

ESSAYS ON TAX PRIVATIZATION

A Dissertation

by

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## ABSTRACT

Tax privatization is a rising American trend. Whether it involves receivables, consultants, or a number of other programs, tax privatization is expanding on multiple fronts. But an important question arises about their use: Are there any penalties for the government in response to privatization? In this dissertation, I examine the consequences of privatization from different angles.

The first angle that I explore centers on tax farming. Tax farming is when the government sells off the right to a specific type of tax for a lump sum. States for several decades have been practicing this form of revenue program and now the national government is practicing it as well. A question that naturally arises from the literature is whether privatizing government functions can have negative repercussions with respect to tax compliance attitudes. In short, the public may punish the government for program failure. However, I find little evidence that the public is sanctioning the government for program failure.

The second angle that I explore centers on whether institutional characteristics of our national tax system can create unintended impacts on tax compliance attitudes. The two key institutional characteristics that I explore are regressive taxation and privatized tax administration. Theory from the literature on this topic suggests that there is a form of social contract of taxation between the state and its associated citizens. The belief is that the willingness of taxpayers to pay taxes depends on receiving government services

as a form of quid pro quo relationship. However, I find little evidence that these institutional characteristics are swaying tax compliance attitudes.

The final angle that I explore centers on sector bias in tax administration. Unlike the last two chapters that center on the relationship between the taxpayer and the tax authority, in this chapter I focus on taxpayer opinions of the tax authority (i.e. the Internal Revenue Service). More specifically, I study biases that the public may hold against the agency's sector of public versus private. Consistent with much of the literature, I also find no evidence that the public cares about the sector of the tax authority's privatized function.

## DEDICATION

This dissertation is dedicated to Natalie Johnson, who has supported me throughout my academic journey.

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## CONTRIBUTORS AND FUNDING SOURCES

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# 1. INTRODUCTION

## 1.1. Overview

The image of a tax collector as an archetypical government employee is a relatively recent invention. Historically, a significant amount of tax collection was undertaken by the private sector in empires of yore. Rome was the prime example of this sort of economic spectacle, where the rights to engage in tax collection were auctioned off to the highest bidder (Kiser and Kane 2001). This process was known as “tax farming” and was revisited by future empires as time unfolded (Cosgel and Miceli 2009). However, America has operated a purely public system of tax collection for most of its history.

Starting in the late 1970s, individual states in the U.S. began selling off rights to past due taxes to collection agencies. Some of these states that have practiced this form of tax privatization include (Jang 2012): Alaska, California, Colorado, Florida, Georgia, Hawaii, Idaho, Illinois, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Mississippi, Missouri, Montana, Nebraska, New Jersey, New Mexico, New York, Ohio, Oregon, South Carolina, South Dakota, Texas, Utah, Vermont, Virginia, West Virginia, and Wisconsin. The Federal government was precluded from engaging in this form of tax privatization until well into the 21<sup>st</sup> century (Jang 2012). However, the Federal government also began selling their tax receivables to collection agencies beginning in 2017 (Jang and Eger 2019). This contemporary form of tax farming has since solidified its support. Furthermore, the Federal government has

also experimented with privatized audits, but this practice experienced a substantial amount of pushback from politicians (Hackbarth 2015). Nevertheless, America has crossed the taxation Rubicon and it is not looking back. Privatized taxation has gained a substantial amount of momentum and appears to be here to stay.

But why does this topic matter? This topic matters since negative tax attitudes may have ramifications for actual tax compliance. In effect, if the public disapproves of tax privatization initiatives, then they may be more likely to avoid paying their fair share of taxes (Meier et al. 2020). In this dissertation, however, I find that the public's tax attitudes are remarkably stable and there is little evidence that they would not comply with the tax code in response to a variety of stimuli. This conclusion leads to numerous policy opportunities. Most importantly, the IRS may have a sufficient amount of freedom to experiment with policy without incurring a negative response from the public.

## **1.2. Measurement of Tax Attitudes**

A major underlying theme in this dissertation involves examining how the policies and programs of tax authorities influence tax attitudes. Generally speaking, attitudes refer to views of "...objects, persons, groups or behaviors" (Onu 2016, Pg. 174). Attitudes, such as tax attitudes, have been found to be stable over the average taxpayer's life time (Ajzen and Fishbein 1977). With respect to my dissertation, I am primarily concerned with attitudes towards tax authorities. Braithwaite (2002) contends that tax attitudes form the foundation for whether a taxpayer is willing to comply with or challenge a tax authority. As such, her scales emphasize the relationship between

taxpayers and tax authorities. Onu (2016) emphasizes that it is important to have tax attitude measures that are theoretically relevant to one's research. However, whether attitudes directly translate to behavior is still an open question, and there is a rich literature in social psychology on this topic (see, e.g., Olson and Zanna 1993).

As recommended by Onu, I utilize a theoretically driven set of scales. I am primarily interested in the link between taxpayers and their attitudes towards tax authorities. As a result, I used the scales in Braithwaite (2002) for Chapters 2 and 3 of my analysis. These scales seek to capture the previously mentioned relationship on multiple dimensions or "motivational postures" as Braithwaite puts it. There are a total of five postures, these postures are commitment, capitulation, disengagement, game playing, and resistance. The commitment and capitulation postures correspond to positive attitudes of "deference" to tax authorities (Braithwaite 2002, Pg. 18). The disengagement, game playing, and resistance postures correspond to negative attitudes of "defiance" to tax authorities (Braithwaite 2002, Pg. 18). Altogether, these measures sculpt a comprehensive image of the many attitudes a person can experience with regard to their relationship with their relevant tax authority.

I also utilize scales for evaluating a government agency for sector bias in Chapter 4. Sector bias involves whether a citizen holds negative attitudes against an organization because of its sector (e.g. public sector). I utilize theoretically driven scales to evaluate this social phenomenon. These scales were developed in Meier et al. (2020), and they were designed to capture dimensions surrounding efficiency, effectiveness, ret tape, and



equity. In my analysis, the factors just loaded up on effectiveness and red tape; but these scales are still very effective.

### **1.3. Dissertation Plan and Three Contributions**

In this dissertation, I examine the impact of tax privatization on attitudes from three separate viewpoints. My goal was to undertake a comprehensive evaluation of public opinion on this topic. Historically, people around the world have not held tax privatization in a positive light, and tax rebellions against tax privatization have occurred on occasion (Kerkhoff 2009). My main thrust with this research was to evaluate whether the public may be hostile to privatized tax administration and hold the public sector more favorably over the private sector. As an example of this counter-intuitive form of sector bias, Johnson et al. (2019) discovered that the public prefers government soldiers over mercenaries. A public sector preference may indeed be possible in a variety of contexts.

The primary theoretical vehicle for this process of tax administrative exceptionalism involves what has been referred to as reciprocity in the tax morale literature (Luttmer and Singhal 2014). Tax morale refers to the non-financial motives that individuals have for complying with the tax code. There are five subfields of tax morale in the literature and reciprocity forms one of them (Luttmer and Singhal 2014). With respect to reciprocity, it has been theorized that there is a form of a social tax contract that underlies the relationship between taxpayer and tax authority. According to this theory, it has been proposed that the legitimacy of taxation rests on a quid pro quo relationship, where the taxpayer will receive back public goods and services for taxes

paid (Luttmer and Singhal 2014). This theory begs the question as to whether privatization may harm the quid pro quo relationship between the citizen and state. If a private sector organization becomes involved in taxation, then its revenues represent funds that will not be returned to taxpayers in the form of public goods and services. This siphoning off of funds becomes my central point of concern.

In Chapter 2, I initially explore the organizational side of tax administration. In this chapter, I evaluate whether specifically privatized tax administrative functions may lead to a negative impact on tax attitudes. Most importantly, I explore whether tax farming may have implications for tax attitudes. Additionally, I explore whether privatized auditing may lead to negative consequences for tax attitudes. These functions represent the two principal areas of privatization practice for tax administration in America. In this chapter, I have null findings with regard to impacts on tax attitudes. In order to determine if my research objectives were not sufficiently salient, I next attempt a study that is immensely more relevant to the pocketbook of survey participants.

In Chapter 3, I explore whether taxation in conjunction with privatization may lead to negative consequences for tax attitudes. The primary feature of this chapter is regressive taxation, and tax privatization comes in the form of revenue collections. As revenues are collected, the private sector receives a percentage. Tax privatization effectively takes a back seat to taxation here, and this was primarily done to ensure that any null findings were not due to a lack of salience. I find that my survey participants did pick up on the regressive tax as being less appealing than a progressive tax.

However, there was still no discernable effect on tax attitudes. Tax privatization also did not lead to an impact on tax attitudes, once again.

My findings here suggest that tax attitudes are remarkably stable with regard to increased tax burdens and privatized taxation. As a result, my findings are consistent with the tax morale literature which has concluded that tax attitudes are highly inelastic. It has been found that about sixty percent of taxpayers from around the world think that it is never acceptable to avoid tax under any circumstance (Luttmer and Singhal 2014). However, tax attitudes are very rigid but behaviors may not be. The tax nudge literature has produced a variety of findings with regard to field experiments on the social tax contract. Some of this research has produced findings in favor of the social tax contract and others have not. In Bott et al. (2020), the authors find in Norway that a moral appeal can lead to a change for the better in taxpayer behavior. In Hallsworth (2017), the authors find in the United Kingdom that a moral appeal can lead to more compliant taxpayer behavior. However, not all field experiments were successful. Castro and Scartascini (2015) found that their field experiment on reciprocity and property tax had null effects. Dwenger et al. (2016) found that they had null effects in a field experiment that involved the German church tax. A lot of these findings may come down to context, but it all hints at a possible divergence in attitudes and behaviors.

Chapter 4 of my dissertation shifts gears slightly. In this chapter, I move from attitudes of tax compliance as it concerns the tax authority to evaluations of the tax authority itself. Dimensions upon which I evaluate the IRS include effectiveness and red tape. Once again, I analyze responses to tax privatization, and this time I also analyze

organizational reputation. In this experiment, I am also attempting to dissect whether sector bias may be fueled by a performance perception of the private sector in the form of a reputation. Once again, I have null findings from my statistical models that suggest that views may be highly inelastic.

In sum, I have a number of null findings that are loosely consistent with the tax literature. This literature suggests that tax attitudes are stable and inelastic (Luttmer and Singhal 2014; Onu 2016). This appears to be precisely what I found. Another possible explanation is that people are indifferent to tax privatization so it did not result in a change in tax attitudes. However, if this was the case, then the regressive tax in Chapter 3 would have altered tax attitudes because it is more relevant. All in all, the prior theory is the more likely explanation for why I had null effects. I expand on this topic in more detail in the concluding chapter of this dissertation.

## 2. TAX FARMING AND PUBLIC OPINION: AN ANALYSIS OF TAX COMPLIANCE ATTITUDES

### 2.1. Introduction

A growing literature has developed in behavioral public administration on whether people penalize public institutions, when compared to otherwise equal private institutions, for their publicness (Marvel 2015; Hvidman and Andersen 2016; Hvidman 2018; Meier et al. 2019; Meier & An 2019). This issue fundamentally comes down to a matter of stereotyping. Social scientists have historically found mixed evidence when examining different organizations, with an emphasis on postal services and hospitals. Thus far, evidence has been found for sector bias against public organizations in Europe; however, relatively less bias has been found when examining the cross-classification of organizations in the United States.

This finding is perplexing given that there is a more visible degree of antagonism in the United States against public organizations (Hvidman & Andersen 2016). Moreover, there is a long history of public sector bashing politically within the United States (Goodsell 2004). One reason for this may be the size of government (Hvidman and Andersen 2016). As a percent of GDP, the public sector makes up far less of the American economy. In Denmark, the public sector is 50.8% of GDP as of 2018; and in America, the public sector is 37.8% of GDP as of 2018 (OECD 2020). This greater share of the economy held by the public sector in Denmark suggests that the population has a public sector preference. In contrast, the opposite can be said for the United States. All in all, the stage is set for a stronger degree of public sector bias against

the government by the average American. But once again, this is not what has been found in the literature, thus far.

Tax administration forms an interesting twist on existing theory in the literature. Generally speaking, it is theorized that the private sector is always thought to be more efficient than the public sector (see, e.g., Meier et al. 2019). In order to harness potential efficiency gains, there has been some degree of privatization in tax administration since pre-modern times. Privatized tax administration probably reached its zenith in Rome through a practice known as “tax farming,” wherein taxation rights by the government in a territory were sold off for a lump sum (Kiser and Kane 2007). This system was eventually abandoned because extortion and bribery ran rampant (Kiser and Kane 2007). However, it has never entirely disappeared. More recently, 18<sup>th</sup> century Holland violently discarded tax farming for a public system that promoted social equity (Kerkhoff 2009). This leads to my principal research question: Does the average citizen prefer publicly controlled tax administration in spite of any potential productivity gained from privatization?

For a few decades now, subnational state governments in the U.S. have been engaged in tax farming. And now the Federal government in America has recently begun engaging in a modest amount of tax farming. Why might this be? Motivation for engaging in tax farming is rooted in the New Public Management movement (Ahmed and Braithwaite 2004). NPM was born in the 1970s, but gained a strong degree of momentum in the 1980s with reforms in New Zealand, Australia, and later in Thatcher’s United Kingdom (Page 2005). Essentially, the view is that government can be restructured as a lean and effective enterprise. The classic organizational stereotype that cuts across numerous countries is that public organizations are

inefficient relative to private ones (Goodsell 2004: Wilson 1989), even though evidence for this assertion is considered to be debatable (Andrews, Boyne, and Walker 2011). Tax privatization would simply be another example of a form of government privatization.

In this manuscript, I examine two contemporary approaches towards tax privatization in the form of privatized tax collections and privatized audits. These forms of privatization have been going on sub-nationally in the U.S., at the state level, for decades and has recently started at the national level. This topical area is important because negative images of government may lead to tax evasion (Andreoni et al. 1998). My findings indicate that citizens do not penalize tax administrations for privatization schemes. These findings against a spillover effect from privatization are intriguing. One potential conclusion that can be drawn is that pilot programs for privatization in tax administration can be employed by a government agency without any concern for penalties in response to program failure. The external validity of this finding is something that potential practitioners should keep in mind and proceed with some degree of caution.

After this introduction section, I will delve into the history of tax privatization in the United States. Following that, I will argue in favor of a particular theoretical explanation. I will then convey my research design and document my empirical findings for my two experiments. Finally, I will conclude with a synopsis of the paper. In sum, this article is intriguing because of peoples' reactions to tax policies.

## 2.2. Privatizing Tax Collections

State tax administrations have been privatizing some functions ever since the 1970s.<sup>1</sup> And the principal component of privatized operations surrounds that of back tax collections. Evidence in relation to the efficacy of these privatization schemes has been mixed (Jang and Eger 2019). However, this has not discouraged new pilot programs.

The Federal Claims Collection Act of 1966 permitted the federal government to collect non-tax debt through privatization schemes. Programs, such as student loans, were some of the earliest pioneers in this area (Resnick 2005). However, the IRS was precluded by name from participating (GAO 1993). This situation began to evolve as former Vice President, Al Gore, encouraged the use of private debt collection agencies to be expanded in 1993. Pilot programs were launched in 1996 and 1997 but they were not performance-based programs, eliminating many conceivable benefits from privatization (Jang 2012; Jang and Eger 2019).

The American Jobs Creation Act of 2004 finally gave the greenlight to the IRS to hire a private firm to help with collections. However, Congress did not authorize funding for such a program and a degree of back and forth between Congress and the IRS saw that any pilot programs got shelved until 2017 (Jang and Eger 2019). Now the IRS has four private contractors to which it assigns delinquent accounts for tax collection purposes (IRS 2020).

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<sup>1</sup> States that use some form of tax farming include (Jang 2012): Alaska, California, Colorado, Florida, Georgia, Hawaii, Idaho, Illinois, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Mississippi, Missouri, Montana, Nebraska, New Jersey, New Mexico, New York, Ohio, Oregon, South Carolina, South Dakota, Texas, Utah, Vermont, Virginia, West Virginia, and Wisconsin.



### **2.3. Ontology of Privatized Taxation**

There is a plethora of different modes of taxation. The common sight of contemporary tax agents as government bureaucrats is largely a recent invention. Historically, a vast cornucopia of tax systems has been utilized by governments across the globe. And, gradually, methods of privatized tax administrations have been creeping back into the debate about what represents an optimal form of tax administration. With respect to privatized tax administrations, there are three core classifications that have arisen.

The first system of privatized tax administration is a “fixed rent contract” which is also known as “tax farming” (Cosgel and Miceli 2009). In this form of taxation, the government leases out the right to collect a certain category of taxes and the private collector would then strive to recoup the cost along with collecting a premium for effort. The Roman Empire was fond of this method of taxation and operated this form of taxation administration via competitive auctions (Levi 1988). Other empires that utilized this method of taxation include the Ottomans, Abbasid, French, and British (Lokkegaard 1950; Darling 1996; Salzman 1993; Copland and Godley 1993; Cosgel and Miceli 2009; Johnson and Balla 2005; Kiser 1994; Kiser and Kane 2001; Ma 2003; and Priks 2005). Calculating an estimate of taxable base could be difficult for this method of taxation, discouraging fixed selling values and making auctions the most effective way to establish a market value (Cosgel and Miceli 2009).

The second system of taxation is known as a “share contract” (Cosgel and Miceli 2009). In a share contract, revenues are shared between the tax agent and the government contractor. The government would need to assign a prespecified share rate and possess a means of measuring taxable base for this method of taxation. The level of market information necessary

for this method of taxation is difficult. As a result, this form of tax administration was relatively uncommon. Nevertheless, share contracts were utilized by a number of empires, such as India, China, Egypt, and Prussian Germany (Kiser and Schneider 1994; Copland and Godley 1993; Cosgel and Miceli 2009).

A third system of taxation is “fixed wage contracts” (Cosgel and Miceli 2009). In this form of taxation, a private tax collector turns over all tax revenues to the government in exchange for a fixed wage. From a principal-agent perspective, this form of taxation is problematic since it does not incentivize the tax collector to exert more effort in collections (Jang and Eger 2019). This form of tax administration is also difficult because it depended on having a necessary level of information to establish the value of wage contracts. Nevertheless, using salaried tax collectors was common in a number of empires such as the Ottoman, Russian, French, and British (Bonney 1995; Cosgel and Miceli 2009).

The vast forms of privatized taxation administration are not absolutely limited to these three systems as there may be minor differences (Cosgel and Miceli 2009). In short, subtle nuances of different forms of taxation required specific adaptations. When it comes to the collection of delinquent tax receivables, this form of privatized tax administration is clearly a fixed rent contract. The delinquent accounts are sold on to private enterprises at a discounted rate. The private contractors attempt to recoup their expenses along with the premium for collecting the account at face value from taxpayers. This premium gives the contract a market orientation that incentivizes the private tax collectors to perform. This format would make this type of privatization ideal from a principal-agent perspective (Jang and Eger 2019). The efficacy

of this form of privatization is still up for debate but this falls outside what is relevant for the rest of the manuscript.

## **2.4. Theory and Hypotheses**

Privatized tax administration represents a tremendous twist on existing theory in behavioral public administration. The publicness may not represent a problem as it does with other public organizations. With respect to most public organizations, Goodsell (2004) discusses how since birth, figuratively speaking, Westerners are taught that public organizations are cumbersome bureaucracies. The word, “bureaucracy,” effectively has a negative connotation here. This negative association with bureaucracy relates to the rigid hierarchy, rules, and regulations herein (Perrow 1970). Such an organization does not possess the organic structure that makes it rapidly adapt to its environment. Thus, this image has a negative effect on how everyday citizens view the average bureaucratic agency. However, the character of tax administrations may not dovetail with existing theoretical problems associated with this image.

Ordinary citizens value social equity in tax administration. The attributes of bureaucracies listed previously help to guarantee that ordinary citizens will be receiving a fair shake from the public agents associated with government administration. In contrast, private agents are motivated by self-serving financial reasons to maximize their own wages. A portion of taxes paid to a private firm will ultimately be lost to the private sector. This problem is consistent with the theory of reciprocity from tax morale (Luttmer and Singhal 2014). Theoretically, there is a quid pro quo relationship between the government and the taxpayer. Taxes paid by citizens will later be received back as public goods and services. Any money collected by the private sector will be lost forever, and nothing will be received back. As a

result, there are two possible outcomes. A privatized tax administration program may promote negative attitudes toward tax compliance. And similarly, a privatized tax administration program may harm positive attitudes towards tax compliance.

**Hypothesis 1:** Tax privatization will affect the attitudes of the public towards taxation.

Performance is also something pertinent for taxpayers. Theoretically, one would expect to find that policy mismanagement (bad performance) would have a negative impact on outlooks of survey participants upon the government, and thereby harm tax attitudes. This is due to taxpayer resources being wasted. This negative impact would increase negative tax attitudes and decrease positive tax attitudes regardless of the sector of the agency.

**Hypothesis 2:** Bad organizational performance will increase negative attitudes towards taxation.

Additionally, the stance of taxpayers toward tax attitudes may be shaped by their hedonic relevance. Hedonic relevance was a theory first proposed by Jones and Davis (1965) within attribution theory that implies that the level of congruence with a decision or situation creates an impact on the attribution of responsibility (Lee 2004). Or more simply, hedonic relevance makes something significant to a person when it will "...have direct bearing and consequences for the people's daily life" (Geva, Astorino-Courtois, and Mintz 1996, Pg. 372). I would expect that when hedonic relevance is low, then ordinary citizens will pay less attention and be less sensitive to the variation in control of tax administration. However, if the implication of taxation is relevant to their life (i.e. high hedonic relevance), then the situation would matter and affect their tax attitudes. As a result, MTurk workers are likely to be low-income and a socially congruent cue will lead to high hedonic relevance; and a socially incongruent cue will lead to low hedonic

relevance. When hedonic relevance is high, there will be a strong effect on tax attitudes and vice versa.

**Hypothesis 3:** When hedonic relevance is high, there should be a relatively greater change in both positive and negative tax attitudes.

## 2.5. Empirical Analysis<sup>2</sup>

I examine public reactions towards taxation through two experiments. Both of my experiments follow as a 2x2 between groups factorial design. The first experiment explores the relationship between tax privatization and bad performance. The second experiment explores the relationship between tax privatization and hedonic relevance. My participants in each experiment were randomly assigned to one of four conditions. The sample for each experiment was drawn from Amazon's Mechanical Turk (hereafter "MTurk"). Some concerns have been shared in the literature about the efficacy of an MTurk sample; however, the external validity of MTurk samples have been established with the consistent replication of important American surveys (Berinsky, Huber, and Lenz 2012; Mullinix et al. 2015).

Treatments were introduced using vignettes. Following the reading of each vignette, the experimental participants were then asked to rate their views on taxation and on a number of organizational measures. The tax attitude measures were developed in Braithwaite (2002) and are as listed in Table 2.1 below. Braithwaite defines tax attitudes as being encapsulated by five

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<sup>2</sup> Summary statistics for both experiments are in Appendix A.1 and A.2. The table of means per experiment are in Appendix A.3 and A.4.

“motivational postures” (Braithwaite 2002, pg. 16), which includes the following categories: commitment, capitulation, resistance, disengagement, and game playing.

The first two motivational postures from Table 2.1 (commitment and capitulation) represent an overall positive tax attitude orientation. The commitment posture represents views that correspond to tax compliance and a socially optimal world view. The capitulation posture represents adhering to the view that the tax office is a legitimate authority on things related to public finance. These first two motivational postures represent a positive attitude on tax compliance. The last three motivational postures (resistance, disengagement, and game playing) are the “...three postures of defiance” (Braithwaite, 2002, Pg. 18). The resistance posture looks at the defensiveness of taxpayers. The disengagement posture extends the insights of the resistance posture to its maximum limits, looking for a lapse in engaging tax authorities. The game playing posture looks to cover the taxpayer’s acceptance of what constitutes an acceptable way to interact with their respective tax authority. Postures of defiance “...are more likely to be associated with perception of threat from taxation, low satisfaction with democracy, anti-government and pro-market attitudes” (Braithwaite 2002, Pg. 24). In short, the first two postures are positive attitude measures and the last three postures are negative attitude measures.

**Table 2.1: Statements from Braithwaite (2002)**

<i>Commitment Statements:</i>
A1. Paying taxes is the right thing to do
A2. Paying taxes is a responsibility that should be willingly accepted by all Americans
A3. I feel a moral obligation to pay my taxes
A4. Paying my taxes ultimately advantages everyone
A5. I think of paying taxes as a method of helping the government to do worthwhile things
A6. Overall, I pay my taxes with good will
A7. I accept responsibility for paying my fair share of taxes
<i>Capitulation Statements:</i>

B1. If you cooperate with the Internal Revenue Service (IRS), they are likely to be cooperative with you
B2. Even if the Internal Revenue Service (IRS) finds that I am doing something wrong, they will respect me in the long run as long as I admit my mistakes
B3. The Internal Revenue Service (IRS) is encouraging to those who have difficulty meeting their obligations through no fault of their own
B4. The tax system may not be perfect, but it works well enough for most of us
B5. No matter how cooperative or uncooperative the Internal Revenue Service (IRS) is, the best policy is to always be cooperative with them
<i>Resistance Statements:</i>
C1. If you don't cooperate with the Internal Revenue Service (IRS), they will get tough with you
C2. The Internal Revenue Service (IRS) is more interested in catching you for doing the wrong thing, than helping you do the right thing
C3. It's important not to let the Internal Revenue Service (IRS) push you around
C4. It's impossible to satisfy the Internal Revenue Service (IRS) completely
C5. Once the Internal Revenue Service (IRS) has you branded as a non-compliant taxpayer, they will never change their mind
C6. As a society, we need more people willing to take a stand against the Internal Revenue Service (IRS)
<i>Disengagement Statements</i>
D1. If I find out that I am not doing what the Internal Revenue Service (IRS) wants, I'm not going to lose any sleep over it
D2. I personally don't think that there is much the Internal Revenue Service (IRS) can do to me to make me pay tax if I don't want to
D3. I don't care if I am not doing the right thing by the Internal Revenue Service (IRS)
D4. If the Internal Revenue Service (IRS) gets tough with me, I will become uncooperative with them
D5. I don't really know what the Internal Revenue Service (IRS) expects of me and I'm not about to ask
<i>Game Playing Statements:</i>
E1. I enjoy spending time working out how changes in the tax system will affect me
E2. I enjoy talking to friends about loopholes in the tax system
E3. I like the game of finding the grey area of tax law
E4. I enjoy the challenge of minimizing the tax I have to pay
E5. The Internal Revenue Service (IRS) respects taxpayers who can give them a run for the money

In the first experiment, I analyzed performance and privatization. The method of privatization was privatized auditing. This method of privatization has been experimented with

once by the Federal government when auditing Microsoft in 2015 so this is not contrived (Hackbarth 2015). As a clear cut policy relevant treatment, a bad performance treatment has been added to this 2x2 factorial design. The vignette for this first experiment is depicted below:

Vignette: *“The IRS has been falling behind in auditing the growing number of tax returns in America. In an effort to audit an escalating numbers of tax return violations, the U.S. government has expanded its human resources to tackle this growing problem. New personnel have since been tasked to audit tax returns by the IRS. (Insert Agency Cue). Following the construction of the new program, the success has been lackluster and it has led to (Insert Audit Performance Cue).”*

Private Agency Cue: *“Primarily, the IRS has contracted Midwest Accounting Service LLP (“MAS”) to use their professional accountants to provide the necessary level of staffing. The IRS’ contract with MAS stipulates that the firm will receive 10 percent of all additional revenues generated from catching audit misreporting.”*

Public Agency Cue: *“The IRS has created a new audit center that incorporates industry professionals who have been recruited from around the country. The employment contracts with these new IRS employees stipulates that they will receive a year-end bonus of 10 percent of all additional revenues generated from audit misreporting.”*

No Change in Performance: *“...no change in performance. Further, the IRS found itself obligated to pay over two billion dollars to meet the 10 percent fee requirement.”*

Performance Drop: *“...a loss of twelve billion dollars in auditing revenue. Further, the IRS found itself obligated to pay over two billion dollars to meet the 10 percent fee requirement.”*



Next, I engaged in factor analysis to reduce down the number of dependent variables to their key underlying dimensions or factors. Braithwaite (2002) engaged in factor analysis to do just this thing and each of the motivational postures largely loaded up on unique factors in her analysis (pg. 21). More specifically, she used principal components analysis with a varimax rotation. As a result, the factor analysis of these statements should lead to unique factors for each of the motivational postures in my analysis. My factor analysis of the statements produced factors that closely followed the theoretically driven motivational postures with some overlap. The factor loadings are depicted in Table 2.2 below. I then predicted the factor scores using the least squares regression approach that predicts the location of each observation on the component (DiStefano et al. 2009; Thurstone 1935; Thomson 1951).

I found the data to be quite robust. The first factor, commitment, had a Chronbach's alpha of 0.93. The second factor, resistance, had a Chronbach's alpha of 0.93. The third factor, game playing, also had a Chronbach's alpha of 0.93. The fourth factor, capitulation, had a Chronbach's alpha of 0.85. The final factor, resistance, had a Chronbach's alpha of 0.82. As a result, I can use each of these five dimensions as dependent variables in my analysis.

I carried out a set of robustness checks. With respect to the first manipulation check, I found that 62 percent of participants correctly identified the sector of tax administration from the vignette.<sup>3</sup> With respect to the second manipulation check, I found that 69 percent of the respondents correctly identified the performance level. Also, I constructed a balance table to assess the balance for this first experiment. I found that the randomization process was

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<sup>3</sup> 64% of the time, public sector was correctly identified; and 60% of the time, private sector was correctly identified.

successful. In short, the difference of means across groups were not statistically different at the 0.05 level. These findings are depicted in Table 2.3 below.

**Table 2.2: Factor Loadings of Motivational Postures**

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
a1	0.8635				
a2	0.8916				
a3	0.8805				
a4	0.8509				
a5	0.8585				
a6	0.8387				
a7	0.7828				
b1	0.4294			0.7054	
b2				0.6715	
b3			0.4088	0.6073	
b4	0.4714			0.4866	
b5	0.4074			0.6277	
c1					0.6893
c2					0.7758
c3		0.487			0.4345
c4		0.5003			0.5137
c5		0.4592			0.6108
c6		0.5436			0.4881
d1		0.7971			
d2		0.8407			
d3		0.8398			
d4		0.857			
d5		0.8213			
e1			0.8039		
e2			0.8634		
e3			0.8523		
e4			0.841		
e5		0.5416	0.6932		

**Table 2.3: Balance Across Experiments Groupings**

		Group	ideology	age	religiosity	sex	white	income
No Performance Info	Public Agency	1	4.2381	39.2667	0.5905	0.3143	0.8286	2.8
	Private Agency	2	3.9725	40.8899	0.5872	0.2936	0.7706	2.7798
Bad Performance Info	Public Agency	3	4.5745	42.5958	0.617	0.3404	0.7766	2.8085
	Private Agency	4	4.3229	42.5833	0.5313	0.3438	0.8333	2.6979
		Prob. > F	0.1978	0.2217	0.6805	0.8524	0.5506	0.7651

My regression findings for each of the five dimensions are in Tables 2.4-2.7 below.

Tables 2.4 and 2.5 contain two types of models: just the treatments; or the treatments with an interaction. Tables 2.6 and 2.7 add in demographic covariates as a robustness check. More or less, all of my findings are null findings with one exception. In Model 15, I find evidence that a bad performance cue will reduce game playing attitudes at the 0.05 significance level. This is inconsistent with my theoretical expectation that bad performance will increase negative tax attitudes. My interventions, for the most part, do not seem to have an impact on tax compliance attitudes by the mass public. In keeping with these results, I find evidence against Hypotheses 1 and 2 in this manuscript.

I should also note that many of the demographic covariates are statistically significant at conventional levels and beyond. Political ideology is statistically significant at the 0.01 level across all models except for the capitulation models. Similarly, religiosity is statistically significant at the 0.05 level in the commitment, disengagement, and game playing models (11-16). These statistical relationships may form important mediating relationships that I will explore in greater detail later in this dissertation.

**Table 2.4: Base-Line Regression Models**

Dep. Variable:	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6	
	Commitment		Commitment		Disengagement		Disengagement		Game Playing		Game Playing	
	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.
Government	0.00619	(0.06)	0.0498	(0.36)	-0.0644	(-0.65)	-0.0196	(-0.14)	0.0226	(0.23)	0.0534	(0.39)
Bad Performance	-0.0210	(-0.21)	0.0247	(0.18)	0.0868	(0.87)	0.134	(0.95)	-0.191	(-1.92)	-0.158	(-1.13)
Government*Bad Performance	-	-	-0.0927	(-0.46)	-	-	-0.0952	(-0.48)	-	-	-0.0654	(-0.33)
Constant	0.00681	(0.08)	-0.0146	(-0.15)	-0.00909	(-0.11)	-0.0311	(-0.32)	0.0785	(0.94)	0.0634	(0.66)
N	404		404		404		404		404		404	
R-Squared	0.0001		0.0007		0.0029		0.0035		0.0092		0.0095	
F. Stat.	0.02		0.09		0.58		0.46		1.86		1.27	

Notes: 2 sided t-tests; t statistics in parentheses; \* p<0.05; \*\* p<0.01; \*\*\* p<0.001.

**Table 2.5: More Base-Line Regression Models**

Dep. Variable:	Model 7		Model 8		Model 9		Model 10	
	Capitulation		Capitulation		Resistance		Resistance	
	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.
Government	-0.102	(-1.02)	-0.201	(-1.47)	0.153	(1.54)	0.103	(0.75)
Bad Performance	0.0438	(0.44)	-0.0596	(-0.43)	0.0601	(0.60)	0.00822	(0.06)
Government*Bad Performance	-	-	0.210	(1.05)	-	-	0.105	(0.53)
Constant	0.0295	(0.35)	0.0780	(0.81)	-0.103	(-1.23)	-0.0792	(-0.83)
N	404		404		404		404	
R-Squared	0.0031		0.0058		0.0068		0.0075	
F. Stat.	0.62		0.78		1.37		1	

Notes: 2 sided t-tests; t statistics in parentheses; \* p<0.05; \*\* p<0.01; \*\*\* p<0.001.

**Table 2.6: Base-Line Regression Models with Covariates**

Dep. Variable	Model 11		Model 12		Model 13		Model 14		Model 15		Model 16	
	Commitment		Commitment		Disengagement		Disengagement		Game Playing		Game Playing	
Government	0.0344	(0.36)	0.110	(0.84)	-0.0828	(-0.90)	-0.0409	(-0.32)	-0.0381	(-0.42)	0.00691	(0.06)
Bad Performance	-0.00654	(-0.07)	0.0723	(0.54)	0.0473	(0.51)	0.0912	(0.70)	-0.186*	(-2.02)	-0.139	(-1.08)
Age	0.0183***	(4.63)	0.0185***	(4.66)	0.00375	(0.98)	0.00385	(1.01)	-0.00884*	(-2.34)	-0.00873*	(-2.31)
Female	-0.0712	(-0.68)	-0.0733	(-0.70)	-0.320**	(-3.18)	-0.321**	(-3.18)	0.0437	(0.44)	0.0424	(0.42)
Caucasian	0.0988	(0.79)	0.0903	(0.72)	0.164	(1.35)	0.160	(1.31)	0.118	(0.98)	0.113	(0.94)
Ideology	-0.139***	(-4.89)	-0.140***	(-4.91)	0.107***	(3.90)	0.107***	(3.88)	0.0800**	(2.94)	0.0797**	(2.92)
Religious	0.411***	(3.71)	0.416***	(3.75)	0.223*	(2.09)	0.226*	(2.11)	0.633***	(5.99)	0.636***	(6.00)
Income	0.103	(1.85)	0.104	(1.86)	-0.211***	(-3.91)	-0.210***	(-3.89)	0.0780	(1.46)	0.0785	(1.47)
Government*Bad Performance	-	-	-0.160	(-0.84)	-	-	-0.0890	(-0.48)	-	-	-0.0955	(-0.52)
Constant	-0.755**	(-3.11)	-0.794**	(-3.21)	-0.168	(-0.72)	-0.190	(-0.80)	-0.564*	(-2.44)	-0.587*	(-2.49)
N	404		404		404		404		404		404	
R-Squared	0.1066		0.1082		0.1667		0.1672		0.1851		0.1856	
F. Stat.	5.89		5.31		9.88		8.79		11.21		9.98	

Notes: 2 sided t-tests; t statistics in parentheses; \* p<0.05; \*\* p<0.01; \*\*\* p<0.001.

**Table 2.7: More Base-Line Regression Models with Covariates**

Dep. Variable	Model 17		Model 18		Model 19		Model 20	
	Capitulation		Capitulation		Resistance		Resistance	
Government	-0.120	(-1.22)	-0.206	(-1.52)	0.148	(1.51)	0.101	(0.75)
Bad Performance	0.0223	(0.22)	-0.0679	(-0.49)	-0.00858	(-0.09)	-0.0573	(-0.42)
Age	0.00468	(1.15)	0.00448	(1.09)	0.0103*	(2.54)	0.0102*	(2.51)
Female	-0.101	(-0.94)	-0.0990	(-0.92)	0.170	(1.59)	0.171	(1.60)
Caucasian	-0.00523	(-0.04)	0.00449	(0.03)	-0.149	(-1.16)	-0.144	(-1.12)
Ideology	0.0515	(1.75)	0.0522	(1.77)	0.0944**	(3.24)	0.0947**	(3.25)
Religious	0.203	(1.77)	0.197	(1.72)	-0.197	(-1.74)	-0.200	(-1.76)
Income	0.0235	(0.41)	0.0227	(0.39)	-0.0528	(-0.92)	-0.0532	(-0.93)
Government*Bad Performance	-	-	0.183	(0.92)	-	-	0.0988	(0.50)
Constant	-0.510*	(-2.03)	-0.466	(-1.82)	-0.569*	(-2.30)	-0.545*	(-2.16)
N	404		404		404		404	
R-Squared	0.0445		0.0466		0.0649		0.0655	
F. Stat.	2.3		2.14		3.43		3.07	

Notes: 2 sided t-tests; t statistics in parentheses; \* p<0.05; \*\* p<0.01; \*\*\* p<0.001.

In the second experiment, the treatments are straightforward. The first treatment is control of tax administration and it comes in two levels: public or private. Treatments were introduced in a vignette. In the vignette, the wording specifically outlined whether the scenario involves a private or public sector operation. The second treatment is congruency and it comes in two levels: working class and upper class. This second treatment relates to people at significantly different income levels. The first involves a waiter and the second involves a wealthy international investor.

The framework for the vignette experiment is below:

*Vignette: “In an effort to collect escalating levels of back-taxes, dating back over 5-years, the U.S. government expanded its human resources to tackle this growing problem. New personnel have since been tasked to collect these overdue taxes by the IRS. (Insert Agency Cue).*

*(Insert Wealth Cue). Following the construction of the new program, the success has been lackluster and it has not led to an improvement in collections.”*

*Private Agency Cue: “Primarily, the IRS has contracted National Credit Collections Incorporated (NCCI), a private-sector business, to use their call center services and professional agents to provide the necessary staffing. The IRS’ contract with NCCI stipulates that this private-sector firm will receive 30 percent of all back-taxes that they collect. This fee is the current market rate for these professionals.”*

*Public Agency Cue: “The IRS has created a new call center and group of rapid-reaction agents that incorporates industry professionals who have been recruited from around the country. The employment contracts with these new IRS employees stipulates that they will receive a year-end*



*bonus of 30 percent of all back-taxes that they collect. This bonus is the current market rate for professionals in the private sector.”*

*Working-Class Wealth Que: “The primary group of Americans, who are in arrears, are members of the working-class. The most common offense they committed involved underreporting income, such as restaurant waiters not reporting their cash tips.”*

*Upper-Class Wealth Que: “The primary group of Americans, who are in arrears, are members of the upper-class. The most common offense they committed involved underreporting income, such as investors not reporting their profits from foreign stock markets.”*

In the second experiment, I displayed Braithwaite’s motivational postures to the survey participants again. Once again, I engaged in factor analysis to reduce the data down to its key underlying dimensions for my analysis. I copied the factor structure from the first experiment since this was nearly identical to what Braithwaite (2002) developed. These factor loadings were then used as dependent variables, using the same predictive methodology as the first experiment, in the second series of regression models in this paper.

I found the data to be quite robust. The first factor, commitment, had a Chronbach’s alpha of 0.93. The second factor, capitulation, had a Chronbach’s alpha of 0.85. The third factor, resistance, had a Chronbach’s alpha of 0.84. The fourth factor, disengagement, had a Chronbach’s alpha of 0.94. And the final factor, game playing, had a Cronbach’s alpha of 0.96.

An additional set of demographic questions and a manipulation check were obtained to ensure the validity of the empirical work. I found with respect to the first manipulation check

that only 57 percent of respondents correctly identified the sector of the tax administration from their respective vignette.<sup>4</sup> With respect to the second manipulation check, I found that the respondents correctly identified the wealth level from the vignette 72 percent of the time. Furthermore, I tested for balance by calculating the F-test of the difference of means across groups. My findings are in Table 2.8 below. There were not any statistically significant differences at the 0.05 level. In sum, I found there to be no issues with the randomization process in this experiment.

**Table 2.8: Balance Across Experiments Groupings**

		Group	ideology	age	religiosity	sex	white	Income
Upper Class	Public Agency	1	4.5385	41.7033	0.6703	0.3956	0.8241	2.6813
	Private Agency	2	4.1019	39.7870	0.6759	0.3889	0.8148	2.8703
Working Class	Public Agency	3	4.0777	40.6602	0.7379	0.3592	0.8641	2.7184
	Private Agency	4	4.2083	38.1667	0.6562	0.4271	0.8229	2.7083
		Prob. > F	0.4163	0.2451	0.5867	0.8103	0.7564	0.3299

There are a total of five latent variables derived from the factor analysis that are my principal dependent variables in this second stage of my analysis. I utilized Ordinary Least Squares (OLS) regression modeling in my analysis once again. My key findings are in Tables 2.9 and 2.10 below. In short, there are almost no statistically significant relationships between either of the treatments and the various measures of tax compliance, with or without interaction terms with one exception. In Model 26, the coefficient for the effect of government on the resistance dependent variable is positive and statistically significant at 0.05 level. The interaction between government and social congruence is negative and statistically significant at

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<sup>4</sup> 56% of the time, the public sector was correctly identified; and 58% of the time the private sector was correctly identified.

the 0.1 level. In order to illuminate the combined effect, I add a marginal effects plot in Figure 2.1 below. As can be seen in the plot, I find that social class only matters when the government cue is delivered; and I find that the government cue will reduce taxpayer resistance.

I then include a series of demographic covariates in the same regression models as a robustness check in Tables 2.11 and 2.12 and my findings do not change. In Model 36, my new resistance model delivers largely the same results as Model 26. In Tables 2.13 and 2.14, I test for hedonic relevance. More specifically, I interact the income variable with the congruence variable in search of a statistically significant effect. Across all of the hedonic relevance models, I have null findings. In Tables 2.13 and 2.14, I also added a 3-way interaction between the public status of the organization, congruence, and income. I still have null effects. In sum, I find some evidence in favor of Hypothesis 1 and find evidence against Hypothesis 3.

**Table 2.9: Base-Line Regression Outputs for 2nd Experiment**

Dep. Variable:	Model 21		Model 22		Model 23		Model 24		Model 25		Model 26	
	Commitment		Commitment		Capitulation		Capitulation		Resistance		Resistance	
	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.
Government	-0.154	(-1.54)	-0.171	(-1.20)	-0.0888	(-0.88)	-0.0432	(-0.30)	0.0950	(0.95)	0.285*	(2.01)
Working Class	-0.0401	(-0.40)	-0.0564	(-0.40)	-0.0275	(-0.27)	0.0169	(0.12)	-0.132	(-1.31)	0.0535	(0.38)
Government*Working Class	-	-	0.0334	(0.17)	-	-	-0.0910	(-0.45)	-	-	-0.380	(-1.90)
Constant	0.0954	(1.13)	0.103	(1.07)	0.0570	(0.67)	0.0362	(0.37)	0.0195	(0.23)	-0.0676	(-0.71)
N	398		398		398		398		398		398	
R-Squared	0.0066		0.0066		0.0022		0.0028		0.0062		0.0152	
F. Stat.	1.31		0.88		0.44		0.36		1.24		2.03	

Notes: 2 sided t-tests; t statistics in parentheses; \* p<0.05;\*\* p<0.01; \*\*\* p<0.001.

**Table 2.10: More Base-Line Regression Outputs for 2nd Experiment**

Dep. Variable:	Model 27		Model 28		Model 29		Model 30	
	Disengagement		Disengagement		Game Playing		Game Playing	
	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.
Government	0.0217	(0.22)	0.111	(0.78)	0.0790	(0.79)	0.154	(1.08)
Working Class	-0.0861	(-0.86)	0.000850	(0.01)	-0.0537	(-0.53)	0.0191	(0.14)
Government*Working Class	-	-	-0.178	(-0.89)	-	-	-0.149	(-0.74)
Constant	0.0325	(0.38)	-0.00844	(-0.09)	-0.0117	(-0.14)	-0.0459	(-0.48)
N	398		398		398		398	
R-Squared	0.0019		0.0039		0.0022		0.0036	
F. Stat.	0.38		0.51		0.43		0.47	

Notes: 2 sided t-tests; t statistics in parentheses; \* p<0.05;\*\* p<0.01; \*\*\* p<0.001.

**Table 2.11: Regression Outputs for the 2nd Experiment with Demographic Covariates**

Dep. Variable:	Model 31		Model 32		Model 33		Model 34		Model 35		Model 36	
	Commitment		Commitment		Capitulation		Capitulation		Resistance		Resistance	
	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.
Government	-0.148	(-1.50)	-0.135	(-0.96)	-0.128	(-1.32)	-0.0488	(-0.35)	0.0462	(0.50)	0.231	(1.79)
Working Class	-0.0293	(-0.30)	-0.0165	(-0.12)	-0.0290	(-0.30)	0.0474	(0.35)	-0.135	(-1.47)	0.0445	(0.35)
Age	0.00925*	(2.31)	0.00926*	(2.30)	0.00748	(1.90)	0.00753	(1.91)	-0.00105	(-0.28)	-0.000924	(-0.25)
Female	0.214*	(2.08)	0.214*	(2.07)	-0.0106	(-0.10)	-0.0152	(-0.15)	-0.0522	(-0.54)	-0.0630	(-0.66)
Caucasian	-0.129	(-0.95)	-0.128	(-0.95)	0.126	(0.95)	0.130	(0.98)	0.202	(1.61)	0.211	(1.69)
Political Ideology	-0.0610*	(-2.39)	-0.0614*	(-2.39)	0.00827	(0.33)	0.00623	(0.25)	0.116***	(4.89)	0.111***	(4.68)
Religious	0.131	(1.14)	0.132	(1.15)	0.570***	(5.05)	0.578***	(5.10)	0.570***	(5.33)	0.587***	(5.49)
Income	0.141*	(2.29)	0.141*	(2.29)	0.0463	(0.77)	0.0498	(0.82)	-0.0567	(-1.00)	-0.0486	(-0.86)
Government*Working Class	-	-	-0.0264	(-0.13)	-	-	-0.157	(-0.81)	-	-	-0.369*	(-2.01)
Constant	-0.480	(-1.83)	-0.487	(-1.82)	-0.877***	(-3.41)	-0.922***	(-3.51)	-0.785**	(-3.23)	-0.891***	(-3.60)
N	398		398		398		398		398		398	
R-Squared	0.0655		0.0655		0.1006		0.1021		0.1946		0.2029	
F. Stat.	3.41		3.02		5.44		4.9		11.75		10.98	

Notes: 2 sided t-tests; t statistics in parentheses; \* p<0.05;\*\* p<0.01; \*\*\* p<0.001.

**Table 2.12: Regression Outputs for the 2nd Experiment with Demographic Covariates**

Dep. Variable:	Model 37		Model 38		Model 39		Model 40	
	Disengagement		Disengagement		Game Playing		Game Playing	
	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.
Government	-0.0350	(-0.39)	0.0741	(0.58)	0.0231	(0.27)	0.121	(1.00)
Working Class	-0.0962	(-1.07)	0.00942	(0.08)	-0.0688	(-0.81)	0.0256	(0.22)
Age	-0.0000503	(-0.01)	0.0000245	(0.01)	-0.00264	(-0.77)	-0.00257	(-0.75)
Female	-0.215*	(-2.28)	-0.221*	(-2.35)	-0.138	(-1.56)	-0.144	(-1.62)
Caucasian	0.139	(1.13)	0.144	(1.17)	0.183	(1.57)	0.187	(1.61)
Political Ideology	0.0816***	(3.51)	0.0788***	(3.37)	0.0937***	(4.27)	0.0911***	(4.14)
Religious	0.798***	(7.60)	0.808***	(7.68)	0.964***	(9.75)	0.973***	(9.81)
Income	-0.0433	(-0.77)	-0.0385	(-0.69)	-0.0211	(-0.40)	-0.0169	(-0.32)
Government*Working Class	-	-	-0.218	(-1.21)	-	-	-0.194	(-1.14)
Constant	-0.737**	(-3.09)	-0.800**	(-3.28)	-0.967***	(-4.30)	-1.023***	(-4.45)
N	398		398		398		398	
R-Squared	0.2238		0.2267		0.3107		0.313	
F. Stat.	14.02		12.64		21.92		19.64	

Notes: 2 sided t-tests; t statistics in parentheses; \* p<0.05; \*\* p<0.01; \*\*\* p<0.001.

**Table 2.13: Regression Outputs for Testing Hedonic Relevance**

Dep. Variable:	Model 41		Model 42		Model 43		Model 44		Model 45		Model 46	
	Commitment		Commitment		Capitulation		Capitulation		Resistance		Resistance	
	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.
Government	-0.144	(-1.45)	-0.587	(-1.15)	-0.124	(-1.28)	-0.184	(-0.37)	0.0413	(0.45)	0.0327	(0.07)
Working Class	0.207	(0.59)	0.508	(1.06)	0.141	(0.41)	0.387	(0.82)	-0.387	(-1.19)	-0.486	(-1.10)
Income	0.186*	(2.09)	0.116	(1.00)	0.0790	(0.90)	0.0632	(0.55)	-0.105	(-1.27)	-0.120	(-1.11)
Working Class*Income	-0.0858	(-0.70)	-0.195	(-1.19)	-0.0618	(-0.51)	-0.124	(-0.77)	0.0918	(0.81)	0.192	(1.26)
Age	0.00915*	(2.28)	0.00956*	(2.39)	0.00741	(1.88)	0.00763	(1.93)	-0.000945	(-0.25)	-0.000977	(-0.26)
Female	0.213*	(2.06)	0.215*	(2.09)	-0.0117	(-0.12)	-0.0152	(-0.15)	-0.0505	(-0.53)	-0.0626	(-0.65)
Caucasian	-0.122	(-0.90)	-0.138	(-1.02)	0.131	(0.98)	0.128	(0.96)	0.195	(1.55)	0.211	(1.68)
Political Ideology	-0.0597*	(-2.33)	-0.0652*	(-2.53)	0.00925	(0.37)	0.00507	(0.20)	0.114***	(4.81)	0.112***	(4.67)
Religious	0.122	(1.06)	0.120	(1.03)	0.564***	(4.96)	0.569***	(4.99)	0.579***	(5.38)	0.594***	(5.53)
Government*Working Class	-	-	-0.572	(-0.82)	-	-	-0.465	(-0.68)	-	-	0.290	(0.45)
Government*Income	-	-	0.167	(0.94)	-	-	0.0515	(0.29)	-	-	0.0690	(0.42)
Government*Working Class*Income	-	-	0.201	(0.82)	-	-	0.112	(0.47)	-	-	-0.239	(-1.06)
Constant	-0.609	(-1.90)	-0.396	(-1.01)	-0.970**	(-3.09)	-0.953*	(-2.47)	-0.646*	(-2.17)	-0.693	(-1.90)
N	398		398		398		398		398		398	
R-Squared	0.0666		0.0803		0.1012		0.1053		0.1959		0.2068	
F. Stat.	3.08		2.8		4.86		3.78		10.51		8.36	

Notes: 2 sided t-tests; t statistics in parentheses; \* p<0.05;\*\* p<0.01; \*\*\* p<0.001.

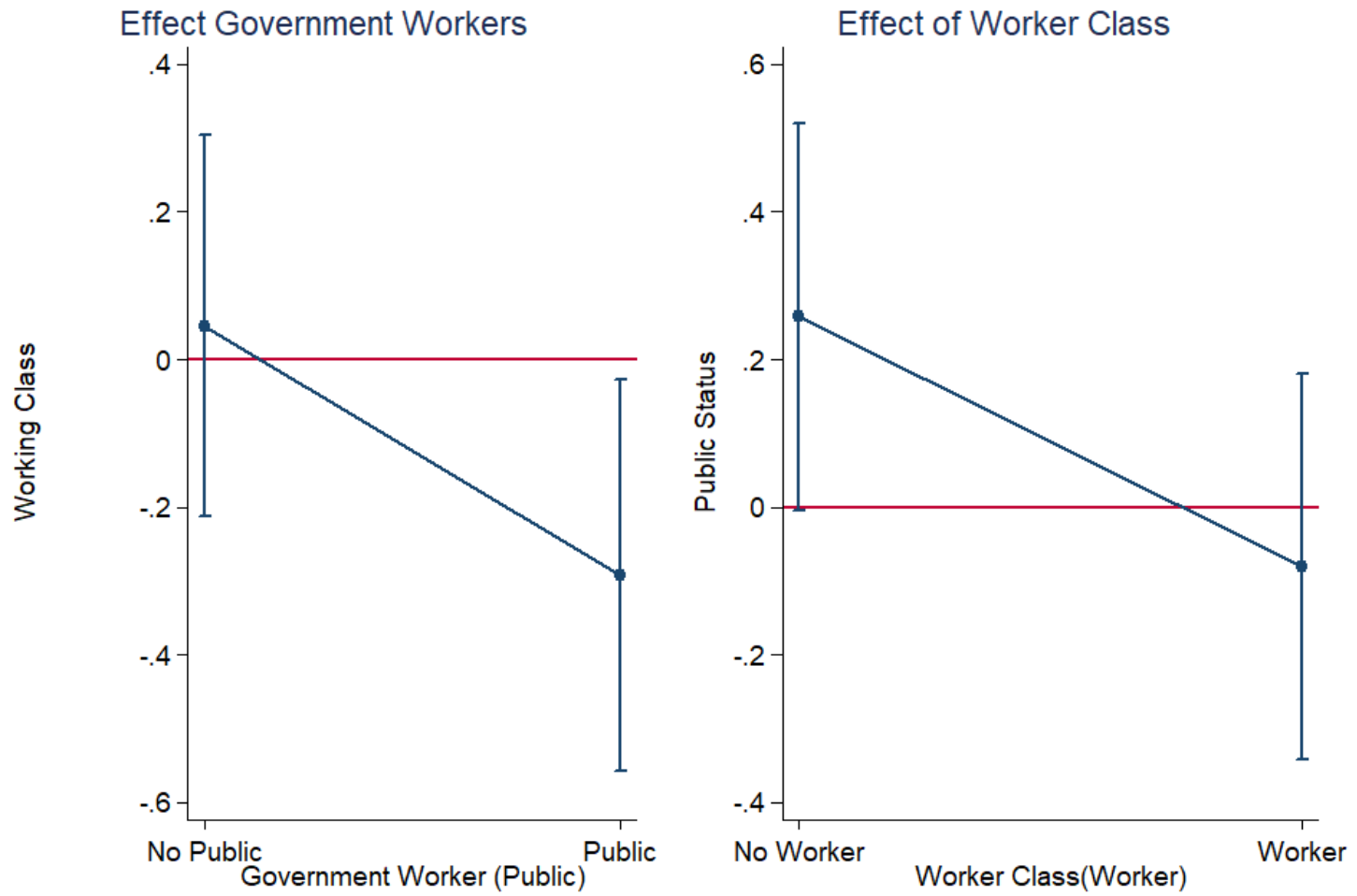


**Table 2.14: Regression Outputs for Testing Hedonic Relevance**

Dep. Variable:	Model 47		Model 48		Model 49		Model 50	
	Disengagement		Disengagement		Game Playing		Game Playing	
	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.
Government	-0.0309	(-0.34)	-0.368	(-0.79)	0.0258	(0.30)	-0.540	(-1.23)
Working Class	0.117	(0.37)	-0.278	(-0.64)	0.0718	(0.24)	-0.0645	(-0.16)
Income	-0.00231	(-0.03)	-0.0607	(-0.57)	0.00592	(0.08)	-0.0872	(-0.87)
Working Class*Income	-0.0774	(-0.69)	0.104	(0.70)	-0.0511	(-0.49)	0.0290	(0.21)
Age	-0.000140	(-0.04)	-0.000263	(-0.07)	-0.00270	(-0.78)	-0.00254	(-0.74)
Female	-0.216*	(-2.30)	-0.225*	(-2.39)	-0.139	(-1.57)	-0.144	(-1.63)
Caucasian	0.145	(1.17)	0.161	(1.30)	0.187	(1.60)	0.189	(1.62)
Political Ideology	0.0829***	(3.55)	0.0821***	(3.50)	0.0945***	(4.29)	0.0904***	(4.08)
Religious	0.790***	(7.48)	0.798***	(7.56)	0.959***	(9.63)	0.964***	(9.66)
Government*Working Class	-	-	0.903	(1.42)	-	-	0.385	(0.64)
Government*Income	-	-	0.163	(1.01)	-	-	0.241	(1.58)
Government*Working Class*Income	-	-	-0.413	(-1.86)	-	-	-0.211	(-1.01)
Constant	-0.854**	(-2.92)	-0.744*	(-2.08)	-1.045***	(-3.79)	-0.815*	(-2.42)
N	398		398		398		398	
R-Squared	0.2248		0.2352		0.3111		0.318	
F. Stat.	12.5		9.87		19.47		14.96	

Notes: 2 sided t-tests; t statistics in parentheses; \* p<0.05; \*\* p<0.01; \*\*\* p<0.001.

Figure 2.1: Marginal Effects Plot on Resistance - Experiment 2



Notes: 95% CIs; two-sided t-tests.

As a robustness check, I examine the responses of those survey participants that passed the manipulation check with respect to correctly identifying the sector of the agency. I undertake this investigation using two different methods. With the first method, I subset the data for each of the two experiments that passed this manipulation check. Next, I re-run the regression models to see if the subset of participants who cleared the manipulation check leads to different findings for each experiment. With the second method, I introduce the manipulation check as a covariate in the model and then interact the manipulation check with the relevant treatment variable in the model. Using a subset of the data may lead to allegations of self-selection bias, but the latter method of testing the manipulation check as a covariate will not be subject to this concern.

First, I subset my data with respect to experiment 1 to analyze whether there were different results with those that passed the agency manipulation check. The findings for these new models are in Tables 2.15 and 2.16 below. In Table 2.15, Models 55 and 56 deliver some findings on how the bad performance cue can have a direct effect on Game Playing. In Model 55, bad performance is statistically significant at the .1 level, and it is statistically significant at the 0.05 level in Model 56. The coefficients are negative, suggesting that when the IRS suffers a financial setback, survey participants are inclined to engage in less game playing. This is fascinating because it suggests that survey participants are not inclined to punish the IRS for organizational mismanagement. I also have findings with Model 60. I find that there are no direct effects with the independent variables; however, I do find an indirect effect with the interaction term. To better illustrate the combination of effects, I produce a marginal effects plot in Figure 2.2 below. As can be seen in Figure 2.2, the marginal effect of bad performance on resistance increases when government workers are utilized. Similarly, the marginal effect of

government workers on resistance increases when there is bad performance. This finding is not consistent with my theory since survey participants seem to be displaying a sector bias against public employees. Nevertheless, this is an interesting observation.

Next for experiment 1, I explore the introduction of the manipulation check as a covariate. In these models, I am using the entire sample of data and I include an interaction term between the manipulation check with the relevant treatment variable. My findings are in Tables 2.17 and 2.18 below. The key takeaway is that the manipulation check variable is statistically significant by itself (Models 63-66), but not with any interactions. These negative coefficients associated with these models suggests that people who passed the manipulation check display a lower propensity towards engaging in nefarious behavior.

My robustness check results for experiment 2 start in Tables 2.19 and 2.20 with the subset data. In these models, I find strong evidence across all of the postures that cover negative attitudes. More specifically, I have findings on motivational postures that cover resistance, disengagement, and game playing. In Models 75-80, there are direct effects for each of the government variables at the 0.05 level or better. These variables are all positive and this implies that the use of government employees increases the propensity towards nefarious behavior in taxation. Interaction terms in Models 76, 78, and 80 are also statistically significant at the .1 level or better. The coefficients are all negative, suggesting that there is an indirect effect through the working class cue that can offset the use of government employees. These manipulation check models give us a much richer picture of what is going on with the data.

Next for experiment 2, I produce a set of regression models that include the agency manipulation check as a variable in the whole sample and interacted with government worker.

These models are in Tables 2.21 and 2.22 below. The manipulation check variable is statistically significant in all of the negative attitude models (85-90) at the 0.01 level or better. The manipulation check variable also had statistically significant interactions with the government worker variables in all of the negative attitude models (Models 86, 88, and 90). These findings suggest that there is a direct effect where government workers decrease nefarious tax attitudes and an indirect effect where they increase this same behavior that is mobilized by the manipulation check.

In sum, these findings with respect to the manipulation checks are mainly relevant for the negative tax attitude dependent variables. These findings suggest that those that pass the agency manipulation check are more likely to hold these negative tax attitudes when the public agency cue is delivered. This also suggests that if information on sector agency was better conveyed in the vignette, then it is more likely that effects would have been found in the base-line models. However, this assumes that the treatment is relevant to all of the survey participants. A point that I will revisit in the conclusion of this dissertation.

**Table 2.15: Regression Models that Passed Manipulation Check – Experiment 1**

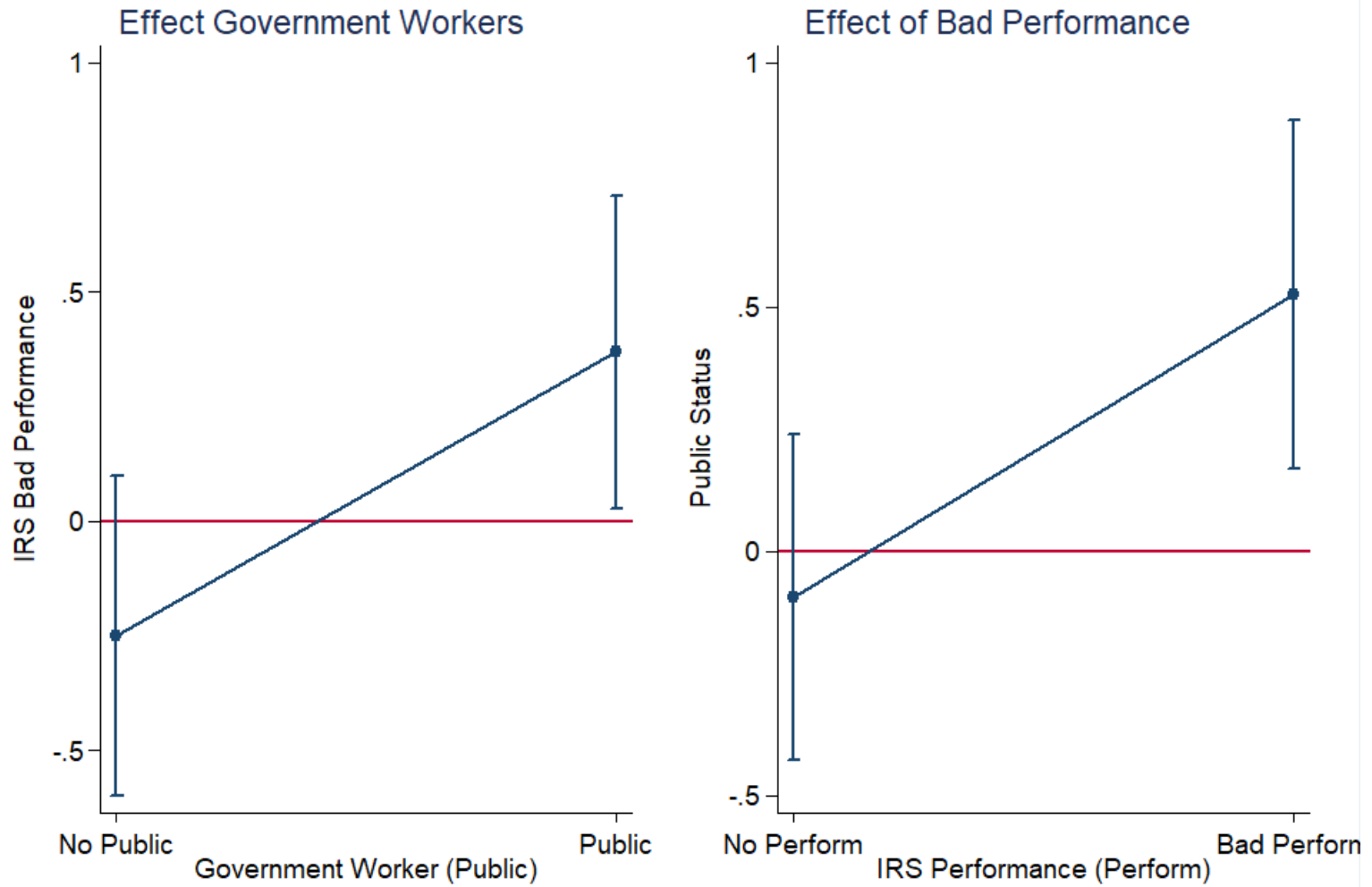
Dep. Variable	Model 51		Model 52		Model 53		Model 54		Model 55		Model 56	
	Commitment		Commitment		Disengagement		Disengagement		Game Playing		Game Playing	
	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.
Government	-0.0266	(-0.21)	-0.0561	(-0.32)	0.0633	(0.49)	0.0876	(0.50)	0.169	(1.35)	0.0165	(0.10)
Bad Performance	0.0309	(0.24)	-0.00117	(-0.01)	-0.00330	(-0.03)	0.0232	(0.13)	-0.223	(-1.77)	-0.390*	(-2.17)
Government*Bad Performance	-	-	0.0629	(0.24)	-	-	-0.0520	(-0.20)	-	-	0.327	(1.30)
Constant	0.0100	(0.09)	0.0246	(0.20)	-0.122	(-1.12)	-0.134	(-1.08)	-0.0410	(-0.39)	0.0349	(0.29)
N	250		250		250		250		250		250	
R-Squared	0.0004		0.0006		0.001		0.0012		0.0192		0.0259	
F. Stat.	0.05		0.05		0.12		0.09		2.42		2.18	
Notes: 2 sided t-tests; t statistics in parentheses; * p<0.05; ** p<0.01; *** p<0.001.												

**Table 2.16: More Regression Models that Passed Manipulation Check – Experiment 1**

Dep. Variable	Model 57		Model 58		Model 59		Model 60	
	Capitulation		Capitulation		Resistance		Resistance	
	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.
Government	-0.0604	(-0.53)	-0.132	(-0.84)	0.195	(1.56)	-0.0940	(-0.55)
Bad Performance	-0.0175	(-0.15)	-0.0951	(-0.58)	0.0654	(0.52)	-0.250	(-1.41)
Government*Bad Performance	-	-	0.152	(0.66)	-	-	0.619*	(2.50)
Constant	-0.00357	(-0.04)	0.0318	(0.29)	-0.0912	(-0.86)	0.0525	(0.44)
N	250		250		250		250	
R-Squared	0.0012		0.003		0.011		0.0355	
F. Stat.	0.15		0.25		1.38		3.01	

Notes: 2 sided t-tests; t statistics in parentheses; \* p<0.05; \*\* p<0.01; \*\*\* p<0.001.

Figure 2.2: Marginal Effects Plot for Manipulation Check Model



Notes: 95% CIs; two-sided t-tests.



**Table 2.17: Robustness Regressions with Manipulation Checks – Experiment 1**

Dep. Variable:	Model 61		Model 62		Model 63		Model 64		Model 65		Model 66	
	Commitment		Commitment		Disengagement		Disengagement		Game Playing		Game Playing	
	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.
Government	0.00510	(0.05)	0.0547	(0.34)	-0.0553	(-0.56)	-0.245	(-1.53)	0.0287	(0.29)	-0.200	(-1.24)
Bad Performance	-0.0208	(-0.21)	-0.0198	(-0.20)	0.0854	(0.86)	0.0814	(0.82)	-0.191	(-1.93)	-0.196*	(-1.98)
Manipulation Check	0.0285	(0.28)	0.0671	(0.47)	-0.237*	(-2.32)	-0.385**	(-2.71)	-0.158	(-1.55)	-0.336*	(-2.37)
Government*Manipulation Check	-	-	-0.0801	(-0.39)	-	-	0.306	(1.50)	-	-	0.368	(1.81)
Constant	-0.0103	(-0.10)	-0.0340	(-0.28)	0.134	(1.29)	0.224	(1.87)	0.174	(1.67)	0.283*	(2.36)
N	404		404		404		404		404		404	
R-Squared	0.0003		0.0007		0.0162		0.0217		0.0151		0.0231	
F. Stat.	0.04		0.07		2.19		2.21		2.04		2.36	

Notes: 2 sided t-tests; t statistics in parentheses; \* p<0.05; \*\* p<0.01; \*\*\* p<0.001.

**Table 2.18: More Robustness Regressions with Manipulation Checks – Experiment 1**

Dep. Variable:	Model 67		Model 68		Model 69		Model 70	
	Capitulation		Capitulation		Resistance		Resistance	
	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.
Government	-0.0977	(-0.98)	-0.156	(-0.96)	0.149	(1.50)	0.0733	(0.45)
Bad Performance	0.0432	(0.43)	0.0420	(0.42)	0.0606	(0.61)	0.0591	(0.59)
Manipulation Check	-0.107	(-1.04)	-0.153	(-1.07)	0.0958	(0.94)	0.0367	(0.26)
Government*Manipulation Check	-	-	0.0941	(0.46)	-	-	0.122	(0.60)
Constant	0.0941	(0.90)	0.122	(1.01)	-0.161	(-1.55)	-0.125	(-1.04)
N	404		404		404		404	
R-Squared	0.0058		0.0063		0.0089		0.0098	
F. Stat.	0.77		0.63		1.2		0.99	

Notes: 2 sided t-tests; t statistics in parentheses; \* p<0.05; \*\* p<0.01; \*\*\* p<0.001.

**Table 2.19: Robustness Regressions with Manipulation Check Subset – Experiment 2**

Dep. Variable:	Model 71		Model 72		Model 73		Model 74		Model 75		Model 76	
	Commitment		Commitment		Capitulation		Capitulation		Resistance		Resistance	
	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.
Government	-0.184	(-1.31)	-0.269	(-1.30)	0.00495	(0.04)	0.0212	(0.10)	0.348*	(2.53)	0.786***	(3.98)
Working Class	-0.0414	(-0.29)	-0.116	(-0.60)	-0.129	(-0.91)	-0.114	(-0.59)	-0.256	(-1.86)	0.128	(0.69)
Government*Working Class	-	-	0.159	(0.56)	-	-	-0.0305	(-0.11)	-	-	-0.822**	(-3.04)
Constant	0.116	(1.01)	0.150	(1.15)	0.0206	(0.18)	0.0141	(0.11)	-0.203	(-1.80)	-0.377**	(-3.03)
N	227		227		227		227		227		227	
R-Squared	0.0086		0.01		0.0038		0.0038		0.0373		0.0755	
F. Stat.	0.97		0.75		0.42		0.28		4.34		6.07	
Notes: 2 sided t-tests; t statistics in parentheses; * p<0.05; ** p<0.01; *** p<0.001.												

**Table 2.20: More Robustness Regressions with Manipulation Check Subset – Experiment 2**

Dep. Variable:	Model 77		Model 78		Model 79		Model 80	
	Disengagement		Disengagement		Game Playing		Game Playing	
	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.
Government	0.400**	(2.95)	0.715***	(3.64)	0.426**	(3.17)	0.705***	(3.60)
Working Class	-0.206	(-1.52)	0.0714	(0.39)	-0.209	(-1.55)	0.0353	(0.19)
Government*Working Class	-	-	-0.592*	(-2.20)	-	-	-0.523	(-1.95)
Constant	-0.227*	(-2.04)	-0.352**	(-2.84)	-0.226*	(-2.05)	-0.337**	(-2.73)
N	227		227		227		227	
R-Squared	0.0423		0.0626		0.0477		0.0637	
F. Stat.	4.95		4.97		5.62		5.06	
Notes: 2 sided t-tests; t statistics in parentheses; * p<0.05; ** p<0.01; *** p<0.001.								

**Table 2.21: Regression Models with Manipulation Check Variable – Experiment 2**

Dep. Variable:	Model 81		Model 82		Model 83		Model 84		Model 85		Model 86	
	Commitment		Commitment		Capitulation		Capitulation		Resistance		Resistance	
	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.
Government	-0.154	(-1.53)	-0.114	(-0.74)	-0.0920	(-0.91)	-0.200	(-1.30)	0.0832	(0.84)	-0.240	(-1.61)
Working Class	-0.0410	(-0.41)	-0.0375	(-0.37)	-0.0215	(-0.21)	-0.0309	(-0.31)	-0.109	(-1.11)	-0.137	(-1.40)
Manipulation Check	0.0145	(0.14)	0.0490	(0.34)	-0.105	(-1.03)	-0.198	(-1.39)	-0.392***	(-3.93)	-0.670***	(-4.85)
Government*Manipulation Check	-	-	-0.0706	(-0.35)	-	-	0.190	(0.93)	-	-	0.570**	(2.88)
Constant	0.0873	(0.86)	0.0656	(0.55)	0.115	(1.13)	0.174	(1.45)	0.237*	(2.38)	0.413***	(3.56)
N	398		398		398		398		398		398	
R-Squared	0.0066		0.0069		0.0049		0.0071		0.0437		0.0635	
F. Stat.	0.88		0.68		0.65		0.71		6.01		6.66	

Notes: 2 sided t-tests; t statistics in parentheses; \* p<0.05; \*\* p<0.01; \*\*\* p<0.001.

**Table 2.22: More Regression Models with Manipulation Check Variable – Experiment 2**

Dep. Variable:	Model 87		Model 88		Model 89		Model 90	
	Disengagement		Disengagement		Game Playing		Game Playing	
	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.
Government	0.0117	(0.12)	-0.478**	(-3.23)	0.0698	(0.70)	-0.370*	(-2.49)
Working Class	-0.0672	(-0.67)	-0.110	(-1.12)	-0.0363	(-0.36)	-0.0746	(-0.76)
Manipulation Check	-0.332**	(-3.30)	-0.753***	(-5.48)	-0.306**	(-3.04)	-0.685***	(-4.95)
Government*Manipulation Check	-	-	0.863***	(4.38)	-	-	0.777***	(3.92)
Constant	0.217*	(2.16)	0.483***	(4.18)	0.158	(1.57)	0.398***	(3.42)
N	398		398		398		398	
R-Squared	0.0288		0.0741		0.025		0.0617	
F. Stat.	3.9		7.86		3.37		6.46	

Notes: 2 sided t-tests; t statistics in parentheses; \* p<0.05; \*\* p<0.01; \*\*\* p<0.001.

## 2.6. Conclusions

My findings in this paper are largely null findings. These results are highly informative from the perspective that the mass public may not punish tax authorities for outsourcing. As with all experiments, there should be some hesitation before generalizing these results to other countries. America may be unique in this regard. So, what we can say is that privatization schemes by the Internal Revenue Service (IRS) may be without penalty if they go wrong.

It's entirely possible that the participants in these experiments were just not sensitive to the interventions though. Workers on MTurk are not likely to be high salaried professionals, so the interventions would not likely lead to any real world ramifications for their level of wealth. A more direct intervention that threatens the pocketbook of the participants may be more successful. In sum, there may be little sensitivity for the experimental participants to the interventions in this experiment.

Moving forward, more work should be done on this topic. The interventions should be revised to something that incurs more sensitivity from the experimental participants. This will help to confirm the potency of the null findings. It has been found in the World Values Survey, that 60% of respondents think it's never acceptable to avoid tax (Luttmer and Singhal 2014). As a result, tax compliance measures may be very inelastic, so null findings with any interventions may actually be the norm.

### 3. REVISITING THE SOCIAL TAX CONTRACT: EXPLORING THE ROLE OF INSTITUTIONS ON TAX COMPLIANCE

#### 3.1. Introduction

Policy mistakes by governments may have severe consequences, such as a drop in tax compliance. This drop in tax compliance is due to a decline in “tax morale.” Tax morale is the non-pecuniary motives a person has for being tax compliant. There is a multitude of avenues by which tax morale can be weakened. Luttmer and Singhal (2014) outline several broad categories of tax morale and one of the most serious ones is reciprocity. This category of tax morale relates to the idea of there being a sort of “social contract” with regard to taxation (Luttmer and Singhal 2014, Pg. 157). An arrangement whereby taxes paid by ordinary citizens will be later redeemed for government services and the legitimacy of taxes rests on receiving said services. This form of tax morale contrasts greatly with the traditional view on tax compliance that the willingness to pay taxes is purely a function of fines and the probability of an audit (Allingham and Sandmo 1972).

The theory of the *social tax contract* is built upon sound empirical foundations. There is evidence that people increase their rate of tax compliance when there are tax expenditures on programs with which they agree, most particularly when their specific preferences are taken into consideration (Alm, Jackson, and McKee 1993). Moreover, it has been found that people in field experiments are likely to increase their rate of tax compliance when reminded that there are certain government services and public goods that they will receive (Bott et al. 2020; Hallsworth et al. 2017). However, these studies are limited in scope. They have not considered the impact of the institutional structure of the tax system on tax morale. This structure could very well influence the perceived level of reciprocity. Most importantly, these issues are less studied in the



literature. This brings me to my research question: Does the regressivity of the tax system or the extent of tax privatization influence tax compliance?

The privatization of bureaucratic agencies is nothing new. Tax administrations have been partially privatized by various governments since antiquity. Rome is widely regarded as the best example of a government that privatized tax functions through a process known as “tax farming” (Cosgel and Miceli 2009; Kiser and Kane 2007). In Rome, taxation rights for a territory would be auctioned off to the highest bidder. Such an economic transaction was economically efficient by harnessing market forces and incentivizing tax collectors to do their respective jobs (Jang and Eger 2019).

A potential problem is that privatized taxation has led to tax revolts, such as in Holland (Kerkhoff 2009), which dampened the zeal that Western countries had for this mode of tax administration. The United States of America in particular operated a purely public form of taxation, via one or more government agencies. However, there was a change toward the end of the 20<sup>th</sup> century as individual states in America began selling off delinquent tax debt to private debt collectors (Jang and Eger 2019). This new form of tax farming is now growing in popularity with the Federal government following suit in the early 21<sup>st</sup> century in association with four affiliated debt collection agencies. Additionally, the federal government has experimented with privatized tax audits (Hackbarth 2015). Whether these forms of privatization are effective is still an open question in the scholarly community; however, there is some evidence that they are not (Jang and Eger 2019).

Following this introduction, I will provide a synopsis of the literature on tax morale and public opinion on regressive taxation. After the literature review, I will provide a theoretical argument that addresses how regressive taxes and privatization can impact tax compliance

attitudes. Next, I will provide my empirical analysis from my experiment. Succeeding that, I will advance an argument in relation to how motivated reasoning could help to illuminate my findings. Finally, I will conclude this manuscript with a thorough discussion of my findings and policy implications for tax administrations.

## **3.2. Literature Review**

### **3.2.1. Defining Tax Morale**

Tax compliance can be decomposed into pecuniary and non-pecuniary motives for complying with the tax code. The pecuniary side of the equation can be described as being composed of the expected utility of the benefits, probability of an audit, and potential penalties for not complying with the tax code (Allingham and Sandmo 1972). The non-pecuniary side of tax compliance can in turn be classified as tax morale (Luttmer and Singhal 2014).

There are several key components of tax morale as defined by Luttmer and Singhal (2014): (1) intrinsic motivation; (2) reciprocity; (3) social effects; (4) cultural factors; and (5) deviations from expected utility theory. *Intrinsic motives* that underly tax morale center on “... a desire to comply with the law” (Luttmer and Singhal 2014, Pg. 155). An example of intrinsic motivation is how guilt may motivate compliance (Andreoni et al. 1998). Also, a duty and trust heuristic can play a role in intrinsic motivation by shaping tax compliance behaviors by influencing how taxpayers process information (Scholz and Lubell 1995; Scholz and Lubell 1998; and Scholz and Pinney 1995). The trust heuristic encompasses how trust in government and other residents causes an impact on tax compliance by shaping the relationship between individual citizens and the state (Scholz and Lubell 1998). The duty heuristic encompasses how a sense of duty filters information in tax compliance behavior (Scholz and Pinney 1995). *Reciprocity* essentially comes down to a quid pro quo relationship between citizen and state

(Luttmer and Singhal 2014). Taxpayers should feel more of an obligation to pay when receiving services from the state. *Social effects* relate to peer pressure, wherein there is some level of peer conformity that occurs between taxpayers. When one taxpayer discovers that their actions are not consistent with collective norms, they will change their behavior and conform. *Cultural factors* is similar to social effects, but it represents "... social norms that persist over long periods and across generations" (Luttmer and Singhal 2014, Pg. 160). In other words, it is a short-term versus long-term difference. Finally, *deviations from expected utility theory* centers upon miscalculations from the Allingham and Sandmo (1972) model. The primary example of a deviation is the miscalculation of the probability of an audit; which is common (Alm, McClelland, and Schulze 1992). These categories of tax morale should encompass all potential contingencies that may arise with respect to non-pecuniary aspects of tax compliance.

### **3.2.2. Regressive Taxes and Bounded Rationality**

Research on public opinion and regressive taxation is in an active state of development. Thus far, this research has glossed over an analysis of institutional considerations with regard to public opinion and regressive taxation. This is something I hope to address. For the most part, this research emphasizes rational choice anomalous behaviors, where the public acts in a fashion that violates expected utility norms.

A major question that the literature hopes to resolve relates to the unexplained support for regressive taxes by the wider population. What makes this unexplained is that these supporters of regressive taxes are actually supporters of progressive policies (Bartels 2005; Slemrod 2006). It has been found that supporters of flat taxes and national sales taxes are often under the mistaken impression that these taxes will have a progressive effect (Slemrod 2006). In other

words, they expect that these taxes will do a better job of collecting money from the wealthy when this is clearly not the case.

This information gap has been attributed to “tax knowledge,” or a lack thereof (Krupnikov et al. 2006). It is concluded that taxation is such an esoteric topic that the average citizen does not comprehend its subtle nuances. This conclusion is supported by research that shows that the average citizen lacks an intellect that comprehends “economic knowledge” (Blinder and Krueger 2004). In effect, the result is a knowledge gap that prevents people from making educated decisions on such things as voting on taxation. One example where this can be seen is with the high degree of opposition to the progressive estate tax that only produces an impact on the very wealthy (Krupnikov et al. 2006). Ironically, it has been found that the wealthy support expanding the Earned Income Tax Credit (EITC) that supports the working class, suggesting that the wealthy are better educated when it comes to economic knowledge (Page et al. 2013).

It is important to emphasize that this knowledge gap is not universal. There may be ample numbers of people who are educated about the intricacies of taxation and in other policy domains. As an example, there is support among the working and middle classes for increased education spending to address rising inequality so these gaps in knowledge are probably contextual (McCall and Kenworthy 2009). So, it is entirely possible that it is the marginal consumer and not all consumers that are necessary to have a rational tax system. However, one thing that may educate any person about taxation is by being actually taxed by a particular tax. It has been suggested that the great property tax rebellion of the late 1970s was a side effect of citizens being taxed (Martin 2008). In short, there were a variety of unofficial tax expenditures that softened the blow of property taxes, but these reductions were not permanent. After

professionalization and standardization of property valuation methods for taxation eliminated tax expenditures, public support for property taxes quickly evaporated as their taxes owed to the government increased dramatically and the tax revolt ensued (Martin 2008).

Property taxation may represent an anomalous example however. The reason behind this thinking is that the corresponding assets that are taxed are highly valued by taxpayers. In short, real estate frequently represents the economic nest egg for the average taxpayer, an asset that frequently represents a disproportionate share of retirement wealth (Martin 2008). In effect, property taxes function like a wealth tax and this jeopardizes the financial status of individual taxpayers. However, it should be noted that working class households have been found to have slightly higher effective rates than upper-income households due to issues associated with the property assessment processes in some states (Ingraham 2021). Regardless of the source of the problem, overall property taxes do represent a progressive tax that should enjoy broader support among taxpayers and it doesn't.

Altogether this research paints a bleak image of the intellectual tax landscape of the broader public. The public seems to like taxes that are regressive when they prefer progressive policies (Norton and Ariely 2011). Moreover, the public does not support progressive taxes when they feel financially threatened by them (Martin 2008). Arguably, the public may misperceive these threatening taxes as being regressive when they are not. Thus, bounded rationality is very much the norm in this area of the tax literature. In support of a theory of bounded rationality, Chetty et al. (2009) found that consumption of grocery items dropped when taxes were incorporated into the advertised price of groceries as compared to adding the expense at the register. Similarly, Finkelstein (2009) found that toll rates for electronic tolls is 20-40% higher than cash toll booths, suggesting that the salience of toll costs matter significantly in

administering this fee. However, this latter finding could represent a rational premium that people are consciously paying to avoid waiting in toll lines. Nevertheless, this research coalesces around the central view that tax salience matters and this has large implications for the bounded rationality that surround regressive and progressive taxes.

In sum, the literature that surrounds regressive taxation and public opinion is progressing. Most of the research findings surround the central issue of bounded rationality and a lack of tax knowledge by the public. Scholars that have suggested that issues of regressive taxation are part of a problem associated with polarization have not caught on (Hacker and Pierson 2005). Additionally, it has been postulated that there is a “last place aversion” by the working class which leads them to be averse to redistributive policies that reward people beneath them (Kuziemko et al. 2014). In short, nobody wants to be “last” and it has been found that people just over the minimum wage level will be opposed to minimum wage increases since this will close a social gap between them and the lowest earners (Kuziemko et al. 2014). Nevertheless, this collective body of research has not examined the broader consequences for tax compliance. Furthermore, this research has not analyzed institutional consequences for how the public processes information in relation to taxation. These are all things that I hope to help address.

### **3.3. Theoretical Argument**

As previously stated in the literature, I posit that there is an implicit social contract of taxation. The willingness of people to comply with the tax code likely centers upon two things: (1) quid pro quo policies that benefit the taxpayer; and (2) inclusion in the policy making process. This first pillar of tax reciprocity is quite intuitive and this second pillar can be best exemplified by the mantra, “no taxation without representation,” uttered by former American

colonials. Essentially, taxpayers care about inclusion in both policies and policy making processes.

I posit that institutional structures which surround taxation are also subject to the social contract of taxation. This can be seen with the strong backlash against the replacement of the council tax with the poll tax in Thatcher's United Kingdom (Besley, Jensen, and Persson 2019). Furthermore, this relationship with tax morale can be viewed with the great tax revolt of the 1970s in America (Martin 2008). Under both tax systems, the public was excluded from policy making processes and made their voices heard.

I posit that a regressive tax will lead to the same sort of negative response against tax compliance as witnessed with the poll tax in the United Kingdom. The institution of a national sales tax should lead to a decline in tax morale because it damages the perceived level of reciprocity with the state. This comes down to a simple level of policy accounting, where the resources being paid to the United States exceed the perceived value of the services being received by individual taxpayers. Due to this decline in tax morale, I would expect to see an increase in negative tax compliance attitudes and a decrease in positive tax compliance attitudes. However, there may be a bounded rationality effect that leads participants to misperceive a regressive sales tax as a progressive policy. In this case, I would expect to see an increase in positive tax compliance attitudes and a decrease in negative tax compliance attitudes. Regardless, it will be important to test for whether there is a bounded rationality effect in this manuscript.

**Hypothesis 1A:** The institution of a regressive tax system will lead to an increase (decrease) in negative (positive) attitudes towards tax compliance.

**Hypothesis 1B:** The institution of a national sales tax will be misinterpreted by the public, due to bounded rationality, and lead to a decrease (increase) in negative (positive) attitudes towards tax compliance.

The privatization of tax collections should also lead to a negative impact on tax morale. Once again, this comes down to the simple policy accounting that underlies this economic exchange. Money paid to a privatized tax collector is permanently siphoned off to the private sector. Once taxable funds have bypassed government coffers there is less room for government reciprocity in exchange for these monies. This implies that there will be fewer public goods and services to be received by the taxpayer. Naturally, I would expect a decline in positive tax compliance attitudes in response to privatized tax collections, and an increase in negative tax compliance attitudes.

**Hypothesis 2:** Privatized tax collections will lead to an increase (decrease) in negative (positive) attitudes toward tax compliance.

### **3.4. Empirical Analysis<sup>5</sup>**

In order to test my hypotheses, I examine public reactions through a 2x2 survey experiment. My experiment is a between-groups factorial design to maximize experimental control. The sample survey participants were collected from Amazon's Mechanical Turk (hereafter "MTurk"). It should be stressed that there are a number of concerns about the use of MTurk. However, past research has addressed these concerns and illustrated the robustness of MTurk based experiments. Most importantly, Berinsky et al. (2012) replicated numerous American surveys with a high degree of accuracy with MTurk. The potency of these results

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<sup>5</sup> Summary Statistics are in Appendix B.1. The table of means per experiment is contained in Appendix B.2.



provide evidence for meaningful levels of external validity (Mullinix et al. 2015). Additionally, steps can be taken by individual researchers to exclude VPN users, foreign respondents, and bots. In sum, this past research in conjunction with MTurk best practices should ameliorate any concerns that cautious scholars might have.

For my experiment, there are two treatments. These treatments are introduced in the vignette. The first treatment is that of regressive taxation. In short, the participants are exposed to a regressive tax or a progressive tax. The regressive tax was set at a rate that is very high to highlight how regressive it is. My second treatment is whether tax collections have been privatized. In short, the hypothetical tax can be administered by subnational governments or a private bank. The tax collector receives a fee for services which represents revenues lost to the private sector when the tax collector is a bank. The vignette for my experiment is depicted below to clarify the process by which data was collected.

*Vignette: Due to the economic recession surrounding the COVID-19 pandemic, the American government has accumulated a substantial amount of debt. The new task at hand is to raise tax revenue to offset the rapidly growing deficit.*

*The U.S. government has chosen to adopt a **[Insert Tax Information Cue Here]**. This additional amount is then collected for the U.S. government.*

*The new national tax revenues will be collected by a **[Insert Tax Collector Cue Here]**.*

*However, a 3 percent fee for collection services rendered is paid to the **[Insert Tax Collector Cue Here]**.*

*Tax information cue, regressive: The U.S. government has chosen to adopt a national sales tax. This new tax will be equal to twenty-five cents on the dollar. In other words, for every dollar*

*that is spent by a resident of the U.S., an additional twenty-five cents are charged to the individuals spending money.*

*Tax information cue, progressive: This new tax increase will target capital gains on real estate transactions. Capital gains tax is taxation on investments. The tax rate will be increased from the current rate of 20% to 30%.*

*Tax collector cue, public: The new national tax revenues will be collected by state tax authorities. After it has been collected by state governments, the sum is then transferred to the Internal Revenue Service (IRS). However, a 3 percent fee for collection services rendered is paid to the state governments.*

*Tax collector cue, private: The new national tax revenues will be collected by a private company, Atlas Bank. After it has been collected by the private enterprise, the sum is then transferred to the Internal Revenue Service (IRS). However, a 3 percent fee for collection services rendered is paid to the private company.*

**Table 3.1: Tax Policy Regression Outputs**

Dep. Variable	Model 1		Model 2	
	Tax Support		Properly Implemented	
	Coef.	T. Stat.	Coef.	T. Stat.
Government	0.0454	(0.14)	0.524	(1.64)
Sales Tax	-1.621***	(-5.18)	-1.218***	(-3.81)
Constant	4.106***	(15.56)	4.096***	(15.20)
N	399		399	
R-Squared	0.0636		0.0394	
F. Stat.	13.46		8.12	
Notes: 2 sided t-tests; t statistics in parentheses; * p<0.05; ** p<0.01; *** p<0.001				

After reviewing the vignette, survey participants were then directed toward a battery of questions that centered on tax compliance attitudes. First, I tested whether there was a bounded rationality effect that led to the survey participants preferring the regressive tax over the progressive tax. MTurk workers are predominantly lower-income (Huff and Tingley 2015), so they should prefer the progressive tax. I conducted this test by asking the participants to rate their level of support for the new tax initiative on a scale of 0-10. Additionally, I asked the participants to rate their level of trust that the new tax will be properly implemented on a scale of 0-10. These two statements will allow for me to directly compare the regressive, national sales tax, with the progressive, capital gains tax. If the working class survey participants of MTurk are perfectly rational as utility maximizers, they would prefer the progressive tax (capital gains). If they are boundedly rational, they will prefer the regressive tax (sales tax). And, as can be seen from the regression outputs in Table 3.1 above, participants viewed a national sales tax negatively. In Model 1, there is clearly less support for the regressive tax. A national sales tax has a negative coefficient and is statistically significant at the .001 level. Similarly, in Model 2, there was a noteworthy dip in support for whether a national sales tax would be properly implemented. Once again, the coefficient is negative for a national sales tax and it is statistically significant at the .001 level. These findings provide strong evidence against the bounded rationality theory of regressive taxation with my sample. My survey participants accurately identified the national sales tax as a relatively more disagreeable tax when compared to the alternative capital gains tax. Furthermore, these regression models from Table 3.1 can also function as providing some evidence in favor of my first hypothesis since these measures are fundamentally attitudes about tax policy.

Next, I explored changes in tax attitudes on multiple dimensions. A battery of statements was directed toward the survey participants, where they could disagree or agree with the statement on a scale of 0-10. The statements are listed in Table 3.2 below and are tax compliance “motivational postures” developed in Braithwaite (2002). These tax motivational postures capture different dimensions of tax compliance attitudes. In total, there are five motivational postures on taxation: two positive postures and three negative postures. More specifically, these postures are (1) commitment, (2) capitulation, (3) resistance, (4) disengagement, and (5) game playing. The first two of the postures are referred to as the “postures of deference” (Braithwaite 2002, Pg. 18), signaling a positive outlook. The commitment posture follows being compliant with societal norms on paying taxes. The capitulation posture follows believing in the legitimate authority of the tax office. The last three of these postures are referred to as the “postures of defiance” (Braithwaite 2002, Pg. 18), signaling a negative outlook. These latter postures are thought to partially reflect “anti-government” attitudes (Braithwaite 2002, Pg. 24). The resistance posture reflects concerns about the neutrality of how the tax authority engages with taxpayers. The disengagement posture reflects utter indifference towards tax authority behavior. Finally, the game playing posture reflects whether interaction with the tax authority can be molded to one’s own interests. In sum, there are two positive postures in this scale and three negative ones. Within the framework of tax morale, these motivational postures fall within the realm of intrinsic motivation. But more importantly, these postures sculpt how I measure overall tax compliance attitudes by the survey participants.

**Table 3.2: Tax Postures from Braithwaite (2002)**

<i>Commitment Statements:</i>
A1. Paying taxes is the right thing to do
A2. Paying taxes is a responsibility that should be willingly accepted by all Americans
A3. I feel a moral obligation to pay my taxes
A4. Paying my taxes ultimately advantages everyone
A5. I think of paying taxes as a method of helping the government to do worthwhile things
A6. Overall, I pay my taxes with good will
A7. I accept responsibility for paying my fair share of taxes
<i>Capitulation Statements:</i>
B1. If you cooperate with the Internal Revenue Service (IRS), they are likely to be cooperative with you
B2. Even if the Internal Revenue Service (IRS) finds that I am doing something wrong, they will respect me in the long run as long as I admit my mistakes
B3. The Internal Revenue Service (IRS) is encouraging to those who have difficulty meeting their obligations through no fault of their own
B4. The tax system may not be perfect, but it works well enough for most of us
B5. No matter how cooperative or uncooperative the Internal Revenue Service (IRS) is, the best policy is to always be cooperative with them
<i>Resistance Statements:</i>
C1. If you don't cooperate with the Internal Revenue Service (IRS), they will get tough with you
C2. The Internal Revenue Service (IRS) is more interested in catching you for doing the wrong thing, than helping you do the right thing
C3. It's important not to let the Internal Revenue Service (IRS) push you around
C4. It's impossible to satisfy the Internal Revenue Service (IRS) completely
C5. Once the Internal Revenue Service (IRS) has you branded as a non-compliant taxpayer, they will never change their mind
C6. As a society, we need more people willing to take a stand against the Internal Revenue Service (IRS)
<i>Disengagement Statements</i>
D1. If I find out that I am not doing what the Internal Revenue Service (IRS) wants, I'm not going to lose any sleep over it
D2. I personally don't think that there is much the Internal Revenue Service (IRS) can do to me to make me pay tax if I don't want to
D3. I don't care if I am not doing the right thing by the Internal Revenue Service (IRS)
D4. If the Internal Revenue Service (IRS) gets tough with me, I will become uncooperative with them

D5. I don't really know what the Internal Revenue Service (IRS) expects of me and I'm not about to ask
<i>Game Playing Statements:</i>
E1. I enjoy spending time working out how changes in the tax system will affect me
E2. I enjoy talking to friends about loopholes in the tax system
E3. I like the game of finding the grey area of tax law
E4. I enjoy the challenge of minimizing the tax I have to pay
E5. The Internal Revenue Service (IRS) respects taxpayers who can give them a run for the money

Next, I used factor analysis to cut the tax motivational posture statements down to their underlying dimensions or factors. Nearly unique factors for each of the motivational postures was developed using principal components analysis with a varimax rotation. This is the same approach that Braithwaite (2002) took to analyze her data. I then predicted the factor scores using the least squares regression approach that predicts the location of each observation on the factor (DiStefano et al. 2009; Thurstone 1935; Thomson 1951). This led to five factor loadings that translated into five dependent variables for my analysis. See Table 3.3 below for more details on the factor loadings.

The data proved to be quite robust. My first measure, commitment, had a Chronbach's alpha of 0.93. My second measure, disengagement, had a Chronbach's alpha of 0.87. My third measure, game playing, had a Chronbach's alpha of 0.92. My fourth measure, resistance, had a Chronbach's alpha of 0.80. My final measure, capitulation, had a Chronbach's alpha of 0.84.

Demographic questions and a manipulation checks were then asked to help with robustness checks. I found with the first manipulation check that 78.4 percent of survey respondents correctly identified the correct category of tax. I found with the second manipulation check that 67.4 percent of survey respondents correctly identified the sector of the

service provider that brokered the tax transaction. Next, in order to test that my participants were properly randomized in my experiment, I analyzed balance by calculating the F-test of the difference of means across groups and placed the results in Table 3.4 below. My chief findings were that there is no discernable indication that there are any problems with the randomization.

**Table 3.3: Factor Loadings of Motivational Postures**

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
a1	0.8737				
a2	0.8922				
a3	0.8916				
a4	0.8305				
a5	0.8157				
a6	0.8158				
a7	0.7662				
b1					0.7339
b2					0.6256
b3					0.6322
b4	0.5434				0.4769
b5	0.4435				0.5519
c1		-0.4009		0.6498	
c2				0.7102	
c3				0.4674	
c4				0.6079	
c5				0.7316	
c6		0.5301		0.5382	
d1		0.6113			
d2		0.7777			
d3		0.7627			
d4		0.8247			
d5		0.7514			
e1			0.8728		
e2			0.8822		
e3			0.8596		
e4			0.843		
e5		0.532	0.6191		

**Table 3.4: Balance Across Experiments Groupings**

		Group	ideology	age	religiosity	sex	white	income
Sales Tax	Public Agency	1	3.6727	41.8091	0.5182	0.3909	0.7091	2.8636
	Private Agency	2	3.9130	45.2065	0.5870	0.3696	0.7391	2.9239
Property Tax	Public Agency	3	3.7222	42.0889	0.5222	0.3222	0.7111	3.0111
	Private Agency	4	3.7757	40.3396	0.4953	0.4393	0.7103	2.9907
		Prob. > F	0.8169	0.0733	0.6132	0.3983	0.9595	0.6897

Next, I engaged in my analysis of whether privatized tax administration or the institution of a national sales tax produced an impact on tax compliance attitudes. A correlation matrix of my dependent variables is in Table 3.5 below. My Ordinary Least Squares (OLS) models are presented in Table 3.6 below. Across all of my models, I consistently found null effects. In Table 3.7 below, I added interaction terms to the models. In Tables 3.8 and 3.9, I added demographic covariates to the same sets of models as a robustness check. I continued to find null effects. These findings are highly suggestive that tax compliance attitudes may be highly inelastic. Luttmer and Singhal (2014) found that sixty percent of the people in the World Values Survey respond that tax avoidance is never acceptable, providing further evidence for this conclusion. As a result, I reject all of my hypotheses.



**Table 3.5: Correlation Matrix of Dependent Variables**

	Commitment	Disengagement	Game Playing	Resistance	Capitulation	Tax Support	Properly Implemented
Commitment	1						
Disengagement	0	1					
Game Playing	0	0	1				
Resistance	0	0	0	1			
Capitulation	0	0	0	0	1		
Tax Support	0.2828	0.3879	0.2811	-0.0535	0.1875	1	
Properly Implemented	0.2844	0.3386	0.3461	-0.0409	0.1777	0.8171	1

**Table 3.6: Base-Line Regression Outputs**

Dep. Variable	Model 3		Model 4		Model 5		Model 6		Model 7	
	Commitment		Disengagement		Game Playing		Resistance		Capitulation	
	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.
Government	0.0482	(0.48)	-0.0551	(-0.55)	-0.0216	(-0.21)	0.0960	(0.96)	0.00156	(0.02)
Sales Tax	-0.101	(-1.00)	-0.0848	(-0.84)	-0.00173	(-0.02)	0.117	(1.17)	-0.0691	(-0.69)
Constant	0.0267	(0.32)	0.0706	(0.83)	0.0117	(0.14)	-0.107	(-1.27)	0.0342	(0.40)
N	399		399		399		399		399	
R-Squared	0.0029		0.0028		0.0001		0.0062		0.0012	
F. Stat.	0.58		0.55		0.02		1.24		0.24	
Notes: 2 sided t-tests; t statistics in parentheses; * p<0.05; ** p<0.01; *** p<0.001										

**Table 3.7: Base-Line Regression Outputs with Interactions**

Dep. Variable	Model 8		Model 9		Model 10		Model 11		Model 12	
	Commitment		Disengagement		Game Playing		Resistance		Capitulation	
	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.
Government	0.0933	(0.65)	-0.105	(-0.73)	0.0789	(0.55)	0.174	(1.22)	-0.0169	(-0.12)
Sales Tax	-0.0559	(-0.39)	-0.134	(-0.94)	0.0975	(0.68)	0.194	(1.36)	-0.0873	(-0.61)
Government*Sales Tax	-0.0891	(-0.44)	0.0990	(0.49)	-0.198	(-0.98)	-0.154	(-0.76)	0.0365	(0.18)
Constant	0.00614	(0.06)	0.0935	(0.96)	-0.0342	(-0.35)	-0.143	(-1.48)	0.0426	(0.44)
N	399		399		399		399		399	
R-Squared	0.0034		0.0034		0.0026		0.0077		0.0013	
F. Stat.	0.45		0.45		0.34		1.02		0.17	
Notes: 2 sided t-tests; t statistics in parentheses; * p<0.05; ** p<0.01; *** p<0.001										

**Table 3.8: More Regression Outputs**

Dep. Variable	Model 13		Model 14		Model 15		Model 16		Model 17	
	Commitment		Disengagement		Game Playing		Resistance		Capitulation	
	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.
Government	0.0338	(0.35)	-0.0603	(-0.62)	-0.0197	(-0.21)	0.115	(1.19)	0.00440	(0.04)
Sales Tax	-0.117	(-1.20)	-0.0772	(-0.80)	0.0238	(0.25)	0.0981	(1.00)	-0.0937	(-0.93)
Age	0.00145	(0.38)	-0.0135***	(-3.59)	-0.0153***	(-4.10)	0.00308	(0.81)	0.0127**	(3.25)
Female	-0.0211	(-0.21)	-0.190	(-1.89)	-0.150	(-1.50)	0.141	(1.38)	-0.150	(-1.44)
Caucasian	0.150	(1.36)	-0.0659	(-0.60)	-0.0132	(-0.12)	-0.257*	(-2.33)	-0.244*	(-2.15)
Political Ideology	-0.159***	(-5.73)	0.0443	(1.60)	0.0750**	(2.73)	0.134***	(4.80)	0.0311	(1.08)
Religious	0.428***	(4.19)	0.388***	(3.81)	0.406***	(4.02)	-0.0000476	(-0.00)	-0.0242	(-0.23)
Income	0.0387	(0.76)	-0.0763	(-1.50)	0.104*	(2.07)	-0.0413	(-0.80)	0.0347	(0.66)
Constant	0.143	(0.57)	0.611*	(2.45)	-0.0929	(-0.38)	-0.489	(-1.94)	-0.464	(-1.79)
N	398		398		398		398		398	
R-Squared	0.1011		0.1037		0.1227		0.0883		0.0411	
F. Stat.	5.47		5.62		6.8		4.71		2.08	
Notes: 2 sided t-tests; t statistics in parentheses; * p<0.05; ** p<0.01; *** p<0.001										

**Table 3.9: More Regression Outputs that Include Interactions**

	Model 18		Model 19		Model 20		Model 21		Model 22	
	Commitment		Disengagement		Game Playing		Resistance		Capitulation	
	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.
Government	0.0614	(0.44)	-0.105	(-0.76)	0.0821	(0.60)	0.185	(1.33)	-0.0609	(-0.43)
Sales Tax	-0.0891	(-0.64)	-0.122	(-0.88)	0.125	(0.92)	0.167	(1.20)	-0.159	(-1.11)
Age	0.00134	(0.35)	-0.0133***	(-3.52)	-0.0157***	(-4.19)	0.00279	(0.73)	0.0130**	(3.30)
Female	-0.0185	(-0.18)	-0.195	(-1.92)	-0.140	(-1.40)	0.147	(1.44)	-0.157	(-1.49)
Caucasian	0.150	(1.37)	-0.0666	(-0.61)	-0.0116	(-0.11)	-0.256*	(-2.32)	-0.245*	(-2.15)
Political Ideology	-0.159***	(-5.72)	0.0442	(1.59)	0.0752**	(2.74)	0.134***	(4.80)	0.0310	(1.08)
Religious	0.427***	(4.17)	0.391***	(3.82)	0.401***	(3.96)	-0.00356	(-0.03)	-0.0209	(-0.20)
Income	0.0386	(0.76)	-0.0760	(-1.49)	0.104*	(2.06)	-0.0417	(-0.81)	0.0352	(0.67)
Government*Sales Tax	-0.0544	(-0.28)	0.0890	(0.46)	-0.201	(-1.04)	-0.136	(-0.69)	0.129	(0.64)
Constant	0.135	(0.53)	0.625*	(2.48)	-0.123	(-0.49)	-0.509*	(-2.01)	-0.445	(-1.70)
N	398		398		398		398		398	
R-Squared	0.1013		0.1042		0.1252		0.0894		0.0421	
F. Stat.	4.86		5.01		6.17		4.23		1.89	
Notes: 2 sided t-tests; t statistics in parentheses; * p<0.05; ** p<0.01; *** p<0.001										

### 3.5. Motivated Reasoning

Human beings impose cognitive constraints upon themselves by developing beliefs and taking on labels. As a result, it has been found by political psychologists that there is bias in the way that people process information. This bias will depend on how ambiguous the topic is (Baekgaard and Serritzlew 2016), and how partisan the topic is (James and Van Ryzin 2016). The label given to these psychological processes is called *motivated reasoning*.

In short, people engage in confirmation bias that leads to directional reasoning (Druckman 2012). When ordinary people receive information, they will weight it based on how much it harmonizes with their pre-existing views. Or even worse, eliminate it completely. As an example, James and Van Ryzin (2016) found that Democrats down-weight information that is not favorable to the Affordable Care Act (ACA), and Republicans down-weight information that is favorable to the Affordable Care Act. This partisan priming in the process of absorbing performance information is very troubling from a democratic perspective and should be carefully considered by public administrators.

With respect to this manuscript, I am interested in those identities and characteristics that could be functioning through the processes of motivated reasoning and producing an impact on tax policy attitudes. As an example, the political views and identities of a person could shape whether they have a regressive or progressive tax policy preference (Meier et al. 2020). Furthermore, it's possible that the dependent variables from Braithwaite (2002) are so global that identities may form crucial mediators in deciphering any causal processes. While the pursuit of understanding motivated reasoning in the context of tax attitudes will receive a lot of discussion in this manuscript, it is important for me to emphasize that this examination is for the purpose of

illuminating the social tax contract more thoroughly and not to transform the paper into one focused on developing theory around motivated reasoning.

The first avenue of motivated reasoning that I pursue surrounds political ideology. People can take on identities as “progressives” or “conservatives.” To examine this in more detail, I then analyze this data using two approaches. First, I introduce whether an observation is either progressive or conservative as a dichotomous covariate and include the whole sample in the analysis (Tables 3.10-3.13). In the second approach, I subset the participants into a progressive category and a conservative category (Tables C.1 – C.4 in Appendix C). The first category is for survey participants who self assign as liberals, and the second category is for survey participants who self assign as conservatives. I use subsets as an additional robustness check since the use of interactions from the first method may induce a substantial amount of collinearity. I would anticipate that conservatives, who frequently run for office on law-and-order platforms, are more likely to have tax compliant attitudes than progressives. However, people that are politically progressive may be more agreeable with current tax policy since they frequently favor expanding it.

My regression results for motivated reasoning in the context of political ideology are in Tables 3.10-3.13 below and Appendix C below. I found that conservatives were consistently anti-tax. Conservatives had a negative coefficient for commitment, a positive tax attitude, that was statistically significant at the 0.05 level (Model 33). Conservatives also had positive coefficients on disengagement, game playing, and resistance at the 0.01 level or better (Models 34-36). These latter three attitudes were negative tax attitudes. Moreover, conservatives had a statistically significant interaction in Model 38 where the presence of the government cue would increase positive tax attitude levels. This indirect finding is consistent with the theory of the

social tax contract. In contrast, the findings for progressives were nearly the complete opposite of conservatives and progressives could be summarized as pro-tax. Progressives had a positive coefficient for commitment that was statistically significant at the 0.001 level (Model 23). Similarly, they had negative coefficient for disengagement, game playing, and resistance at the 0.05 level or better (Models 24-26). Moreover, the interactions in Model 31 were both statistically significant at the .1 level; suggesting that progressives exhibited more resistance when there was a government cue and a regressive tax cue. Furthermore, in the subset models in Appendix C, I found in Model 76 that politically progressive participants are more likely to increase their level of tax resistance in response to the government cue and the national sales tax cue at the 0.05 significance level. These findings with the government cue are not consistent with my theoretical framework but the findings with the national sales tax are. In sum, I find that conservatives are anti-tax and progressives are pro-tax but there is little evidence of motivated reasoning here.

The second avenue of motivated reasoning that I pursue surrounds religiosity. Religious people can be categorized by typology and their level of religiosity. Religious people of all denominations have been found to more strictly believe in the tax code (Torgler 2006; Torgler 2007). I would thus anticipate that religious people of all faiths are more likely to have tax compliant attitudes than non-religious people. In my experiment, I ask survey participants if they would self assign as religious. I then analyze this data using two separate approaches. With the first approach, I introduce whether an observation was religious as a dichotomous covariate and include the whole sample in the analysis (Tables 3.14 and 3.15). In the second approach, I subset the participants into a religious category and a non-religious category (Tables C.5- C.8 in



Appendix C). Once again, I proceed with this two-pronged approach since using a subset of the data can mitigate issues with collinearity.

For the first analytical approach, I have the models divided into a table with just direct effects (Table 3.14) and a table with models that have just interactions (Table 3.15). I repeatedly found a direct effect for the religious covariate that was statistically significant in Models 43-45 and Models 49-50. The findings were not theoretically consistent. I found that religious people in Model 43 had a positive coefficient on commitment, a positive tax attitude, that was statistically significant at 0.05 level. However, they also had a positive coefficient on disengagement (Model 44) and game playing (Model 45), negative tax attitudes, that was statistically significant at the .001 level. In effect, religious people simultaneously held positive views of both categories of tax compliance attitudes: positive and negative. There were no statistically significant interactions between the treatments and the religious variable in Table 3.14. My regression results for data subsets are in Appendix C below. With respect to these models in Appendix C, I have a near plurality of null findings here with one exception. In Model 111, the government information cue resulted in a positive coefficient that is statistically significant at the 0.05 level. This finding suggests that the use of government workers may boost resistance levels for non-religious people. This finding is not consistent with my theory, but it is consistent with much of the literature in behavioral public administration that expects bureaucracy to have a negative impact on citizen perceptions (Hvidman and Andersen 2016). Once again, religiousness does produce counter-intuitive findings by it does not appear to be driving motivated reasoning.

### **3.6. Manipulation Check Robustness Models**

Next, I investigated whether my manipulation check on the tax category could shed some light on the efficacy of my research design. I took two approaches with this robustness check.

With the first approach, I took a subset of the data for those that passed this manipulation check. With this subset, I ran some additive models and some additional models with a multiplicative interaction term. It should be noted that some might be concerned about charges of self-selection bias. In response to this concern, I use a second approach for using this manipulation check as a measure of robustness. With this second method, I use the whole sample of data and added in the manipulation check as a simple covariate. Next, I interact this covariate with the relevant treatment to search for an effect. These two methods for checking robustness with the manipulation check should help with any concerns about the internal validity of the experiment.

In Table 3.16 and 3.17, I use the subset of observations that passed the tax categorization manipulation check. There was a total of 313 out of 399 observations that passed the check. Across all ten models (Models 63-72), I had null results. This first series of robustness checks suggests that there are not any systematic effects from those that passed the manipulation check which may be obfuscating the results.

In Tables 3.18 and 3.19, I use all 399 observations from the sample. In Table 3.18, I do not include an interaction term. In Table 3.19, I do include an interaction term between the manipulation check variable and the national sales tax treatment. In Table 3.18, I have findings for Models 64 and 65. Both of these models relate to negative measures of tax attitudes. In both models, the manipulation check variable has a negative coefficient suggesting that it reduces disengagement (.001 significance level) and game playing (0.01 significance level). In Table 3.19, the corresponding models are still statistically significant, but the interactions are not statistically significant. This suggests that the manipulation check has a direct effect on the dependent variables but it did not uncover any bias with the data.

**Table 3.10: Regression Models with Progressive Variable**

Dep. Variable:	Model 23		Model 24		Model 25		Model 26		Model 27	
	Commitment		Disengagement		Game Playing		Resistance		Capitulation	
	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.
Government	0.0327	(0.34)	-0.0484	(-0.48)	-0.0151	(-0.15)	0.108	(1.10)	0.00572	(0.06)
Sales Tax	-0.0934	(-0.96)	-0.0879	(-0.88)	-0.00471	(-0.05)	0.112	(1.13)	-0.0710	(-0.71)
Progressive	0.531***	(5.43)	-0.231*	(-2.29)	-0.223*	(-2.21)	-0.415***	(-4.19)	-0.143	(-1.41)
Constant	-0.198*	(-2.15)	0.168	(1.78)	0.106	(1.12)	0.0684	(0.74)	0.0948	(1.00)
N	399		399		399		399		399	
R-Squared	0.0721		0.0158		0.0124		0.0486		0.0062	
F. Stat.	10.23		2.12		1.65		6.73		0.82	

Notes: 2 sided t-tests; t statistics in parentheses; \* p<0.05; \*\* p<0.01; \*\*\* p<0.001

**Table 3.11: Regression Models with Progressive Variable Interactions**

Dep. Variable:	Model 28		Model 29		Model 30		Model 31		Model 32	
	Commitment		Disengagement		Game Playing		Resistance		Capitulation	
	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.
Government	0.0657	(0.51)	0.0614	(0.46)	0.0331	(0.25)	-0.0371	(-0.29)	-0.101	(-0.76)
Sales Tax	-0.0815	(-0.63)	-0.0750	(-0.57)	0.0161	(0.12)	-0.0384	(-0.30)	-0.0273	(-0.21)
Progressive	0.582***	(3.51)	-0.0889	(-0.52)	-0.144	(-0.84)	-0.756***	(-4.53)	-0.216	(-1.26)
Government*Progressive	-0.0762	(-0.39)	-0.255	(-1.26)	-0.111	(-0.55)	0.332	(1.68)	0.250	(1.23)
Sales Tax*Progressive	-0.0264	(-0.13)	-0.0257	(-0.13)	-0.0465	(-0.23)	0.343	(1.73)	-0.106	(-0.52)
Constant	-0.220*	(-2.02)	0.108	(0.96)	0.0720	(0.64)	0.216*	(1.98)	0.125	(1.11)
N	399		399		399		399		399	
R-Squared	0.0725		0.0199		0.0133		0.0639		0.0105	
F. Stat.	6.14		1.6		1.06		5.36		0.83	
Notes: 2 sided t-tests; t statistics in parentheses; * p<0.05; ** p<0.01; *** p<0.001										

**Table 3.12: Regression Models with Conservative Variable**

Dep. Variable:	Model 33		Model 34		Model 35		Model 36		Model 37	
	Commitment		Disengagement		Game Playing		Resistance		Capitulation	
	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.
Government	0.0513	(0.51)	-0.0590	(-0.59)	-0.0269	(-0.27)	0.0905	(0.92)	-0.00104	(-0.01)
Sales Tax	-0.0992	(-0.99)	-0.0864	(-0.87)	-0.00392	(-0.04)	0.115	(1.17)	-0.0701	(-0.70)
Conservative	-0.241*	(-2.30)	0.299**	(2.86)	0.414***	(3.99)	0.428***	(4.14)	0.202	(1.92)
Constant	0.107	(1.18)	-0.0293	(-0.32)	-0.127	(-1.40)	-0.250**	(-2.78)	-0.0334	(-0.36)
N	399		399		399		399		399	
R-Squared	0.0161		0.023		0.0388		0.0476		0.0104	
F. Stat.	2.15		3.09		5.31		6.58		1.39	

Notes: 2 sided t-tests; t statistics in parentheses; \* p<0.05; \*\* p<0.01; \*\*\* p<0.001

**Table 3.13: Regression Models with Conservative Variable Interactions**

Dep. Variable:	Model 38		Model 39		Model 40		Model 41		Model 42	
	Commitment		Disengagement		Game Playing		Resistance		Capitulation	
	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.
Government	-0.0983	(-0.80)	-0.131	(-1.07)	0.0114	(0.09)	0.143	(1.18)	0.0427	(0.34)
Sales Tax	-0.106	(-0.86)	-0.0218	(-0.18)	-0.0430	(-0.35)	0.226	(1.86)	-0.0474	(-0.38)
Conservative	-0.470**	(-2.64)	0.288	(1.62)	0.412*	(2.33)	0.667***	(3.81)	0.300	(1.67)
Government*Conservative	0.436*	(2.07)	0.212	(1.01)	-0.112	(-0.54)	-0.150	(-0.72)	-0.127	(-0.60)
Sales Tax*Conservative	0.0154	(0.07)	-0.190	(-0.90)	0.115	(0.55)	-0.323	(-1.56)	-0.0654	(-0.31)
Constant	0.185	(1.79)	-0.0260	(-0.25)	-0.126	(-1.23)	-0.332**	(-3.26)	-0.0666	(-0.64)
N	399		399		399		399		399	
R-Squared	0.0269		0.0271		0.0401		0.0552		0.0117	
F. Stat.	2.17		2.19		3.28		4.59		0.93	

Notes: 2 sided t-tests; t statistics in parentheses; \* p<0.05; \*\* p<0.01; \*\*\* p<0.001

**Table 3.14: Regression Models with Religious Variable**

Dep. Variable:	Model 43		Model 44		Model 45		Model 46		Model 47	
	Commitment		Disengagement		Game Playing		Resistance		Capitulation	
	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.
Government	0.0533	(0.53)	-0.0463	(-0.47)	-0.0118	(-0.12)	0.0995	(0.99)	0.00191	(0.02)
Sales Tax	-0.111	(-1.11)	-0.103	(-1.04)	-0.0217	(-0.22)	0.110	(1.10)	-0.0698	(-0.69)
Religious	0.238*	(2.38)	0.410***	(4.16)	0.456***	(4.65)	0.164	(1.63)	0.0164	(0.16)
Constant	-0.0965	(-0.98)	-0.141	(-1.45)	-0.224*	(-2.31)	-0.192	(-1.94)	0.0257	(0.26)
N	399		399		399		399		399	
R-Squared	0.017		0.0446		0.052		0.0129		0.0013	
F. Stat.	2.28		6.15		7.22		1.72		0.17	

Notes: 2 sided t-tests; t statistics in parentheses; \* p<0.05; \*\* p<0.01; \*\*\* p<0.001

**Table 3.15: Regression Models with Religious Variable Interactions**

Dep. Variable:	Model 48		Model 49		Model 50		Model 51		Model 52	
	Commitment		Disengagement		Game Playing		Resistance		Capitulation	
	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.
Government	-0.0106	(-0.07)	-0.128	(-0.88)	-0.0349	(-0.24)	0.231	(1.57)	-0.00381	(-0.03)
Sales Tax	-0.0537	(-0.37)	-0.0138	(-0.10)	-0.0555	(-0.38)	0.0724	(0.49)	0.124	(0.84)
Religious	0.232	(1.37)	0.417*	(2.51)	0.400*	(2.40)	0.257	(1.52)	0.204	(1.20)
Government*Religious	0.116	(0.57)	0.146	(0.74)	0.0466	(0.24)	-0.245	(-1.22)	-0.00576	(-0.03)
Sales Tax*Religious	-0.103	(-0.51)	-0.161	(-0.81)	0.0658	(0.33)	0.0595	(0.30)	-0.366	(-1.81)
Constant	-0.0916	(-0.76)	-0.143	(-1.21)	-0.196	(-1.66)	-0.241*	(-2.00)	-0.0654	(-0.54)
N	399		399		399		399		399	
R-Squared	0.0184		0.0473		0.0524		0.0167		0.0096	
F. Stat.	1.47		3.9		4.35		1.33		0.76	
Notes: 2 sided t-tests; t statistics in parentheses; * p<0.05; ** p<0.01; *** p<0.001										



**Table 3.16: Regression Models for Manipulation Check Subset**

	Model 53		Model 54		Model 55		Model 56		Model 57	
	Commitment		Disengagement		Game Playing		Resistance		Capitulation	
	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.
Government	-0.0181	(-0.15)	-0.0313	(-0.29)	0.00349	(0.03)	0.0481	(0.42)	0.0453	(0.38)
Sales Tax	-0.0569	(-0.47)	0.104	(0.93)	0.0843	(0.72)	0.00878	(0.08)	-0.0346	(-0.28)
Constant	0.000279	(0.00)	-0.199*	(-2.00)	-0.123	(-1.18)	0.0183	(0.18)	-0.0279	(-0.26)
N	313		313		313		313		313	
R-Squared	0.0008		0.0029		0.0017		0.0006		0.0007	
F. Stat.	0.13		0.45		0.27		0.1		0.1	
Notes: 2 sided t-tests; t statistics in parentheses; * p<0.05; ** p<0.01; *** p<0.001										

**Table 3.17: Regression Models for Manipulation Check Subset with Interactions**

	Model 58		Model 59		Model 60		Model 61		Model 62	
	Commitment		Disengagement		Game Playing		Resistance		Capitulation	
	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.
Government	-0.0327	(-0.17)	-0.215	(-1.24)	0.115	(0.63)	0.104	(0.57)	0.0602	(0.32)
Sales Tax	-0.0687	(-0.40)	-0.0442	(-0.28)	0.174	(1.06)	0.0540	(0.33)	-0.0226	(-0.13)
Government*Sales Tax	0.0241	(0.10)	0.303	(1.35)	-0.183	(-0.78)	-0.0926	(-0.40)	-0.0246	(-0.10)
Constant	0.00682	(0.05)	-0.117	(-1.00)	-0.172	(-1.42)	-0.00684	(-0.06)	-0.0346	(-0.27)
N	313		313		313		313		313	
R-Squared	0.0009		0.0088		0.0037		0.0011		0.0007	
F. Stat.	0.09		0.91		0.38		0.12		0.07	
Notes: 2 sided t-tests; t statistics in parentheses; * p<0.05; ** p<0.01; *** p<0.001										

**Table 3.18: Regression Models for Manipulation Check Variable**

	Model 63		Model 64		Model 65		Model 66		Model 67	
	Commitment		Disengagement		Game Playing		Resistance		Capitulation	
	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.
Government	0.0488	(0.49)	-0.0525	(-0.55)	-0.0203	(-0.20)	0.0954	(0.95)	0.00191	(0.02)
Sales Tax	-0.0423	(-0.39)	0.161	(1.55)	0.118	(1.09)	0.0561	(0.52)	-0.0368	(-0.34)
Manipulation Check	-0.184	(-1.40)	-0.778***	(-6.16)	-0.378**	(-2.88)	0.193	(1.47)	-0.102	(-0.77)
Constant	0.142	(1.20)	0.555***	(4.91)	0.247*	(2.11)	-0.228	(-1.93)	0.0979	(0.83)
N	399		399		399		399		399	
R-Squared	0.0078		0.0902		0.0207		0.0116		0.0027	
F. Stat.	1.04		13.05		2.79		1.55		0.36	

Notes: 2 sided t-tests; t statistics in parentheses; \* p<0.05; \*\* p<0.01; \*\*\* p<0.001

**Table 3.19: Regression Models for Manipulation Check Interaction**

	Model 68		Model 69		Model 70		Model 71		Model 72	
	Commitment		Disengagement		Game Playing		Resistance		Capitulation	
	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.
Government	0.0514	(0.51)	-0.0457	(-0.48)	-0.0165	(-0.16)	0.102	(1.01)	0.00108	(0.01)
Sales Tax	0.114	(0.37)	0.559	(1.88)	0.341	(1.10)	0.435	(1.40)	-0.0859	(-0.28)
Manipulation Check	-0.149	(-1.01)	-0.689***	(-4.90)	-0.328*	(-2.24)	0.278	(1.89)	-0.113	(-0.77)
Manipulation Check*Sales Tax	-0.179	(-0.54)	-0.454	(-1.43)	-0.255	(-0.77)	-0.432	(-1.30)	0.0560	(0.17)
Constant	0.118	(0.94)	0.496***	(4.13)	0.214	(1.72)	-0.283*	(-2.26)	0.105	(0.83)
N	399		399		399		399		399	
R-Squared	0.0085		0.0949		0.0222		0.0159		0.0028	
F. Stat.	0.85		10.33		2.24		1.59		0.27	
Notes: 2 sided t-tests; t statistics in parentheses; * p<0.05; ** p<0.01; *** p<0.001										

### 3.7. Discussion and Conclusions

In sum, I have an assortment of findings. First, my research produced evidence against the bounded rationality theory on tax knowledge in the literature. My working class MTurk sample was effectively able to discern that a national sales tax is less appealing for them than an increase in capital gains tax on investments. This is due to them being unlikely to have any investments. Furthermore, this finding provides some evidence in favor of my first hypothesis and suggests that my MTurk sample does have some tax knowledge under their belt.

My findings in relation to the Braithwaite (2002) motivational posture scales on tax compliance is complicated. My chief finding is that tax compliance attitudes appear to be highly inelastic. This finding is consistent with the literature that has found that 60% of respondents to the World Values Survey think it is never acceptable to avoid taxes (Luttmer and Singhal 2014). The durability of these views could be a by-product of Motivated Reasoning, but I found little evidence for this conclusion in my analysis.

I should note that I attempted to develop a tax treatment that was the most reasonable regressive tax possible that would also produce a response from my experimental participants. The American sales tax on the final value of goods and services fits this goal. Other options included flat taxes, user fees, and “sin” taxes. However, I did not think that they would be salient enough to have an effect. In Europe, Value Added Tax (VAT), which is a regressive tax, is very popular but it has not taken hold in the U.S. Given that I am working with an American subject pool, a sales tax is effectively the optimal tax for my research purposes. However, I expect that any findings would be null for any regressive tax at reasonable values. It may be possible that different effects would have been realized at more extreme rates of a conventional sales tax.

There is one potential weakness to my research design. This experiment was a one-shot game, and it may take repeated interaction with such a regressive sales tax to truly alter tax compliance attitudes. Moreover, it may be necessary for the participants to actually be taxed before they change their behavior. As a result, a lab experiment with a simulation may also be able to get at this research question with more precision. Furthermore, focusing on the benefit side of the equation of the social tax contract may be a more productive area of future research; but, tax nudge field experiments in the area of the social tax contract have only seen modest success (Castro and Scartascini 2015; Dwenger et al. 2016).

However, it is entirely possible that the tax morale of individual taxpayers is impervious to violations of the *social tax contract*. If this is the case, then a variety of tools open up for policymakers. Most importantly, tax authorities can experiment with different taxes and privatization schemes without any fear of damaging their relationship with the public. But caution should be heeded that extreme policies are not followed that lead to a repeat of the property tax rebellion of the United States in the 1970s.

## 4. TAX BUREAUCRACY AND STEREOTYPING: A SURVEY EXPERIMENT ON SECTOR-BIAS IN PUBLIC FINANCE

### 4.1. Introduction

New Public Management (NPM) represents not only a managerial paradigm but a form of sector bias (Pollitt 1995). With the collapse of the Soviet Union, came a conviction in the hearts of ordinary Westerners that the private sector was both more efficient and effective than their government could be. At this time, performance-based initiatives (e.g. private sector management techniques) were adopted and government privatizations occurred. The public sector inched ever closer to private sector ideals, regardless of whether this was optimal or advantageous (Pollitt 2000). After the 2008 financial crisis occurred, confidence in private sector methods was damaged and this was reflected in the literature (See, e.g., Levy 2010). However, Western economies soon improved and certain aspects of NPM were reborn and growing across the globe (Dan and Pollitt 2015).

Rose colored glasses that accompany private sector institutions in the West are complemented by the rhetoric that surrounds the public sector. Bureaucracy bashing is a common pastime by both politicians and ordinary Americans (Goodsell 2004; Marvel 2016). Bureaucracies have become almost a “dirty word” in our contemporary lexicon (Perrow, 1970, Pg. 50). Structurally, bureaucracies are perceived to be characterized by rigid mechanistic structures that come endowed with their own advantages and disadvantages. The key advantage of this structure is equity and political accountability that is cherished in democracies (Weber 1947). Key disadvantages come in the form of a lack of adaptability and shirking agents.

Regardless of any tradeoffs, it becomes easy to see how bureaucratic agencies can be easily scapegoated by entrepreneurial politicians.

This negative rhetoric shapes how people distinguish between types of organizations, potentially leading to public sector bias. Based on how people have been conditioned to view the public sector, one would expect that the average Westerner has at least a modest amount of negative bias against public organizations. One would further expect some variation across Western countries with the corporatist Scandinavian countries possessing the least bias and the anglophile countries possessing the most bias (Meier et al. 2019). However, empirical findings thus far have not corroborated this common-sense theory. For this reason, it is important that researchers continue to explore sector bias in a variety of fields. One field that has been overlooked is tax administration. This topical area is important since negative sector bias with tax administration may lead to a drop in tax compliance (Meier et al. 2020). This brings me to my research question: Does the American public experience sector bias against tax administrations that have experimented with outsourcing organizational functions?

A second research objective I explore is whether privatized tax functions are likened with a performance-based reputation. In other words, I attempt to dissect whether privatized functions are equated with being high performing. By controlling for reputation, I attempt to answer this second research endeavor. However, my findings from all interventions in the present experiment are null findings. In all of my statistical models, I find that the public does not have a sector bias. Perhaps this suggests that tax opinions are highly inelastic.

After this introduction, I include a comprehensive literature review for all of the articles that touch on sector bias. Following my literature review, I present a theoretical framework and



testable hypotheses that seeks to address my research question. Then, I present my empirical section that carefully documents all the subtle nuances of my analysis for this paper. In this manuscript, I utilize a between-subjects survey experiment to address my research question. Next, I address my empirical findings in the context of motivated reasoning. Finally, I end the paper with a section that contains my discussion and conclusions. In summary, I systematically address my topic and find no evidence for sector bias in the privatization of tax administration functions.

## **4.2. Literature Review**

The literature in Behavioral Public Administration has examined sector-bias in a variety of locations, centering on healthcare and parcel services. Hvidman and Andersen (2016) were the first two to examine hospitals in Denmark with a student sample. The authors found that Danish students viewed public hospitals as being less efficient and having more red tape. What made this study significant was the setting: corporatist Denmark. Hvidman and Andersen (2016) suggested that their findings would be easily replicated in anglophile countries. Meier, Johnson, and An (2019) then replicated their study in the United States with a student sample and an online convenience sample. With both pools of participants, the authors arrived at null findings, suggesting that there is no sector-bias in America with hospitals. Meier and An (2020) extended Meier, Johnson, and An (2019) with nonprofit hospitals, and once again found no evidence of sector-bias there. These articles on hospitals are interesting because of the contrasting findings between Scandinavia and America. One would expect pro-public bias in Scandinavia given the high level of government spending, but that is not what has been found.

Some research has also been done on parcel services. Marvel (2015) found that the United States Postal Service (USPS) is viewed as lower performing than Fedex, and positive performance reviews cannot override this effect. Marvel (2016) found that sector bias with postal services is implicit in the human psyche. These last two articles were based in the United States, providing some basis for the presence of sector bias in the United States.

Similar to hospitals, some research has also been done with elder care provision. Back in Denmark, Hvidman (2019) found that in-home elderly care that is public is believed to be performing worse than the private sector on the dimensions of effectiveness and red tape. This article is interesting because it provides additional evidence in favor of sector bias in Denmark. Meier et al. (2020) found with the provision of elder care that for-profit nursing homes were rated lower on a variety of dimensions, including effectiveness, efficiency, and equity; and the authors further found no distinguishable difference between for-profit performance and government performance. Moreover, Van Slyke and Roch (2004) found that citizens will misidentify a private organization as a public one when dissatisfied with outcomes.

Van Den Bekerom et al. (2021) also looked at how negativity could tangentially look at sector-bias in a study from the Netherlands. The authors examined service provision in three separate fields. The authors found that negative performance information is more detrimental to public-sector organizations than private-sector organizations using a large sample of respondents. In contrast, positive performance information was found to have almost no impact. This study is intriguing because of the way that it amplified the study of negativity bias in the context of sector bias.

An allied literature is in the study of blame attribution with public organizations. An open question is whether outsourcing a public function to the private sector will mitigate blame. In James et al. (2016), the authors tested this theory with street maintenance in England. The authors found that blame could not be mitigated by outsourcing to the private sector. In Marvel and Girth (2016), the authors explore governance in the realm of a municipal public works department. The authors also find that the government cannot avoid blame through the use of private sector contractors. In Piatak et al. (2017), the authors explore third party government in the realm of street sanitation. The authors find that the public is equally sympathetic to both city employees and private sector contractors with one exception; when there are financial shortfalls, blame shifts from private sector contractors to the government. In Leland et al. (2021), the authors explore blame attribution across different levels of government along with contracting out services. The authors find that local governments incur less blame than national or state governments. Furthermore, they find that contracting out services helps to mitigate blame to the government. In Ramirez (2021), the author explores blame attribution in military contracting, and the author discover the private-sector soldiers (i.e. mercenaries) increases the spread of blame to the government than what would otherwise happen with ordinary government soldiers. In Johnson, Geva, and Meier (2019), the authors explore government contracting in national defense. The authors find that private-sector soldiers are viewed as inferior service providers relative to government soldiers. These studies on blame attribution provide an additional lens to examine sector bias indirectly.

### **4.3. A Theoretical Argument**

For many people in America, the word “bureaucracy” has a negative connotation that is reinforced by the way our society indoctrinates people from an early age (Goodsell 2004). Furthermore, spending to GDP in the U.S. is a fraction of what other Western countries spend, increasing the social distance between Americans and their government (OECD 2020). Moreover, America’s faith in elected representatives, such as with Congress, is also at record lows (Cooper 2018), and a lack of support for government agencies is also the norm (Bok 2001; Marvel 2015; Rölle 2017). All of these factors reflect attitudes or contributions to attitudes by the American public, and it is natural to suspect that these attitudes will sculpt public sector bias.

Public organizations are also characterized by their hierarchy, formalization, and specialization. These are factors which lead to a high level of political accountability and social equity (Weber 1947). These factors are highly important for democracies but are the antithesis of a high performing organic private sector enterprise. By being overly mechanistic, government agencies provide credibility to the illusion held by the broader public that they are burdened by too much red tape and are not effective at their core public missions. By red tape, I am referring to the illusion that there are too many rules and procedures that get in the way of a public organization’s day-to-day operations (Bozeman et al. 1992). Moreover, red tape can also be described as a consequence of our governmental separation of powers in conjunction within our system of checks and balances (Allison 1983; Baldwin 1990; Golembiewski 1969; and Gortner et al. 1984). Red tape can come in one of two forms (Baldwin 1990): formal and informal. Where formal red tape is institutional red tape that has come into existence through formal procedures; and informal red tape is a result of externalized forces, such as pressure from public

opinion (Baldwin 1990). In this manuscript, I am focusing on formal forms of red tape. Some of the reasons for the existence of formal red tape include goal ambiguity, risk aversion, and weak ties between compensation and performance (Rainey et al. 1995).

**Hypothesis 1:** Government agents will be rated as higher with measures of red tape.

**Hypothesis 2:** Government agents will be rated as lower with measures of effectiveness.

Organizations can further enjoy some form of organizational reputation which is turning into an important area of public administration research (Lee and Van Ryzin 2019; Overman et al. 2020). Standifird (2001) characterizes reputation as an organization's expected behavior when in action. Reputation can also be understood as the external image of an organization (Overman et al. 2020), which can sculpt its "brand equity" (Teodoro and An 2018, Pg. 323). The perception of an organization's reputation can also vary by stakeholder group (Lange et al. 2011; Lee and Van Ryzin 2019). A problem that arises is that forming reputations can be difficult when the inner-workings of organizations can be summarized as a black box (Rindova et al. 2005). However, public organizations almost always have constituent audiences and associated networks that provide some level of functional transparency that includes interactions with Congress (Carpenter 2001; Carpenter 2010). Moreover, the reputation of an agency head can serve in lieu of an agency itself under certain circumstances (Maor 2016). Reputations with public organizations can also be subdivided into four categories: performance, moral, procedural, and technical reputations (Carpenter and Krause 2012). Performance reputation relates to whether the organization is competent. Moral reputation relates to whether the organization acts faithfully unto its stakeholders. Procedural reputation relates to whether the organization adheres to norms and procedures for bureaucratic agencies. Finally, technical reputation relates to

whether an organization has the “capacity and skill required” to perform at its job (Carpenter and Krause 2012, Pg. 27).

In the absence of evidence to establish a technical reputation, the provision of reliable information should be able to help fill any knowledge gaps that may exist. Some cues about private sector contracting may also help to shape a reputation. I posit that a trusted media outlet may have the capacity to shape an organizational reputation more directly.

**Hypothesis 3:** New information that signals high performance will lead to organizations being rated lower with measures of red tape.

**Hypothesis 4:** New information that signals high performance will lead to organizations being rated higher with measures of effectiveness.

It is also possible that certain identity characteristics may serve as important mediators with respect to the causal processes discussed in this paper. This is part of the social science phenomena known as *motivated reasoning*. I will flesh out the theory surrounding motivated reasoning in a subsequent section of this manuscript. But one would expect certain identities to have statistically significant interactions with the treatment variables.

#### **4.4. Empirical Analysis<sup>6</sup>**

In this study, I utilize a survey experiment to answer my research question. The source of my experimental participants is Amazon’s Mechanical Turk (hereafter “MTurk”). It should be noted that MTurk has been criticized as a source of survey respondents by some scholars. These

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<sup>6</sup> Summary statistics for all variables used are presented in Appendix D in Table D.1. The table of means per experiment is presented in Table D.2.

criticisms have centered upon the demographic makeup of MTurk, the presence of professional survey takers, foreign respondents, and bots. However, these fears have been addressed in the literature. With respect to who participates on MTurk, the average participant on MTurk does lean toward being female, young, and Caucasian but not excessively so (Huff and Tingley 2015). Furthermore, Berinsky et al. (2012) has managed to replicate the results of numerous major American surveys, such as the ANES. Further research has suggested a high degree of external validity with MTurk findings (Mullinix et al. 2015). Furthermore, fears of foreign respondents and bots can be addressed by simply configuring an online survey properly. As a result, this past conjecture about MTurk's inadequacies can be set aside.

For my empirical work, there are two treatments forming a 2x2 factorial design experiment. The treatments for this experiment are introduced through a vignette. The first treatment is whether a team of analysts is part of a private-sector enterprise or directly employed by the IRS. The second treatment is whether the agents have had their reputations augmented by being rated positively by a newspaper.

The vignette is as follows:

*American multi-national businesses have engaged in tax avoidance strategies to reduce the amount of taxes owed to the IRS. As an example, Google has reduced their effective tax rate from 35% to a mere 3%.*

*The U.S. government has been taking these firms to tax court in an effort to win back revenues that are being moved to overseas tax havens. In order to win more court cases, new personnel have been recruited to serve as valuations analysts and expert-witnesses for the IRS. (Insert Sector cue here). (Insert reputation cue here).*

*However, the success of the new program has been lackluster. The IRS has continued to lose court cases at the same rate as previous years. Furthermore, the IRS has yet to express an interest in changing its new approach to prosecuting multi-national businesses in tax court.*

*Public Sector Cue: The IRS has constructed an internal IRS team of analysts and expert-witnesses from the private sector. These new government professionals are intended to help prove that multinational firms are not paying their fair share of taxes.*

*Private Sector Cue: The IRS has since signed a contract with FTI Consulting, a large private sector consulting firm, to supply the necessary personnel. These private-sector professionals are intended to help prove that multinational firms are not paying their fair share of taxes.*

*Reputation Cue: According to the Wall Street Journal, these valuation professionals reportedly represent some of the best analysts in the world.*

After reading the vignette, the participants in the survey are directed toward a series of questions that address several dimensions of organizations in different sectors. These scales are listed in Table 4.1 below, and they were derived from those in Meier et al. (2020).

I then used factor analysis to reduce the scales to their underlying dimensions. With principle components analysis and a varimax rotation, I found that everything loaded up on two factors: effectiveness and red tape. This slightly differs from the results of other papers in the literature that developed unique factors for efficiency and benevolence, but my results are robust. I then predicted the factor scores using the least squares regression approach that predicts the location of each observation on the component (DiStefano et al. 2009; Thurstone 1935; Thomson 1951). As a result, I have two dependent variables for my empirical analysis. The loadings are



depicted in Table 4.2 below. The variables in Table 4.2 correspond to the numbered statements from Table 4.1.

**Table 4.1: Organizational Scales for Factor Analysis**

1	The Internal Revenue Service (IRS) provides services efficiently.
2	The Internal Revenue Service (IRS) makes the most of its monetary and human resources.
3	The Internal Revenue Service (IRS) is not wasteful.
4	The Internal Revenue Service (IRS) resources are well spent.
5	The Internal Revenue Service (IRS) is effective.
6	The Internal Revenue Service (IRS) is effective in accomplishing its core mission.
7	The Internal Revenue Service (IRS) is effective in delivering a very good service.
8	The Internal Revenue Service (IRS) is genuinely interested in the well-being of taxpayers.
9	The Internal Revenue Service (IRS) acts in the interest of taxpayers.
10	The Internal Revenue Service (IRS) has a high level of burdensome administrative rules and procedures.
11	A high level of administrative procedures negatively affects the Internal Revenue Service's (IRS) effectiveness.
12	The Internal Revenue Service (IRS) delivers services to taxpayers in a fair and impartial way.
13	Every taxpayer, regardless of race, religion or income, gets the same quality of services by the Internal Revenue Service (IRS).
14	Persons of any race, religion or income have an equal chance of being audited by the Internal Revenue Service (IRS).

**Table 4.2: Factor Loadings**

Variable	Factor 1	Factor 2
1	0.8966	
2	0.8993	
3	0.8951	
4	0.9309	
5	0.9127	
6	0.8814	
7	0.9356	
8	0.8807	
9	0.8709	
10		0.8997
11		0.9078
12	0.8483	
13	0.7741	
14	0.7145	

My first factor, effectiveness, has a Chronbach’s alpha of 0.97. My second factor, red tape, has a Chronbach’s alpha of 0.82. These results lead me to believe that the factor scores that I’m using in my analysis are quite sound.

I also asked two manipulation check questions in my survey along with a slate of demographic questions. With respect to the first manipulation check, I found that only 57 percent of the respondent correctly identified the organizational sector of the tax agents. With regard to my second manipulation check, I found that 62 percent of my survey participants correctly identified the reputation level of the organization from the vignette. Due to these findings, I ran an additional set of regression models that examined only participants who passed the manipulation check. Next, I examined whether the participants were properly randomized in my experiment. I proceeded with this next step by calculating the F-test of the difference of means across groups. I placed the results in Table 4.3 below. Fortunately, I was able to deduce that there were no problems with the randomization process in this experiment.

**Table 4.3: Balance Across Experiments Groupings**

		Group	ideology	age	religiosity	sex	white	income
No Reputation Cue	Public Agents	1	4.186916	39.48598	0.570094	0.439252	0.672897	2.813084
	Private Agents	2	4.244186	38.69767	0.639535	0.395349	0.662791	2.872093
Reputation Cue	Public Agents	3	4.219048	39.02857	0.590476	0.285714	0.676191	2.971429
	Private Agents	4	4.019231	41.41346	0.644231	0.432692	0.740385	3.019231
		Prob. > F	0.867	0.4943	0.6371	0.0653	0.6	0.3334

Next, I analyzed whether the treatments had an impact on my dependent variables. In Table 4.4 below, I examine the impacts on effectiveness. In Model 1, I have just the additive

model. And in Model 2, I add a multiplicative interaction term. In Models 3 & 4, I add in demographic covariates as a robustness check. Regardless of the model specification, I had null effects with all of my treatment variables.

In Table 4.5 below, I examine the impacts on red tape. In Model 5, I have just an additive model. In Model 6, I add to the previous model a multiplicative interaction term. In Models 7 & 8, once again, I add in demographic covariates as a robustness check. Findings were the same for red tape as they were with effectiveness. In short, there were null effects across all of these models too. Cumulatively, these findings lead me to reject all of my hypotheses.

It is important to note that there are some statistically significant demographic covariates in Models 3-4 and 7-8. Most importantly, religiosity was statistically significant at the 0.001 level in the effectiveness models (3-4). Furthermore, political ideology was statistically significant at the 0.05 level in the red tape models (7-8). These findings hint at the importance of identities in the context of motivated reasoning. Shortly, I will discuss this psychological phenomenon in more detail.

**Table 4.4: Regression Outputs for Effectiveness Models**

Dep. Variable	Model 1		Model 2		Model 3		Model 4	
	Effectiveness		Effectiveness		Effectiveness		Effectiveness	
	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.
Government	0.0294	(0.29)	-0.115	(-0.79)	0.0287	(0.31)	-0.0492	(-0.37)
Reputation	0.0122	(0.12)	-0.134	(-0.92)	0.0168	(0.18)	-0.0626	(-0.47)
Government*Reputation	-	-	0.276	(1.37)	-	-	0.150	(0.81)
Age	-	-	-	-	-0.0153***	(-4.28)	-0.0152***	(-4.24)
Political Ideology	-	-	-	-	0.0236	(0.96)	0.0231	(0.94)
Female	-	-	-	-	-0.279**	(-2.87)	-0.272**	(-2.79)
Caucasian	-	-	-	-	-0.144	(-1.41)	-0.141	(-1.38)
Religious	-	-	-	-	0.596***	(5.84)	0.597***	(5.85)
Income	-	-	-	-	-0.0433	(-0.81)	-0.0433	(-0.81)
Constant	-0.0218	(-0.24)	0.0581	(0.54)	0.457*	(2.00)	0.493*	(2.12)
N	402		402		402		402	
R-Squared	0.0002		0.005		0.1787		0.1801	
F. Stat.	0.05		0.66		10.69		9.57	
Notes: 2 sided t-tests; t statistics in parentheses; * p<0.05; ** p<0.01; *** p<0.001								

**Table 4.5: Regression Outputs for Red Tape Models**

Dep. Variable	Model 5		Model 6		Model 7		Model 8	
	Red Tape		Red Tape		Red Tape		Red Tape	
	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.
Government	-0.108	(-1.08)	-0.0587	(-0.41)	-0.0884	(-0.91)	-0.0443	(-0.32)
Reputation	0.141	(1.42)	0.191	(1.31)	0.118	(1.21)	0.163	(1.15)
Government*Reputation	-	-	-0.0937	(-0.47)	-	-	-0.0851	(-0.44)
Age	-	-	-	-	0.0120**	(3.15)	0.0119**	(3.13)
Political Ideology	-	-	-	-	0.0543*	(2.08)	0.0545*	(2.09)
Female	-	-	-	-	-0.0162	(-0.16)	-0.0202	(-0.20)
Caucasian	-	-	-	-	-0.0950	(-0.88)	-0.0968	(-0.90)
Religious	-	-	-	-	0.183	(1.70)	0.183	(1.69)
Income	-	-	-	-	0.104	(1.85)	0.104	(1.85)
Constant	-0.0166	(-0.18)	-0.0438	(-0.41)	-1.059***	(-4.39)	-1.079***	(-4.39)
N	402		402		402		402	
R-Squared	0.0083		0.0088		0.0818		0.0822	
F. Stat.	1.67		1.18		4.38		3.9	
Notes: 2 sided t-tests; t statistics in parentheses; * p<0.05; ** p<0.01; *** p<0.001								

#### **4.5. Manipulation Check Robustness Models**

Manipulation check results were then examined to see if those that passed the first check had different preferences. I pursued these robustness checks via two separate methods, using the sector bias manipulation check. For the first method, I took a sub-set of the data that passed this particular manipulation check and re-ran the models to test for this feature. However, there is a potential concern that can be leveled about this approach in the form of self-selection bias. For this reason, I also include a second method. In the second method, I utilize the entire sample and introduce the sector bias manipulation check as a covariate in the model. I then interact it with the relevant treatment to see if there are any findings. Together, these two manipulation check methods should help to mitigate any concerns about the robustness of the results.

First, I developed the subset models with respect to who passed the sector bias manipulation check. In Table 4.6 below, I have the models for effectiveness. In Model 9, I have just the additive model. In Model 10, I add in the multiplicative interaction term. In Models 11 and 12, I add in demographic covariates to check for robustness. In Table 4.7 below, I have the models for red tape. In Model 13, I have just the additive model. In Model 14, I add in the multiplicative interaction term. In Models 15 and 16, I once again add in the demographic covariates. This time, there is a statistically significant finding.

In Model 9, the variable for government tax administration is statistically significant at the 0.004 level. The sign is positive suggesting that the use of government workers leads to higher appraisals of effectiveness than otherwise equal private sector workers. This finding is not consistent with theory and suggests that tax administrations might be one of the exceptions to the rule. Another exception being how private military contractors are viewed as inferior to

government soldiers (Johnson et al. 2019). It should be noted that the inclusion of an interaction term or demographic covariates pushes this variable out of statistical significance at the 0.05 level. Furthermore, all of the red tape models in Table 4.7 are not statistically significant.

Next, I analyze the data using the sector bias manipulation check as a covariate in the respective models (see Table 4.8 and 4.9). In the simple additive models (17 and 19), there are no statistically significant findings. However, the inclusion of an interaction in Models 18 between the manipulation check variable and the government variable is statistically significant at the 0.001 level. As a result, there is a direct effect and an indirect effect in this effectiveness model. The coefficient on the interaction term is positive, suggesting the public sector has a positive effect on perceived effectiveness when the manipulation check is passed. But it is important to emphasize that the coefficients for the direct effects of government and the manipulation check variable in Model 18 are both negative. For this reason, I developed a marginal effects plot to help visualize this complex relationship in Figure 4.1 below. As can be seen from the plot, the effect of the worker sector on perceived effectiveness is negative when the manipulation check is failed and positive when the manipulation check is passed. This counter-intuitive finding suggests that those who pass the manipulation check will exhibit pro-government preferences in relation to effectiveness. This is not consistent with my theory, but this provides further evidence that public sector workers are preferred in tax administration. With respect to red tape, there were no statically significant findings in Table 4.9.

**Table 4.6: Manipulation Check Regression Models for Effectiveness**

Dep. Variable	Model 9		Model 10		Model 11		Model 12	
	Effectiveness		Effectiveness		Effectiveness		Effectiveness	
	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.
Government	0.382**	(2.87)	0.238	(1.17)	0.240	(1.94)	0.140	(0.74)
Reputation	0.0780	(0.58)	-0.0613	(-0.31)	0.0333	(0.27)	-0.0655	(-0.35)
Government*Reputation	-	-	0.250	(0.93)	-	-	0.176	(0.70)
Age	-	-	-	-	-0.0187***	(-4.11)	-0.0186***	(-4.08)
Political Ideology	-	-	-	-	0.0286	(0.88)	0.0292	(0.89)
Female	-	-	-	-	-0.304*	(-2.39)	-0.291*	(-2.26)
Caucasian	-	-	-	-	0.00299	(0.02)	0.00436	(0.03)
Religious	-	-	-	-	0.581***	(4.38)	0.586***	(4.41)
Income	-	-	-	-	0.0340	(0.49)	0.0342	(0.50)
Constant	-0.258*	(-1.99)	-0.167	(-1.03)	0.177	(0.63)	0.224	(0.78)
N	229		229		229		229	
R-Squared	0.0353		0.039		0.219		0.2207	
F. Stat.	4.13		3.04		7.71		6.89	
Notes: 2 sided t-tests; t statistics in parentheses; * p<0.05; ** p<0.01; *** p<0.001								



**Table 4.7: Manipulation Check Regression Models for Red Tape**

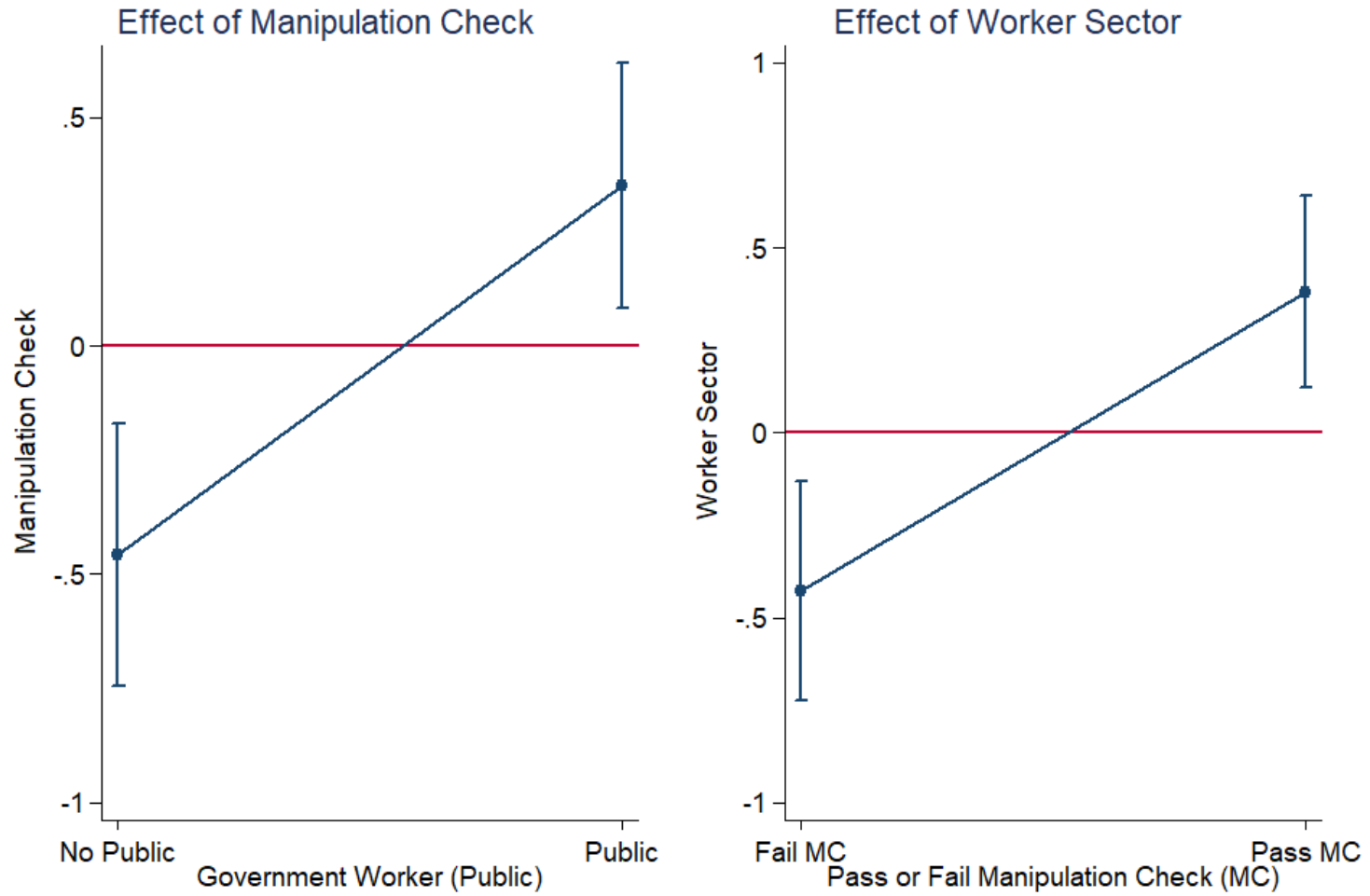
Dep. Variable	Model 13		Model 14		Model 15		Model 16	
	Red Tape		Red Tape		Red Tape		Red Tape	
	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.
Government Reputation	0.0109	(0.08)	0.0238	(0.12)	-0.0604	(-0.45)	-0.0862	(-0.42)
Government*Reputation	-	-	-0.0225	(-0.08)	-	-	0.0453	(0.17)
Age	-	-	-	-	0.00547	(1.11)	0.00550	(1.11)
Political Ideology	-	-	-	-	0.0283	(0.80)	0.0285	(0.80)
Female	-	-	-	-	-0.0576	(-0.42)	-0.0543	(-0.39)
Caucasian	-	-	-	-	-0.0195	(-0.13)	-0.0192	(-0.13)
Religious	-	-	-	-	0.329*	(2.29)	0.330*	(2.29)
Income	-	-	-	-	0.0709	(0.95)	0.0709	(0.95)
Constant	-0.0266	(-0.21)	-0.0348	(-0.21)	-0.641*	(-2.12)	-0.629*	(-2.02)
N	229		229		229		229	
R-Squared	0.0049		0.005		0.0619		0.062	
F. Stat.	0.56		0.37		1.81		1.61	
Notes: 2 sided t-tests; t statistics in parentheses; * p<0.05; ** p<0.01; *** p<0.001								

**Table 4.8: Regression Models for Manipulation Check Variables with Effectiveness**

Dep. Variable:	Model 17		Model 18		Model 19		Model 20	
	Effectiveness		Effectiveness		Effectiveness		Effectiveness	
	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.
Government	0.0298	(0.30)	-0.427**	(-2.84)	0.0279	(0.30)	-0.276	(-1.95)
Reputation	0.0147	(0.15)	0.0730	(0.73)	0.00872	(0.09)	0.0506	(0.54)
Manipulation Check	-0.0272	(-0.27)	-0.457**	(-3.13)	0.0901	(0.96)	-0.201	(-1.44)
Government*Manipulation Check	-	-	0.808***	(4.02)	-	-	0.535**	(2.80)
Age	-	-	-	-	-0.0156***	(-4.33)	-0.0156***	(-4.39)
Political Ideology	-	-	-	-	0.0232	(0.94)	0.0171	(0.70)
Female	-	-	-	-	-0.277**	(-2.85)	-0.254**	(-2.63)
Caucasian	-	-	-	-	-0.146	(-1.43)	-0.149	(-1.47)
Religious	-	-	-	-	0.610***	(5.92)	0.567***	(5.49)
Income	-	-	-	-	-0.0418	(-0.78)	-0.0486	(-0.92)
Constant	-0.00784	(-0.07)	0.202	(1.75)	0.410	(1.75)	0.619*	(2.55)
N	402		402		402		402	
R-Squared	0.0004		0.0396		0.1806		0.1968	
F. Stat.	0.06		4.09		9.6		9.58	

Notes: 2 sided t-tests; t statistics in parentheses; \* p<0.05; \*\* p<0.01; \*\*\* p<0.001

Figure 4.1: Manipulation Check Marginal Effects Plots



Notes: 95% CIs; 2-sided tests.

**Table 4.9: Regression Models for Manipulation Check Variables with Red Tape**

Dep. Variable:	Model 21		Model 22		Model 23		Model 24	
	Red Tape		Red Tape		Red Tape		Red Tape	
	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.
Government	-0.110	(-1.10)	-0.269	(-1.77)	-0.0897	(-0.92)	-0.141	(-0.93)
Reputation	0.130	(1.30)	0.150	(1.49)	0.105	(1.07)	0.112	(1.13)
Manipulation Check	0.124	(1.23)	-0.0256	(-0.17)	0.150	(1.52)	0.101	(0.68)
Government*Manipulation Check	-	-	0.281	(1.39)	-	-	0.0908	(0.45)
Age	-	-	-	-	0.0115**	(3.04)	0.0115**	(3.04)
Political Ideology	-	-	-	-	0.0537*	(2.06)	0.0526*	(2.01)
Female	-	-	-	-	-0.0120	(-0.12)	-0.00818	(-0.08)
Caucasian	-	-	-	-	-0.0986	(-0.92)	-0.0991	(-0.92)
Religious	-	-	-	-	0.205	(1.89)	0.198	(1.80)
Income	-	-	-	-	0.107	(1.90)	0.105	(1.87)
Constant	-0.0805	(-0.77)	-0.00722	(-0.06)	-1.138***	(-4.62)	-1.103***	(-4.25)
N	402		402		402		402	
R-Squared	0.0121		0.0168		0.0872		0.0876	
F. Stat.	1.62		1.7		4.16		3.76	
Notes: 2 sided t-tests; t statistics in parentheses; * p<0.05; ** p<0.01; *** p<0.001								

#### **4.6. Motivated Reasoning**

It is possible that preexisting attitudes and beliefs may be shaping how our study participants draw conclusions. It has been proposed that there is a psychological process of motivated reasoning. In this process, people's beliefs and assumptions shape how they process new information (Druckman 2012; Taber and Lodge 2006). This is especially relevant for scholars that examine organizational performance as I do in this paper.

Motivated reasoning shares many traits with confirmation bias. With motivated reasoning, it can be expected that people will be biased in favor of information that is consistent with their prior beliefs (James and Van Ryzin 2017). Similarly, it can be expected that they will discount information that is inconsistent with their prior beliefs. Meier et al. (2020) studied this effect with nursing homes. James and Van Ryzin (2017) studied this effect with how citizens process information on the Affordable Care Act (i.e. Obamacare). Baekgaard and Serritzlew (2016) studied this effect by looking at both hospitals and schools. There are further examples from the psychological literature, but these are the most relevant to this study.

With respect to my analysis, one might expect for there to be a difference between progressives and conservatives. This difference owes itself to the natural inclination of each faction to have public or private sector preferences (Meier et al. 2020). As a result, progressives would have a more positive outlook on the public sector and conservatives would have a more positive outlook on the private sector. This theory directly translates to views on effectiveness and red tape.

In order to analyze these differences, I take two approaches. With the first method, I introduce the identity variable as a covariate into the model with the entire sample. I then

interact the identity variable with the two primary treatment variables. With the second method, I take subsets of each identity variable and run the models with this reduced sample size. The subset approach should help to mitigate problems associated with multicollinearity that may arise when using the first method.

In Tables 4.10 and 4.11 below, I included the whole sample and interacted the political identity variables with the treatments. For Table 4.10, there are four models. Models 25 and 27 are simple additive models, and Models 26 and 28 add in the multiplicative interaction terms. In Models 25 and 27, the conservative variable is statistically significant at the 0.001 level. In Model 25, the coefficient on the conservative variable is positive, suggesting that conservatives view the IRS as an effective organization. However, in Model 27 the coefficient is positive once again, suggesting that conservatives view the IRS as being burdened by red tape. Unfortunately, none of the interaction terms in Models 26 and 28 are statistically significant. Once again, there are four models in Table 4.11. Models 29 and 31 are simple additive models, and Models 30 and 32 add a multiplicative interaction term. In Model 31, the coefficient for the progressive variable is statistically significant at the 0.01 level. The coefficient is negative, suggesting that progressives view the IRS as being less burdened by red tape. However, there are no statistically significant interactions in this table.

Next, in Appendix E, I subset the data for the participants that assigned themselves an ideological score that was “liberal” or “conservative.” I then re-ran the models from the empirical section of this paper to see if motivated reasoning was driving any findings. Table E.1 below encompasses both the models for effectiveness and red tape for conservatives. Model 41 and 43 are additive models for each of the dependent variables. Models 42 and 44 add in the

multiplicative interaction term. Table E.2 below encompasses both the models for effectiveness and red tape for progressives. Once again, Models 45 and 47 are the additive models for each of the dependent variables. Models 46 and 48 then add in the interaction term.

The models once again had null findings with two noteworthy exceptions. For progressives, the reputation cue was statistically significant at the 0.05 level in both of the red tape models (Models 47 and 48). The coefficient is positive suggesting that the reputation cue did not meet my theoretical expectations. A reason for this back-fire effect might be that the Wall Street Journal is considered by some to be a conservative news outlet. As a result, progressive survey participants may have had this unexpected reaction. Also, the variable for government workers is statistically significant at the .1 level in Model 47. The coefficient is negative, suggesting that progressives view government workers as being less prone to red tape which is consistent with my expectation that progressives will have a pro-government outlook. However, this finding disappears with the inclusion of a multiplicative interaction term (Model 48). Collectively, the red tape models for progressives paints a very complex picture for how unconventional views might be with respect to red tape.

Other areas for which motivated reasoning could be situated include religiosity and tax experience. Evidence that religious people are more likely to comply with the tax code has accrued in the literature (see, e.g., Torgler 2006). There is some variation across denominations; however, there is a general tendency in favor of compliance that is universal to people of faith (Torgler 2007). Once again, I develop two sets of models for each of these categories. For the first category, I use the whole sample along with the identity variables as covariates. For the second category, I subset the data for different identity groups.

**Table 4.10: Regression Models for Conservatives**

Dep. Variable:	Model 25		Model 26		Model 27		Model 28	
	Effectiveness		Effectiveness		Red Tape		Red Tape	
	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.
Government	0.0306	(0.31)	-0.0167	(-0.12)	-0.107	(-1.08)	-0.237	(-1.76)
Reputation	0.0299	(0.30)	-0.102	(-0.76)	0.158	(1.60)	0.138	(1.02)
Conservative	0.376***	(3.81)	0.184	(1.02)	0.354***	(3.59)	0.190	(1.06)
Government*Conservative	-	-	0.0903	(0.46)	-	-	0.280	(1.42)
Reputation*Conservative	-	-	0.280	(1.41)	-	-	0.0318	(0.16)
Constant	-0.206*	(-2.02)	-0.109	(-0.87)	-0.190	(-1.87)	-0.110	(-0.88)
N	402		402		402		402	
R-Squared	0.0354		0.0406		0.0395		0.0443	
F. Stat.	4.86		3.35		5.45		3.67	
Notes: 2 sided t-tests; t statistics in parentheses; * p<0.05; ** p<0.01; *** p<0.001								



**Table 4.11: Regression Models for Progressives**

Dep. Variable:	Model 29		Model 30		Model 31		Model 32	
	Effectiveness		Effectiveness		Red Tape		Red Tape	
	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.
Government	0.0261	(0.26)	0.0894	(0.70)	-0.113	(-1.14)	-0.0177	(-0.14)
Reputation	0.0169	(0.17)	0.103	(0.82)	0.149	(1.51)	0.0358	(0.29)
Progressive	-0.163	(-1.58)	0.0523	(0.28)	-0.277**	(-2.71)	-0.305	(-1.63)
Government*Progressive	-	-	-0.174	(-0.84)	-	-	-0.244	(-1.19)
Reputation*Progressive	-	-	-0.235	(-1.14)	-	-	0.294	(1.44)
Constant	0.0390	(0.40)	-0.0389	(-0.34)	0.0868	(0.89)	0.0932	(0.83)
N	402		402		402		402	
R-Squared	0.0065		0.0112		0.0263		0.0354	
F. Stat.	0.87		0.9		3.59		2.91	
Notes: 2 sided t-tests; t statistics in parentheses; * p<0.05; ** p<0.01; *** p<0.001								

I record my findings on religiosity in Tables 4.12, E.3 and E.4 below. In Table 4.12, I use the whole sample with religiosity as a simple covariate. The religious variable is statistically significant in the effectiveness models (33 and 34) at the 0.001 level. This suggests that religious people are more likely to view the IRS as an effective organization. In Model 35, the religious variable is statistically significant at the 0.01 level. This finding suggests that religious people are more likely to view the IRS as being burdened by red tape. These findings are interesting; however, none of the interactions in Table 4.12 are statistically significant.

Next, I move on to the subset models for religiosity (Appendix E). Table E.3 below encompasses both the models for effectiveness and red tape for religious people. Model 49 and 51 are additive models for each of the dependent variables. Models 50 and 52 add in the multiplicative interaction term. Table E.4 below encompasses both the models for effectiveness and red tape for non-religious people. Once again, Models 53 and 55 are the additive models for each of the dependent variables. Models 54 and 56 then add in the interaction term.

Once again, the findings from Tables E.3 and E.4 were largely null. However, there were two noteworthy exceptions in relation to the reputation cue. In Model 50, the direct effect of reputation on effectiveness was statistically significant at the 0.05 level and the coefficient was negative. Also, the interaction term was statistically significant at the 0.1 level and the coefficient was positive. These findings are interesting and help to decode how some information cues can be counter-intuitive.

I also record whether or not someone files their own taxes. I propose that people who file their own taxes are likely to have more tax knowledge. By tax knowledge, I refer to a knowledge of the subtle intricacies of the tax code that could shape tax attitudes (Krupnikov et

al. 2006). It has been found that most people lack tax knowledge, just as they lack economic knowledge (Blinder and Krueger 2004). People's views on taxation are also shaped by their life experiences and how they are taxed by the state (Martin 2008). In Martin (2008), the author found that rising property taxes mobilized public opinion on these taxes. Similarly, I would expect that filing one's taxes independently imposes an opportunity cost that shapes tax attitudes. These tax attitudes form a system of beliefs that could have ramifications for motivated reasoning. I would anticipate that people who file their own taxes are more likely to view government workers as more effective and with less red tape. Moreover, they are likely to factor reputational information into their interpretation of the vignette. As a result, they are likely to see a boost in effectiveness and a decline in red tape in response to a reputation cue.

In Table 4.13, I use the entire sample of survey participants and use tax knowledge as a simple covariate. I asked a question in my experiment in relation to whether the participant filed their taxes alone. I coded that variable for tax knowledge as one if they filed alone and zero if they filed with assistance. Models 37 and 39 are simple additive models, and Models 38 and 40 add in the multiplicative interaction terms. The tax knowledge variable is statistically significant in the effectiveness models (37 and 38) at the 0.001 level. The coefficients are negative. This suggest that people with tax knowledge are less likely to view the IRS as an effective organization. I should note that none of the interactions in Model 38 were statistically significant.

In Tables E.5 and E.6 below (Appendix E), I present my findings for those with and without tax knowledge. I took a sub-set for the experiment for whether each observation filed taxes alone or filed them with assistance. Table E.5 below encompasses both the models for

effectiveness and red tape for people who filed their own taxes. Model 57 and 59 are additive models for each of the dependent variables. Models 58 and 60 add in the multiplicative interaction term. Table E.6 below encompasses both the models for effectiveness and red tape for people who file their taxes with assistance. Once again, Models 61 and 63 are the additive models for each of the dependent variables. Models 62 and 64 then add in the interaction term.

The findings were largely null except for the reputational cue in Model 63 which was positive and statistically significant at the 0.1 level. This finding is interesting because it implies that there is a backfire effect with the reputation cue for those without tax knowledge. When the reputation cue is presented, it increases perceptions of red tape. This finding amounts to yet another example of the reputation cue not functioning in a way that is consistent with theory.

**Table 4.12: Regression Models for Religiosity**

Dep. Variable:	Model 33		Model 34		Model 35		Model 36	
	Effectiveness		Effectiveness		Red Tape		Red Tape	
	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.
Government	0.0678	(0.71)	0.0647	(0.42)	-0.0890	(-0.90)	-0.307	(-1.93)
Reputation	0.00405	(0.04)	0.225	(1.47)	0.137	(1.39)	0.0290	(0.18)
Religious	0.628***	(6.41)	0.811***	(4.52)	0.307**	(3.03)	0.0241	(0.13)
Government*Religious	-	-	0.00708	(0.04)	-	-	0.355	(1.75)
Reputation*Religious	-	-	-0.362	(-1.85)	-	-	0.176	(0.87)
Constant	-0.420***	(-3.94)	-0.531***	(-3.73)	-0.211	(-1.91)	-0.0325	(-0.22)
N	402		402		402		402	
R-Squared	0.0938		0.1017		0.0307		0.0395	
F. Stat.	13.74		8.96		4.2		3.26	
Notes: 2 sided t-tests; t statistics in parentheses; * p<0.05; ** p<0.01; *** p<0.001								

**Table 4.13: Regression Models for Tax Knowledge**

Dep. Variable:	Model 37		Model 38		Model 39		Model 40	
	Effectiveness		Effectiveness		Red Tape		Red Tape	
	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.
Government	0.0432	(0.45)	0.0773	(0.57)	-0.104	(-1.04)	-0.00109	(-0.01)
Reputation	0.0132	(0.14)	-0.0907	(-0.67)	0.142	(1.42)	0.249	(1.78)
File Alone	-0.535***	(-5.54)	-0.613***	(-3.47)	-0.163	(-1.63)	0.0769	(0.42)
Government*File Alone	-	-	-0.0564	(-0.29)	-	-	-0.224	(-1.12)
Reputation*File Alone	-	-	0.208	(1.07)	-	-	-0.233	(-1.17)
Constant	0.234*	(2.35)	0.270*	(2.26)	0.0610	(0.60)	-0.0475	(-0.39)
N	402		402		402		402	
R-Squared	0.0718		0.0748		0.0149		0.021	
F. Stat.	10.26		6.4		2.01		1.7	
Notes: 2 sided t-tests; t statistics in parentheses; * p<0.05; ** p<0.01; *** p<0.001								

#### **4.7. Discussion and Conclusions**

In sum, I explore sector bias in the context of privatization in tax administration. The literature has had mixed findings on whether there is sector bias in Western countries. Some of the literature coming out of Europe has suggested that there is sector bias in different areas of the healthcare sector. In contrast, findings in North America have been decidedly mixed. In this article, I find zero evidence for sector bias in the outsourcing of tax administration functions in the United States.

My findings suggest that the Internal Revenue Service (IRS) may have a high degree of latitude when implementing and experimenting with new public programs. Due to repeated annual interaction, views on the reputation of the IRS by the American public may also be very inelastic. Public opinion research has also pointed to the IRS being a modestly popular organization with two out of three Americans having a favorable view (PEW 2020).

This strong reputation associated with the IRS may explain the null effects contained in this paper. The public may view any new department, public or private, as likely to be high performing because that fits with the agency's established reputation. Moreover, the informational cue that was intended to establish the reputation of the new team of analysts may have been simply ignored because it was superfluous to the IRS' pre-existing brand image with the survey participants.

It should also be noted that in Johnson et al. (2019), the authors found that there was a public sector preference in military contracting. In other words, the public

preferred government soldiers over the use of mercenaries. It is entirely possible that there may be a public sector preference with regard to tax administration. There is a history of tax rebellions against private tax collectors (see, e.g., Kerkhoff 2009). For this reason, ordinary people may prefer some level of public features for some areas of government, making public tax workers preferable. This view is likely to be persistent across the West. Additionally, I include in the conclusion chapter of this dissertation some evidence for this theory of a public sector preference in tax administration.

Moving forward, more research should be done on sector bias that emphasizes private sector contracting and the role of reputations. An organization, such as ICE, that has a struggling reputation would be a good next step (PEW 2020). When an informational cue from a trusted source about a reputation is presented with a low-reputation organization, it may be more likely to change preexisting opinions.



## 5. CONCLUSIONS

### 5.1. Introduction

In this dissertation, I have made several solid contributions to the literature with respect to our understanding of tax privatization. In Chapter 2, I first present the argument that one would expect there to be reciprocity in sync with the tax morale literature. In short, people's tax attitudes should improve in response to receiving goods or services from the state. Or, in the case of my research, people will be averse to tax privatization since it will limit the amount of goods and services that they will receive back. This is due to the siphoning off of funds from public purposes by the private sector. However, I do not find evidence in favor of this theory in my initial testing. More specifically, I find null effects for almost all of my statistical models.

These findings beg many questions about potential causes for these null effects in Chapter 2 which covers a variety of treatments, such as tax privatization, hedonic relevance, and organizational performance. The dependent variables from this chapter were tax policy attitudes towards tax authorities measures as developed in Braithwaite (2002). There are effectively three possible causes for these null effects. The first possible cause is that tax attitudes are inelastic and remarkably stable. This stability is what the preexisting tax literature would suggest (Luttmer and Singhal 2014; Onu 2016). The second possible cause is that people are simply disinterested in tax privatization thus it is not swaying their opinions. Finally, it is also possible that people do not discriminate between the public and private sectors in this context. I explore these possibilities in more detail later in this chapter.

In Chapter 3, I attempt to make the experiment substantially more relevant to survey participants by emphasizing the institution of a regressive tax. This regressive tax is a sales tax that amounts to twenty-five cents on the dollar, which should have a relatively larger impact on low income people. MTurk workers are largely working class (Huff and Tingley 2015), thus this tax will be extremely relevant to them and should sway tax attitudes if possible. Tax privatization, in this chapter, functions as an additional component whereby it may be taking a percentage for collecting tax revenues. With regard to my own questions on regressive taxation, I do have findings. I find that when asked whether they support the institution of a sales tax or trust that the new sales tax will be properly implemented, there is a decrease in support with the relatively more regressive tax. However, I found null effects once again with regard to the scales from Braithwaite (2002). It is important to note the key difference between these dependent variables. The Braithwaite (2002) scales represent global tax policy attitudes, whereas my scales represent attitudes towards a narrow area of tax policy. Once again, these findings may be due to one of two things. First, tax attitudes may be too inelastic. Second, survey participants may simply find the content of the experiment to be irrelevant to their life. However, I find that specific questions on opinions and implementation will, however, elicit a response. This suggests that the second option is incorrect. In accordance with the literature, these results strongly hint that tax attitudes are inelastic with regard to more global preferences.

In Chapter 4, I shift gears and study how people evaluate tax authorities under the backdrop of sector bias instead of evaluating general tax policy attitudes. The key thing that I am evaluating is the Internal Revenue Service over its performance. More specifically, I am evaluating perceptions of organizational effectiveness and their level of red tape. In America,

there have been mixed findings with respect to these kinds of evaluations in the sector bias literature (Marvel 2015; Meier et al. 2019; Meier and An 2020). Consistent with much of the literature, I have null findings once again. These findings could be interpreted to mean one of three things. First, the survey participants may not discriminate between the public and private sector in this context. Second, tax related attitudes are too inelastic to register anything relative to these treatments. Third, survey participants simply do not care sufficiently enough to register a change. Based on the findings from Chapter 3, the third outcome is unlikely. However, this still begs the question that is central to the literature in sector bias about whether the population is biased against the public sector.

As a result, I can make several deductions about the public in this dissertation. First, my pool of survey participants appears to have some tax knowledge that became apparent in the third chapter when asked to appraise the regressive tax system. This suggests that they are not entirely disinterested in the topic. Furthermore, global tax attitude measures appear to be inelastic with regard to treatments involving tax privatization. To ensure that these conclusions drawn from my dissertation are accurate, I undertook one additional experiment to verify whether people have a public sector preference and whether they are interested in this topic of tax privatization.

## **5.2. The Experiment**

In this experiment, I utilize a 2x4 mixed factorial design. The sample is drawn from Amazon's Mechanical Turk once more. There are a total of eight conditions, but there are four vignettes that the survey participants will encounter. Each vignette revisits one of the four experiments contained in the previous chapters of this dissertation. In each vignette, the survey

participant is randomized across the non-privatization treatment. With respect to tax privatization, the survey participant is then asked several questions with respect to how they feel about a public sector option and a private sector option.

With respect to the first scenario (i.e. Scenario A), the survey participants were once again randomized across social class, and then asked to rate, on a scale of 0-10, how much they cared about the policy conundrum facing the Internal Revenue Service. Following this question, the survey participants were presented with two sector options to rank. Option A and Option B are as follows:

*Option A. The IRS has created a new call center and group of rapid-reaction agents that incorporates industry professionals who have been recruited from around the country. The employment contracts with these new IRS employees stipulates that they will receive a year-end bonus of 30 percent of all back-taxes that they collect. This bonus is the current market rate for professionals in the private sector.*

*Option B. Primarily, the IRS has contracted National Credit Collections Incorporated (NCCI), a private-sector business, to use their call center services and professional agents to provide the necessary staffing. The IRS' contract with NCCI stipulates that this private-sector firm will receive 30 percent of all back-taxes that they collect. This fee is the current market rate for these professionals.*

Then the survey participants were asked to rate the options, based on two questions, on a scale of 0-10. First, they were asked whether they believed one of the options was clearly superior to the other. Second, they were asked whether they cared which option that was used. Finally, they were asked to pick either Option A or Option B as their preferred policy choice.

With respect to the Scenario B, the survey participants were randomized across performance level. The two possibilities were a decrease in performance or unchanged performance. Once again, the participant was asked to rate how much they cared about the policy conundrum facing the IRS. The two sector options that were then presented to the participant and were as follows:

*Option A. The IRS has created a new audit center that incorporates industry professionals who have been recruited from around the country. The employment contracts with these new IRS employees stipulates that they will receive a year-end bonus of 10 percent of all additional revenues generated from audit misreporting.*

*Option B. Primarily, the IRS has contracted Midwest Accounting Services Company (“MAS”), a private-sector accounting firm in Ohio, to use their professional accountants to provide the necessary level of staffing. The IRS’ contract with MAS stipulates that this private-sector business will receive 10 percent of all additional revenues generated from catching audit misreporting.*

Following these options, the participant faced the same questions as was previously presented in conjunction with the first scenario.

Scenario C (capital gains tax vs. sales tax) and Scenario D (reputation vs. no reputation) were presented next, sequentially. The options for the Scenario C experiment were as follows:

*Option A. The new national tax revenues will be collected by state tax authorities. After it has been collected by state governments, the sum is transferred to the Internal Revenue Service*

*(IRS). However, a 3 percent fee for collection services rendered is paid to the state governments.*

*Option B. The new national tax revenues will be collected by a private company, Atlas Bank. After it has been collected by the private enterprise, the sum is transferred to the Internal Revenue Service (IRS). However, a 3 percent fee for collection services rendered is paid to the private company.*

The options for the Scenario D experiment were as follows:

*Option A. The IRS has constructed an internal IRS team of analysts and expert-witnesses from the private sector. These new government professionals are intended to help prove that multinational firms are not paying their fair share of taxes.*

*Option B. The IRS has since signed a contract with FTI Consulting, a large private sector consulting firm, to supply the necessary personnel. These private-sector professionals are intended to help prove that multinational firms are not paying their fair share of taxes.*

Once again, the same questions were then asked for every scenario of the experiment.

There were three levels of randomization to maximize control over my experiment. First, the non-sector treatment was randomized, leading to two possible conditions for each scenario. Second, the order of the scenarios was randomized so I would not have to worry about the participants being primed by previous experiments. Finally, the order of the options presented to each participant was randomized to minimize concerns there as well. In conjunction, the format by which I randomized the viewing order of the information should mitigate any methodological concerns over bias being introduced into the experiment.

My findings from the experiment had a definite trend. With respect to sector preference, there was a strong preference for the public sector. With respect to Scenario A, 65.5% of participants marked that they preferred the public sector option. With respect to Scenario B, 69.5% of participants marked that they preferred the public sector option. With respect to Scenario C, 58.6% of participants marked that they preferred the public sector option. With respect to Scenario D, 59.6% of participants marked that they preferred the public sector option. When faced with both options, experimental participants had a distinct preference for the public sector option likely because the difference between sectors was made more salient by presenting them side by side.

Next, I developed a series of regression models to determine whether the randomized treatment had an impact on whether or not they cared about the policy conundrum facing the IRS. See Table 5.1 below. I had null findings for all of the experiments except for one: the regressive tax experiment. In the sales tax experiment (Model 3), survey participants were more likely to say they cared about the tax policy topic if they were exposed to the regressive tax condition at the 0.011 significance level.

**Table 5.1: Regression Models for Non-Privatization Treatments**

	Model 1		Model 2		Model 3		Model 4	
	Scenario A		Scenario B		Scenario C		Scenario D	
	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.
Treatment	-0.408	(-1.29)	-0.134	(-0.39)	0.882*	(2.57)	-0.117	(-0.39)
Constant	7.019***	(32.37)	6.682***	(25.94)	6.370***	(26.08)	6.938***	(31.85)
N	203		203		203		203	
R-Squared	0.0082		0.0008		0.0319		0.0008	
F. Stat.	1.66		0.15		6.62		0.15	

Notes: 2 sided t-tests; t statistics in parentheses; \* p<0.05; \*\* p<0.01; \*\*\* p<0.001

This latter finding about the importance of the regressive tax provides additional support for the theory that global tax policy attitudes may be inelastic. As stated previously, there were findings with regards to the scales on the institution of a sales tax or for whether it will be effectively implemented as a tax. And now I have also found that a regressive sales tax also increases whether people care about this tax policy topic. But these scales are still limited in scope. In sum, the manipulation is working and people do care about taxation; however, they are simply not swaying general tax policy attitudes.

Next, I explore the ratings that were assigned by the survey participants to each of the questions for each scenario. As stated previously, there was a strong preference for the public service option in this data, which provides evidence for my preexisting theoretical framework on reciprocity. But how did the participants actually feel about the topic? In Figure 5.1 below, I developed a set of histogram plots that highlight, for each scenario, how much the survey participant cares about the topic. For Scenario A, the mean value is 6.83. For Scenario B, the mean value is 6.61. For Scenario C, the mean value is 6.82. For Scenario D, the mean value is 6.88. As a reminder, this was on a scale of 0-10, so these mean values are on the high end of things. Once again, by looking at Figure 5.1 it quickly becomes apparent that people do indeed care about tax policy issues.



Figure 5.1: Histogram - "Do they care?"

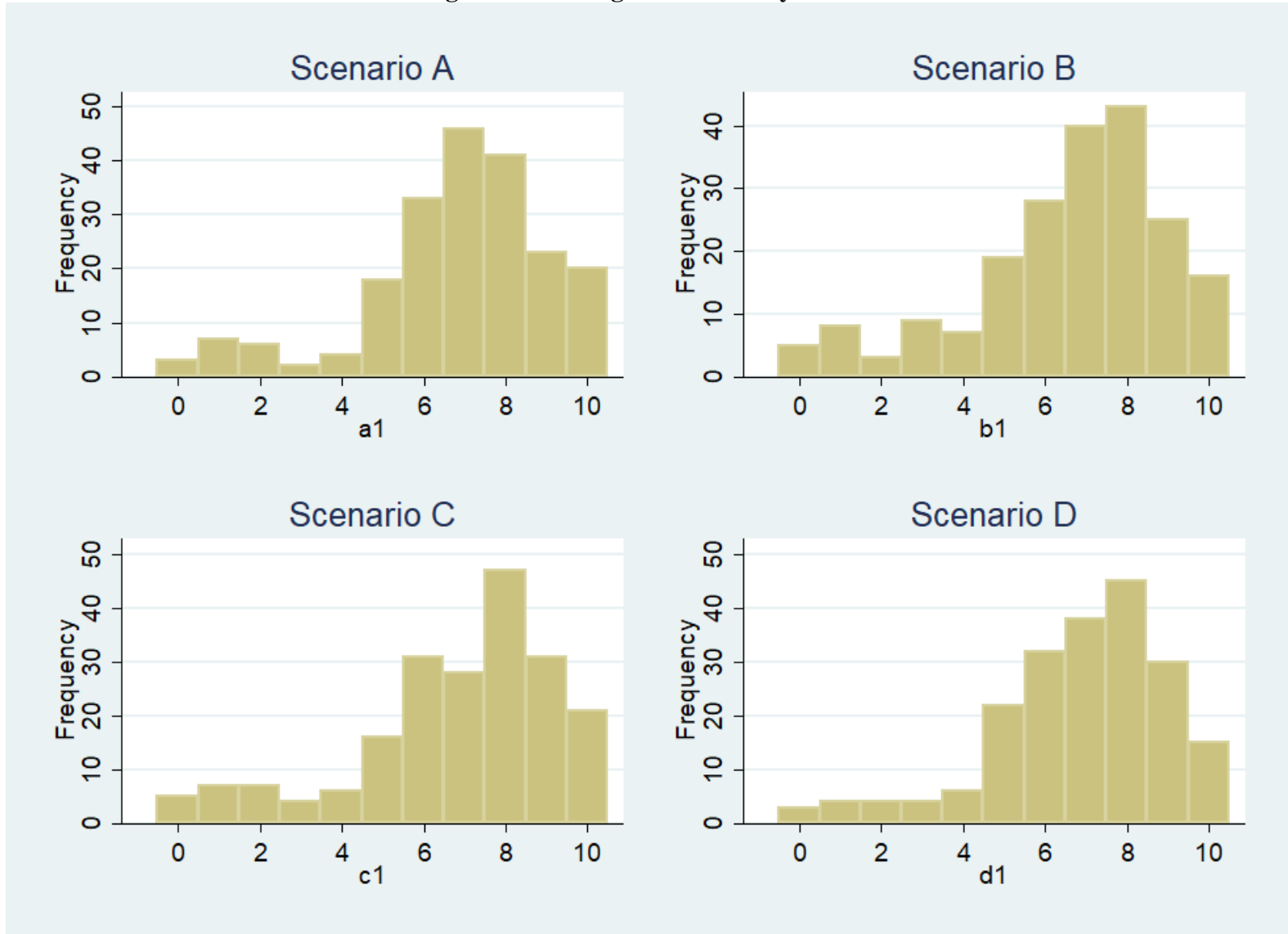


Figure 5.2: Histogram - "Is one Superior?"

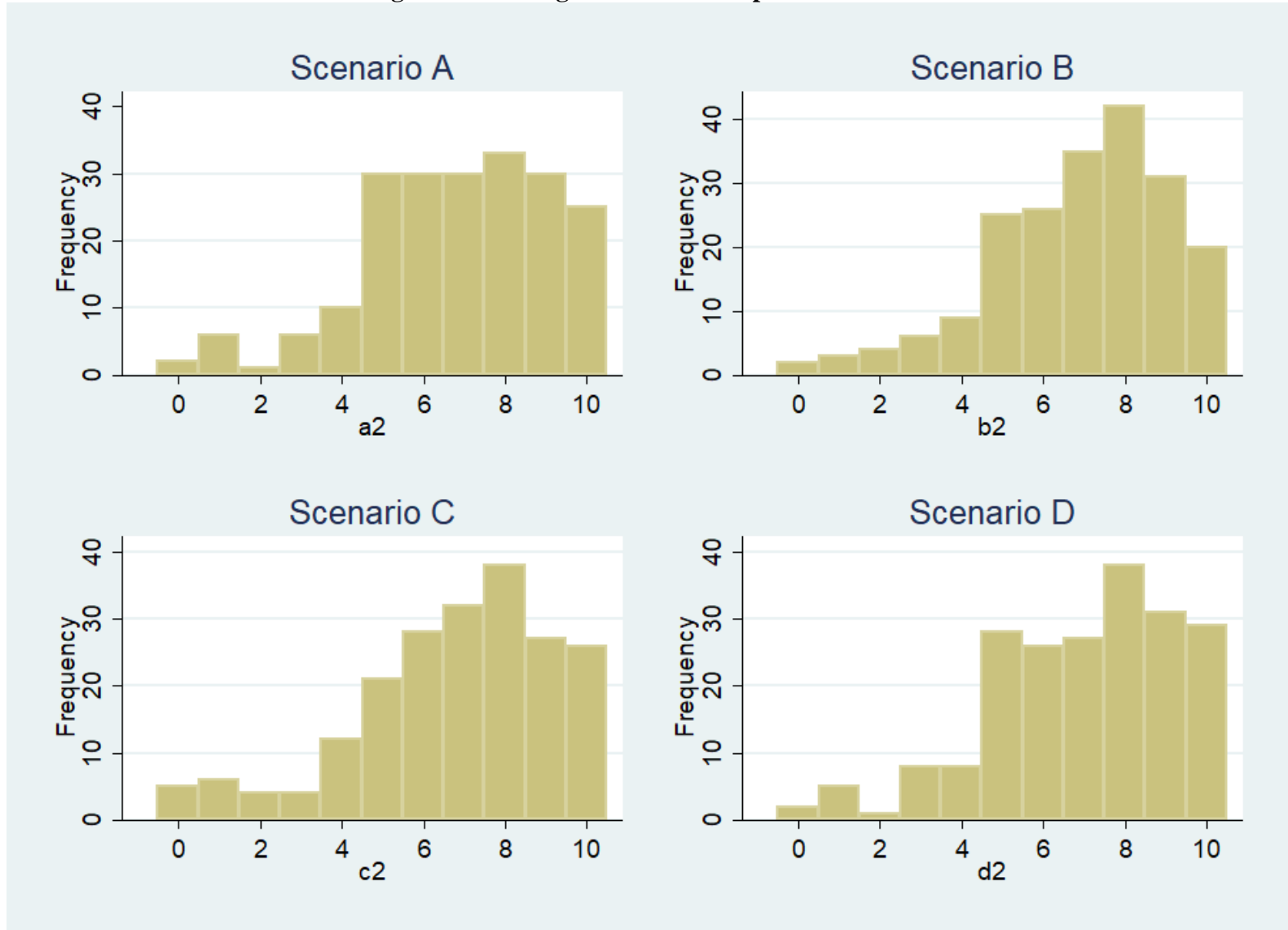
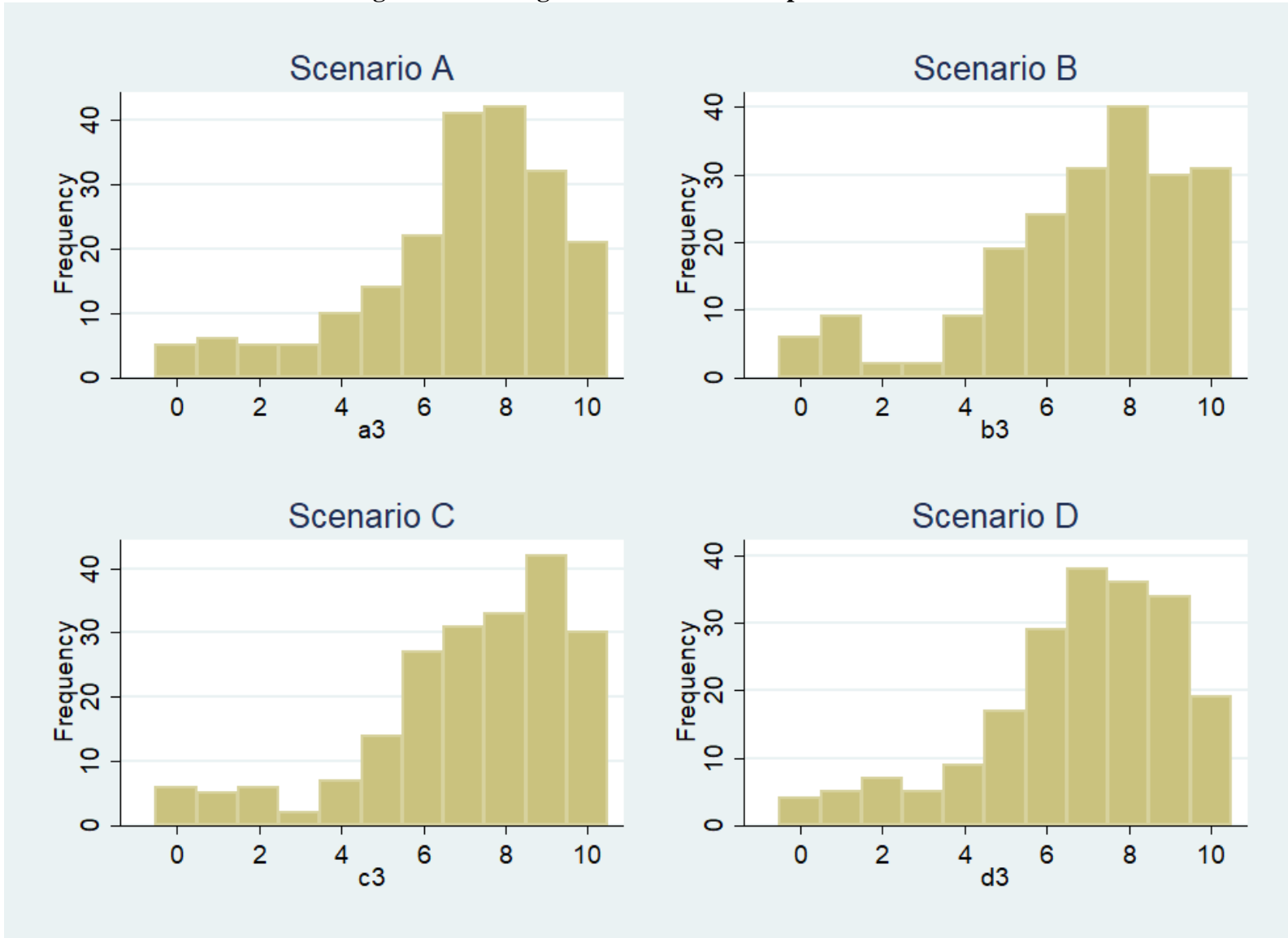


Figure 5.3: Histogram - "Care which Option?"



But how much do people care about the tax privatization options? Just to reiterate, almost two out of three people prefer a public sector option but the strength of this preference is important. Once again, I find a strong result for whether the survey participants think one option is clearly superior to the other. In Figure 5.2 above, I developed a set of histogram plots that highlight this question. For Scenario A, the mean value is 6.85. For Scenario B, the mean value is 6.93. For Scenario C, the mean value is 6.79. For Scenario D, the mean value is 7. There is a clear response to this question, and the response is that people tend to agree with the statement that there is a superior option.

Next, the survey participants were asked whether they cared about which options were used. In Figure 5.3 below, I developed a plot with a set of histograms to highlight this question. With respect to the data, I found similar numbers to the previous questions. For Scenario A, the mean value is 6.87. For Scenario B, the mean value is 6.95. For Scenario C, the mean value is 7.1. For Scenario D, the mean value is 6.79. Once again, these are strong findings that complement what can clearly be seen in histograms in Figure 5.3. People do care about what option that is used, and the option that received an overwhelming amount of support was the public sector option.

### **5.3. Conclusion**

In summary, I find in this final experiment that tax policy does matter to survey participants. The survey participants not only care about the topic, they also have specific concerns that are relevant to my research contained in this dissertation on tax privatization. I found that the survey participants favor the public sector, which begs the question about why were there null effects in so many of my statistical models. As stated previously, there are three

possible explanations for my null findings contained in this dissertation. First, global tax policy attitudes may be too inelastic for my experiments to cause an impact. Second, the participants may simply be disinterested in the topic. Third, survey participants may not discriminate between the public and private sector.

The results contained in this chapter provide evidence against the theory that the average survey participant is disinterested in the topic. Based on my findings, I can say that there is support for the conclusion that they are interested in the topic. This disproves the second possible explanation for the null findings that I proposed. Furthermore, I can say that the survey participants largely have a public sector preference and believe that this sector is a superior option to the private sector. These findings disprove the third argument that survey participants do not discriminate between sectors.

These findings leave me with one explanation for where these null effects are originating from. I can say that general tax policy attitudes are probably too stable and inelastic to change much. It has been found that 60 percent of people around the world think that it is never acceptable to avoid tax (Luttmer and Singhal 2014), suggesting that preferences are unlikely to change in response to tax policy. Onu (2016) also proposes that tax attitudes are stable. Finally, it has been found in the United States that two out of three Americans hold a favorable view of the Internal Revenue Service (PEW 2020). This agency popularity gives the IRS a favorable reputation that can deflect some negative press. Adding in the findings from this dissertation, there is a lot of evidence that global tax policy attitudes in the United States are most likely to be inelastic and stable.

It should be noted that the boundary conditions of the inelasticity of tax attitudes is an important concept. Boundary conditions are the qualifications that surround theory (Busse et al. 2017). I would expect that policies which may lead to inelastic tax attitudes are universal across the gamut of public finance at reasonable levels. However, it may be possible that there is a critical mass whereby the equilibrium of tax attitudes is shattered. This has probably been seen with the 1970s property tax rebellion in California (Martin 2008). This may have also been seen when the British government shifted from the council tax to the poll tax in the late 1980s and early 1990s (Besley, Jensen, and Persson 2019). The key to understanding boundary condition here is to conceptualize this stability as a type of equilibrium.

I should also be noted that the strength of a null effect is an important characteristic of the data that relates to the problem of noise and measurement in a dependent variable. As such, the random error of noise is something that may influence the measurement of my dependent variables. This is due to a substantial shift that occurred in how people interact with each other and the state because of COVID-19. It is effectively possible that people may have redefined their relationship with their respective government because of the pandemic (Greer et al. 2020). Moreover, people have received multiple stimulus checks from the state and have adhered to government safety mandates due to the health risks associated with this crisis (Green and Loualiche 2021). This redefined relationship with the state may very well have influenced how survey participants view reciprocity from my theory.

But where do we go from here? Moving forward, future researchers will need to be cognizant of this stability in general tax policy attitudes when engaging in scholarly activities. When designing research proposals, scholars should carefully craft their scales to be specific in

scope but still theoretically substantive. As an example, my questions from Chapter 3 on whether the survey participants support the new regressive tax initiative and whether they believed that the tax policy would be properly implemented, fit this description. With these questions, I asked the survey participants to rate a single policy domain and not their general opinions across the entire gamut of public finance. These types of narrow questions if well designed can still answer theoretically interesting questions. It should also be noted that the experiments in this dissertation were one-shot games, and it may take repeated interactions to overcome some of the issues with the inelasticity of tax attitudes. This is consistent with how the great property tax rebellion with respect to Proposition 13 swayed tax attitudes over time and was eventually codified into the platform of the Republican party (Martin 2008). As a result, there may be a couple of approaches for future research that can yield more optimal findings. The first would be a lab experiment with a simulation that has multiple stages. The second would be a panel experiment, where there are multiple observations per unit of analysis. In this latter experiment, the model can be estimated in a dynamic form too. I strongly encourage researchers to pursue one of these methodologies.

I should also emphasize the benefits of cross-national research in this area of tax policy. Simply because attitudes are inelastic and stable in the United States does not mean that they will be so in other countries. The various publics may also stereotype sectors differently, depending on their preconceived notions of each one. As an example, the private sector may be stereotyped as efficient and cutthroat in the American context. On the other hand, the public sector may be stereotyped as corrupt and nonresponsive in a non-American context. These stereotypes may have an impact on the potential effects of public perceptions associated with different sectors in

their respective economies. On the other hand, research from the World Values survey states that 60 percent of people across the globe think that it's never acceptable to avoid tax (Luttmer and Singhal 2014), so there is a good chance that attitudes will be stable and inelastic across most countries. Nevertheless, it is certainly true that some analyses in other countries will help to illuminate causal mechanisms that are relevant to research in this topical area.



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APPENDIX A

MISCELLANEOUS STATISTICS TABLES

**Table A. 1: Summary Statistics for Experiment 1**

Variable	Obs	Mean	Std. Dev.	Min	Max
Government	404	0.492574	0.500565	0	1
Bad Performance	404	0.470297	0.499736	0	1
Age	404	41.26733	13.0484	20	73
Female	404	0.321782	0.467739	0	1
Caucasian	404	0.80198	0.399001	0	1
Political Ideology	404	4.264851	2.020159	1	7
Religious	404	0.581683	0.493894	0	1
Income	404	2.772277	0.858543	1	5
Commitment	404	7.47E-10	1	-3.91179	1.710644
Disengagement	404	-2.83E-09	1	-3.13697	2.795447
Game Playing	404	-1.89E-10	1	-2.6083	2.819479
Capitulation	404	1.93E-10	1	-3.9865	4.201765
Resistance	404	1.31E-09	1	-3.84347	3.069362

**Table A. 2: Summary Statistics for Experiment 2**

Variable	Obs	Mean	Std. Dev.	Min	Max
Government	398	0.487437	0.500471	0	1
Working Class	398	0.5	0.500629	0	1
Age	398	40.0603	12.84676	19	89
Female	398	0.39196	0.488802	0	1
Caucasian	398	0.831658	0.37464	0	1
Political Ideology	398	4.221106	2.109438	1	7
Religious	398	0.68593	0.464729	0	1
Income	398	2.748744	0.813727	1	5
Commitment	398	4.43E-10	0.963103	-4.11876	1.153926
Capitulation	398	8.15E-10	0.918	-3.28536	1.473268
Resistance	398	-3.10E-10	0.939695	-2.30189	1.493663
Disengagement	398	-2.68E-10	0.973535	-1.55331	1.509985
Game Playing	398	-4.00E-09	0.9808	-1.48466	1.472407

**Table A. 3: Experiment 1 - Table of Means Per Experiment [Range: -3.98 – 4.20]**

Dep. Variables:	Commitment		Capitulation		Resistance		Disengagement		Game Playing	
	Private	Public	Private	Public	Private	Public	Private	Public	Private	Public
Performance (+)	-0.01458	0.035215	0.077971	-0.12255	-0.07921	0.024031	-0.03107	-0.05066	0.063384	0.116758
	(0.992083)	(0.991158)	(1.063129)	(1.015688)	(1.095862)	(0.943204)	(0.947687)	(1.007351)	(0.972851)	(0.942563)
Performance (-)	0.010137	-0.03278	0.018358	0.027728	-0.07098	0.137494	0.102625	-0.01219	-0.09496	-0.10694
	(0.930386)	(1.097584)	(0.961945)	(0.946946)	(0.966188)	(0.978753)	(0.96653)	(1.089158)	(0.991175)	(1.093715)

Notes: standard deviations are in parentheses.



**Table A. 4: Experiment 2 - Table of Means Per Experiment [Range: -4.19 – 1.51]**

Dep. Variables:	Commitment		Capitulation		Resistance		Disengagement		Game Playing	
	Private	Public	Private	Public	Private	Public	Private	Public	Private	Public
Socially Congruent	0.047591	-0.09224	0.03965	-0.07362	-0.01538	-0.09556	-0.00203	-0.0719	-0.01439	-0.03368
	(0.933471)	(1.049859)	(0.857623)	(0.989364)	(0.96727)	(0.945563)	(0.976434)	(0.989852)	(1.007731)	(0.968656)
Not Congruent	0.10446	-0.06978	0.030926	0.004792	-0.06121	0.197034	-0.01288	0.098804	-0.04341	0.104819
	(0.857738)	(1.008864)	(0.89901)	(0.928269)	(0.997575)	(0.810343)	(0.979093)	(0.952995)	(0.982845)	(0.971942)

Notes: standard deviations are in parentheses.

APPENDIX B

MISCELLANEOUS STATISTICS TABLES

**Table B. 1: Summary Statistics**

Variable	Obs	Mean	Std. Dev.	Min	Max
Government	399	0.501253	0.500626	0	1
Sales Tax	399	0.506266	0.500588	0	1
Age	398	42.26633	13.44995	21	75
Female	399	0.383459	0.486839	0	1
Caucasian	399	0.716792	0.451122	0	1
Political Ideology	399	3.766917	1.853506	1	7
Religious	399	0.528822	0.499795	0	1
Income	399	2.944862	0.952103	1	5
Commitment	399	2.04E-10	1	-3.8651	1.520169
Disengagement	399	-3.55E-10	1	-	2.71263
				3.719855	
Game Playing	399	-2.87E-09	1	-	2.54217
				3.010532	
Resistance	399	-1.40E-11	1	2.96824	2.893208
Capitulation	399	9.79E-10	1	-3.4767	3.615523

**Table B. 2: Experiment 3 - Table of Means Per Experiment [Range: -3.87 – 3.72]**

Dep. Variables:	Commitment		Disengagement		Game Playing		Resistance		Capitulation	
	Private	Public	Private	Public	Private	Public	Private	Public	Private	Public
Sales Tax	-0.0498	-0.04565	-0.04086	-0.04712	-0.04086	-0.04712	0.051021	0.071117	-0.04471	-0.02511
	(1.034284)	(1.068951)	(1.082228)	(0.99059)	(1.082228)	(0.99059)	(1.052286)	(0.947397)	(1.207172)	(0.837923)
Capital Gains Tax	0.006135	0.099404	0.093476	-0.01177	0.093476	-0.01177	-0.14295	0.030878	0.042636	0.025702
	(0.945735)	(0.947766)	(0.985839)	(0.948664)	(0.985839)	(0.948664)	(1.035578)	(0.963702)	(1.040119)	(0.909843)

Notes: standard deviations are in parentheses.

## APPENDIX C

### MOTIVATED REASONING REGRESSION MODELS

**Table C. 1: Regression Models for Progressives**

	Model 73		Model 74		Model 75		Model 76		Model 77	
	Commitment		Disengagement		Game Playing		Resistance		Capitulation	
	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.
Government	-0.0105	(-0.09)	-0.193	(-1.33)	-0.0781	(-0.55)	0.295*	(2.03)	0.149	(0.96)
Sales Tax	-0.108	(-0.95)	-0.101	(-0.69)	-0.0304	(-0.21)	0.304*	(2.09)	-0.133	(-0.85)
Constant	0.362***	(3.80)	0.0190	(0.16)	-0.0717	(-0.59)	-0.540***	(-4.41)	-0.0916	(-0.70)
N	172		172		172		172		172	
R-Squared	0.0056		0.0145		0.0022		0.0532		0.0088	
F. Stat.	0.47		1.24		0.19		4.75		0.75	
Notes: 2 sided t-tests; t statistics in parentheses; * p<0.05; ** p<0.01; *** p<0.001										

**Table C. 2: Regression Models for Progressives with Interactions**

	Model 78		Model 79		Model 80		Model 81		Model 82	
	Commitment		Disengagement		Game Playing		Resistance		Capitulation	
	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.
Government	-0.127	(-0.80)	-0.0735	(-0.36)	-0.0269	(-0.13)	0.288	(1.40)	0.0889	(0.40)
Sales Tax	-0.230	(-1.41)	0.0244	(0.12)	0.0231	(0.11)	0.297	(1.42)	-0.196	(-0.87)
Government*Sales Tax	0.236	(1.04)	-0.242	(-0.83)	-0.103	(-0.36)	0.0140	(0.05)	0.121	(0.39)
Constant	0.417***	(3.83)	-0.0368	(-0.26)	-0.0955	(-0.69)	-0.537***	(-3.83)	-0.0636	(-0.42)
N	172		172		172		172		172	
R-Squared	0.012		0.0185		0.003		0.0532		0.0097	
F. Stat.	0.68		1.06		0.17		3.15		0.55	
Notes: 2 sided t-tests; t statistics in parentheses; * p<0.05; ** p<0.01; *** p<0.001										

**Table C. 3: Regression Models for Conservatives**

	Model 83		Model 84		Model 85		Model 86		Model 87	
	Commitment		Disengagement		Game Playing		Resistance		Capitulation	
	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.
Government	0.338	(1.82)	0.0809	(0.43)	-0.101	(-0.56)	-0.00695	(-0.05)	-0.0844	(-0.52)
Sales Tax	-0.0901	(-0.49)	-0.212	(-1.12)	0.0717	(0.39)	-0.0969	(-0.65)	-0.113	(-0.69)
Constant	-0.285	(-1.81)	0.262	(1.63)	0.286	(1.86)	0.335**	(2.64)	0.233	(1.69)
N	137		137		137		137		137	
R-Squared	0.0247		0.01		0.0032		0.0032		0.0061	
F. Stat.	1.7		0.68		0.21		0.22		0.41	
Notes: 2 sided t-tests; t statistics in parentheses; * p<0.05;** p<0.01; *** p<0.001										

**Table C. 4: Regression Models for Conservatives with Interaction Terms**

	Model 88		Model 89		Model 90		Model 91		Model 92	
	Commitment		Disengagement		Game Playing		Resistance		Capitulation	
	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.
Government	0.465	(1.75)	-0.120	(-0.44)	0.0239	(0.09)	-0.0304	(-0.14)	-0.0395	(-0.17)
Sales Tax	0.0376	(0.14)	-0.412	(-1.53)	0.197	(0.76)	-0.120	(-0.56)	-0.0680	(-0.29)
Government*Sales Tax	-0.251	(-0.67)	0.394	(1.04)	-0.245	(-0.67)	0.0460	(0.15)	-0.0881	(-0.27)
Constant	-0.344	(-1.90)	0.355	(1.93)	0.229	(1.29)	0.346*	(2.37)	0.213	(1.34)
N	137		137		137		137		137	
R-Squared	0.0281		0.0181		0.0066		0.0034		0.0066	
F. Stat.	1.28		0.82		0.29		0.15		0.3	
Notes: 2 sided t-tests; t statistics in parentheses; * p<0.05;** p<0.01; *** p<0.001										

**Table C. 5: Regression Models for Religious People**

	Model 93		Model 94		Model 95		Model 96		Model 97	
	Commitment		Disengagement		Game Playing		Resistance		Capitulation	
	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.
Government	0.105	(0.87)	0.0182	(0.12)	0.0117	(0.08)	-0.0138	(-0.10)	-0.00958	(-0.07)
Sales Tax	-0.156	(-1.29)	-0.175	(-1.18)	0.0103	(0.07)	0.132	(0.93)	-0.242	(-1.75)
Constant	0.140	(1.34)	0.274*	(2.14)	0.203	(1.70)	0.0158	(0.13)	0.138	(1.16)
N	211		211		211		211		211	
R-Squared	0.0111		0.0066		0.0001		0.0042		0.0146	
F. Stat.	1.16		0.69		0.01		0.44		1.54	
Notes: 2 sided t-tests; t statistics in parentheses; * p<0.05; ** p<0.01; *** p<0.001										



**Table C. 6: Regression Models for Religious People with Interactions**

	Model 98		Model 99		Model 100		Model 101		Model 102	
	Commitment		Disengagement		Game Playing		Resistance		Capitulation	
	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.
Government	0.225	(1.28)	-0.0600	(-0.28)	-0.0355	(-0.18)	-0.0644	(-0.31)	-0.0256	(-0.13)
Sales Tax	-0.0450	(-0.26)	-0.248	(-1.19)	-0.0337	(-0.17)	0.0849	(0.43)	-0.257	(-1.32)
Government*Sales Tax	-0.227	(-0.94)	0.148	(0.50)	0.0896	(0.32)	0.0960	(0.34)	0.0305	(0.11)
Constant	0.0839	(0.70)	0.311*	(2.10)	0.226	(1.64)	0.0396	(0.28)	0.146	(1.06)
N	211		211		211		211		211	
R-Squared	0.0152		0.0078		0.0006		0.0047		0.0147	
F. Stat.	1.07		0.54		0.04		0.33		1.03	
Notes: 2 sided t-tests; t statistics in parentheses; * p<0.05; ** p<0.01; *** p<0.001										

**Table C. 7: Regression Models for Non-Religious People**

	Model 103		Model 104		Model 105		Model 106		Model 107	
	Commitment		Disengagement		Game Playing		Resistance		Capitulation	
	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.
Government	-0.0106	(-0.06)	-0.128	(-1.00)	-0.0349	(-0.25)	0.231	(1.62)	-0.00381	(-0.03)
Sales Tax	-0.0537	(-0.33)	-0.0138	(-0.11)	-0.0555	(-0.39)	0.0724	(0.51)	0.124	(0.84)
Constant	-0.0916	(-0.68)	-0.143	(-1.37)	-0.196	(-1.70)	-0.241*	(-2.07)	-0.0654	(-0.54)
N	188		188		188		188		188	
R-Squared	0.0006		0.0058		0.0013		0.0169		0.0039	
F. Stat.	0.06		0.54		0.12		1.59		0.36	
Notes: 2 sided t-tests; t statistics in parentheses; * p<0.05; ** p<0.01; *** p<0.001										

**Table C. 8: Regression Models for Non-Religious People with Interactions**

	Model 108		Model 109		Model 110		Model 111		Model 112	
	Commitment		Disengagement		Game Playing		Resistance		Capitulation	
	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.
Government	-0.0590	(-0.26)	-0.179	(-1.01)	0.175	(0.90)	0.414*	(2.10)	-0.0189	(-0.09)
Sales Tax	-0.106	(-0.45)	-0.0690	(-0.38)	0.170	(0.84)	0.269	(1.32)	0.108	(0.51)
Government*Sales Tax	0.101	(0.31)	0.107	(0.42)	-0.437	(-1.56)	-0.381	(-1.34)	0.0315	(0.11)
Constant	-0.0702	(-0.46)	-0.120	(-1.02)	-0.289*	(-2.24)	-0.322*	(-2.46)	-0.0587	(-0.43)
N	188		188		188		188		188	
R-Squared	0.0011		0.0067		0.0144		0.0264		0.0039	
F. Stat.	0.07		0.41		0.89		1.66		0.24	

Notes: 2 sided t-tests; t statistics in parentheses; \* p<0.05; \*\* p<0.01; \*\*\* p<0.001

APPENDIX D

MISCELLANEOUS STATISTICS TABLES

**Table D. 1: Summary Statistics**

	Variable	Obs	Mean	Std. Dev.	Min	Max
1	Effectiveness	402	-9.68E-10	1	-2.40418	1.93056
2	Red Tape	402	-1.91E-09	1	-3.71189	2.014896
3	Government	402	0.527363	0.499873	0	1
4	Reputation	402	0.519901	0.500226	0	1
5	Age	402	39.69652	13.48473	5	79
6	Political Ideology	402	4.164179	2.035327	1	7
7	Female	402	0.38806	0.487916	0	1
8	Caucasian	402	0.689055	0.463457	0	1
9	Religious	402	0.609453	0.488481	0	1
10	Income	402	2.920398	0.884125	1	5

**Table D. 2: Experiment 4 - Table of Means Per Experiment [Range: -3.71 – 2.01]**

Dep. Variables:	Effectiveness		Red Tape	
	Private	Public	Private	Public
Reputation (+)	-0.07572	0.085202	0.14711	-0.00536
	(1.040195)	(0.966554)	(0.943284)	(0.951989)
Reputation (-)	0.058078	-0.05669	-0.04379	-0.10252
	(1.018863)	(0.981741)	(0.956837)	(1.123231)

Notes: standard deviations are in parentheses.

APPENDIX E

MOTIVATED REASONING REGRESSION MODELS

**Table E. 1: Regression Models for Conservatives**

Dep. Variable	Model 41		Model 42		Model 43		Model 44	
	Effectiveness		Effectiveness		Red Tape		Red Tape	
	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.
Government	0.0736	(0.48)	-0.125	(-0.58)	0.0429	(0.32)	-0.0267	(-0.14)
Reputation	0.178	(1.15)	-0.0332	(-0.15)	0.169	(1.27)	0.0953	(0.49)
Government*Reputation	-	-	0.400	(1.30)	-	-	0.141	(0.52)
Constant	0.0745	(0.55)	0.180	(1.14)	0.0799	(0.68)	0.117	(0.85)
N	186		186		186		186	
R-Squared	0.0084		0.0175		0.0092		0.0107	
F. Stat.	0.77		1.08		0.85		0.66	
Notes: 2 sided t-tests; t statistics in parentheses; * p<0.05; ** p<0.01; *** p<0.001								

**Table E. 2: Regression Models for Progressives**

Dep. Variable	Model 45		Model 46		Model 47		Model 48	
	Effectiveness		Effectiveness		Red Tape		Red Tape	
	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.
Government	-0.0849	(-0.57)	-0.206	(-0.93)	-0.261	(-1.70)	-0.135	(-0.59)
Reputation	-0.132	(-0.88)	-0.248	(-1.15)	0.330*	(2.14)	0.451*	(2.02)
Government*Reputation	-	-	0.224	(0.75)	-	-	-0.232	(-0.75)
Constant	0.0134	(0.10)	0.0810	(0.49)	-0.211	(-1.49)	-0.282	(-1.66)
N	152		152		152		152	
R-Squared	0.0069		0.0106		0.0516		0.0552	
F. Stat.	0.51		0.53		4.05		2.88	
Notes: 2 sided t-tests; t statistics in parentheses; * p<0.05; ** p<0.01; *** p<0.001								

**Table E. 3: Regression Models for Religious People**

Dep. Variable	Model 49		Model 50		Model 51		Model 52	
	Effectiveness		Effectiveness		Red Tape		Red Tape	
	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.
Government	0.0718	(0.57)	-0.165	(-0.90)	0.0473	(0.41)	0.0976	(0.58)
Reputation	-0.138	(-1.08)	-0.364*	(-2.02)	0.205	(1.78)	0.253	(1.55)
Government*Reputation	-	-	0.449	(1.77)	-	-	-0.0954	(-0.41)
Constant	0.280*	(2.46)	0.404**	(3.03)	-0.00848	(-0.08)	-0.0349	(-0.29)
N	245		245		245		245	
R-Squared	0.0064		0.0192		0.0134		0.0141	
F. Stat.	0.77		1.57		1.64		1.15	
Notes: 2 sided t-tests; t statistics in parentheses; * p<0.05; ** p<0.01; *** p<0.001								



**Table E. 4: Regression Models for Non-Religious People**

Dep. Variable	Model 53		Model 54		Model 55		Model 56	
	Effectiveness		Effectiveness		Red Tape		Red Tape	
	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.
Government	0.0647	(0.45)	0.107	(0.51)	-0.307	(-1.71)	-0.262	(-1.01)
Reputation	0.225	(1.58)	0.271	(1.25)	0.0290	(0.16)	0.0786	(0.29)
Government*Reputation	-	-	-0.0809	(-0.28)	-	-	-0.0873	(-0.24)
Constant	-0.531***	(-4.00)	-0.556***	(-3.47)	-0.0325	(-0.20)	-0.0596	(-0.30)
N	157		157		157		157	
R-Squared	0.0167		0.0173		0.0191		0.0195	
F. Stat.	1.31		0.9		1.5		1.01	
Notes: 2 sided t-tests; t statistics in parentheses; * p<0.05; ** p<0.01; *** p<0.001								

**Table E. 5: Regression Models for People with Tax Knowledge**

Dep. Variable	Model 57		Model 58		Model 59		Model 60	
	Effectiveness		Effectiveness		Red Tape		Red Tape	
	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.
Government	0.0209	(0.15)	0.00584	(0.03)	-0.225	(-1.48)	0.00223	(0.01)
Reputation	0.118	(0.83)	0.102	(0.48)	0.0162	(0.11)	0.250	(1.12)
Government*Reputation	-	-	0.0283	(0.10)	-	-	-0.429	(-1.41)
Constant	-0.343*	(-2.58)	-0.334*	(-2.07)	0.0295	(0.21)	-0.107	(-0.62)
N	198		198		198		198	
R-Squared	0.0035		0.0036		0.0115		0.0216	
F. Stat.	0.34		0.23		1.14		1.43	
Notes: 2 sided t-tests; t statistics in parentheses; * p<0.05; ** p<0.01; *** p<0.001								

**Table E. 6: Regression Models for People without Tax Knowledge**

Dep. Variable	Model 61		Model 62		Model 63		Model 64	
	Effectiveness		Effectiveness		Red Tape		Red Tape	
	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.	Coef.	T. Stat.
Government	0.0773	(0.58)	-0.116	(-0.61)	-0.00109	(-0.01)	-0.106	(-0.56)
Reputation	-0.0907	(-0.69)	-0.282	(-1.49)	0.249	(1.91)	0.145	(0.77)
Government*Reputation	-	-	0.371	(1.41)	-	-	0.202	(0.77)
Constant	0.270*	(2.31)	0.369**	(2.71)	-0.0475	(-0.41)	0.00619	(0.05)
N	204		204		204		204	
R-Squared	0.004		0.0138		0.0178		0.0207	
F. Stat.	0.4		0.93		1.82		1.41	
Notes: 2 sided t-tests; t statistics in parentheses; * p<0.05; ** p<0.01; *** p<0.001								