Unintended Consequences of Regulated Contract Structure

by

Bryan W. Stewart

Associate of Arts
Dixie State College

Bachelor of Art
Utah State University

Master of Accountancy
University of Notre Dame

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University of South Carolina

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Accepted by:

Scott Jackson, Chairman

Brad Tuttle, Committee Member

Doug Wedell, Committee Member

Rich White, Committee Member

Lacy Ford, Vice Provost and Dean of Graduate Studies

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ABSTRACT

This study examines the effect of contract structure (fixed versus contingent) and a contextual factor (positive versus negative benefit surprise) on tax professionals' behavior. Regulatory restrictions on contract structure are based on the belief that contingent fee contracts "encourage tax return preparers to take unsupported positions on the taxpayers' returns" (Murphy 1989, p. 2). Experienced tax professionals participated in an experiment investigating the effect of contract structure and benefit surprise on their judgments and decisions. Contrary to regulators' beliefs about the effect of contingent fee structures, I do not find a main effect of contract structure. Rather, results show that tax professionals who contract under a fixed fee and encounter a negative benefit surprise are more likely to take uncertain tax positions than professionals who contract under a contingent fee and encounter a negative benefit surprise. In contrast, participants who contract under a fixed fee and encounter a positive benefit surprise are less likely to take uncertain tax positions than professionals who contract under a contingent fee and encounter a negative benefit surprise. Supplemental analysis shows that the form of this interaction changes with the aggressiveness of the position. Results also show that tax professionals contracting under a contingent fee are more likely to inform their client that positions included on the tax return may not be supported if audited. The overall tenure of the results suggests that restricting the ability of tax professionals and their clients to allocate risk through the use of contingent fee contracts has the unintended consequence of *increasing* tax professionals' aggressiveness and *decreasing* the information provided

to taxpayers. These results are particularly important when considering the significant influence tax professionals can have on the positions taken on their clients' tax returns.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

I. INTRODUCTION

The effect of contract structure on the behavior of contracting parties has received attention from academics, policy-makers, professional organizations, and the media (Frankel et al. 2002; Murphy 2012). In the academic literature, research suggests that in an environment where outcomes are uncertain and inputs are costly to observe, contract structure can play an important role in motivating behavior, aligning incentives, and allocating risk between contracting parties (Eisenhardt 1989). However, contract structure may also result in suboptimal behavior. For example, performance-based executive compensation may cause aggressive financial reporting and be a motivating factor in recent financial crises (Murphy 2012). This potential for suboptimal behavior has prompted contract restrictions in executive compensation, investment banking, and auditing and tax services (Murphy 2012). While restricting contract structure may influence behavior, restricting contract structure may also result in unintended consequences. This study brings initial empirical evidence to bear on how contract structure interacts with naturally occurring contextual factors to affect tax professionals' behavior.

Consistent with concerns in other fields that compensation contracts drive suboptimal behavior, regulations limiting the use of contingent fees in contracts between tax professionals and their clients are based on claims that contingent fee contracts would "encourage tax return preparers to take unsupported positions on the taxpayers' returns"

(Murphy 1989, p. 2; Rostain 2006; Levin 2009; Department of the Treasury; "IRS;" 2011).[1] While regulators and lawmakers assert that limiting the use of contingent fee contracts will decrease the incidence of aggressive tax positions, the American Institute of Certified Public Accountant's (AICPA) Tax Practice Responsibilities Committee (hereafter "AICPA Committee") emphasized the importance of contextual factors when considering the consequences of contingent fee structures (AICPA 2006). They argued that contingent fee contract structures have been used as an important risk reduction tool for both taxpayers and tax professionals when the "tangible value" of the tax services to be offered is difficult to estimate (AICPA 2006, p. 13).

Despite the strongly held competing views about the effect of restrictions on contingent fees, the sweeping restrictions on the contractual relationships between tax professionals and their clients (i.e., the restrictions on contingent fees discussed above) have been made in the absence of empirical evidence. This observation is important because regulatory interference in complex economic arrangements between contracting parties may have unanticipated or even counterproductive consequences (Smith 1776; Merton, 1936; Sims and Herman 1996; Hanlon et al. 2008; Norton 2011).

In order to understand the effect of different contract structures on tax professionals' behavior, it is important to examine those structures within the context in which they are utilized. Tax professionals operate in an environment where inputs are costly to observe and outcomes are uncertain – for example, where the extent or cost of tax professionals' services are costly to observe and the benefit that the client will realize as a result of those services may not be precisely estimable (Kadous and Magro 2001; AICPA 2006). The efficient sharing of economic risk has been identified as an important

[1] See the background section for a discussion of the history of contingent fees for tax services.

factor in the development of the optimal contract structure (Reese 1985; Eisenhardt 1989; Baiman 1990; and Phillips and Sansing 1998). Indeed, the AICPA Committee emphasized the use of contingent fee contract structures as a way to allocate risk between taxpayers and tax professionals. However, regulations and standards now restrict the use of contingent contract structures for tax services (IRS 2011; AICPA 2011). The experimental results reported herein suggest that, contrary to the claims of regulators and lawmakers, the restrictions of contract structure cause suboptimal behavior by tax professionals. Specifically, in the highly uncertain environment in which tax professionals operate, regulations that restrict contingent fee contracts between taxpayers and tax professionals may backfire – restrictions may actually *increase* the likelihood of aggressive behavior by tax professionals.

Research has shown that taxpayers view tax professionals' primary duties as those of (1) resolving uncertainty and (2) minimizing the overall cost of tax compliance, including tax liabilities and the costs related to tax services (Jackson and Milliron 1986; Johnson 1993; Phillips and Sansing 1998). Christensen (1994) and Stephenson (2006) suggest that tax professional's behavior is based on perceptions of their client's expectations, and that tax professionals most often see their role as minimizing their client's tax liability. However, prior to the start of an engagement, tax professionals cannot always perfectly predict the necessary services to be provided or the benefit that will be realized by the taxpayer (AICPA 2006; Kadous and Magro 2001). In many situations, an estimate of the anticipated outcome of the engagement is communicated to the client and, in turn, influences the contract with the client (AICPA 2006; Phillips and Sansing 1998). In addition to affecting the contract with the client, this estimate may

serve as a reference point that the client will use to evaluate the value and quality of the services provided by the tax professional at the conclusion of the engagement.

There are three potential results of providing a taxpayer with an estimate of the tangible value of the tax services to be provided: (1) the benefit obtained is exactly equal to the estimate provided (no benefit surprise); (2) the benefit obtained exceeds the estimate provided (a positive benefit surprise); or (3) the benefit obtained is less than the estimate provided (a negative benefit surprise). If taxpayers use the projected benefit as a reference point, a negative benefit surprise may negatively impact their evaluation of the tax professional. A tax professional anticipating this negative client reaction may search for ways to increase the benefit realized by the client, including taking uncertain positions on the tax return. I predict that a tax professional encountering a negative benefit surprise will be more likely to include uncertain tax positions on the tax return than a tax professional encountering a positive benefit surprise.

The reaction to a benefit surprise is important because it has significant implications for how tax professionals behave under different contract structures. While prior research has not identified the estimate provided to the client as a reference point for the evaluation of the tax professional, prior research has suggested that taxpayers use the difference between the actual outcome and the fee for services in forming their judgments (Phillips and Sansing 1998). When the contract has been structured as a fixed fee and there is a negative benefit surprise, the fee for services (1) consumes an unexpectedly high fraction of any benefit actually realized and (2) results in a situation where the client bears the entire burden of the difference between the actual outcome and the estimate originally provided.

In contrast, a contingent fee contract structure creates a situation where (1) the risk that a negative benefit surprise will impact the client is shared by the tax professional, and (2) the economic impact of the negative surprise on the taxpayer is dampened by the reduced fee for the services provided. In this manner, a contingent fee contract structure allows the tax professional to share the inherent risk of a negative change in the actual, versus estimated, outcome with the taxpayer. I predict that tax professionals' reactions to the direction of the benefit surprise will interact with contract structure such that a tax professional who contracts for a fixed fee and encounters a negative benefit surprise will be more likely to include uncertain tax positions on the tax return than a professional who contracts for a contingent fee and encounters a negative benefit surprise.

In addition to affecting tax professionals' propensity to include an aggressive position on the tax return, contract structure may also affect the information provided to the taxpayer by the tax professional. Tax professionals who engage in more aggressive judgments to meet client expectations may feel pressure to not fully disclose their choices to the taxpayer. Research in psychology has shown that participants will be more likely to share negative news when the recipient of the news perceives that both parties will share in the fate (Johnson et al. 1974). Tax professionals contracting under a contingent fee structure share in the economic impact of the negative benefit surprise. This may reduce the potential for the tax professional to hide the negative benefit surprise by including uncertain tax positions on the tax return and hiding information from the taxpayer. I predict that tax professionals contracting under a contingent fee contract

structure will be more likely to inform the client that positions taken on the return may not be supportable if challenged by the IRS.

I employ a 2x2 between-subjects experimental design that manipulates contract structure (fixed versus contingent) and benefit surprise (positive versus negative). I explore the interactive effect of these two variables on the likelihood that tax professionals will include uncertain positions on the client's tax return and inform the client that uncertain positions may not be upheld if challenged. The experiment presents a situation where a tax professional that has encountered a benefit surprise (unknown to the taxpayer) must determine whether they will include uncertain positions on the tax return.

Results demonstrate that contract structure interacts with benefit surprise to affect tax professionals' behavior. Tax professionals who contract under a fixed fee and encounter a negative benefit surprise are more likely to include uncertain tax positions than tax professionals who contract under a contingent fee structure and encounter a negative benefit surprise. In contrast, tax professionals who contract under a fixed fee contract and encounter a positive benefit surprise are less likely to include uncertain tax positions than professionals who contract under a contingent fee and encounter a positive benefit surprise. In addition, professionals who contract under a contingent fee are more likely to inform their client that a position may not be sustained if challenged by the IRS.

Supplemental analysis comparing professionals' judgments of whether a position is likely to be upheld by a Tax Court judge to their likelihood of taking that position show a similar pattern of results. Participants contracting under a fixed fee report a higher (lower) likelihood of taking a position than their assessments of support for that position

when they encounter a negative (positive) benefit surprise. Participants who contract under a contingent fee show no significant difference between their likelihood of taking a position and their judgments of the level of support for that position, regardless of benefit surprise.

This study makes several contributions to the growing literature on tax professionals' judgments and decision-making. Results highlight the importance of benefit surprise and the potential for that surprise to interact with contract structure to affect professionals' behavior. Contrary to regulators' claims that contingent fees for tax services will increase noncompliance, results demonstrate that restricting contingent fee contracts actually increases the likelihood of aggressive behavior by tax professionals when they encounter a negative benefit surprise. This increase is especially pronounced for categories of cost that are less than 50% likely to be sustained. These results may inform regulators about potential consequences of constraining economic interactions between taxpayers and tax professionals. Careful consideration should be given to the potential for contextual factors to negatively impact behavior when contract structures are limited.

In addition, this study is the first to examine whether contract structure affects tax professionals' likelihood of informing taxpayers that tax return positions may not be supported if challenged. This reduction in the amount of information provided to clients by the tax professional may leave them unaware of aggressive positions taken on their returns and, as a consequence, undermine a fundamental aspect of our income tax system – the ability of taxpayers to accurately report their income. Reduced communication between professionals and their clients may be especially significant given that taxpayers

prefer conservative tax positions (Hite and McGill 1992) but lack the expertise required to identify an aggressive position and have been shown to follow both conservative and aggressive recommendations made by tax professionals (Newberry et al. 1993; Beck et al. 1996).

The remaining discussion is organized as follows: Section II provides a brief overview of the contingent fee contract structure debate. Section III develops the hypotheses. Section IV describes the methodology employed. Section V describes the experimental results. Section VI provides a discussion of the contribution and limitations of the study, as well as suggestions for future research.

II. BACKGROUND

Contingent Fee Contract Structure

In 1985, the Federal Trade Commission (FTC) investigated the AICPA for illegally restricting trade by banning contingent fee contract structures (Mason 1994).[2] As the two parties neared settlement, the FTC wrote a proposed settlement that would allow contingent fees for tax services (Phillips and Sansing 1998). Before a final agreement was reached, then-acting IRS Commissioner Murphy argued that "contingent fee structure[s] will encourage tax return preparers to take unsupported positions on the taxpayer's returns" (Murphy 1989, p. 2). This argument is consistent with conventional wisdom that tax professionals contracting under a contingent fee will include aggressive positions on their clients' returns in order to increase their fees. In response to Commissioner Murphy's concern, the IRS amended Treasury Circular 230 to prohibit contingent fees in many contexts, including the filing of an original tax return (IRS 1994, 2011). The final settlement agreement led the AICPA to issue revised ethics rules prohibiting contingent fee contracts when the engagement was with clients for whom attest services are performed or for the preparation of an original tax return (FTC 1989).

Despite the intent of the revised Circular 230 to decrease the incentives (and increase the risks) associated with aggressive behavior, differences in interpretation of the rules limited their effectiveness. The assumptions that contract structure (1) continued to be a driving factor in accountants' decisions to be more aggressive with their

[2] See Sager (1993), Mason (1994), and Phillips and Sansing (1998) for a more thorough discussion of the history of contingent fees for tax services.

recommendations to clients and (2) ultimately affects the positions taken on tax returns has kept fee structure at the forefront of the debate related to tax professionals' behavior (Newberry et al. 1993; Phillips and Sansing 1998; Levin 2009). In addition to the correspondence between the AICPA Committee and the IRS, Senator Carl Levin (2009) more recently emphasized the need to eliminate contingent fee structures for tax services in order to curb the abusive behavior of tax professionals.

In contrast to the claimed negative influence of contingent fees on tax professionals' behavior, the AICPA's Tax Practice Responsibilities Committee asserted that there might be benefits to allowing contingent fees (AICPA 2006). The AICPA Committee stated that contingent fees were important to the public's perception that representation is available to all taxpayers who have a legitimate claim against the IRS, regardless of ability to pay.[3] Further, the AICPA Committee argued that it was in the IRS' best interest to encourage taxpayers to avail themselves of services that would resolve potential examination issues before a return was audited. The AICPA Committee also asserted that when tax professionals have the ability to charge a contingent fee, they will be more likely to accept only engagements "where the IRS' position is open to challenge" (AICPA 2006, p. 13), thereby increasing the overall incidence of compliance.

Stressing that fee structure should not be limited by a third party, but should be founded on mutual trust and what the two parties (taxpayer and tax professional) agree is most fair and will best serve their respective interests, the AICPA Committee argued that contingent fee structures best align the interests of the taxpayer and the tax professional. The AICPA Committee emphasized "each type of fee arrangement inherently poses

[3] Restricting the use of a contingent fee essentially limits the ability to retain professional tax assistance to those taxpayers who can afford to pay an hourly or fixed fee regardless of the outcome (AICPA 2006).

financial risks to the practitioner, the taxpayer, or both" (AICPA 2006, p. 13). These risks arise because it is not always possible for practitioners to determine, up front, the extent of the services necessary or "the tangible value of such services to the taxpayer" (AICPA 2006, p. 13). While difficult to make, this initial estimate affects the size and type of the fee for services and serves as an important risk reduction tool for both parties (AICPA 2006).[4]

The AICPA Committee's emphasis on the importance of the tangible value of services rendered is consistent with prior tax literature showing that (1) evaluations of tax professionals are based primarily on the *outcome* of the services provided (Jackson and Milliron 1986; Newberry et al. 1993; Phillips and Sansing 1998) and (2) tax professionals expect to collect a larger percentage of their billable time when the client is in a tax refund position (Jackson et al. 2005). Phillips and Sansing's (1998) analytical model also emphasized the importance of the benefit realized by the taxpayer relative to the amount of the fee paid.[5] Their model suggests that taxpayers would be required to pay higher fees under a fixed (versus contingent) fee structure, which would, in turn, cause taxpayers to be more aggressive as they attempted to realize a greater tax benefit to offset the higher fee paid.

[4] If the estimated benefit of the services is sufficient, the taxpayer and tax professional will determine the appropriate fee for the engagement. However, if the estimated benefit of the service does not exceed a minimal reservation price, the taxpayer will not engage the professional to provide the service. In addition to the costs of receiving the services, taxpayers may also consider participation by client personnel, the possibility of audit, and any uncertainty inherent in the estimate.

[5] See Reinganum and Wilde (1991), Cuccia (1994), and Anderson and Cuccia (2000) for applications of principal-agent theory to the taxpayer-tax professional relationship. See also Eisenhardt (1989) for a review of agency literature and Baiman (1990) for a review of the use of agency theory in accounting literature.

III. HYPOTHESES DEVELOPMENT

Benefit Surprise

Client satisfaction, an important part of tax professionals' ability to maximize utility from their practice (Kadous and Magro 2001), has been shown to be closely linked with the outcome of the tax services provided (Phillips and Sansing 1998). Research reports that taxpayers view tax professionals' primary duties as those of (1) resolving uncertainty and (2) minimizing tax liabilities and the costs related to tax services (Jackson and Milliron 1986; Johnson 1993; Phillips and Sansing 1998). Christensen (1992) and Stephenson (2006) suggest that a tax professional's behavior is based on perceptions of the client's expectations. These expectations may be set by the tax professional at the beginning of the engagement.

During their discussion of factors that impact the structure and amount of the fee for tax services, the AICPA Committee highlighted the importance and difficulty of estimating the "tangible value" of the services to be provided to the client (AICPA 2006, p. 13). As the engagement concludes, the initial estimate may also serve as a reference point for the client's evaluation of both the success of the engagement and the competence of the tax professional (Phillips and Sansing 1998; Newberry et al. 1993). However, a tax professional's inability to precisely determine the tangible benefit to be realized by the taxpayer often results in a difference between the estimated benefit

initially communicated to the client and the actual benefit realized from the services (i.e., a benefit surprise).[6]

This benefit surprise may influence the client's evaluation of the competence of the tax professional and impact their evaluation of the quality and value of the services provided (Phillip and Sansing 1998; AICPA 2006). When the actual benefit realized from the services exceeds the reference point established at the beginning of the engagement (i.e., a positive benefit surprise) the client will likely be pleased with the result and, by extension, with the service provider (Newberry et al. 1993). However, holding all else constant, a realized benefit that falls short of the initially established reference point (i.e., a negative benefit surprise) will likely have a negative impact on the client's evaluation of the tax professional and the quality of the services provided, as well as their assessment of the value of those services compared to the fee paid (Phillip and Sansing 1998; AICPA 2006).

A desire to meet their client's expectations may cause tax professionals encountering a negative benefit surprise to be more likely to include uncertain tax positions on the return in order to deliver a positive result to their client. Although putting a client in a more aggressive position may expose them to the risk of IRS audit, tax professionals have been shown to view that risk as negligible, and it may not weigh heavily on their decisions (Klepper and Nagin 1989a, 1989b, Cuccia 1994). In the presence of a negative benefit surprise, the risk of disappointing or even losing the client

[6] There are three potential results of providing a taxpayer with an estimate of the tangible value of the tax services to be provided: 1) the benefit obtained is exactly equal to the estimate provided; 2) the benefit obtained exceeds the estimate provided (a positive benefit surprise); or 3) the benefit obtained is less than the estimate provided (a negative benefit surprise).

may outweigh, or be more salient than, the risk of detection posed by the IRS (Jackson and Milliron 1986; Newberry et al. 1993).[7] Formally, I hypothesize that:

> **Hypothesis 1:** Tax professionals who encounter a negative benefit surprise will be more likely to take uncertain tax positions than tax professionals who encounter a positive benefit surprise.

Contract Structure

The effect of a negative or positive benefit surprise may be exacerbated by the structure of the contract between the taxpayer and tax professional. If there is a negative benefit surprise and the contract has been structured as a fixed fee contract, the fee for services (1) consumes a larger portion of the benefit realized and (2) results in a situation where the client bears the entire economic burden of the difference between the actual outcome and the estimate originally provided. Phillips and Sansing's (1998) model of taxpayer behavior suggests that taxpayers compare the dollar outcome of the services provided with the amount of the fee charged for those services. Extending that same comparison to a negative benefit surprise would suggest that taxpayers will be averse to negative changes in the benefit of the services provided relative to the fee charged for those services. Therefore, a tax professional that encounters a negative benefit surprise and is providing services under a fixed fee contract may have heightened expectations that the client will be dissatisfied. This may cause the tax professional to be even more likely to include uncertain tax positions on the tax return in order to increase the chances that the client is pleased.

[7] While it appears that a tax professional would benefit from always underestimating the value of the services to be provided so as to exceed the client's expectations, often referred to as "underpromise and overdeliver" (Trautz and Pinnington 2009, p. 12), that is not always feasible. Underestimating may cause the client not to engage the professional in favor of someone else, or to forgo the services altogether. In addition, repeatedly overdelivering may shift the reference point, such that the client begins to expect that result (Trautz and Pinnington 2009).

In contrast to a fixed fee contract structure, outcome uncertainty is implicit in a contingent fee contract structure.[8] A contingent fee contract structure creates a situation where (1) there is no change in the relative portion of the benefit consumed by the ultimate fee charged and (2) the economic impact of the negative surprise on the taxpayer is lessened by the reduced fee for the services provided. This is consistent with the argument of the AICPA Committee (2006) that a contingent fee structure would better align the interests of the contracting parties. While a fixed fee contract may exacerbate the likelihood of losing the client if a negative benefit surprise is encountered, a contingent fee contract structure allows the tax professional to share the economic risk of a negative change in the actual, versus estimated, outcome with the taxpayer and may reduce the likelihood of losing the client. Such a reduction in the risk of losing the client may also reduce the propensity for a tax professional contracting under a contingent fee and encountering a negative benefit surprise to take uncertain tax positions.

While a contingent fee may reduce the pressure to include uncertain positions when a negative benefit surprise is encountered, the same may not hold true when a positive benefit surprise is encountered. Hypothesis 1 suggests that, when a tax professional encounters a negative benefit surprise, the possibility of disappointing or even losing the client may outweigh the additional risk of an IRS audit, leading tax professionals to take aggressive positions on returns. However, when a positive benefit surprise is encountered, the likelihood of disappointing or losing the client and the associated reputation concerns are greatly reduced. Rather than focusing on the salience of losing the client, the tax professional evaluating potentially aggressive decisions would

[8] If the benefit could be precisely estimated, there would be no need to contract under a contingent fee arrangement. Rather, a taxpayer who could not pay up front could pay a fixed amount after the known benefit had been realized.

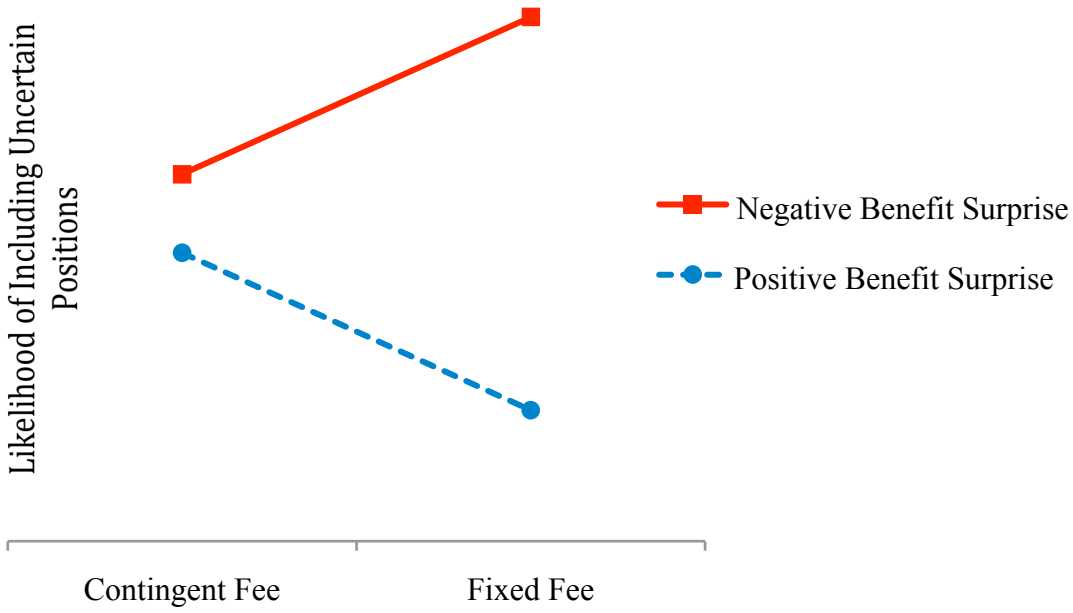
now be making a judgment based on the riskiness of the tax position relative to the potential gain of taking the aggressive position. Under a contingent fee contract structure, the incremental tax benefit of taking the aggressive position would be directly rewarded with an increase in the fee received by the tax professional. This may encourage the tax professional to be more aggressive in their recommendations to taxpayers, as suggested by the IRS (Murphy 1989). This incremental benefit would not be available when contracting under a fixed fee contract. Therefore, a tax professional contracting under a fixed fee may not be motivated to take uncertain positions. I predict that:

> **Hypothesis 2a:** When a negative benefit surprise is encountered, tax professionals contracting under a fixed fee will be more likely to take uncertain tax positions than professionals contracting under a contingent fee.
>
> **Hypothesis 2b:** When a positive benefit surprise is encountered, tax professionals contracting under a fixed fee will be less likely to take uncertain tax positions than professionals contracting under a contingent fee structure.

Note that Hypotheses 2a and 2b predict an interaction between contract structure and benefit surprise. The form of that interaction is shown in Figure 1.

In addition to reducing the pressure to avoid a negative benefit surprise, the direct alignment of the taxpayer and tax professional's financial interest, found in the context of contingent fees, may affect the communication between the taxpayer and tax professional. Hypotheses 1 and 2a suggest that tax professionals encountering a negative benefit surprise may take aggressive positions on the tax return to increase the benefit to the client, thus reducing the probability of losing the client. However, taxpayers have a

Figure 1 – Interaction Predicted in H2a and H2b



preference for taking conservative positions on their returns, and have even reported a desire to disengage the professional when provided with advice they identify as overly aggressive (Hite and McGill 1992; Stephenson 2006). At the same time, taxpayers lack the expertise required to identify an aggressive position and have been shown to follow both conservative and aggressive recommendations made by tax professionals (Newberry et al. 1993; Beck et al. 1996). Therefore, while a tax professional may be motivated by contextual factors to take aggressive tax positions, informing the client that positions may not be supported could ultimately result in losing the client.

However, a contingent fee contract structure may reduce the risk that informing the client about uncertain positions will result in losing the client. Research in

psychology has shown that individuals are more likely to share negative news when the recipient of the news perceives that both parties will share in the fate (Johnson et al. 1974). Tax professionals contracting under a contingent fee structure share in the economic impact of the tax position, including uncertain positions taken on the return. This alignment of interests may result in increased trust between the taxpayer and the tax professional (AICPA 2006; Dana and Spier 1993) and reduce the pressure on the tax professional to hide the impact of a benefit surprise (Johnson et al. 1974). Thus, professionals contracting under a contingent fee contract structure may be more likely than professionals contracting under a fixed fee contract structure to inform the taxpayer that uncertain positions on the tax return may not be sustained if challenged. I hypothesize that:

> **Hypothesis 3:** Tax professionals contracting under a contingent (fixed) fee will be more (less) likely to inform the taxpayer that an uncertain tax position may not be sustained if challenged.

IV. METHODOLOGY

Overview

A 2 x 2 between-subjects experimental design was used to examine how fee structure (contingent versus fixed) and benefit surprise (positive versus negative) affect tax professionals' recommendations to clients. After reading introductory information, 48 practicing tax professionals with R&D tax credit experience were asked to determine the likelihood that a tax professional would include uncertain positions in the calculation of a client's R&D tax credit. Participants then responded to supplemental, demographic, and manipulation check questions.

Participants

All participants were experienced tax professionals from large, international firms who specialized in providing R&D tax credit services to clients. I solicited participation through firm representatives and direct contact with tax professionals. Participants were emailed an invitation to participate in the study. The email contained a link to the online instrument administered via Qualtrics. Ultimately, 48 practicing tax professionals with R&D tax credit experience participated in the study. Participants had a mean (median) age of 32 (31), and 8.6 (7.7) years of professional tax experience.

Participants also self-reported their familiarity with the R&D tax credit by responding to the question, "How familiar are you with the research and development (R&D) tax credit?" Responses were on a scale from 0-100 anchored by "NOT very familiar" and "VERY Familiar." The mean (median) response to the familiarity question

was 82.0 (91.1). None of the demographic variables differed by condition and they do not significantly affect the dependent variables. Information about participants is included Table 1.

Task

Participants were presented with background information related to a hypothetical tax professional and taxpayer. The tax professional is described as a high performer in their firm, who has exceeded his billing, realization, and client development goals. The tax professional is also told that his team has been assigned the R&D tax credit engagement for a new client due to his tax expertise and the quality of his client relationships. This detailed information about the tax professional is provided in order to establish that the tax professional is reasonably competent and reduce the likelihood that participants attribute the benefit surprise to a lack of competence on the part of the tax professional.

The client is introduced as an S corporation in the biotechnology industry that is just beginning to invest significant funds in activities that potentially qualify for the R&D tax credit. The client is described as not having any employees with the expertise necessary to calculate the R&D tax credit or capable of scrutinizing the work of a tax professional who calculates the R&D credit on their behalf. This information is provided so that participants have the mental freedom to include positions without concerns that the client will second-guess their decisions. All participants are told that, prior to engaging the professional to provide the services, the tax professional estimated that the client's R&D tax credit would be "about $200,000." After providing that estimate to the client, the client engaged the tax professional to calculate the R&D tax credit on their behalf.

Table 1 – Demographic Information

Variable	Mean	Std. Dev.	1st Quartile	Median	3rd Quartile
Age	32.0	9.8	26.0	31.0	35.0
Years of tax experience	8.6	7.7	3.5	7.0	10.0
Familiarity with R&D Tax Credit	82.0	20.3	66.9	91.1	100.0

Participants consist of 48 tax professionals with R&D tax credit experience who responded to an email request to participate in an online experiment. Two-thirds of the participants who responded to the demographic questions were male.

Contract Structure Manipulation

The manipulation of contract structure ("CONTRACT") is communicated as follows. In the fixed fee contract setting, participants are told that "the fee for the engagement is structured as a **fixed fee of $70,000**." In the contingent fee contract setting, participants are told that "the fee for the engagement is structured as a **contingent fee of 35% of the final R&D tax credit**."

Benefit Surprise Manipulation

Benefit surprise ("SURPRISE") was manipulated by telling participants that, when reviewing the R&D tax credit calculation, the tax professional found new information that changed the current calculated credit. Participants in the positive (negative) benefit surprise condition were told that incorporating that information, "results in an **increase (**a **decrease) in the final R&D tax credit of $90,000**, making the **calculated R&D tax credit $290,000 ($110,000)**, rather than the originally **estimated $200,000 communicated to [the client] prior to the engagement**."

Uncertain Tax Position(s)

Participants next learn that the engagement team has identified a potentially qualifying project that has not been incorporated into the current calculation of the R&D tax credit amount and that client's management team has not identified it as a potentially qualifying activity. Participants learned that the costs associated with the project are broken into three categories, and that the support for including each category in the calculation of the R&D tax credit varies. Participants are not provided with the level of support for the three categories of costs. Rather, the potentially qualifying activities for each of the three categories of cost are described in a brief narrative. Participants learn

that including all of the costs in the calculation of the credit would increase the current credit by $100,000. They are informed that this increase would bring the total credit amount to $390,000 ($210,000) in the positive (negative) benefit surprise condition.[9]

The three categories of costs were developed with an R&D manager and partner at one of the Big 4 firms providing participants. The descriptions were calibrated such that the costs described in Category 1 were 55% likely to be upheld by a Tax Court judge, the costs described in Category 2 were 35% likely to be upheld by a Tax Court judge, and the costs described in Category 3 were 0-5% likely to be upheld by a Tax Court judge.[10] Including a position with virtually no support provide the opportunity to directly explore the IRS's claim that contingent fees will result in professionals taking unsupportable positions.[11] In addition, differing levels of support provides the opportunity to explore whether the effects of the independent variables on professionals' behavior differs based on the level of support for a position.

Dependent Measures

The dependent variables for Hypotheses 1, 2a, and 2b are tax professionals' assessment of the likelihood that the tax professional "will choose to include the costs related to [each category described] in the final calculation of the R&D tax credit?" For each category of costs, participants responded on a scale from 0-100, with anchoring descriptions of "Definitely WILL NOT Include" and "Definitely WILL Include." The

[9] The descriptions of each category also includes the amount that the credit will increase if that category is added. The three categories of cost increase the credit by $32,000, $35,000, and $33,000, respectively.

[10] The descriptions were then provided to three other R&D professionals at the Senior Manager/Partner level to confirm the likelihood ratings. See supplemental testing below for an analysis of participants' reported likelihood judgments.

[11] Although the IRS has not provided percentage thresholds for most positions, Fleming and Whittenburg (2007) state that a position that does not have at least 25% certainty will not meet the reasonable basis criteria.

dependent variables for Hypothesis 3 are the reported likelihoods that the tax professional will inform the client that each category of cost may not be upheld if challenged by the IRS. To aid in interpreting their response to that measure, I simultaneously ask participants whether they feel the tax professional *has a responsibility* to inform the client that each category of costs may not be upheld under audit.

Supplemental Measures

In addition to responding to the dependent measures, participants responded to supplemental judgment measures and follow-up questions. Participants were asked to select the final number that would be reported to the client. This question allowed them to make a selection that did not include any of the uncertain categories of cost, included only the first category, included both the first and second categories of cost, etc. Participants then responded to process measures related to possible motivations for the tax professional's decision to include or exclude amounts in the credit. Next, participants rated the likelihood that a Tax Court judge will uphold each of the three cost categories if the R&D tax credit were selected for audit. Finally, participants responded to manipulation checks and demographic questions.

V. RESULTS

Tests of Hypothesis 1

Hypothesis 1 predicts that tax professionals experiencing a negative benefit surprise would be more likely to include uncertain costs in the final R&D tax credit calculation than tax professionals experiencing a positive benefit surprise. The dependent measures used to test Hypothesis 1 are respondents' ratings of the likelihood that the tax professional would include the costs related to each of the three categories of uncertain

costs in the final calculation of the R&D tax credit. Hypothesis 1 is supported if participants are more likely to include the uncertain costs described in the three categories when they encounter a negative benefit surprise than when they encounter a positive benefit surprise.[12]

Panel A of Table 2 provides the means for Category 1 for each of the four experimental conditions and Panel B provides the analysis of variance (ANOVA). A comparison of the row means shows that participants in the negative benefit surprise condition report a mean likelihood of including Category 1 in the final R&D tax credit calculation of 69.50, compared to a mean of 52.00 for participants in the positive benefit surprise condition. This pattern of means is in the hypothesized direction, and an examination of the ANOVA for Category 1 shows that SURPRISE has a significant effect on participants' likelihood ratings (p-value = 0.012). For Category 1, the hypothesized effect of negative benefit surprise on tax professionals' likelihood of including uncertain positions is supported.

Table 3 provides the ANOVA results and means for the costs described in Category 2. Panel A shows that participants in the negative benefit surprise condition report a mean likelihood of including the position of 46.16, compared to a mean of 26.25 for participants in the positive benefit surprise condition. These results are also in the hypothesized direction. The ANOVA for Category 2 shows that SURPRISE has a significant effect on participants' likelihood ratings (p-value = 0.010), providing additional support for H1.

[12] In addition to the tests I describe in this section, I also performed a MANOVA for all three categories. The MANOVA shows that the main effect of SURPRISE is significant (p-value = 0.014) and the interaction effect for SURPRISE and CONTRACT is also significant (p-value = 0.023).

Table 2 – Analyses for Category 1

Panel A: Mean Likelihood of Including the Uncertain Costs from Category 1

Benefit Surprise	Contract Structure: Contingent Fee		Contract Structure: Fixed Fee		Row Means	
Negative	Mean =	62.98	Mean =	77.99	Mean =	69.50
	Std. dev. =	26.59	Std. dev. =	12.46	Std. dev. =	22.52
	n =	13	n =	10	n =	23
Positive	Mean =	61.57	Mean =	41.63	Mean =	52.00
	Std. dev. =	24.69	Std. dev. =	38.41	Std. dev. =	32.93
	n =	13	n =	12	n =	25
Column Means	Mean =	62.27	Mean =	58.16	Mean =	60.39
	Std. dev. =	25.15	Std. dev. =	34.39	Std. dev. =	29.48
	n =	26	n =	22	n =	48

Panel B: ANOVA Results

Likelihood of Including Category 1

	df	MS	F-statistic	p-value
SURPRISE	1	4229.64	5.568	**0.012** *
CONTRACT	1	71.87	0.095	0.760
*SURPRISE * CONTRACT*	1	3622.49	4.769	**0.017** *
Error	44	759.58		
Total	48			

Panel C: Additional Test of Hypotheses 2a & 2b

Planned Contrast	t-statistic	df	p-value
Interaction effect of SURPRISE and CONTRACT	2.86	44	**0.004** *

* One-tailed

Table 3 – Analyses for Category 2

Panel A: Mean Likelihood of Including the Uncertain Costs from Category 2

Benefit Surprise	Contract Structure: Contingent Fee		Contract Structure: Fixed Fee		Row Means	
Negative	Mean =	35.17	Mean =	60.45	Mean =	46.16
	Std. dev. =	35.14	Std. dev. =	28.17	Std. dev. =	34.09
	n =	13	n =	10	n =	23
Positive	Mean =	29.90	Mean =	22.30	Mean =	26.25
	Std. dev. =	30.64	Std. dev. =	29.04	Std. dev. =	29.52
	n =	13	n =	12	n =	25
Column Means	Mean =	38.45	Mean =	39.64	Mean =	35.79
	Std. dev. =	32.42	Std. dev. =	34.06	Std. dev. =	33.02
	n =	26	n =	22	n =	48

Panel B: ANOVA Results

Likelihood of Including Category 2

	df	MS	F-statistic	p-value
SURPRISE	1	5593.16	5.79	**0.010** *
CONTRACT	1	926.33	0.96	0.333
*SURPRISE * CONTRACT*	1	3204.94	4.76	**0.038** *
Error	44	966.14		
Total	48			

Panel C: Additional Test of Hypotheses 2a & 2b

Planned Contrast	t-statistic	df	p-value
Interaction effect of SURPRISE and CONTRACT	2.79	44	**0.004** *

* One-tailed

While the conditions for an ANOVA are met for Categories 1 and 2, they are not met for Category 3. Specifically, tests for homogeneity of variance and skewness show that, for Category 3, the between-cell variances are significantly different (p-value < 0.05) and the underlying data is positively skewed (skewness-statistic = 4.295). Quinn and Keough (2002) note that, while PROC GLM may be robust to violations of homogeneity of variance, it may not be robust when the distribution is positively skewed. In such circumstances, rank transformations of the response variable may be appropriate. Therefore, I perform a rank-transformed (RT) ANOVA for Category 3. Table 4 reports results for Category 3. Panel A shows that the row mean for participants in the negative benefit surprise conditions were 7.12, compared to the row mean of 3.87 for participants in the negative benefit surprise conditions.[13] In Panel B, results for the RT ANOVA show a significant effect of SURPRISE (p-value = 0.062).

Overall, these results provide strong support for Hypothesis 1. Participants encountering a negative benefit surprise were more likely to take the uncertain tax positions than participants experiencing a positive benefit surprise. This suggests that, in addition to playing an important role when contracting for services (AICPA 2006), the initial estimate is also an important factor in tax professionals' judgments and recommendations to clients.

Tests of Hypotheses 2a and 2b

Hypotheses 2a and 2b predict an interaction between CONTRACT and SURPRISE. Hypothesis 2a is supported if participants who contract under a fixed fee contract structure and encounter a negative benefit surprise are more likely to include

[13] Participants were ranked from 1 (least aggressive) to 48 (most aggressive). The mean ranking for participants in the negative (positive) benefit surprise conditions were 20.04 (13.08).

Table 4 – Analyses for Category 3

Panel A: Mean Likelihood of Including the Uncertain Costs from Category 3

Benefit Surprise	Contract Structure: Contingent Fee		Contract Structure: Fixed Fee		Row Means	
Negative	Mean =	2.72	Mean =	12.85	Mean =	7.12
	Std. dev. =	5.77	Std. dev. =	25.44	Std. dev. =	17.59
	n =	13	n =	10	n =	23
Positive	Mean =	5.80	Mean =	1.78	Mean =	3.87
	Std. dev. =	10.57	Std. dev. =	3.51	Std. dev. =	8.10
	n =	13	n =	12	n =	25
Column Means	Mean =	4.26	Mean =	5.77	Mean =	3.87
	Std. dev. =	8.49	Std. dev. =	17.77	Std. dev. =	13.45
	n =	26	n =	22	n =	48

Panel B: Rank-Transformed ANOVA Results

Likelihood of Including Category 3

	df	MS	F-statistic	p-value	
SURPRISE	1	763.38	2.34	**0.066**	*
CONTRACT	1	335.33	1.03	0.316	
*SURPRISE * CONTRACT*	1	1692.63	5.19	**0.014**	*
Error	44	325.99			
Total	48				

Panel C: Additional Test of Hypotheses 2a & 2b

Planned Contrast	t-statistic	df	p-value	
Interaction effect of SURPRISE and CONTRACT	2.12	44	**0.020**	*

* One-tailed

uncertain costs in the final research credit than tax participants who contract under a contingent fee contract structure and encounter a negative benefit surprise. Hypothesis H2b is supported if participants who contract under a fixed fee structure and encounter a positive benefit surprise are *less* likely to include uncertain costs in the final research credit than tax participants who contract under a contingent fee structure and encounter a positive benefit surprise (refer to Figure 1 for a visual representation of the hypothesized interaction).

A visual examination of the means for each category of uncertain costs shows results consistent with the hypothesized interaction. Figures 2-4 graph the mean likelihood of including the uncertain costs for each category. For each category of cost, participants who contract under a fixed fee structure and encounter a negative benefit surprise are more likely to include uncertain costs in the final research credit than tax participants who contract under a contingent fee and encounter a negative benefit surprise. In addition, participants who contract under a fixed fee structure and experience a positive benefit surprise are less likely to include uncertain costs in the final research credit than tax participants who contract under a contingent fee structure and encounter a positive benefit surprise.

The interaction between CONTRACT and SURPRISE is significant for Category 1 (p-value = 0.017), Category 2 (p-value = 0.038), and Category 3 (p-value = 0.014). These results provide strong support for Hypotheses 2a and 2b. I also use planned contrast tests to determine whether the pattern of the predicted interaction between CONTRACT and SURPRISE is significant. I use a contrast code of 1, 2, -1, -2 for the contingent fee/negative benefit surprise, fixed fee/negative benefit surprise, contingent fee/positive

benefit surprise, and fixed fee/positive benefit surprise, respectively for each category of costs (Buckless and Ravenscroft 1990). Panel C of Tables 2, 3, and 4 shows the results of this test of the predicted pattern of cell means for Categories 1, 2, and 3. The contrast is significant for all categories of uncertain costs. For Category 1, Table 2 reports a t-statistic of 2.885, one-tailed p-value = 0.004. For Category 2, Table 3 reports a t-statistic of 2.786, one-tailed p-value = 0.004. For Category 3, Table 4 reports a t-statistic of 2.117, one-tailed p-value = 0.020.

These results provide robust support for Hypotheses 2a and 2b. Tax professionals are more likely to include uncertain positions in tax returns when they are contracting under a fixed fee and encounter a negative benefit surprise than when they are contracting under a contingent fee and encounter a negative benefit surprise. In contrast, when professionals contract under a fixed fee and encounter a positive benefit surprise, they are less likely to include uncertain positions in tax returns than when they contract under a contingent fee contract structure.

Test of Hypothesis 3

Hypothesis 3 predicts a main effect of CONTRACT. H3 is supported if professionals contracting under a contingent fee structure are more likely to inform the client that a category of cost may not be upheld if challenged by the IRS. In analyzing participants' responses to the dependent measure for H3, I control for their responses to the question asking whether they feel the tax professional has a responsibility to inform the client about the position. Figure 5 displays participants' means responses. Table 5 displays the results of the ANCOVAs. For Categories 1 and 2, participants assessments of the professionals' responsibility to inform the client were significant (p-values <0.001

Figure 2 – Likelihood of Including the Costs from Category 1

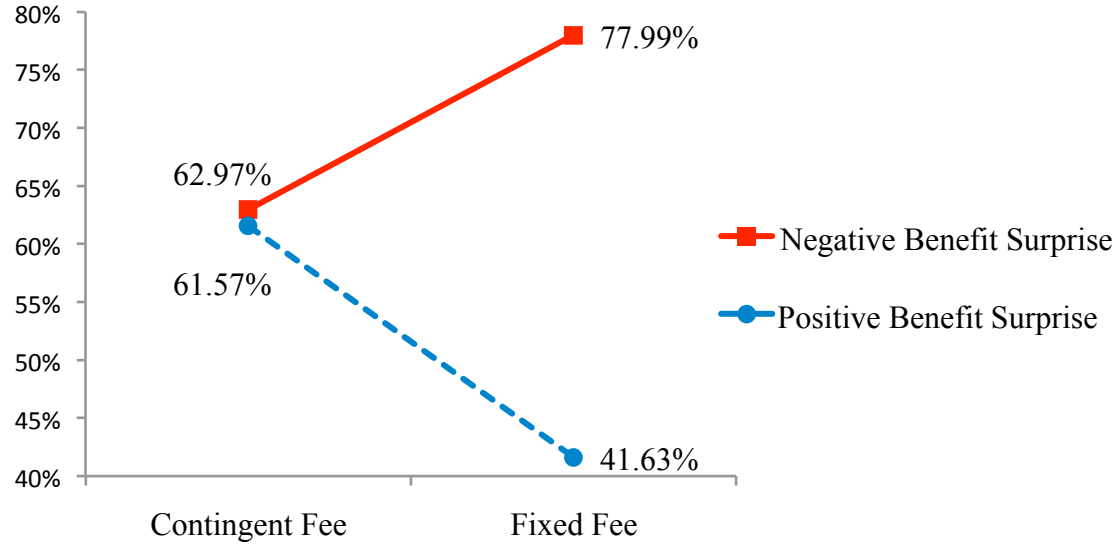


Figure 3 – Likelihood of Including the Costs from Category 2

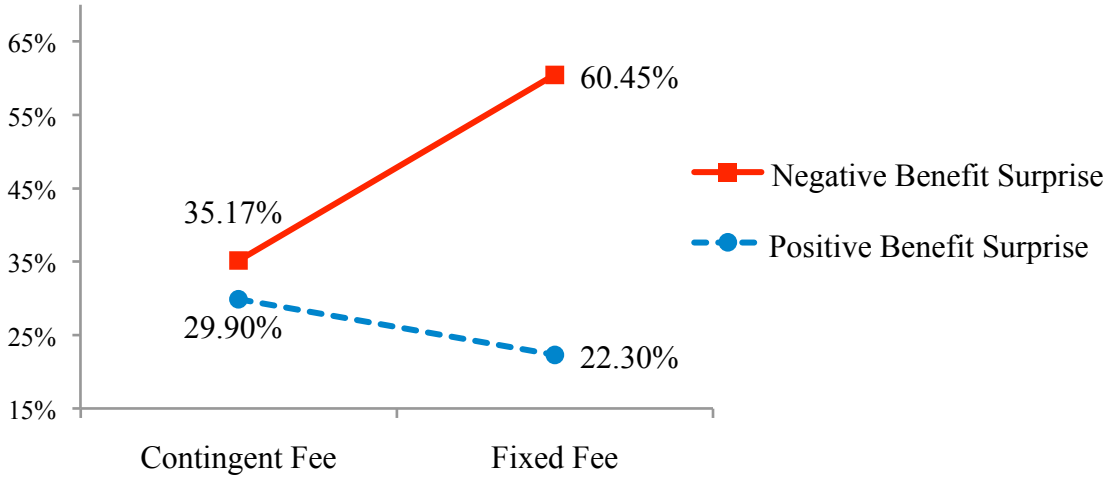
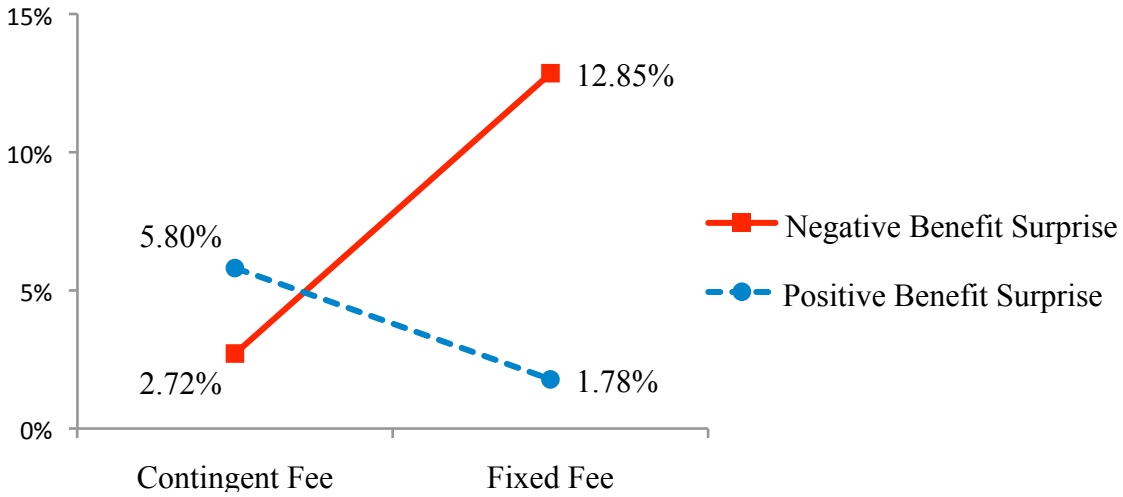
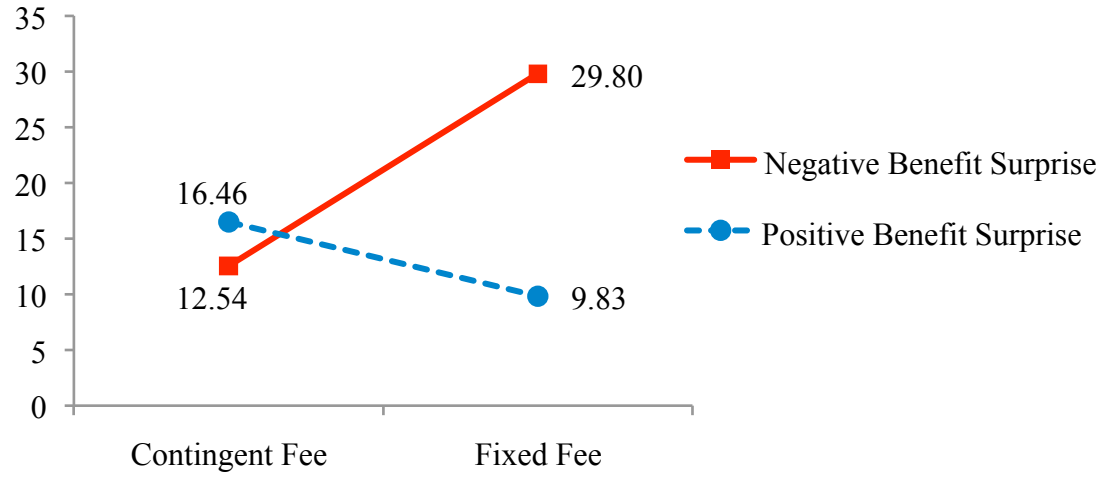


Figure 4 – Panel A: Likelihood of Including the Costs from Category 3



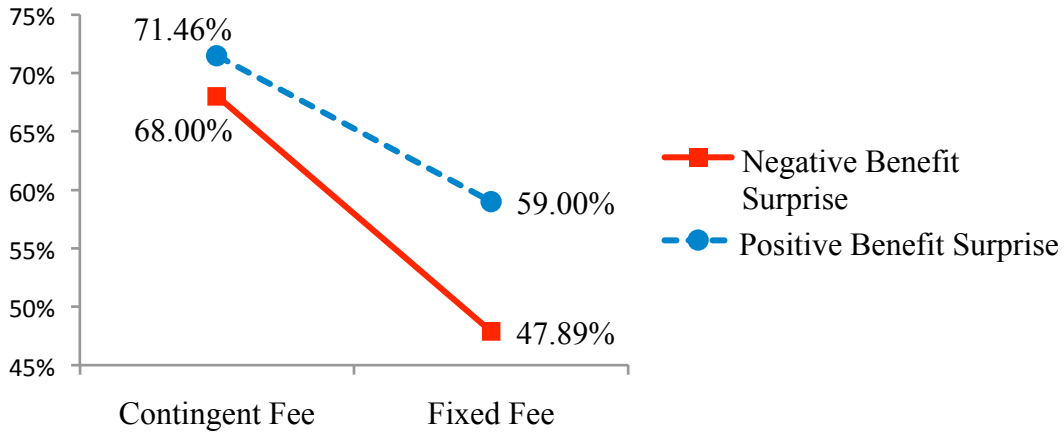
Panel B: Rank of Likelihood of Including the Costs from Category 3*



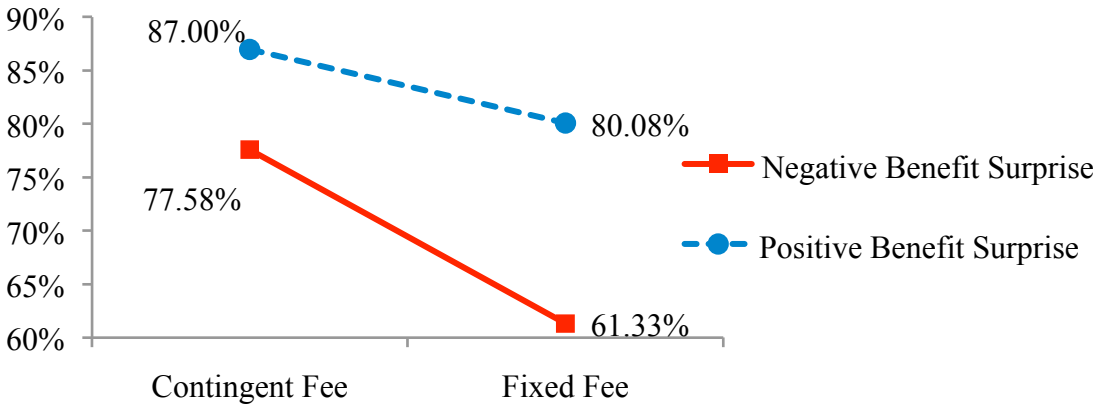
*Participants are ranked from 1 to 48, with a rank of 1 being assigned to the participant who is least likely to include the costs from Category 3 and 48 being assigned to the participant who is most likely to include the costs from Category 3.

Figure 5 – Likelihood of Informing Client

Panel A: Category 1



Panel B: Category 2



Panel C: Category 3

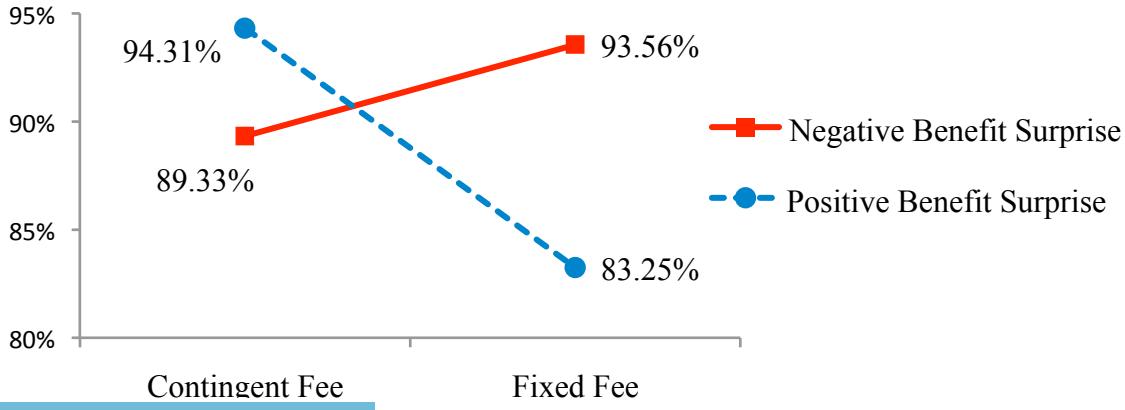


Table 5 – Communication

Panel A: Mean Likelihood of Informing Client - Category 1

Benefit Surprise	Contract Structure: Contingent Fee		Contract Structure: Fixed Fee		Row Means	
Negative	Mean =	68.00	Mean =	47.89	Mean =	59.38
	Std. dev. =	30.12	Std. dev. =	30.88	Std. dev. =	31.38
	n =	12	n =	9	n =	21
Positive	Mean =	71.46	Mean =	62.64	Mean =	67.42
	Std. dev. =	34.07	Std. dev. =	33.17	Std. dev. =	33.23
	n =	13	n =	11	n =	24
Column Means	Mean =	69.80	Mean =	56.00	Mean =	63.67
	Std. dev. =	31.61	Std. dev. =	32.21	Std. dev. =	32.27
	n =	25	n =	20	n =	45

Panel B: ANOVA Results – Category 1

	df	MS	F-statistic	p-value
RESPONSIBILITY	1	22984.30	47.01	<0.001
SURPRISE	1	68.31	0.14	0.711
CONTRACT	1	873.99	1.788	**0.095** *
*SURPRISE * CONTRACT*	1	243.21	0.497	0.485

Table 5 – Communication, Continued

Panel C: Mean Likelihood of Informing Client - Category 2

Benefit Surprise	Contract Structure: Contingent Fee		Contract Structure: Fixed Fee		Row Means	
Negative	Mean =	77.58	Mean =	61.33	Mean =	70.62
	Std. dev. =	25.93	Std. dev. =	29.94	Std. dev. =	28.22
	n =	12	n =	9	n =	21
Positive	Mean =	87.00	Mean =	80.73	Mean =	84.13
	Std. dev. =	19.84	Std. dev. =	19.65	Std. dev. =	19.58
	n =	13	n =	11	n =	24
Column Means	Mean =	82.48	Mean =	72.00	Mean =	77.82
	Std. dev. =	22.98	Std. dev. =	26.05	Std. dev. =	24.67
	n =	25	n =	20	n =	45

Panel D: ANOVA Results – Category 2

	df	MS	F-statistic	p-value
RESPONSIBILITY	1	4525.10	9.72	0.003
SURPRISE	1	1117.69	2.40	0.129
CONTRACT	1	1531.97	3.30	**0.038** *
*SURPRISE * CONTRACT*	1	294.07	0.63	0.431

Table 5 – Communication, Continued

Panel E: Mean Likelihood of Informing Client - Category 3

Benefit Surprise	Contract Structure: Contingent Fee		Contract Structure: Fixed Fee		Row Means	
Negative	Mean =	84.62	Mean =	93.56	Mean =	88.27
	Std. dev. =	27.08	Std. dev. =	9.79	Std. dev. =	21.81
	n =	13	n =	9	n =	22
Positive	Mean =	94.31	Mean =	87.50	Mean =	91.04
	Std. dev. =	13.73	Std. dev. =	18.76	Std. dev. =	16.36
	n =	13	n =	12	n =	25
Column Means	Mean =	89.46	Mean =	90.10	Mean =	89.74
	Std. dev. =	21.60	Std. dev. =	15.53	Std. dev. =	18.94
	n =	26	n =	21	n =	47

Panel F: ANOVA Results – Category 3

	df	MS	F-statistic	p-value
RESPONSIBILITY	1	172.23	0.46	0.499
SURPRISE	1	16.12	0.044	0.836
CONTRACT	1	0.75	0.002	0.482 *
*SURPRISE * CONTRACT*	1	623.19	1.69	0.201

*One-tailed

and 0.003, respectively). For Categories 1 and 2, participants contracting under a contingent fee structure are more likely to inform the client that uncertain positions may not be upheld if challenged than participants contracting under a fixed fee. The mean likelihood of informing the client when contracting under a contingent (versus fixed) contract structure was 69.80 (versus 56.00) for Category 1 and 82.48 (versus 72.00) for Category 2. An examination of the ANCOVAS for Category 1 and 2 show that these differences are significant, with p-values of 0.095 and 0.038, respectively.

For Category 3, however, there was virtually no difference between levels of CONTRACT. The mean likelihood of informing the client when contracting under a contingent (versus fixed) contract structure was 89.46 (versus 90.10) for Category 3 – indicating that participants in all conditions were highly likely to inform the client that the uncertain position may not be upheld if challenged. Overall, these results provide some support for Hypothesis 3. Controlling for participants' perceptions of responsibility to inform the client, participants contracting under a contingent fee structure were more likely to inform the client that a position may not be supported if challenged.

Supplemental Analyses

Judgments of Support

In addition to the main analysis of the dependent variables for H1, H2a, and H2b described above, I further explore the effect of CONTRACT and SURPRISE on tax professionals' behavior by examining participants' answers to supplemental questions. Participants were asked to rate the likelihood that "a Tax Court judge would allow the treatment of each category of costs as qualifying research expenses." For each category of costs, participants responded on a scale from 0-100, with anchoring descriptions of

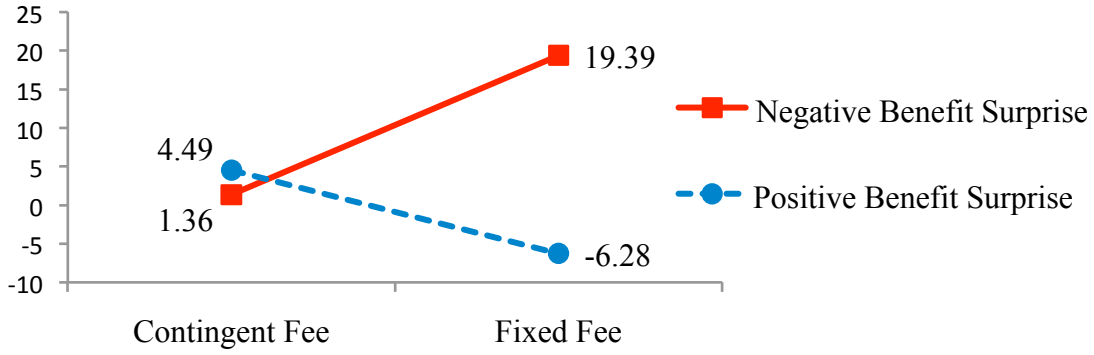
"Definitely WOULD NOT Allow" and "Definitely WOULD Allow." The three categories of cost were intended to describe costs that were 55% (Category 1), 35% (Category 2), and 0-5% (Category 3) likely to be upheld if challenged by a Tax Court judge. I first examine the overall mean likelihood assessments for each category of cost. The mean likelihood rating was 56.33% for Category 1, 33.41% for Category 2, and 7.81% for Category 3. None of the categories had an overall mean that differed significantly from the intended calibrations. ANOVAs for participants' judgments for each category of variables show that there were not significant differences between conditions (all p-values for the corrected models ≥ 0.619).

I next examine how participants' likelihood of including each category of costs differs from their assessments of support. For each category of cost, I subtract participants' assessments of support from their response to the dependent variable. For example, assume that a participant rates the likelihood that the position would be included in the credit to be 55% and their assessment of support is 45%. The difference between these two responses is positive 10. Thus, a positive difference means that the participants' likelihood of including the position is higher than their assessment of support for that position. Figure 6 displays the differences for the experimental conditions.

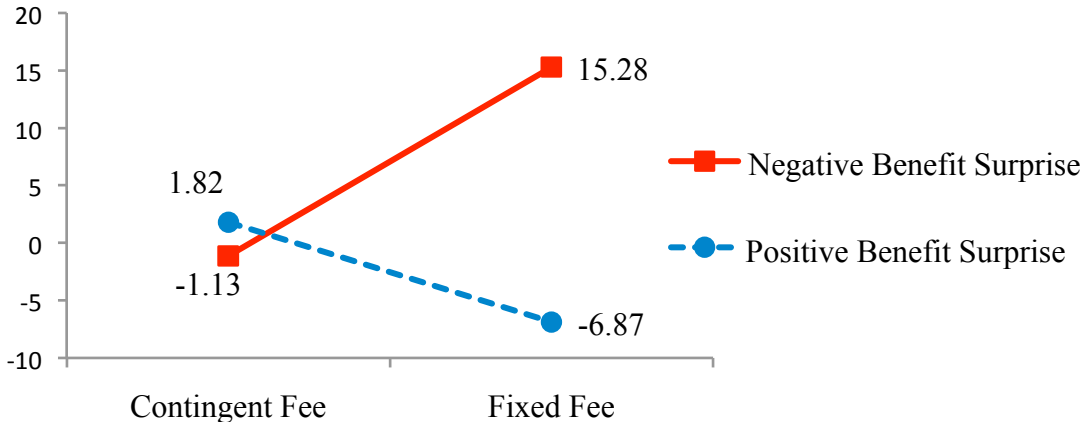
For Categories 1, 2, and 3, participants who contract under a fixed fee and encounter a negative benefit surprise have an average positive difference of 19.39, 18.75, and 4.25, respectively. These differences are significantly different from zero for Categories 1 and 2 (results not tabulated). Participants who contract under a fixed fee and encounter a positive benefit surprise have an average difference of -6.28, -6.87, and -

Figure 6 – Difference Between Judgments of Support and Likelihood of Including Position

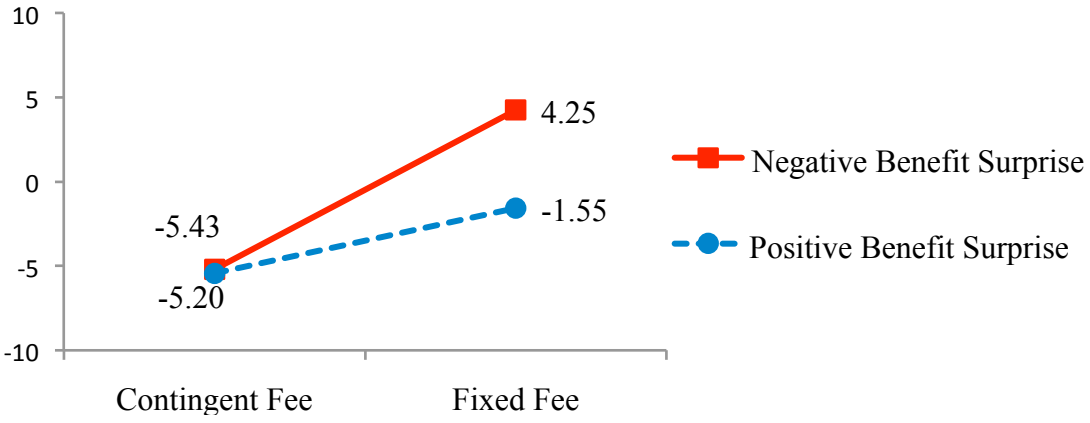
Panel A: Category 1



Panel B: Category 2



Panel C: Category 3



1.55 for the three categories. These differences are only significant for Category 1 (results not tabulated). None of the mean differences were significant for participants contracting under contingent fee structures.

Final Amount of the R&D Tax Credit

After participants rate the likelihood of including each of the categories of uncertain cost in the tax return, they select the final R&D tax credit amount to report to the client (FINAL). This choice task required participants to make one selection that included the appropriate categories of cost. For ease of exposition, Table 6 reports participants' selections in the following manner. If participants selected a final amount that included none of the uncertain positions, their response is coded as zero. Otherwise it was coded a 1, 2, or 3 depending on how many categories of cost they included in their final amount.[14]

Figure 7 shows the mean responses for the four experimental conditions. An examination of the means shows that the results are consistent with the hypothesized interaction between CONTRACT and SURPRISE. Participants who contract under a fixed fee and encounter a negative benefit surprise reported a final amount to the client that included an average of 1.80 uncertain positions, compared to 1.31 uncertain positions for professionals who contract under a contingent fee and encounter a negative benefit surprise.[15] In addition, participants who contract under a fixed fee and encounter a

[14] The experimental question allowed participants to select different combinations of the three categories. For instance, participants could have selected categories 1 and 3, rather than 1 and 2. These responses are coded equally as a 2 in the current analysis. Alternatively I analyze these responses by ranking each choice in order of increasing aggression. Thus, because Category 3 is more aggressive than Category 2, a participant who selected the combination of Category 1 and Category 3 would have selected a more aggressive combination than a participant who selected a combination of Category 1 and Category 2. Analyzing the results with the more descriptive rankings strengthens the results of the ANOVA, but does not qualitatively change the interpretation thereof.

positive benefit surprise reported a final amount to the client that included an average of 0.75 uncertain positions, compared to 1.31 uncertain positions for professionals who contracted under a contingent fee and encounter a positive benefit surprise. ANOVA results in Table 6, Panel B show that the hypothesized main effect of SURPRISE is significant (one-tailed p-value = 0.009). In addition, the hypothesized interaction and planned contrasts are also significant (one-tailed p-value = 0.009 and 0.002, respectively). These results provide further support for Hypotheses 1, 2a, and 2b.

An examination of the overall results from this experiment provides additional insight into the behavior of tax professionals. Participants who contract under a fixed fee contract structure and encounter a negative benefit surprise are significantly more likely than participants in all other conditions to include uncertain positions on returns. Significantly, 80% of participants contracting under a fixed fee and encountering a negative benefit surprise included Category 2 in the final R&D tax credit, even though this position was rated as having less than a 40% probability of being upheld if challenged (compared to less than 50% of the participants contracting under a contingent fee). While this behavior may be readily identifiable as suboptimal from the perspective of the IRS, aggressive behavior may not be the only form of suboptimal behavior.

Results also show that participants who contract under a fixed fee contract structure and encounter a positive benefit surprise are significantly less likely than participants in all other conditions to include Category 1 for which the overall mean level of support was judged to be greater than 50%. Examination of the data shows that 40% of the participants in that condition did not include any of the uncertain categories of cost

[15] Only one participant chose to include all three categories of costs in the final R&D tax credit. That participant contracted under a fixed fee and encountered a negative benefit surprise.

Figure 7 – Final Number of Uncertain Positions Included in R&D Tax Credit

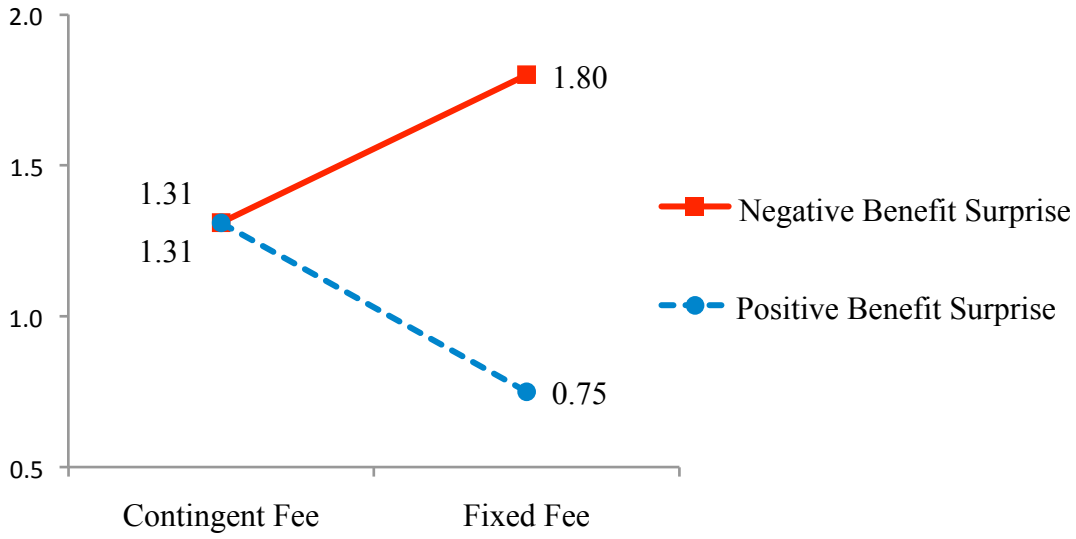


Table 6 – Final Number of Uncertain Positions Reported to Client

Panel A: Mean Final Number of Uncertain Positions Reported to Client

Benefit Surprise	Contract Structure: Contingent Fee	Contract Structure: Fixed Fee	Row Means
Negative	Mean = 1.31 Std. dev. = 0.75 n = 13	Mean = 1.80 Std. dev. = 0.63 n = 10	Mean = 1.52 Std. dev. = 0.73 n = 23
Positive	Mean = 1.31 Std. dev. = 0.75 n = 13	Mean = 0.75 Std. dev. = 0.75 n = 12	Mean = 1.04 Std. dev. = 0.79 n = 25
Column Means	Mean = 1.31 Std. dev. = 0.74 n = 26	Mean = 1.23 Std. dev. = 1.13 n = 22	Mean = 1.27 Std. dev. = 0.79 n = 48

Panel B: ANOVA Results

Final Number of Uncertain Positions Reported to Client

	df	MS	F-statistic	p-value
SURPRISE	1	3.27	6.15	**0.009** *
CONTRACT	1	0.01	0.02	0.878
*SURPRISE * CONTRACT*	1	3.27	6.15	**0.009** *
Error	44	0.53		
Total	48			

Panel C: Additional Test of Hypotheses 2a & 2b

Planned Contrast	t-statistic	df	p-value
Interaction effect of SURPRISE and CONTRACT	3.058	44	**0.002** *

* One-tailed

in the final credit. This suggests that there may be circumstances where tax professionals forgo supportable tax positions, resulting in overpayment of tax by their client.

VI. CONCLUSION

This study makes several contributions to the growing literature on tax professionals' judgments and decision-making. This is the first study to empirically examine the effect of contract structure and benefit surprise on tax professionals' behavior. Contrary to claims made by regulators, results show that contingent fees do not lead professionals to take unsupportable positions on returns. Rather, results demonstrate that restricting contingent fee contracts actually increases the likelihood of aggressive behavior by tax professionals when they encounter a negative benefit surprise. This increase is especially pronounced for categories of cost that are less than 50% likely to be sustained.

This study is also the first to examine whether contract structure affects tax professionals' likelihood of informing taxpayers that tax return positions may not be supported if challenged. Reducing the amount of information provided to clients by the tax professional may leave them unaware of aggressive positions taken on their returns and, consequently, undermine a fundamental aspect of our income tax system – the ability of taxpayers to accurately report their income. Reduced communication between professionals and their clients may be especially significant given that taxpayers prefer conservative tax positions (Hite and McGill 1992) but lack the expertise required to identify an aggressive position and have been shown to follow both conservative and

aggressive recommendations made by tax professionals (Newberry et al. 1993; Beck et al. 1996).

Interpretation of the results of this study are subject to limitations common to experiments. While the experiment discussed herein contained important contextual factors, other factors may also affect tax professionals' behavior. In addition, experimental participants are experienced tax professionals who have expertise in delivering R&D tax credit studies to clients. Professionals in other settings may not react to the manipulated variables in the same manner. Finally, while experimental results suggest that participants are highly likely to inform clients that uncertain positions may not be supported if challenged, that likelihood was measured with a simultaneous measure of perceived responsibility. It is possible that, absent the measure of perceived responsibility, tax professionals would have reported a lower likelihood of informing the client that positions may not be supported.

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