled. The purpose of this research is to examine individual decision making and reporting. You will be asked to read instructions for a decision involving reporting. You will then be asked to make your decision and answer some questions about your opinions and demographic questions. This research study will be conducted in a behavioral lab. The estimated time to complete this study is approximately 30 minutes.

You must be 18 years of age or older to take part in this research study.

Study contact for questions about the study or to report a problem: If you have questions, concerns, or complaints: Bonnie Brown, Doctoral Candidate, Kenneth G. Dixon School of Accounting, College of Business Administration, (407) 823-1478 or by email at [bonnie.brown@ucf.edu](mailto:bonnie.brown@ucf.edu) or Dr. Vicky Arnold, Faculty Supervisor, Kenneth G. Dixon School of Accounting, College of Business Administration, (407) 823-3192 or by email at [vicky.arnold@ucf.edu](mailto:vicky.arnold@ucf.edu).

IRB contact about your rights in the study or to report a complaint: Research at the University of Central Florida involving human participants is carried out under the oversight of the Institutional Review Board (UCF IRB). This research has been reviewed and approved by the IRB. For information about the rights of people who take part in research, please contact: Institutional Review Board, University of Central Florida, Office of Research & Commercialization, 12201 Research Parkway, Suite 501, Orlando, FL 32826-3246 or by telephone at (407) 823-2901.

## TASK INSTRUCTIONS [*Paper format*]

You will be participating in a task in which your group is provided with Francs and then is asked to make a reporting decision. Note that Francs are the experimental currency, and there are no right or wrong answers.

The Francs will belong to another group, and your two member group will make the reporting decision for that other group. At the conclusion of the task, Francs will be converted into dollars using a positive conversion rate and the other group will be paid based upon the net Francs from your group's decision. In other words, **your group's decision affects the payout that another group will receive**. Your group's own payout will be based upon the net Francs of another group deciding on your behalf. Assignment is completely random – you should assume the group deciding on your group's behalf is not the same group for whom you are deciding. Payouts will be divided equally between group members.

After being provided with Francs, your group will decide how much of the Francs to report on a form, ranging from zero Francs to all of the Francs. Francs reported on the form are subject to a 50% fee. Francs that you decide not to report on the form are not subject to a fee unless the form is selected for inspection. If the form is selected for inspection, the amount of Francs reported is compared to the initial amount of Francs provided, and any Francs not reported on the form are subject to a 100% fee. The form has a 50% chance of being selected for inspection. Inspections are determined completely at random and do not depend on your group's decisions or the decisions of other groups.

After your group has decided the amount of Francs to report and has submitted the form on behalf of another group, you will be notified whether or not the form was selected for inspection. After the inspection period, net Francs will be calculated as the initial Francs provided, less total fees (**Net Francs = Initial Francs - Total Fees**). Thus, any fees assessed reduce the other group's payout at the end of the task. Total Fees depend upon both the amount your group decides to report on the form and whether the form is selected for inspection:

**If selected for inspection**, Total Fees equal 50% of the Francs reported on the form, plus 100% of the Francs not reported on the form.

**If not selected for inspection**, Total Fees equal 50% of the amount reported on the form.

## PRACTICE REPORTING DECISION

Just for practice, imagine your group is provided with 4,000 Francs and is asked to decide what amount to report on a form, ranging from 0 Francs to 4,000 Francs (in 400 Franc increments). The 4,000 Francs will belong to another group, and your two member group will make the reporting decision for that other group. Payouts will be divided equally between group members.

The following chart has been provided to help your group decide how much of the 4,000 Francs you want to report. The chart presents examples of both the maximum and minimum Net Francs that may be possible outcomes, given the Francs your group decides to report.

| Francs You Could Choose to Report  | 0     | 400   | 800   | 1,200 | 1,600 | 2,000 | 2,400 | 2,800 | 3,200 | 3,600 | 4,000 |
|------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| <u>Maximum</u> Possible Net Francs | 4,000 | 3,800 | 3,600 | 3,400 | 3,200 | 3,000 | 2,800 | 2,600 | 2,400 | 2,200 | 2,000 |
| <u>Minimum</u> Possible Net Francs | 0     | 200   | 400   | 600   | 800   | 1,000 | 1,200 | 1,400 | 1,600 | 1,800 | 2,000 |

Several amounts are shown on the top row of the chart as “Francs you could choose to report.” For each reporting option, the chart presents both the maximum (no inspection) and minimum (inspection) possible net Francs if your group chooses to report that particular amount.

EXAMPLE 1: Note (towards the top right of the chart) if your group decides to report all 4,000 Francs, net Francs would be 2,000 Francs regardless of whether the form is selected for inspection.

EXAMPLE 2: On the other end of the chart, note that if your group decides to report 0 Francs, net Francs depend upon *whether the form is selected for inspection*.

If the form is selected for inspection and you have decided to report 0 Francs, net Francs would be 0 Francs, calculated as follows:

Total fees equal 50% of the 0 Francs reported on the form, plus 100% of the 4,000 Francs not reported on the form, so Total Fees equal 4,000. Net Francs are calculated as the 4,000 Initial Francs, less 4,000 Total Fees, so Net Francs equal 0.

If the form is not selected for inspection and you have decided to report 0 Francs, net Francs would be 4,000 Francs, calculated as follows:

Total fees equal 50% of the 0 Francs reported on the form, so Total Fees equal 0. Net Francs are calculated as the 4,000 Initial Francs, less 0 Total Fees, so Net Francs equal 4,000.

As shown in the chart, the other reporting options fall between these two examples. Please take a few minutes to review this chart.



*[End of Task Instructions – Blank page intentional spacer]*

**[QUALTRICS PORTION; SCREEN 1]**

**Your group name and participant number are displayed on the outside of the envelopes you were given. Do not open the envelopes.**

**Please locate your GROUP NAME and enter it in the space provided below.**

\_\_\_\_\_

**Please locate both of your PARTICIPANT NUMBERS and enter them in the spaces provided below.**

1<sup>st</sup> PARTICIPANT NUMBER

\_\_\_\_\_

2<sup>nd</sup> PARTICIPANT NUMBER

\_\_\_\_\_

[SCREEN 2]

**YOUR GROUP HAS NOW BEEN PROVIDED WITH 20,000 FRANCS**

Your task is to decide as a group how much of the 20,000 Francs your group would like to report.

The 20,000 Francs will belong to another group, and your two member group will make the reporting decision for that other group. Payouts will be divided equally between group members. Please feel free to refer back to your paper hardcopy of the Task Instructions.

The following chart has been provided to help your group decide how much of the 20,000 Francs you want to report. The chart presents examples of both the maximum and minimum Net Francs that may be possible, given the Francs your group decides to report.

**Possible Net Francs**

| Francs You Could Choose to Report  | 0      | 2,000  | 4,000  | 6,000  | 8,000  | 10,000 | 12,000 | 14,000 | 16,000 | 18,000 | 20,000 |
|------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| <u>Maximum Possible Net Francs</u> | 20,000 | 19,000 | 18,000 | 17,000 | 16,000 | 15,000 | 14,000 | 13,000 | 12,000 | 11,000 | 10,000 |
| <u>Minimum Possible Net Francs</u> | 0      | 1,000  | 2,000  | 3,000  | 4,000  | 5,000  | 6,000  | 7,000  | 8,000  | 9,000  | 10,000 |

Please do not comment out loud. Rather, to keep your conversation private, please take turns typing in the textbox provided below to share your thought process to reach a group decision about how much of the 20,000 Francs to report.

How much of the 20,000 Francs would your group like to report?

- 0      2,000      4,000      6,000      8,000      10,000      12,000      14,000      16,000      18,000      20,000
-

[*SCREEN 3*]

**Please open Envelope 1 and complete the contents individually on your own. Only open “Envelope 1” at this time. Once complete, place materials back inside the envelope and wait for further instruction.**

**WAIT Do not click on the computer until the person administering the study tells you to proceed in the computer survey.**

Please remain quiet. After everyone is ready, you will be instructed to continue.

**[SCREEN 4]**

**INSPECTION PERIOD**

**Reports will now be randomly selected for inspection. On the next screen, you will be notified whether or not your report was selected for inspection.**

**[SCREEN 5]**

**Your report was selected for inspection.**

**[Your report was not selected for inspection.]**

**Net Francs = [Insert Net Francs]**

**Please click “>>” below to proceed.**

*[SCREEN 6 – Custom Final Qualtrics Screen]*

**Please WAIT here for further instruction.**

**As a reminder, please remain quiet while you are waiting.  
After everyone is ready, you will be instructed how to proceed.**

*[End of Qualtrics Study – Blank page intentional spacer]*



# ENVELOPE 1

[Contains Covariate Questionnaire]

[Envelope 1 Outside Label (Label color matches group name color)]

**IMPORTANT – Do not open this envelope until instructed to do so.**

YOUR PARTICIPANT NUMBER IS: **000000**

You are a member of a two person group. YOUR GROUP IS **BLUE**

[Covariate Questionnaire]

Please enter your **GROUP NAME** in the space provided below.

GROUP NAME: \_\_\_\_\_

Please enter your **PARTICIPANT NUMBER** in the space provided below.

PARTICIPANT NUMBER: \_\_\_\_\_

**ADDITIONAL RESPONSE QUESTIONS:** Please respond to the following questions. There are no right or wrong answers. Therefore, please respond as honestly and accurately as possible.

Regarding the reporting decision that you just made, please indicate your agreement or disagreement with the following statements:

|  | Strongly Disagree     | Disagree              | Somewhat Disagree     | Neither Agree nor Disagree | Somewhat Agree        | Agree                 | Strongly Agree        |
|--|-----------------------|-----------------------|-----------------------|----------------------------|-----------------------|-----------------------|-----------------------|
| It was hard for me to care very much about whether or not a good reporting decision was made.          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I felt a very high degree of <u>personal</u> responsibility for the decision about how much to report. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I feel I should personally take the credit or blame for the results of the reporting decision.         | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Whether or not a good reporting decision was made is clearly <u>my</u> responsibility.                 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

When deciding how many Francs to report on the form, how concerned were you about the possibility that the report would be inspected?

- Extremely Concerned
- Moderately Concerned
- Somewhat Concerned
- Slightly Concerned
- Not at all Concerned

Compared to the average person, how risky was the decision you just made?

- Much more risky than average
- More risky than average
- Somewhat more risky than average
- Neither more or less risky than average
- Somewhat less risky than average
- Less risky than average
- Much less risky than average

Which best describes how your payment is determined for this study?

- Based on a reporting decision I made
- Based on a reporting decision that someone else made
- Based on a reporting decision that my group made
- Based on a reporting decision that another group made

*[End of Envelope 1 Covariate Questionnaire– Blank page intentional spacer]*

## **ENVELOPE 2**

[*Contains Demographics Questionnaire*]

[Envelope 2 Outside Label (Label color matches group name color)]

**IMPORTANT – Do not open this envelope until instructed to do so.**

YOUR PARTICIPANT IS: **000000**

You are a member of a two person group. YOUR GROUP IS **BLUE**

***[Demographics Questionnaire]***

**Please enter your GROUP NAME in the space provided below.**

GROUP NAME: \_\_\_\_\_

**Please enter your PARTICIPANT NUMBER in the space provided below.**

PARTICIPANT NUMBER: \_\_\_\_\_

**DEMOGRAPHIC QUESTIONS: Please tell us a little about yourself to help categorize your responses. All responses to this survey are anonymous and confidential.**

What is your age?

- 18 - 20
- 21 - 25
- 26 - 30
- 31 - 35
- 36 and over
- I would prefer not to answer

What is your gender?

- Male
- Female

How many tax classes have you taken? Include the current semester.

- 0
- 1 - 2
- 3 - 4
- 5 or more

How much total work experience have you had in public accounting?

- No experience in public accounting
- Less than 6 months
- 6 – 12 months
- More than a year (Please specify how many years)\_\_\_\_\_

How much work experience have you had in public accounting, specifically in tax?

- No tax experience in public accounting
- Less than 6 months
- 6 – 12 months
- More than a year (Please specify how many years)\_\_\_\_\_

What size public accounting firm did you work for? Check all that apply.

- Big 4
- International/National (does not include Big 4)
- Regional/Local
- Sole Proprietorship
- Other (Please specify)\_\_\_\_\_
- No experience in public accounting

What is your status regarding becoming a Certified Public Accountant (CPA)?

- Currently a licensed CPA
- Passed the CPA exam but not yet licensed
- Plan to take CPA exam in the future
- Do not plan to be a CPA

If you were evaluating a potential tax deduction for your personal tax return, how certain would you want to be of your tax position before taking a deduction?

|                          |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                      |
|--------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------------------|
| Not<br>At All<br>Certain |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | Extremely<br>Certain |
| 0%                       | 10%                   | 20%                   | 30%                   | 40%                   | 50%                   | 60%                   | 70%                   | 80%                   | 90%                   | 100%                  |                      |
| <input type="radio"/>    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |                      |

If you were evaluating a potential tax deduction for your personal tax return and engaged a paid tax preparer for assistance, how certain would you want your paid preparer to be of your tax position before taking a deduction?

|                          |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                      |
|--------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------------------|
| Not<br>At All<br>Certain |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | Extremely<br>Certain |
| 0%                       | 10%                   | 20%                   | 30%                   | 40%                   | 50%                   | 60%                   | 70%                   | 80%                   | 90%                   | 100%                  |                      |
| <input type="radio"/>    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |                      |



Who prepared your most recent individual income tax return?

- I prepared my own tax return
- I hired a paid preparer
- A friend or relative prepared my tax return
- I do not file a tax return
- Other (Please specify)\_\_\_\_\_

For each of the following statements, please indicate your **likelihood** of engaging in each activity or behavior.

|   | Very Unlikely         | Unlikely              | Somewhat Unlikely     | Neither Likely nor Unlikely | Somewhat Likely       | Likely                | Very Likely           |
|---|-----------------------|-----------------------|-----------------------|-----------------------------|-----------------------|-----------------------|-----------------------|
| Admitting that your tastes are different from those of your friends.                            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Betting a day's income at the horse races.  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Investing 10% of your annual income in a moderate growth mutual fund.                           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Disagreeing with your father on a major issue.  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Betting a day's income at a high stake poker game.  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Arguing with a friend about an issue on which he or she has a very different opinion.           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Investing 5% of your annual income in a very speculative stock.                                 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Approaching your boss to ask for a raise.   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Betting a day's income on the outcome of a sporting event (e.g. baseball, soccer, or football). | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Telling a friend if his or her significant other has made a pass at you.                        | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Investing 5% of your annual income in a conservative stock.                                     | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Wearing shocking or unconventional clothes on occasion.   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Investing 10% of your annual income in government bonds (treasury bills).                       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Gambling a week's income at a casino.   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Taking a job that you enjoy over one that is prestigious but less enjoyable.                    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Defending an unpopular issue that you believe in at a social occasion.                          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Thank you for participating in this study! Please place this questionnaire back into Envelope 2 and remain seated until the person administering the study instructs you to line up for payout.

To ensure that you receive your payout, please have the following materials ready to bring with you:

- Envelope 1 containing completed questions
- Envelope 2 containing completed questions
- Acknowledgement of Payment form – print your name, sign your name, and leave the “amount received” blank

*[End of Envelope 2 Demographics Questionnaire – Blank page intentional spacer]*

## **ACKNOWLEDGEMENT OF PAYMENT**

Thank you for participating in this study on reporting decisions conducted by Bonnie Brown. Please sign below to acknowledge receipt of payment for your participation in this study.

**In addition, by signing below you acknowledge that you will NOT discuss the study with other students.** To get valid and useful results, we need each participant's honest and unfiltered reactions to his/her experiences in the study. Thank you very much for your cooperation.

**Session Date and Time: [Insert Date] ([Insert Day of the Week]) [Insert Time]**

---

**Amount Received (in U.S. dollars)**

---

**Printed Name**

---

**Signed Name**

Thank you very much for your participation!

## **APPENDIX G: STUDY 3 ADDITIONAL MEASURES**

### **Felt Responsibility**

Instructions: Please respond to the following questions. There are no right or wrong answers. Therefore, please respond as honestly and accurately as possible. Regarding the reporting decision that you just made, please indicate your agreement or disagreement with the following statements:

(Measured on a seven-point scale with labeled points ranging from 1 “Strongly Disagree” to 7 “Strongly Agree”)

- 1) It was hard for me to care very much about whether or not a good reporting decision was made.
- 2) I felt a very high degree of personal responsibility for the decision about how much to report.
- 3) I feel I should personally take the credit or blame for the results of the reporting decision.
- 4) Whether or not a good reporting decision was made is clearly my responsibility.

Adapted from Hackman and Oldham (1974)

### **Risk Attitude**

Instructions: For each of the following statements, please indicate your **likelihood** of engaging in each activity or behavior.

(Measured on a seven-point scale with labeled points ranging from 1 “Very Unlikely” to 7 “Very Likely”)

- 1) Betting a day’s income at the horse races.
- 2) Betting a day’s income at a high stake poker game.
- 3) Betting a day’s income on the outcome of a sporting event (e.g. baseball, soccer, or football).
- 4) Gambling a week’s income at a casino.

Adopted from Weber et al. (2002) Domain-specific risk-attitude scale, gambling subscale

## **APPENDIX H: IRB APPROVALS**





University of Central Florida Institutional Review Board  
Office of Research & Commercialization  
12201 Research Parkway, Suite 501  
Orlando, Florida 32826-3246  
Telephone: 407-823-2901 or 407-882-2276  
[www.research.ucf.edu/compliance/irb.html](http://www.research.ucf.edu/compliance/irb.html)

### Approval of Exempt Human Research

From: **UCF Institutional Review Board #1**  
**FWA00000351, IRB00001138**

To: **Bonnie J. Brown**

Date: **July 16, 2015**

Dear Researcher:

On 07/16/2015, the IRB approved the following activity as human participant research that is exempt from regulation:

Type of Review: Exempt Determination  
Project Title: Corporate Tax Decision Makers  
Investigator: Bonnie J. Brown  
IRB Number: SBE-15-11457  
Funding Agency:  
Grant Title:  
Research ID: N/A

This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made and there are questions about whether these changes affect the exempt status of the human research, please contact the IRB. When you have completed your research, please submit a Study Closure request in iRIS so that IRB records will be accurate.

In the conduct of this research, you are responsible to follow the requirements of the [Investigator Manual](#).

On behalf of Sophia Dziegielewski, Ph.D., L.C.S.W., UCF IRB Chair, this letter is signed by:

A handwritten signature in black ink that reads "Joanne Muratori".

Signature applied by Joanne Muratori on 07/16/2015 11:31:20 AM EDT

IRB manager



University of Central Florida Institutional Review Board  
Office of Research & Commercialization  
12201 Research Parkway, Suite 501  
Orlando, Florida 32826-3246  
Telephone: 407-823-2901 or 407-882-2276  
[www.research.ucf.edu/compliance/irb.html](http://www.research.ucf.edu/compliance/irb.html)

### Approval of Exempt Human Research

From: **UCF Institutional Review Board #1  
FWA00000351, IRB00001138**

To: **Bonnie J. Brown**

Date: **November 10, 2015**

Dear Researcher:

On 11/10/2015, the IRB approved the following minor modifications to human participant research that is exempt from regulation:

Type of Review: Exempt Determination  
Modification Type: As a "thank you" for participation, study participants will have the option of selecting a charity to receive a small \$2 donation. As a result a revised Experienced Participant Recruitment E-mail has been uploaded in iRIS. In addition, a revised consent document has been approved for use.

Project Title: Corporate Tax Decision Makers  
Investigator: Bonnie J. Brown  
IRB Number: SBE-15-11457  
Funding Agency:  
Grant Title:  
Research ID: N/A

This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made and there are questions about whether these changes affect the exempt status of the human research, please contact the IRB. [When you have completed your research, please submit a Study Closure request in iRIS so that IRB records will be accurate.](#)

In the conduct of this research, you are responsible to follow the requirements of the [Investigator Manual](#).

On behalf of Sophia Dziegielewski, Ph.D., L.C.S.W., UCF IRB Chair, this letter is signed by:

A handwritten signature in black ink that reads "Joanne Muratori".

Signature applied by Joanne Muratori on 11/10/2015 02:09:57 PM EST

IRB Manager



University of Central Florida Institutional Review Board  
Office of Research & Commercialization  
12201 Research Parkway, Suite 501  
Orlando, Florida 32826-3246  
Telephone: 407-823-2901 or 407-882-2276  
[www.research.ucf.edu/compliance/irb.html](http://www.research.ucf.edu/compliance/irb.html)

### Approval of Exempt Human Research

From: **UCF Institutional Review Board #1  
FWA00000351, IRB00001138**

To: **Bonnie J. Brown**

Date: **June 30, 2014**

Dear Researcher:

On 6/30/2014, the IRB approved the following activity as human participant research that is exempt from regulation:

Type of Review: Exempt Determination  
Project Title: Corporate Tax and Individual Decision Making  
Investigator: Bonnie J. Brown  
IRB Number: SBE-14-10409  
Funding Agency:  
Grant Title:  
Research ID: N/A

This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made and there are questions about whether these changes affect the exempt status of the human research, please contact the IRB. When you have completed your research, please submit a Study Closure request in iRIS so that IRB records will be accurate.

In the conduct of this research, you are responsible to follow the requirements of the Investigator Manual.

On behalf of Sophia Dziegielewski, Ph.D., L.C.S.W., UCF IRB Chair, this letter is signed by:

Signature applied by Joanne Muratori on 06/30/2014 03:00:35 PM EDT

A handwritten signature in black ink that reads 'Joanne Muratori'.

IRB Coordinator



University of Central Florida Institutional Review Board  
Office of Research & Commercialization  
12201 Research Parkway, Suite 501  
Orlando, Florida 32826-3246  
Telephone: 407-823-2901 or 407-882-2276  
[www.research.ucf.edu/compliance/irb.html](http://www.research.ucf.edu/compliance/irb.html)

### Approval of Exempt Human Research

From: **UCF Institutional Review Board #1**  
**FWA00000351, IRB00001138**

To: **Bonnie J. Brown**

Date: **June 24, 2015**

Dear Researcher:

On 06/24/2015, the IRB approved the following activity as human participant research that is exempt from regulation:

Type of Review: Exempt Determination  
Modification Type: Protocol revision; Consent form revision; Added new recruitment email, Revised existing recruitment email; Changed Faculty advisor from Donna D. Schmitt to Vicki Jane Arnold  
Project Title: Corporate Tax and Individual Decision Making  
Investigator: Bonnie J. Brown  
IRB Number: SBE-14-10409  
Funding Agency:  
Grant Title:  
Research ID: N/A

This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made and there are questions about whether these changes affect the exempt status of the human research, please contact the IRB. When you have completed your research, please submit a Study Closure request in iRIS so that IRB records will be accurate.

In the conduct of this research, you are responsible to follow the requirements of the [Investigator Manual](#).

On behalf of Sophia Dziegielewski, Ph.D., L.C.S.W., UCF IRB Chair, this letter is signed by:

A handwritten signature in black ink, appearing to read "Patria Davis".

Signature applied by Patria Davis on 06/24/2015 12:46:33 PM EDT

IRB Coordinator



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### Approval of Exempt Human Research

From: **UCF Institutional Review Board #1  
FWA00000351, IRB00001138**

To: **Bonnie J. Brown**

Date: **February 04, 2016**

Dear Researcher:

On 02/04/2016, the IRB approved the following minor modifications to human participant research that is exempt from regulation:

Type of Review: Exempt Determination  
Modification Type: In addition, to UCF student participants, accounting students at the University of South Carolina will also be recruited for the study. A revised protocol, recruitment e-mail, and questionnaire have been uploaded in iRIS and a revised consent document has been approved for use.  
Project Title: Corporate Tax and Individual Decision Making  
Investigator: Bonnie J. Brown  
IRB Number: SBE-14-10409  
Funding Agency:  
Grant Title:  
Research ID: N/A

This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made and there are questions about whether these changes affect the exempt status of the human research, please contact the IRB. When you have completed your research, please submit a Study Closure request in iRIS so that IRB records will be accurate.

In the conduct of this research, you are responsible to follow the requirements of the [Investigator Manual](#).

On behalf of Sophia Dziegielewski, Ph.D., L.C.S.W., UCF IRB Chair, this letter is signed by:

A handwritten signature in black ink that reads "Joanne Muratori".

Signature applied by Joanne Muratori on 02/04/2016 10:57:02 AM EST

IRB Manager



University of Central Florida Institutional Review Board  
Office of Research & Commercialization  
12201 Research Parkway, Suite 501  
Orlando, Florida 32826-3246  
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### Approval of Exempt Human Research

From: **UCF Institutional Review Board #1  
FWA00000351, IRB00001138**

To: **Bonnie J. Brown**

Date: **September 04, 2015**

Dear Researcher:

On 09/04/2015, the IRB approved the following activity as human participant research that is exempt from regulation:

Type of Review: Exempt Determination  
Project Title: Decision Making and Reporting  
Investigator: Bonnie J. Brown  
IRB Number: SBE-15-11480  
Funding Agency:  
Grant Title:  
Research ID: N/A

This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made and there are questions about whether these changes affect the exempt status of the human research, please contact the IRB. When you have completed your research, please submit a Study Closure request in iRIS so that IRB records will be accurate.

In the conduct of this research, you are responsible to follow the requirements of the [Investigator Manual](#).

On behalf of Sophia Dziegielewski, Ph.D., L.C.S.W., UCF IRB Chair, this letter is signed by:

A handwritten signature in black ink that reads "Kanielle Chay" with a horizontal line extending to the right.

IRB Coordinator