

2009

# Understanding and improving use-tax compliance: A theory of planned behavior approach

Christopher Robert Jones  
*University of South Florida*

Follow this and additional works at: <http://scholarcommons.usf.edu/etd>

 Part of the [American Studies Commons](#)

---

## Scholar Commons Citation

Jones, Christopher Robert, "Understanding and improving use-tax compliance: A theory of planned behavior approach" (2009).  
*Graduate Theses and Dissertations*.  
<http://scholarcommons.usf.edu/etd/2032>

This Dissertation is brought to you for free and open access by the Graduate School at Scholar Commons. It has been accepted for inclusion in Graduate Theses and Dissertations by an authorized administrator of Scholar Commons. For more information, please contact [scholarcommons@usf.edu](mailto:scholarcommons@usf.edu).

Understanding and Improving Use-Tax Compliance: A Theory of Planned Behavior  
Approach

by

Christopher Robert Jones

A dissertation submitted in partial fulfillment  
of the requirements for the degree of  
Doctor of Philosophy  
Department of Accounting  
College of Business Administration  
University of South Florida

Co-Major Professor: Jennifer Kahle-Schafer, Ph.D.  
Co-Major Professor: Uday Murthy, Ph.D.  
Edward Levine, Ph.D.  
Brad Schafer, Ph.D.  
Nathan Stuart, Ph.D.

Date of Approval:  
July 9, 2009

Keywords: use tax, theory of planned behavior, tax compliance, state and local taxes,  
remedies

© Copyright 2009, Christopher Robert Jones

## **Acknowledgments**

I gratefully acknowledge the helpful comments, suggestions, and support received from my dissertation committee members: Jennifer Kahle-Schafer (co-chair), Uday Murthy (co-chair), Edward Levine, Brad Schafer, and Nathan Stuart. I also thank Donald Bellante, Maureen Butler, Andrea Kelton, Lee Kersting, Gary Laursen, Robert Marley, Norma Montague, Nazgol Moshtaghi, Linda Ragland, Jacqueline Reck, Dahlia Robinson, Anissa Truesdale, and Sajeev Varki for their helpful comments and suggestions during the process. I would also like to thank my fellow Ph.D. colleagues and friends at both the University of South Florida and the University of Alabama not mentioned above: Ann Dzurainin, Travis “Boss Man” Holt, Johan Perols, Jessie Robertson, and Spencer Usrey. In addition, I appreciate all comments and suggestions from the faculty at Florida International University, Cal-Poly Pomona, Western Illinois University, and Nicholls State University during my paper presentations at these institutions. Finally, I would also like to thank Carilee Jones and Archer Montague for countless hours of proofreading.

## Table of Contents

List of Tables	iii
List of Figures	iv
Abstract	v
Introduction	1
Background and Hypotheses	6
Federal Income Tax Compliance	6
Use and Sales Tax Compliance	7
The Streamlined Sales Tax Project and The Internet Tax Freedom Act	8
Use Tax	10
Theory of Planned Behavior	12
Initial Survey	17
Method	17
Participants	18
Results	21
Developing and Testing the Model	23
Developing a Use-Tax Compliance Model	23
Salient Beliefs Determined in Survey	25
Attitude	25
Effort	25
Funding for State	28
Monetary Concerns	28
Fairness	30
Knowledge	34
Another Tax	36
Social Norms	37
Perceived Behavioral Control	39
Overall Model	40
Differences from Federal Income Tax	40
Method	41
Participants	42

Procedure	45
Results	46
Remedies for Improving Use-Tax Compliance	51
Remedy – Effort	51
Remedy – Information	52
Method	54
Participants	56
Manipulation Checks	59
Assumptions of ANOVA	59
Results	60
Supplementary Analysis	63
Conclusion	65
References	69
Appendices	76
Appendix A: Initial Survey Instrument	77
Appendix B: Model Validation and Remedy Instrument	85
About the Author	End Page

## **List of Tables**

Table 1 – Demographic Data for Participants in the Survey	19
Table 2 – Internet Buying Habits and Use Tax Data for Participants in the Survey	21
Table 3 – Most Commonly Listed Advantages and Disadvantages of Paying Use Tax	22
Table 4 – Demographic Data for Participants in the Model Validation Step	43
Table 5 – Internet Buying Habits and Use Tax Data for Participants in the Model Validation Step	45
Table 6 – Factor Loading and Cronbach’s Alpha for Factors with Multiple Questions	47
Table 7 – Descriptive Statistics for Variables in Model Validation Step	48
Table 8 – Models from Model Validation Step	49
Table 9 – Summary of Hypotheses for Model Testing	50
Table 10 – Demographic Data for Participants in the Remedy Step	56
Table 11 – Internet Buying Habits and Use Tax Data for Participants in the Remedy Step	58
Table 12 – Cell Mean and Standard Deviations for Treatment Conditions in Remedy Step	61
Table 13 – ANOVA Results	61
Table 14 – T-Tests Comparing Salient Beliefs between Participants in the Remedy and No-Remedy Conditions	63

## **List of Figures**

Figure 1 – General Model of the Theory of Planned Behavior	13
Figure 2 – Model of Use Tax Compliance using the Theory of Planned Behavior	24
Figure 3 – Experimental Set-up for Remedy	55

# **Understanding and Improving Use-Tax Compliance: A Theory of Planned Behavior Approach**

**Christopher Robert Jones**

## **ABSTRACT**

This study seeks to understand specific factors that are pertinent to individuals when making a use-tax compliance decision and to test a remedy to improve use-tax compliance. This study investigates use-tax compliance using a three-step approach. The first step involved building a survey to determine potential salient beliefs that are pertinent to individuals when facing a use-tax compliance decision. Results of the initial survey reveal that the effort of complying with the use tax, potential revenue to the state if the individual complies, fairness of the use tax, monetary concerns of the individual, perceived knowledge of the use tax, and social influences were the most mentioned factors contributing to individuals when making a use tax compliance decisions.

The second step in this study develops a model, based on the Theory of Planned Behavior, incorporating these salient beliefs. Results indicate that most of the salient beliefs identified in the survey were correlated to an individual's attitude.

Finally, the third step involved testing two remedies. The first remedy gave the individual the option to have the website automatically collect the use tax due. The second examined remedy provided information to the participant regarding the use tax. Results indicated that the effort remedy developed, having the website give the individual



the choice whether the website will automatically collect the tax, does improve the likelihood the individual will comply with the use tax. In addition, results also show compliance improves if participants are given information regarding the use tax.

## **I. Introduction**

This study seeks to understand specific factors that are pertinent to individuals when making a use-tax compliance decision and to test a remedy to improve use-tax compliance. Specifically, I use a survey-based approach to determine salient factors of use-tax compliance. Given the survey results, I design and experimentally test remedies that are expected to improve compliance.

The use tax is similar in spirit to a sales tax. It is a state tax a consumer pays to store, consume, or use an item in a particular geographic location (i.e., a state).<sup>1</sup> A use tax is generally owed when an individual purchases an item “out of state” and does not pay any sales tax (or pays a sales tax of a lesser amount than what is charged in his or her state of residence). It is important to note that it does not matter what the legal residence is for the person: if he or she lives in a state temporarily (i.e., for school) and stores an item there, he or she is obligated to pay the use tax if (s)he did not pay a sales tax on the purchase. Although there are numerous situations in which an individual could owe a use tax to his or her state of residence, in this study I focus on purchases made online since states continue to lose vast amounts of money due to untaxed internet purchases.

The largest revenue source for state governments is the sales tax (Goolsbee and Zittrain 1999). States that have a sales tax generally also have some form of a use tax that is due only when the individual did not pay sales tax on a purchase.<sup>2</sup> Traditional brick

---

<sup>1</sup> The multistate tax commission defines a use tax as "a nonrecurring tax, other than a sales tax, which (a) is imposed on or with respect to the exercise or enjoyment of any right or power over tangible personal property incident to the ownership, possession or custody of that property or the leasing of that property from another including any consumption, keeping, retention, or other use of tangible personal property and (b) is complementary to a sales tax" (Streamlined Sales Tax Project Website 2007).

<sup>2</sup> For instance, in Florida, residents are required to fill out Form DR-15MO quarterly and pay 6% tax on all purchases made out of state if the amount of tax owed is greater than \$1.00

and mortar stores automatically collect the sales tax and remit it to the state, eliminating the need for the purchaser to pay the use tax. Purchases made via the internet, however, are largely untaxed. Since internet vendors are rarely required to collect a sales tax for an out-of-state sale, it is left to the purchaser to pay any use tax in his or her state. In 2004, it was estimated that by 2008 states would lose between \$21.5 billion and \$33.7 billion a year because of untaxed purchases made online (Bruce and Fox 2004). Florida alone could lose as much as \$2.3 billion, representing approximately eight percent of total revenue for Florida in 2008 (State of Florida Long-Range Financial Outlook 2008).<sup>3</sup> Not only are states losing money, but residents in states are losing jobs because of uncollected use tax (Florida Tax Watch 2009). Due to the economic significance of this revenue loss, it is important to examine both factors that influence use-tax compliance and ways to improve use-tax compliance.

Although states recognize that untaxed internet sales continue to be a problem, few remedies exist due to the difficulties in monitoring and enforcement. A typical internet transaction with use-tax implications would involve a person located in one state buying a product from a vendor in another state. Currently, vendors are not required to collect use or sales taxes for a state unless they have a physical presence in the state (*Quill Corp. vs. North Dakota 1992*).<sup>4</sup> Therefore, in order to enforce use-tax compliance for a specific purchase, a state would have to determine if a sales tax was collected at the point of sale, where the item was shipped, whether the item is in “use” in the state, and who would be responsible for paying the use tax.

---

<sup>3</sup> Florida is currently projecting a budget deficit of \$2.33 billion for 2008.

<sup>4</sup> The ruling in *Quill Inc. vs. North Dakota* determined that Quill Inc. did not need to collect a sales tax for catalog orders from North Dakota.

Despite the considerable amount of federal tax compliance research, there is a dearth of research on other types of taxes. The use tax differs from the federal income tax in many potential ways. For example, taxpayers may not be as aware of the use tax or the compliance requirements. Federal income tax research has shown that raising the penalty and/or audit rate should improve compliance (Allingham and Sandmo 1972). Given that very few people are aware the use tax even exists, it would serve little purpose to raise the penalty and/or audit rate – people still would not pay since they are not aware that they should pay. Other potential differences between the two taxes include the fact that the use tax is a consumption based tax whereas the federal income tax is income based and the fact that the use tax is generally much smaller in amount than the federal income tax and could be deemed “immaterial” by the taxpayer. Recent empirical research has begun to examine different taxes in addition to the federal income tax (e.g., Sanders et al. 2008).

Given the multitude of potential differences, the use-tax compliance decision is likely to involve different psychological factors than the decision to comply with the federal income tax. More specifically, each difference could alter the decision process for the individual. Thus, an important first step in improving use-tax compliance is to identify factors associated with the use-tax compliance decision.

This study investigates use-tax compliance using a three-step approach. The first two steps create a model for use-tax compliance using the Theory of Planned Behavior (TPB) (Ajzen 1991). The TPB posits that actual behavior is based on a person’s intention to perform the behavior. This intention, in turn, is based on three factors: attitude

towards the behavior, subjective norms regarding the behavior, and perceived behavioral control.

The first step in this study gathers factors that are pertinent to individuals when facing a use-tax compliance decision. I develop a questionnaire based on Ajzen and Fishbein (1980) to determine the antecedents to attitudes, subjective norms, and perceived behavioral control that are pertinent to individuals making a use-tax decision.

The second step in this study develops a model, based on the TPB, incorporating these factors. This approach serves two purposes. First, it allows me to experimentally test if the factors identified in the questionnaire are in fact antecedents to use-tax compliance behavior. Second, by using regression analysis, I can show the relative importance of each factor. These first two steps have been used in many research settings. Taylor and Todd (1995) used a similar approach to predict adoption of new technology. They also used the approach to help predict composting behavior. Bobek and Hatfield (2003) used a similar approach to explain federal income tax compliance. Bobek, Hatfield, and Wentzel (2007) use TPB to explore why people prefer a refund to having less tax withheld on their paycheck.

The final step in this study involves developing and testing technology-based remedies aimed at changing the attitudes, subjective norms, and perceived behavioral control factors that are found to be pertinent to use-tax compliance behavior from steps one and two. Specifically, this study examines a remedy where individuals are given the option to have the vendor's website automatically collect the use-tax due. In addition,

this study examined a remedy were the participant is simply given information on the use tax.

Results of the initial survey reveal that the effort of complying with the use tax, potential revenue to the state if the individual complied, fairness of the use tax, monetary concerns of the individual, perceived knowledge of the use tax, and the fact that participants considered the use tax just “another tax” were the most mentioned factors influencing individuals’ use tax compliance decisions. Accordingly, a model using these beliefs was developed and tested.

Results of the model testing indicate that most of the salient beliefs identified in the survey were correlated to an individual’s attitude. Specifically, effort involved in paying the use tax, fairness of the use tax, funding provided to the state, and the fact the use tax was considered just another tax were all significantly related to an individual’s attitude towards paying the use tax. In addition, the attitude measure was positively correlated with intention to comply.

The results of the remedy step indicate that the proposed remedies do increase the likelihood of use-tax compliance.

## **II. Background and Hypotheses**

### Federal Income Tax Compliance

The United States has a voluntary tax compliance system, and understanding what motivates consumers to voluntarily pay (or not pay) the federal income tax has been a focus of extensive investigation by researchers. The official view of the IRS is that there are three dimensions of federal tax compliance: filing, reporting, and payment compliance (IRS 2003). Filing compliance refers to whether the taxpayer submitted the correct forms to the IRS. Reporting compliance refers to whether the return was accurate. Finally, payment compliance refers to whether the taxpayer paid his/her reported tax liability in a timely manner. Based on the IRS's definition of compliance, all three of these dimensions lead to a taxpayer being viewed as "non-compliant." Virtually all tax compliance research to date, however, has been restricted to situations in which a taxpayer intentionally pays less than the amount owed (i.e., payment compliance). The motivation behind this stream of research is the large amount of tax revenue the U.S. has lost due to non-compliant behavior. For the tax year 2001, the IRS estimated this amount to be to be \$345 billion dollars (IRS 2006).<sup>5</sup>

There are several reviews of federal income-tax compliance research (e.g., Long and Swingen 1991; Cuccia 1994; Jackson and Milliron 1986). Jackson and Milliron (1986), the broadest and most comprehensive study, provide a framework for understanding tax compliance by identifying individual variables (e.g., age, gender, and education), perception variables (e.g., fairness and social norms), and environmental

---

<sup>5</sup> The IRS bases its current estimated tax gap on 2001 data. The tax gap refers to the total difference between what is owed and what is being paid to the IRS.

variables (e.g., penalty and audit rate) that help to explain and potentially improve, federal income tax compliance. Thus, while these reviews are helpful for understanding federal income tax compliance, they do not encompass all potential taxes since different taxes could make different factors more or less salient.

### Use and Sales-Tax Compliance

Many states collect taxes on purchases made by residents in the form of sales and use taxes. A sales tax is a tax an individual pays upon purchase of a tangible item. A use tax is a tax an individual pays to utilize, store, or consume an item in a particular location. The individual who purchases the item is generally responsible for complying with all applicable use-tax laws. A sales tax differs from a use tax in that retailers (as opposed to the buyer) are generally held responsible for collecting and enforcing the sales tax. When an individual buys and does not pay a sales tax in the state in which the individual plans to use the item, the individual may be required to file a use-tax return and pay a use tax. This situation is common when an individual places an order through a catalog or online store where the retailer is located in a different state and will not collect the local sales tax. Perhaps the easiest and most convenient method of collecting the use tax would be to have the state force the vendor to automatically collect payment. However, the Supreme Court (in *Quill Corp. vs. North Dakota 1992*) ruled that a vendor is not required to collect the use tax for a state unless the vendor has nexus, a physical presence, in the state.

The largest revenue source for state governments is the sales tax (Goolsbee and Zittrain 1999). States that have a sales tax generally also have some form of a use tax. For



example, in the state of Florida use tax is due on purchases if the amount of tax owed is greater than \$1.00. Compliance requirements for the use tax vary from state to state. For example, many states (e.g., New York) have a use-tax line item on their state income tax form. Other states have separate forms that must be completed. For example, in Florida, a resident must submit a form quarterly to comply with use-tax laws.

States continue to lose sales tax revenue because individuals make purchases online and avoid state sales tax, as these purchases made via the internet from out-of-state vendors remain largely untaxed. In 2004 it was estimated that, within four years, states would lose between \$21.5 billion and \$33.7 billion in revenue annually due to untaxed purchases made online (Bruce and Fox 2004). A primary contributor to this trend is online auction sites such as eBay. Uncollected sales and use taxes on eBay auctions have been estimated to be around \$60 million annually (Albring et al. 2000), yet this figure appears conservative as individual states have just begun to disclose estimates of how much revenue is lost due to consumers not paying use taxes.<sup>6</sup> For example, Maine has estimated it loses between \$30-\$100 million a year (Maine Revenue Services Website 2007). Information indicates that sales made via the internet continue to grow. The U.S. Census Bureau recently released its 2006 E-Commerce Multi-sector report showing that retailers' e-commerce sales increased by 22 percent in 2006 (U.S. Census Bureau 2008).

#### The Streamlined Sales Tax Project and the Internet Tax Freedom Act

The Streamlined Sales Tax Project (SSTP) is a project undertaken by many states to simplify sales and use-tax compliance, and has resulted in the Streamlined Sales and

---

<sup>6</sup> Not all purchases on eBay require a person to pay the use tax. Payment of the use tax depends on a number of factors including whether the seller was a business or individual and location of seller (Heckman 2005).

Use Tax Agreement (SSUTA). This agreement allows companies to use computer programs (called “certified service providers”) to automatically determine the amount of tax to be collected from each customer and the state to which the tax should be paid. The company then collects the use tax owed from the customer and remits it to the proper state. Although the SSTP is voluntary, one incentive for participation is that compliant companies are allowed to keep a portion of the tax proceeds collected.<sup>7</sup> Currently, 18 states have adopted the SSUTA (United State Sales Tax Site 2008). Cornia et al. (2004, 1) expressed doubt over whether the project would actually work, noting that “states are unlikely to adopt extensive reforms.” To date, there has been little empirical research addressing the Streamlined Sales Tax Project or the Streamlined Sales and Use Tax Agreement.

Finally, it is important to address a common misconception involving collection of the use tax for online sales. The Internet Tax Freedom Act (established in 1998) provides a ban on certain taxes being imposed. Many people mistakenly believe that the act prohibits states from collecting a use tax on online sales. This is not the case, as the act merely prohibits state and local governments from enacting internet-only taxes. For example, a tax to send or receive e-mails is prohibited by the Internet Tax Freedom Act. Since a majority of states already collect a sales tax on non-internet sales, a use tax is not disallowed under the act.

---

<sup>7</sup> A similar incentive is used to induce companies to remit sales tax collected in the state. However, this plan has come under scrutiny due to the lost revenue being paid to companies as inducements (Druker 2008).

## Use Tax

A majority of the literature available on taxing internet sales is descriptive in nature, focusing either on recent trends during the time period the article was written involving taxes and the internet (e.g., Fox and Murray 1997) or the growing problem of uncollected sales tax revenues for various states (McClure 1999; Tannenwald 2002). Many of these articles are now outdated, provide little more than opinion, and do not offer any empirical evidence about the causes of non-compliance or solutions that could be implemented to improve non-compliance.

Goolsbee and Zittrain (1999) examine several issues in the debate on whether to tax internet sales. Their paper is not designed to test hypotheses related to the use tax, but several findings in the paper warrant further discussion. One important contribution the article makes is in estimating the actual amount of revenue states are losing due to not taxing internet purchases. Goolsbee and Zittrain (1999) determined that states lost approximately \$430 million in revenue due to untaxed internet purchases during 1998. In addition, the authors found that not taxing internet sales tends to favor the more affluent since richer and more highly-educated individuals tend to purchase online more often than poorer and lesser educated individuals. Finally, the authors argue that the costs associated with taxing internet sales will probably be minimal after an initial system is in place. The authors suggest that software could simplify the collection and distribution of the appropriate taxes to the appropriate jurisdictions.

While Goolsbee and Zittrain (1999) contribute to the initial discussion about the internet and state taxes, their study has limitations. The authors acknowledge that a lack

of measurable data required them to make numerous assumptions and estimates. Use of the internet for commerce has grown exponentially since their data were collected in 1998, and the results in this study almost certainly underestimate the sales tax problem. Significantly, only five years later, Bruce and Fox (2004) predicted that electronic commerce would cost states at least \$21.5 billion in lost sales tax revenue by 2008. Interestingly, Goolsbee (2000) suggests that internet sales are highly sensitive to sales tax rates, and online purchases might be reduced by 24 percent if use-tax laws were enforced. In addition, this article notes that people living in locations with higher sales-tax rates are more likely to purchase online. Taken together, these facts suggest that people are using the internet to avoid paying taxes and that “forced” compliance would probably reduce sales via the internet.

Sanders et al. (2008) examined use-tax compliance in the construction industry and found that making the taxpayer (i.e., construction firm) aware of the penalty associated with non-compliance of the use tax and having a representative of the firm sign an affidavit stating they have reviewed all appropriate use tax rules both increased compliance.

One empirical article warranting discussion is Trandel (1991). Written before the internet boom of the mid-1990s, this article deals with use-tax avoidance on cross-border sales in general. As Trandel’s (1991, 315) analysis shows, “the ability of consumers to evade the use tax alters their behavior in a way that leads firms to charge lower prices. This reduces welfare loss created by the sellers’ market power, and implies that evasion can increase welfare, even when tax rates are adjusted to offset the effect of evasion on

tax revenue.” Trandel is thus suggesting that, by not taxing internet sales, states and consumers ultimately benefit since the loss of customers from brick and mortar stores will cause these stores to reduce prices, in turn increasing the overall economic welfare for the individuals.

In summary, states are forfeiting a vast stream of revenue by not enforcing the use tax. The actual amount states stand to lose appears to be in constant flux, and the estimates can (and do) change dramatically based on the assumptions made by the investigators. Significantly, consumers have come to recognize that they can avoid sales taxes by purchasing online. Whether avoiding the use tax is simply due to a monetary incentive (i.e., not having to pay a tax) or other factors have not been investigated to date.

#### Theory of Planned Behavior

As research in tax compliance has progressed, it has moved beyond looking at one or two individual factors associated with a taxpayer’s compliance decision. Instead, some research has attempted to build an integrated model of taxpayer compliance using multiple factors (Hanno and Violette 1996; Bobek and Hatfield 2003).<sup>8</sup> The theory used to help build this “integrated model” is the TPB.

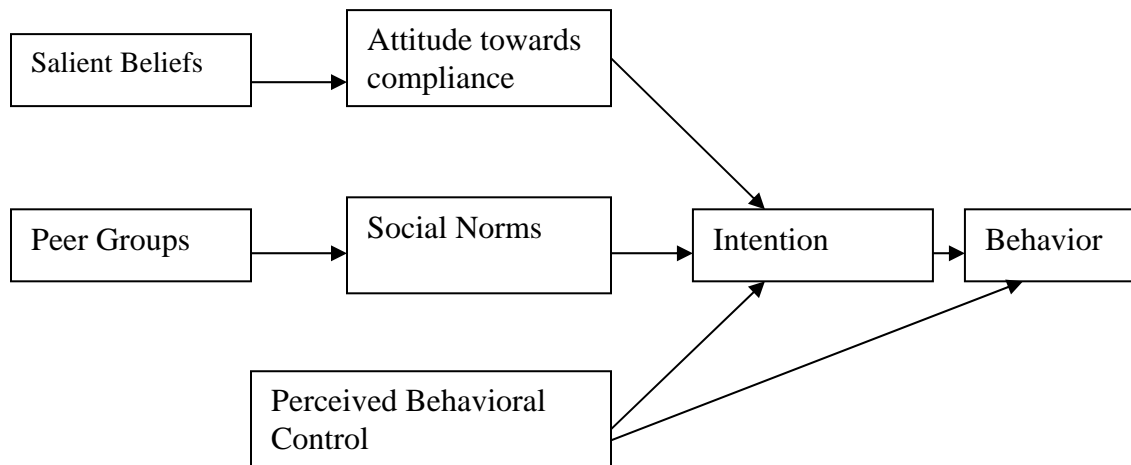
The TPB suggests that the key factor in determining whether a person will engage in a certain behavior is the intention to perform the behavior itself. This is intuitively easy to understand: the greater the intention to perform the behavior, the more likely a person is to actually engage in the behavior. The second key point behind the TPB is that it also suggests three key factors that are associated with the person’s intention to perform

---

<sup>8</sup> Although the tenets of TPB can be used to explain any action, in psychology, the action in most TPB studies is generally something that “better” the individual. It could be argued that paying a use tax does not directly improve an individual, but rather better society as a whole.

the action: a person’s attitude towards the behavior in question, social factors (termed “subjective norms”), and perceived behavioral control. Subjective norms are how society influences an individual’s behavior. Perceived behavioral control deals with the amount of control a person believes he has over a certain action. A key point is that it is also possible to determine antecedents of the attitude towards the behavior, allowing researchers to determine what specific factors influence the behavior of interest. This theory was originally discussed by one of the “founders” of the theory of reasoned action, Icek Ajzen, and has been validated in numerous studies since (e.g., Beck and Ajzen 1991; Taylor and Todd 1995).<sup>9</sup> Bobek and Hatfield (2003) found evidence consistent with the model’s predictions for federal tax compliance intentions. A generalized picture of the TPB model is depicted in Figure 1.

**FIGURE 1 – General Model of the Theory of Planned Behavior**



Numerous accounting studies have used the TPB, and its predecessor--the theory of reasoned action--to explain a decision choice (e.g., Cohen et al. 1991; Mauldin and

<sup>9</sup> A complete literature review of the theory of planned behavior can be found in Ajzen (1991).

Arunachalam 2002).<sup>10</sup> Hanno and Violette (1996) used the theory of reasoned action in a tax compliance setting and found that the theory explained taxpayer compliance decisions. In general, most recent research uses the TPB instead of its predecessor, the theory of reasoned action. However, both have been used to explain taxpayer federal compliance behavior, and are good starting points for an integrated model of tax compliance decisions. In addition, the theory incorporates social factors and personal attitudes. Therefore, the three factors used to explain intention in the TPB will be useful in determining use-tax compliance.

To date, no research has examined the TPB in relation to the use tax. Although federal tax compliance research has used the TPB, it is important to develop a model specific to the use tax. As discussed in the introduction, the use tax differs from the federal income tax in many ways:

- The use tax is paid on a completely self-reporting basis. Although individuals do voluntarily comply with the federal income tax as well, the government is provided with numerous documents (e.g., W-2s, 1099s) that are used for verification purposes. Since states do not receive verification of out-of-state purchases, the state would have no way of easily determining whether a resident is complying with the use tax.
- The use tax is a consumption tax whereas the federal income tax is income-based. Taxpayers may view the fairness of a tax based on how much they spend differently than on how much they earn.

---

<sup>10</sup> The only difference between the theory of reasoned action and the theory of planned behavior is that the former does not have perceived behavioral control as a determinant of intention.

- Taxpayers making multiple purchases are required to keep track of each instance, and, in certain states, file multiple use tax returns throughout the year versus the requirement for only one federal income tax return. This potentially creates a burden for taxpayers to keep receipts for each purchase, know when and how to submit the use tax due, and how to comply correctly.
- The use tax itself is a cash outlay increasing the cost of the item purchased, whereas the income tax is often withheld on earnings (a reduction to a cash inflow) and is potentially less salient since taxpayers never see the cash.
- The state is the taxing authority, not the federal government. Thus, revenues benefit the state the individual resides in rather than the broader federal government.
- Taxpayers may not be as aware of the use tax or the compliance requirements; whereas, most individuals know of the IRS and the federal income tax. Individuals may perceive getting taxed by their state differently than getting taxed by a federal government for numerous reasons including different enforcement procedures, the individual's knowledge of each, and differing opinions of federal and state governments.

Given the numerous differences between the income tax and the use tax, it is important to determine what specific factors are relevant for a person making a use-tax compliance decision. Considering factors that are pertinent to federal income tax compliance might lead to suboptimal remedies since those factors may not be relevant to use-tax compliance decisions. A richer discussion of differences between the federal



income and use taxes can be found below following identification of specific factors pertinent to the use-tax compliance decision.

This study uses the approach developed by Ajzen and Fishbein (1980) and Ajzen (1991) to build a model that explains use-tax compliance behavior. This provides a method for not only determining what antecedents are important in forming one's attitude, social norms, and perceived behavioral control, but also the relative importance of each.

### **III. Initial Survey**

#### Method

I developed a survey utilizing the recommendations of Ajzen and Fishbein (1980) in order to determine antecedents of a person's attitude towards paying a use tax (i.e., attitude towards compliance in Figure 1). Ajzen and Fishbein refer to these antecedents as "salient beliefs" toward the action itself. Accordingly, for the remainder of this study the term salient beliefs will be used.

The survey consisted of four sections.<sup>11</sup> The first section asked participants to list anything they knew about the use tax. This was used to determine how much prior knowledge a participant had about the use tax. The second section gave the participants relevant information on the use tax (e.g., definition and example of when the use tax would apply). Anecdotal evidence indicates that many individuals know little or nothing about the use tax and asking them for their opinions on paying the use tax would yield few useful results without first providing background information to them.

In the third section, participants received a scenario in which they were told to assume they had purchased an item online and therefore they owed a use tax. Participants were then asked to list "advantages, disadvantages, and anything else they associate" with paying the use tax on the purchase. To be as consistent as possible with the recommendations of Ajzen and Fishbein (1980), participants were asked about paying a use tax on a particular purchase, not paying a use tax in general. This is important since the theory of planned behavior deals with the attitude towards a specific *action*, not the

---

<sup>11</sup> The research project received IRB approval from the University of South Florida before any data were collected.

subject of the action. For example, although it might very well be important to determine one's attitude towards the use tax in general, that is only one salient belief in determining one's overall attitude towards *paying* the use tax on a specific purchase. As mentioned previously, this type of questioning has been used in prior federal tax compliance research (e.g., Bobek and Hatfield 2003) to determine salient beliefs towards federal tax compliance attitudes. The final section gathered demographic data on the participants. A copy of the survey can be found in Appendix A.

### Participants

The participants for this survey were undergraduate students from a large university located in the southeastern United States. They were enrolled in an introductory accounting class at the time of data collection. One hundred six individuals took part in the survey. Demographic data for the participants can be found in Table 1. Given that the participants were undergraduate students, the demographic data are not surprising. The majority of participants were young, unmarried, and in low income brackets.<sup>12</sup>

---

<sup>12</sup> The average internet shopper tends to be slightly older than an undergraduate student (Forsythe and Shi 2003).

**TABLE 1 –  
Demographic Data for Participants in the Survey**

	<b>Number</b>	<b>% of Total</b>
<b>Gender</b>		
<i>Male</i>	53	50.00%
<i>Female</i>	53	50.00%
<b>Age</b>		
<i>Under 20</i>	48	45.28%
<i>20 to 29</i>	57	53.77%
<i>30 to 39</i>	1	0.94%
<i>40 +</i>	0	0.00%
<b>Household Income</b>		
<i>Zero to \$20,000</i>	54	50.94%
<i>\$20,001 to \$35,000</i>	11	10.38%
<i>\$35,001 to \$50,000</i>	5	4.72%
<i>\$50,001 to \$65,000</i>	5	4.72%
<i>\$65,001 to \$80,000</i>	5	4.72%
<i>\$80,001 to \$100,000</i>	10	9.43%
<i>\$100,000+</i>	16	15.09%
<b>Tax Return Status (2007 Return)</b>		
<i>Single</i>	93	87.74%
<i>Married Filing Jointly</i>	3	2.83%
<i>Married Filing Separately</i>	0	0.00%
<i>Head of Household</i>	4	3.77%
<i>Qualifying Widow(er)</i>	0	0.00%
<i>Did Not File</i>	6	5.66%

n = 106

In addition to collecting general demographic data, the survey also asked participants questions relating to the use tax and the participant’s online buying habits. Table 2 summarizes this data. Only one of the 106 participants had any prior knowledge of the use tax before taking the survey. The one participant who was aware of the use tax had this knowledge because her job required her to pay the use tax for the company where she worked. Thirteen of the participants admitted they had no knowledge of the

use tax, but attempted to define it anyway.<sup>13</sup> Ninety-two of the participants had never heard of the use tax. In addition, 100 of the 106 participants had purchased a product online, with over half spending over \$100 in the past year on online purchases. These data, while limited to a relatively homogeneous sample, indicate that the participants are representative of the typical online purchaser. In addition, the data support the idea that states have done a poor job educating people about the use tax, a majority of people do not pay the use tax, and the states are losing a great deal of money due to this non-compliance.

---

<sup>13</sup> In order to be counted in this group, a participant had to say, “I don’t know, but I will say.” or use similar wording.

**TABLE 2 –  
Internet Buying Habits and Use Tax Data for Participants in the Survey**

	<b>Number</b>	<b>% of Total</b>
<b>Awareness</b>		
<i>Did Not Know</i>	92	86.79%
<i>Guessed Wrong</i>	9	8.49%
<i>Guessed Correctly</i>	4	3.77%
<i>Knew</i>	1	0.94%
<b>Purchased Online Before</b>		
<i>Yes</i>	100	94.34%
<i>No</i>	6	5.66%
<b>Spent Online in Past Year</b>		
<i>Zero</i>	6	5.66%
<i>\$1 to \$100</i>	23	21.70%
<i>\$101 to \$500</i>	50	47.17%
<i>\$501 to \$1,000</i>	15	14.15%
<i>\$1,001 to \$5,000</i>	12	11.32%
<i>\$5,000 +</i>	0	0.00%
<b>Paid Florida Use Tax Before</b>		
<i>Yes</i>	3	2.83%
<i>No</i>	57	53.77%
<i>Not Sure</i>	46	43.40%
<b>Paid a Use Tax in any State Before</b>		
<i>Yes</i>	3	2.83%
<i>No</i>	60	56.60%
<i>Not Sure</i>	43	40.57%

n = 106

## Results

The participants were asked to list any “advantages, disadvantages, or anything else they associated with” paying a use tax on a particular purchase. The responses were then coded and tallied.<sup>14</sup> A list of the more commonly given answers is shown in Table 3. The two most common responses for disadvantages and advantages were that complying with the use tax would require additional effort and that compliance would give the state more funding, respectively. Interestingly, the second most common listed

---

<sup>14</sup> Only one coder was used in this process. Multiple coders were not used since there were no hypotheses being tested. However, it is a potential limitation to the study.

advantage of paying the use tax was that the use tax was less than the sales tax. This occurred since the county that a majority of students lived in has an additional one percent sales tax that is avoided by paying the use tax. While it could be argued that this advantage would only be applicable to the cities and/or counties that have an additional sales tax, offering a lower use tax than the sales tax in the state might increase compliance just due to the fact that people feel better about saving even a small percentage than if they had to pay the sales tax in full.

**TABLE 3 –  
Most Commonly Listed Advantages and Disadvantages of Paying Use Tax**

	<b>Number of Times Listed</b>
<b>Advantages</b>	
<i>Funding for state*</i>	53
<i>Lower than sales tax in county***</i>	29
<i>Pay fair share**</i>	15
<i>Might get caught if you don't pay</i>	15
<i>Might incur penalty</i>	13
<i>Obeying the law</i>	7
<i>Moral Obligation</i>	6
<b>Disadvantages</b>	
<i>Effort*</i>	58
<i>Monetary payment***</i>	37
<i>Another tax*</i>	23
<i>Knowledge*</i>	23
<i>Majority of people would not pay</i>	20
<i>Tax is not fair**</i>	16

The survey yielded 336 total identifiable responses. This table lists the most commonly given advantages and disadvantages.

\* - Salient belief was included in the model

\*\* - Responses were combined to form the *Fairness* salient belief before being included in model

\*\*\*- Response were combined to form the *Monetary Concerns* salient belief before being included in the model

#### **IV. Developing and Testing the Model**

##### Developing a Use-Tax Compliance Model

A model of use tax compliance was built using the data obtained from the survey. The first step is choosing the salient beliefs identified in the survey to put in the model. Ajzen and Fishbein (1980) suggest using enough beliefs so that 75 percent of all responses are represented in the model. The survey yielded 336 separate responses; accordingly responses were ranked and added to the model until the model contained at least 252 responses (or 75 percent of all responses).

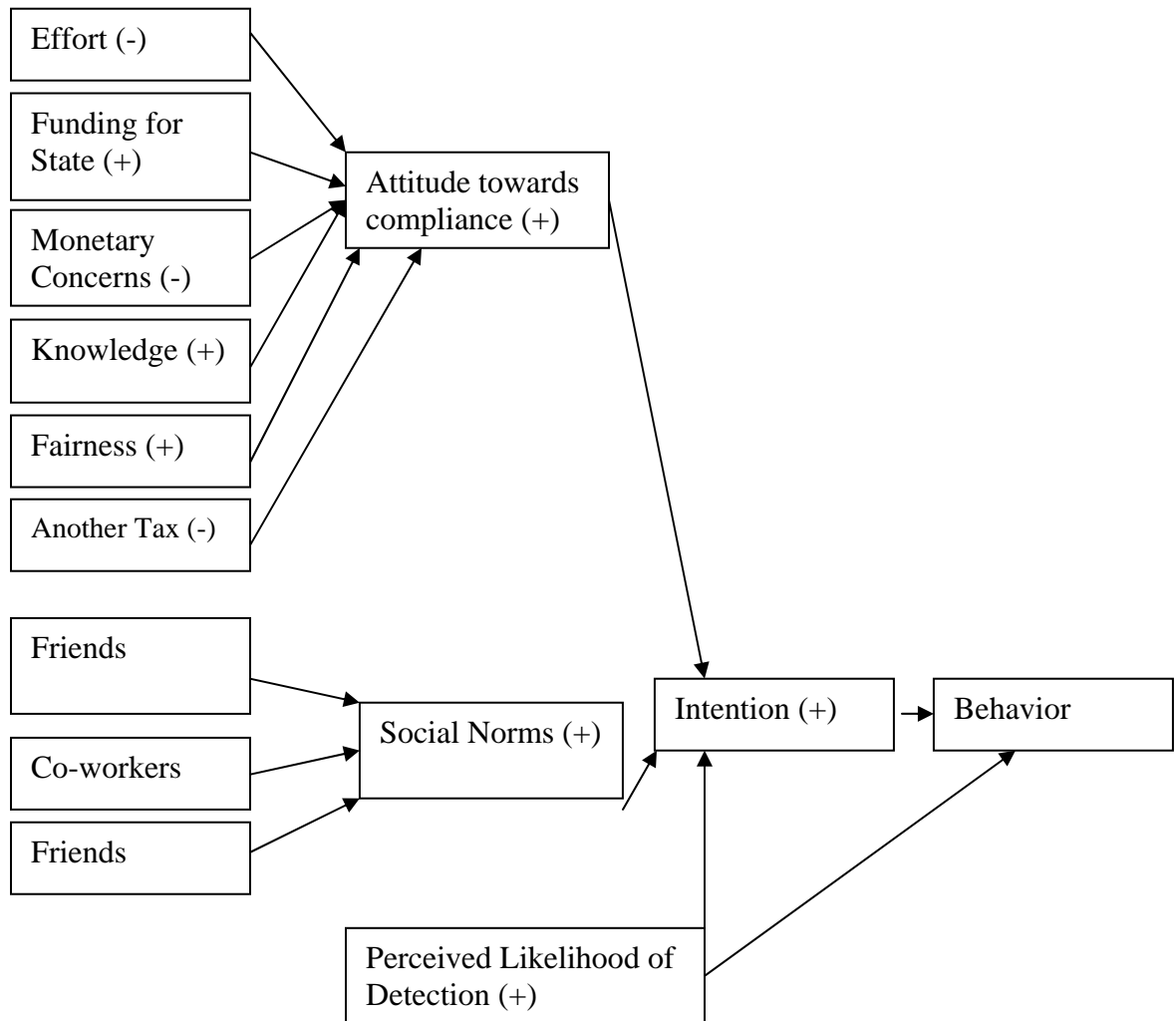
During this step certain advantages and disadvantages that involved the same underlying concept were combined to form one salient belief. For example, participants listed paying their fair share of taxes as an advantage and the tax not being fair as a disadvantage. Since both of these responses concerned fairness they were combined into one salient belief (termed *Fairness*). An identical approach was taken with the disadvantage of monetary payments and the above mentioned advantage that the use tax owed on the purchase was less than the sales tax that would have been due for the participants in the county where the initial survey was administered. This salient belief was termed *Monetary Concerns*.

As mentioned above, salient beliefs were then added to the model until at least 75% of all responses were included. For example, monetary concerns was the most often listed salient belief (60, approximately 20 % of the total number of responses given). The second most often listed salient belief was effort; this salient belief was listed 58 times (or approximately 17 percent of the total number of responses given).



Combining these two totals yields 37 percent of the total number of all responses. The next salient belief added was funding to the state (53, equaling approximately 16% of the total number of responses given). Adding this salient belief meant the model now included 53% of all responses. Accordingly, the salient beliefs of fairness, another tax, and knowledge were added to the model so that 75% of all responses were included. Salient beliefs highlighted with an asterisk in Table 3 were included in the model. The full model is shown in Figure 2.

**FIGURE 2 –  
Model of Use Tax Compliance using the Theory of Planned Behavior**



## Salient Beliefs Determined in the Survey

### *Attitude*

General attitude towards an action refers to a person's feelings toward performing the stated action. Having a positive (negative) attitude towards the stated action increases (decreases) the likelihood that the person will perform the stated action. The next section discusses the salient beliefs determined in the survey that should influence attitude.

### *Effort*

One area of taxpayer compliance of singular relevance to the use-tax question comes from the compliance requirements themselves. For purposes of this paper, I specifically define effort as the compliance requirements imposed on the taxpayer to pay the use tax. Most states require the individual to include the use-tax owed on their state income tax return (e.g. Alabama, New York). In Florida, there is no income tax, thus there is no accompanying income tax form to complete. In general, for states that do not have an income tax, the individual must find the appropriate form online, complete it, and submit it to the appropriate taxing authority. In each case, the burden is on the taxpayer to maintain adequate records to ensure compliance. Keeping track of all purchases is also the responsibility of the individual. Unlike the federal income tax, where forms are given to the individual (e.g., W-2s, 1099s, etc.), the burden of maintaining records is completely on the individual. This could lead the individual to have a more negative "attitude" towards compliance.

Fifty-eight participants listed some form of “effort” as a disadvantage to paying the use tax. To date, little tax research has actually examined the requirements to comply with a tax. This is probably due to the fact that most analyses focus on the federal income tax, which, in its present form, presents minimal confusion on how to actually comply with that tax (i.e., fill out a form and submit it to the IRS). Prior research has tended to focus mainly on the complexity of tax laws (Kaplow 1998; Krause 2000). Kaplow (1998) developed a framework discussing how accurate a tax return should be and if, and why, a taxpayer seeks outside advice when preparing a tax return. Krause (2000) argued that income tax laws are so complex that the IRS cannot always determine the “true” liability owed. The results of most of this research are not overly surprising: as complexity increases, compliance decreases. In their literature review, Alm and McKee (1998) indicate that “burden of compliance” indeed might be a factor in tax compliance behavior. The discussion of prior research linked to burden of compliance in Alm and McKee (1998), however, focused more on complexity and uncertainty.

Tax research has also focused on other issues that might make tax compliance less complex. For example, Masselli et al. (2002) examined how the use of tax preparation software influenced compliance. The results of Masselli et al. (2002) indicate that less-experienced taxpayers tend to ‘overreact’ to embedded audit warnings in these programs and increase the amount of income reported. A second way in which taxpayers reduce complexity is by using paid tax preparers to prepare tax returns. Research has examined how the use of tax preparers influences

compliance (Hite and McGill 1992; Christian et al. 1994). The results of these studies have generally shown that the use of tax preparers generally reduces a person's tax liability (Christian et al. 1994). Research has not established that this reduction in tax liability is the primary reason for using preparers, however. In fact, some evidence suggests that taxpayers do not always prefer aggressive advice, but rather that the return be accurate (Hite and McGill 1992). Taken together, this research suggests that people try to reduce complexity by a number of means.

There are few ways that a taxpayer could reduce the complexity and/or compliance requirements of the use tax, however. No tax software exists that the general population could use for complying with the use tax, and tax preparers offer little in the way of services to help. Thus, the use tax provides an interesting setting as the burden to comply currently rests with the taxpayer as compared to the sales tax where the tax is collected by the vendor. Under current regulations, an online vendor website is not required to provide any information about the responsibility for the use tax to the individual nor does it provide any information to the state if the vendor sells an item and sales tax is not collected. The burden thus lies with the taxpayer, who must find all applicable forms, print them, fill out, and submit the forms to the state. One may posit that this level of effort reduces compliance, and some interesting questions emerge: how much assistance (if any) does a taxpayer require in order to comply with use-tax laws? Would taxpayers prefer a system where the website automatically fills out the appropriate form for them? This area offers many avenues of investigation for future use-tax research.

In summary, there is little prior empirical research related to effort (i.e., compliance requirements imposed on a taxpayer). Research addressing complexity has shown that as a tax law becomes more complex, however, compliance with the tax law decreases. Based on the above discussion, I propose the following hypothesis:

*H<sub>1a</sub>: The salient belief Effort will be negatively correlated with the Attitude variable.*

#### *Funding for State*

The advantage most often listed in the salient belief identification survey was the idea that paying the use tax leads to more funding for the state. Interestingly, little tax research has examined this rather obvious point. Alm, Jackson, and McKee (1992) find that the level of popular support for a public good affects the level of compliance. Falsetta et al. (2008) offer experimental evidence that taxpayers are more likely to comply with income tax laws when they support the government program with which the tax is associated.

No research has examined how the individual feels about paying a tax towards their state versus the federal government. Based on the above discussion, I propose the following hypothesis:

*H<sub>1b</sub>: The salient belief Funding for State will be positively correlated with the Attitude variable.*

#### *Monetary Concerns*

Monetary concerns as defined in this study refer to the fact that taxpayers will have less money if they pay the use tax. This point generally provides the tension in

most tax compliance research. The seminal study of Allingham and Sandmo (1972) is widely recognized as providing the foundation for modern tax compliance research. In this study, the authors developed a model for explaining taxpayer behavior. This model is based on the notion that given a tax, penalty, and detection rate, individuals will choose a compliance level to maximize monetary utility. In my survey, 37 participants listed monetary concerns as a disadvantage to paying the use tax and saving money over paying full sales tax in county as an advantage.

Empirical research has also found that the predictions of this model hold in a compliance setting. Both Beck et al. (1991) and Carnes and Englebrecht (1995) confirm that increasing either penalty or audit rate led to an increase in compliance.<sup>15</sup> Cuccia (1994) refers to this line of study, which assumes that individuals will act to maximize utility, as economics-based compliance research and provides a comprehensive literature review on the topic. It should be noted that in all of these studies, individuals maximize their utility based on maximizing their monetary return. With regards to this current study, taxpayers could be making a use-tax compliance decision based on maximizing monetary utility.

These prior results could be of particular importance when examining use-tax compliance for a number of reasons. First, there is little chance of an individual being caught in noncompliance of a use tax due to the low audit rate. Second, if an individual were to be audited, the use tax would only apply if that individual used, stored, or consumed the taxable item in the state. If the item could conceivably be shown to have been purchased as a gift, the individual would not owe the use tax.

---

<sup>15</sup> In both of these studies the term “audit rate” is analogous to “detection rate.”

Hence, there is little chance that a state could ever prove that the individual is subject to the use tax since the individual could always claim the item is elsewhere. Third, since there is minimal chance of being caught, there is consequently minimal chance that a person would ever incur a penalty by non-compliance. Fourth, as mentioned in the list of potential differences between the federal income and use tax earlier, the use-tax is a cash outlay. due to the withholding of federal tax, individuals federal income tax liability is never paid as a lump sum amount when the tax return is due, whereas the use tax represents an explicit cash outlay for every transaction. (Schepanski and Shearer 1995).

Based on the Allingham and Sadmo (1972) model and the fact that a person will have a minimal chance of being caught or incur a penalty for non-compliance, a person will always be monetarily better off not paying the use tax. Based on the above discussion, I propose the following hypothesis:

*H<sub>1c</sub>: The salient belief Monetary Concerns will be negatively correlated with the Attitude variable.*

#### *Fairness*

The term fairness relates to the justification and validity a consumer assigns to the imposition of a given tax.<sup>16</sup> Fifteen participants listed “pay fair share” as an advantage of paying the use tax, while 16 listed “tax is not fair” as a disadvantage. The earlier list of potential differences described the fact that the use tax was a consumption based tax whereas the federal income tax is income-based. People

---

<sup>16</sup> A more accurate term would be “perceived fairness” since fairness implies that a tax is fair or unfair when in reality each person makes this decision. However, to be consistent with prior literature, the term fairness is used.

could perceive one type of tax as more or less fair than the other. Given that people could find one tax more or less fair than the other, compliance decisions between the taxes could differ.

Generally, equity theory is employed when investigating tax fairness (Moser et al. 1995; Maroney et al. 2002). It is generally assumed in these studies that an individual is more likely to pay a tax if he or she perceives the tax as equitable. For example, if a taxpayer believes his or her tax liability is the correct/fair amount, then he or she is more likely to pay the tax. In addition, equity theory states that if a discrepancy emerges between the amount due and the amount paid, this discrepancy can be attributed to the concept of fairness. Thus, a taxpayer who believes he or she owes too much is less likely to pay the full amount owed because he or she does not find the tax fair (Moser et al. 1995).

While the link between fairness and compliance is a significant and valuable research stream, other research has attempted to understand what aspects of the tax *itself* cause an individual to find it unfair. Jackson and Milliron (1985) identified two dimensions associated with the perception of fairness with regard to the tax: the equity of trade (commonly referred to as exchange equity) and a taxpayer's burden relative to others (vertical and horizontal equity). Exchange equity, as defined by Jackson and Milliron (1985), refers to the difference between the amount of tax a person pays and to the benefits he or she receives from the tax. If a person feels he or she pays too high of an amount relative to the benefits he or she receives, a person will find the tax unfair.



There are two forms of inequity that have been shown to address a taxpayer's burden relative to others: horizontal and vertical inequity. Horizontal inequity occurs when one individual pays a higher amount in taxes than another despite both individuals being classified in the same income bracket. For example, two single factory workers with the same compensation package should, according to horizontal equity theory, be paying roughly the same in taxes. Vertical inequity, in turn, suggests that people who make more money should consequently pay more in taxes. For example, if an extremely wealthy person such as Bill Gates is paying a smaller percentage of his income in tax than a middle-class individual, the tax more likely would be considered an unfair tax burden on the less affluent payer. An additional empirical example linking the types of inequities with taxpayer behavior is provided by Moser et al. (1995). In this study, the authors examine how horizontal and exchange inequity each affect tax reporting decisions. The authors predict that taxpayers will report less income when tax rates *and* horizontal inequity increase. Just increasing the tax rate itself does not decrease compliance. This can be attributed to the fact that individuals will find horizontal inequity unfair and report less income, but will be less likely to find exchange inequity unfair given the universality of the tax increase. This study thus provides evidence that not all forms of inequity are perceived as uniformly unfair by the taxpayer, but instead the perception of fairness does play a part in a taxpayer's reporting decision. For instance, an individual may believe there is no benefit to himself/herself in paying the use tax (exchange

inequity), yet is still likely to pay the tax in recognition of the universal burden of the tax (vertical/horizontal inequity).

Maroney et al. (2002) introduced the concept of vertical inequity in addition to the horizontal and exchange equity dimensions of their study. Their study explored the provision of different explanations based on these dimensions and its effect on taxpayer compliance. The tax used in the study was the social security tax, with participants given an explanation as to why their social security benefits were being taxed. The parameters of the horizontal equity explanation as defined by the study stated (page 83):

Congress decided to tax social security income for some tax payers in an effort to enhance tax equity. Congress believes that social security benefits are intended to replace lost wages, which is very similar to other forms of retirement income (for example, a pension from an employer). Since these other forms of retirement income are subject to tax, Congress believes that a portion of social security benefits should also be subject to tax.

The results indicate that there is not one universal type of explanation that allows for generalizations of all taxpayers in all situations. Specifically, for a subject who is already being taxed on social security, the exchange equity explanation leads to greater levels of acceptance and higher degrees of perceived fairness.<sup>17</sup> For subjects not already paying a tax on their social security, the higher level of acceptance is consistent with the vertical exchange explanation. It is important to note, however, that the ethical exchange explanation did not actually lead to higher levels of perceived fairness for those not currently paying taxes on their social security benefits.

---

<sup>17</sup> The participants in Maroney et al. (2002) were senior citizens.

In summary, there is a growing body of evidence to suggest that exchange, vertical, and horizontal inequity all are negatively related to tax compliance behavior.

Based on the above discussion, I propose the following hypothesis:

*H<sub>1a</sub>: The salient belief Fairness will be positively correlated with the Attitude variable.*

### *Knowledge*

Knowledge, as defined for this study, is the information required by the taxpayer to comply with use-tax laws. Knowledge is a potentially significant factor that has to date received little attention in tax compliance research. The lack of attention to knowledge as a factor can probably be attributed to the fact that most people are well aware of the federal income tax and know how to comply with it. The concept of knowledge of a tax could be of particular value to use-tax compliance research, however, given the variations in use-tax laws, forms, and compliance requirements from state to state. The concept of knowledge of use tax is especially important in this study, considering how few people knew of the use tax before the survey. Greater knowledge of use tax might help individuals understand not only how to comply, but also why the use tax exists. Twenty-three participants listed lack of knowledge as a reason for not paying the use tax.<sup>18</sup>

Creating knowledge is, above all, a form of education, and numerous empirical studies have examined the influence of education on taxpayer compliance (Kasipillai et al. 2003; Witte and Woodbury 1983). The results are mixed; Kasipillai

---

<sup>18</sup> Examples of *knowledge* beliefs include the participant indicating that they would be afraid they would incorrectly fill out the form, not know what online purchases require payment of the use tax, not knowing where to obtain the correct forms, etc.

et al. (2003) finds that more education leads to an increase in compliance of undergraduate students in Malaysia. Witte and Woodbury (1985), however, find the opposite, noting that more education could instead lead to an increase in noncompliant behavior. The authors suggest that this could be attributed to the fact that, for some individuals, more advanced levels of education actually suggest new avenues for avoiding compliance. This suggests an inverted-U relationship between knowledge and compliance. When knowledge is low, increases in knowledge will improve compliance. When knowledge reaches a certain point, however, compliance is maximized and any more information given to the taxpayer could provide opportunities to lower compliance. In this current study, I assume the participants will be on the left-hand side of the inverted-U since knowledge of the use tax is low.

The problem of increases in internet purchases provides a unique opportunity to improve knowledge and potentially to improve compliance. Knowledge conveyance could occur simply by installing a pop-up window at checkout informing the customer of the use tax due on the purchase. Interestingly, the creation of knowledge could interact with the effort salient belief. Prior tax research has revealed an interaction between complexity and knowledge (O'Donnell et al. 2005). Specifically, as the complexity of a tax decision increases, tax professionals with higher procedural knowledge tend to favor less aggressive tax positions. Procedural knowledge deals with the type of knowledge that is needed to complete a specific task. In terms of this study, I posit that giving a person the knowledge as to what the

use tax is and how to comply with it will increase compliance through reducing the perceived effort of compliance.

The question emerges as to how the message can be most effectively and efficiently conveyed when attempting to create awareness. Sanders et al. (2008) found that sending construction firms a letter detailing penalties associated with non-compliance did increase use-tax compliance. Based on the above discussion, I propose the following hypothesis:

*H<sub>1e</sub>: The salient belief Knowledge will be positively correlated with the Attitude variable.*

#### *Another Tax*

Participants listed as a disadvantage to paying the use tax that the tax itself is just “another tax” that must be paid. It could be argued that this salient belief is similar in scope to the monetary concern or fairness salient beliefs. Since numerous participants listed it as a separate disadvantage over having to *pay* a tax, it was left as its own salient belief.<sup>19</sup>

No empirical research has addressed how adding a new tax to taxes already being paid by people affects their beliefs or actions towards the new tax. The current study does not seek to explore to explore the psychological phenomena underlying the cause of *Another Tax* being a significant variable. Future research, however, could investigate the specific psychological factors induced when individuals are presented with a new tax.

---

<sup>19</sup> Bobek and Hatfield (2003) took a similar approach to a salient belief in their paper. The authors identified “engaging in illegal” behavior as a separate salient belief over incurring a penalty or potentially being audited.

Lack of prior research makes predicting how this salient belief will influence attitude towards paying the use tax difficult. It seems intuitive, however, that since numerous individuals listed it as a disadvantage that paying another tax should be negatively correlated with attitude. Based on the above discussion, I propose the following hypothesis:

*H<sub>1f</sub>: The salient belief Another Tax will be negatively correlated with the Attitude variable.*

### *Social Norms*

A potentially critical factor in a person's decision to comply with the use tax is the influence of social norms in general. Twenty participants listed the fact that other people do not pay as a disadvantage of complying with the use tax. Alm and McKee (1998) list social norms a main factor in tax compliance behavior. This section highlights several of the theories that help to explain how and/or why social norms may affect an individual's use-tax compliance choice and tax-compliance research that has examined social factors and their influence on tax compliance decisions.

Social comparison theory (Festinger 1954) states that an individual seeks to compare him/herself to others to determine how he/she is doing. For example, a person may be more inclined to laugh if others around him/her are laughing. Festinger (1954) argues that this effect is more pronounced under conditions of uncertainty.

Social identity theory is similar in scope to social comparison theory, but provides richer detail as to which specific social groups a person would compare

him/herself too. Social identity theory states that a person will classify themselves in groups/categories. The group(s) that a person most closely identifies themselves with will become ingroups and a person will base actions and decisions to conform to the ingroup norms (Ashforth and Mael 1989).

Social theories have been employed in explaining taxpayer compliance decisions. King and Sheffrin (2002), for instance, examine prior research and suggest that social comparisons influences tax-paying behavior. For example, if a person finds his or her friends are complying with a tax, he or she is more likely to comply. It is important to note, however, that King and Sheffrin's article was not an empirical study addressing social comparison theory directly.

Stalans et al. (1991) examine the roles co-workers and family/friends play when an individual forms his or her beliefs about IRS enforcement activities and the acceptability of noncompliance on tax returns. The authors predicted that individuals would use work colleagues to obtain information about IRS enforcement activities given the fact that tax burdens are more likely to be similar among co-workers. Further, the study predicted that co-workers and family members assume differing roles for the individual when it comes to tax compliance decisions. Specifically, communications from family members are concerned with normative issues (e.g., right versus wrong) and the fairness of tax laws. Communications from co-workers are more likely to be concerned with opportunities or techniques to avoid detection when not complying with tax laws. Communication with co-workers would then decrease judgments of the appropriateness of tax compliance, the fairness of tax laws,

the likelihood of formal detection for overstating deductions, and the severity of informal sanctions if caught by authorities.

Stalans et al. (1991) utilized data from phone interviews with adult Minnesota residents conducted by the Minnesota Center for Social Research. The results indicate that communication with co-workers lowered the perceived likelihood of detection of overstated deductions, lowered the perceived severity of punishment if caught, and lowered the perceived fairness of tax laws and positive personal norms toward compliance with tax laws. Further, as the study predicted, communication with family members increased the perceived fairness of tax laws and positive personal norms towards compliance with tax laws. An important limitation of the study, however, is that the authors fail to link these “new” feelings with actual compliance behavior. The TPB provides the necessary link between these findings and actual compliance, however. Based on the above discussion, I include family, friends, and co-workers as three factors to control for social norms.

#### *Perceived Behavioral Control*

As discussed previously, perceived behavioral control deals with the amount of control a person believes he has over a certain action (Ajzen 1991). This is not the same as actual control over an outcome. For example, suppose a forty-five year old man wanted to learn to play basketball well enough to play in the NBA. Even though the actual odds of a professional basketball team giving him a tryout would be remote, he might still try if he perceives that he can, in fact, make the NBA. In this



study, to be consistent with Bobek and Hatfield (2003), perceived likelihood of detection will be used to proxy for perceived behavioral control.<sup>20</sup>

### *Overall Model*

As discussed, according to the TPB attitude, perceived behavioral control and social norms should be positively related to one's intention to comply with the use tax. Stated in hypothesis form:

*H<sub>2</sub>: The attitude, social norm, and perceived behavioral control constructs will be positively correlated with an individual's intention to pay the use tax.<sup>21</sup>*

### *Differences from Federal Income Tax*

As discussed previously, Bobek and Hatfield (2003) used a similar procedure to develop a model of federal tax compliance. Only one salient belief is common between the two studies – fairness. A second salient belief identified in this study--monetary utility--is similar in scope to Bobek and Hatfield's "minimize taxes paid." The three other salient beliefs identified in Bobek and Hatfield (2003) were guilt feelings associated with non-compliance, breaking the law, and incurring a penalty. It is important to note that all three of these variables were listed by participants in this study (see Table 2). However, they were not included in the current model since they were not within the 75% range cutoff for inclusion. Taken together, these results

---

<sup>20</sup> Bobek and Hatfield (2003) actually use the audit rate multiplied by the likelihood the IRS would discover the non-compliance if audited. In this current setting audit and discovery would occur simultaneously, so only one question will be asked.

<sup>21</sup> Intuitively perceived likelihood of detection should be negatively correlated with perceived behavioral control (i.e., the higher the perceived likelihood of detection, the less "control" one actually has over a situation). A tax compliance setting is actually somewhat unique setting for the TPB since increasing compliance should involve taking away control.

indicate that although people have similar salient beliefs when paying the federal income tax and the use tax, the beliefs are not identical.

### Method

To test the model, questions were developed similar to other studies that use the TPB to test a salient beliefs model (Taylor and Todd 1994; Taylor and Todd 1995, Bobek and Hatfield 2003; Bobek et al 2007). This process involves asking participants about individual beliefs and the relative importance of these feelings with regard to each construct. For example, the survey determined that an important salient belief affecting attitude towards paying the use tax was the effort of complying with use tax. Participants were asked how much they agree with the following statement pertaining to effort, “paying the use tax on this purchase would be time consuming” on a 7-point likert type scale. The relative importance of this factor was determined by asking participants how much they agree with the following statement on a 7-point scale, “The amount of time it would take to pay the use tax on this purchase was very unimportant/very important to me when making my compliance decision.” The “effort” score then was determined by multiplying the two questions together.<sup>22</sup>

The antecedents for social norms ask participants about different “groups” of people that would influence their decision: family, co-workers, and general population. For example, a participant was asked how much they agree with the statement, “my co-workers would want me to pay the use tax on this purchase.”

---

<sup>22</sup> Some salient beliefs had more than one set of questions asked. This was to ensure that the instrument captured multiple dimensions of the construct. For example, the effort score had four questions. The full survey can be found in the Appendix.

Similar to the attitude antecedents, these scores were weighted against the relative importance that the co-workers would want the individual to pay the use tax.

The perceived behavioral control question asked participants to indicate how likely it was that Florida would discover this purchase on a 7-point scale. The overall attitude score asked participants to indicate on a 7-point scale how much they agreed with the statement, “I have a positive attitude towards paying the use tax.” Finally, the behavioral intention was derived by asking the participant how likely is it they will pay the use tax on the purchase in the scenario (0 to 100 percent).

### *Participants*

Seventy-three undergraduate and graduate students from accounting classes were used. Demographic data for the participants can be found in Table 4.

**TABLE 4 –  
Demographic Data for Participants in the Model Validation Step**

	<b>Number</b>	<b>% of Total</b>
<b>Gender</b>		
<i>Male</i>	44	60.27%
<i>Female</i>	29	39.73%
<b>Age</b>		
<i>Under 20</i>	7	9.59%
<i>20 to 29</i>	43	58.90%
<i>30 to 39</i>	17	23.29%
<i>40 +</i>	6	8.22%
<b>Household Income</b>		
<i>Zero to \$20,000</i>	25	34.25%
<i>\$20,001 to \$35,000</i>	13	17.81%
<i>\$35,001 to \$50,000</i>	11	15.07%
<i>\$50,001 to \$65,000</i>	5	6.85%
<i>\$65,001 to \$80,000</i>	4	5.48%
<i>\$80,001 to \$100,000</i>	2	2.74%
<i>\$100,000+</i>	13	17.81%
<b>Tax Return Status (2007 Return)</b>		
<i>Single</i>	49	67.12%
<i>Married Filing Jointly</i>	15	20.55%
<i>Married Filing Separately</i>	1	1.37%
<i>Head of Household</i>	4	5.48%
<i>Qualifying Widow(er)</i>	1	1.37%
<i>Did Not File</i>	3	4.11%

n = 73

The participants are slightly older and have higher household income than the participants from the initial survey. This is not surprising since some these participants were graduate students, whereas the participants in the initial survey were all undergraduate students. As mentioned above, the average internet shopper tends to be slightly older than an undergraduate student (Forsythe and Shi 2003). Thus, these subjects are even more reflective of a typical internet consumer than those

participants used in the initial survey. Table 5 shows data regarding participants' internet shopping habits. Like the participants in the initial survey, a majority of the participants have purchased online while only a few have ever paid the use tax. Unlike the survey, participants were not asked to list everything they know about the use tax. Instead, a self-reported use-tax knowledge question was asked (7-point scale). The results show that the participants tended to feel they had a fair amount of use-tax knowledge (over 50% responded on the mid-point or greater). This result is probably attributed to the fact that all but two of participants had taken a tax course in the past where the use tax was discussed.<sup>23</sup>

---

<sup>23</sup> The university that these graduate students are attending does spend some time discussing the use tax in various tax courses. However, some of the graduate students may have attended other institutions for their undergraduate degrees where the use tax was not discussed.

**TABLE 5 –  
Internet Buying Habits and Use Tax Data for Participants in the Model Validation Step**

	<b>Number</b>	<b>% of Total</b>
<b>Awareness (Self-Reported, 1 to 7 scale)</b>		
<i>1 (No Knowledge)</i>	10	13.70%
2	4	5.48%
3	1	1.37%
4	5	6.85%
5	14	19.18%
6	4	5.48%
<i>7 (High Knowledge)</i>	5	6.85%
<b>Purchased Online Before</b>		
<i>Yes</i>	71	97.26%
<i>No</i>	2	2.74%
<b>Spent Online in Past Year</b>		
<i>Zero</i>	2	2.74%
<i>\$1 to \$100</i>	7	9.59%
<i>\$101 to \$500</i>	32	43.84%
<i>\$501 to \$1,000</i>	17	23.29%
<i>\$1,001 to \$5,000</i>	11	15.07%
<i>\$5,000 +</i>	2	2.74%
<b>Paid Florida Use Tax Before</b>		
<i>Yes*</i>	7	9.59%
<i>No</i>	36	49.32%
<i>Not Sure</i>	30	41.10%
<b>Paid a Use Tax in any State Before</b>		
<i>Yes</i>	9	12.33%
<i>No</i>	34	46.58%
<i>Not Sure</i>	30	41.10%

n = 73

\* To ensure that participants actually had paid the use tax, a follow-up question was used asking whether or not the participant had filled out and submitted form DR-15MO. None of the 7 who indicated they had paid the use tax in the past had filled out this form. Although not conclusive, this indicates that the participant did not actually pay a use tax to Florida (since the only way the use tax can be paid in Florida is through submission of the form DR-15MO).

*Procedure*

Subjects were given the same scenario and description of the use tax used in the survey. They then were asked how likely they would be to pay the use tax on the

purchase discussed in the scenario. After answering that question, the salient belief, attitude, social norm, and perceived behavioral control questions discussed above were asked. Finally, demographic data were obtained.

### *Results*

Before analyzing results, factor analysis was performed.<sup>24</sup> The main results of the factor analysis are shown in Table 6. The questions relating to the three variables linked to social norms (family, co-workers, and friends) loaded to form one variable. In addition, the questions relating to the salient belief *Effort*, *Another Tax*, and *Funding for State* loaded correctly as well (i.e., the four questions relating to *Effort* loaded to form one factor, two questions relating to *Another Tax* formed one factor, etc). For the analysis, I used these factor load scores.

---

<sup>24</sup> Factor loading was conducted based on the suggestions in Fields (2005).

**TABLE 6 –  
Factor Loading and Cronbach's Alpha for Factors with Multiple Questions**

	<b>Factor Load</b>	<b>Cronbach's Alpha</b>
<i>Salient Beliefs</i>		
<b>Effort</b>		0.918
<i>Hassle</i>	0.884	
<i>Require effort</i>	0.895	
<i>Inconvenient</i>	0.929	
<i>Time consuming</i>	0.874	
<b>Funding for State</b>		0.913
<i>Give Florida more money</i>	0.959	
<i>Florida would benefit</i>	0.959	
<b>Another Tax</b>		0.785
<i>Another tax in a multitude of taxes</i>	0.912	
<i>Another way government is trying to get my money</i>	0.912	
<i>Variables Directly Linked to Intention</i>		
<b>Social Norms</b>		0.948
<i>Family</i>	.795	
<i>Friends</i>	.770	
<i>Co-Workers</i>	.842	

Descriptive statistics for all variables can be found in TABLE 7.



**TABLE 7 –  
Descriptive Statistics for Variables in Model Validation Step**

Construct	Mean (Std. Dev)
Likelihood to pay (DV)	21.51 (31.79)
<i>Variables Directly Linked to Compliance</i>	
Attitude	3.29 (1.44)
Social Norms	20.72 (13.68)
Perceived Behavioral Control	2.62 (1.59)
<i>Salient Beliefs</i>	
Effort	95.06 (39.29)
Funding for State	33.59 (19.79)
Monetary Concerns	21.33 (13.59)
Knowledge	17.22 (8.61)
Fairness	14.70 (8.63)
Another Tax	42.61 (21.81)

*Likelihood to pay* asked participants how likely they would be to pay the use tax on a 0 to 100 percent scale.

*Attitude* ranged from 1 to 7

*Social Norms* used the factor load scores from TABLE 6 (range 2.41 to 54.74)

*Perceived Behavioral Control* ranged from 1 to 7

*Effort* used the factor load scores from TABLE 6 (range 14.26 to 175.52)

*Funding for State* used the factor load scores from TABLE 6 (range 6.71 to 80.56)

*Monetary Concerns* ranged from 1 to 49

*Knowledge* ranged from 1 to 36

*Fairness* ranged from 2 to 42

*Funding for State* used the factor load scores from TABLE 6 (range 6.71 to 80.56)

The likelihood to pay measure had a mean of 21.51% with a standard deviation of 31.79. Next the hypotheses were tested using simply linear regression techniques. To test Hypotheses H1a through H1f, the following model was used:

$$Attitude = \alpha_0 + \beta_1 Effort + \beta_2 Funding\ For\ State + \beta_3 Monetary\ Concerns + \beta_4 Knowledge + \beta_5 Fairness + \beta_6 Another\ Tax + \varepsilon$$

To test H2, the following model was used:

$$Likelihood = \alpha_0 + \beta_1 Attitude + \beta_2 Social\ Norms + \beta_3 PBC + \varepsilon$$

All results can be found in Table 8.

**TABLE 8 –  
Models from Pilot Study**

Variable	Coefficient	Standard Error	P-Value (1-tail)
<i>Likelihood = <math>\alpha_0 + \beta_1 \text{Attitude} + \beta_2 \text{Social Norms} + \beta_3 \text{PBC} + \epsilon</math></i>			
Constant	-19.049	9.179	.021
Attitude	3.448	2.55	.091
Social Norms	.400	.248	.055
PBC	7.997	2.225	<.001
$R^2 = 27.7\%$			
$Adjusted R^2 = 24.6\%$			
<i>Attitude = <math>\alpha_0 + \beta_1 \text{Effort} + \beta_2 \text{Funding For State} + \beta_3 \text{Monetary Concerns} + \beta_4 \text{Knowledge} + \beta_5 \text{Fairness} + \beta_6 \text{Another Tax} + \epsilon</math></i>			
Constant	3.708	.530	<.001
Effort	-.011	.004	.003
Funding for State	.015	.009	.048
Monetary Concerns	.001	0.011	.47
Knowledge	.009	.017	.30
Fairness	.045	.020	.018
Another Tax	-.019	.008	.013
$R^2 = 39.8\%$			
$Adjusted R^2 = 34.3\%$			

The results regarding the effects of the salient beliefs on attitude towards compliance are encouraging. Four of the six beliefs are significant at the .05 level (*Effort, Funding for State, Another Tax, and Fairness*).<sup>25</sup> The two salient beliefs that were not significantly related to attitude were *Monetary Concerns* (p-value = .47) and *Knowledge* (p-value = .30). The insignificant results for the *Monetary Concern* variable could be attributed to the fact that the use-tax owed in this case was relatively small (\$12.00). Future research could investigate at what point this variable does become significant (i.e., how much tax is owed before people start caring about

<sup>25</sup> All p-values are one-tail unless otherwise mentioned.

the effect on their finances paying would have). The *Knowledge* variable will be discussed in greater detail in the remedy section.

The overall attitude score, factor load score for social norms, and perceived likelihood of detection (i.e., the proxy used for PBC) were all significantly correlated in the predicted direction with intention to comply. This result supports the idea that TPB is a valid framework for explaining a person’s intention to comply with the use tax. A summary of the hypotheses and their results can be found in Table 9.

**TABLE 9 –  
Summary of Hypotheses Testing for Model Testing**

<b>Hypothesis</b>	<b>P-Value (1-tailed)</b>	<b>Support/Fail</b>
H1a - Effort	.003	Support
H1b - Funding for State	.048	Support
H1c - Monetary Concerns	.47	Fail
H1d - Fairness	.018	Support
H1e - Knowledge	.30	Fail
H1f - Another Tax	.013	Support
H2 - Model	N/A	Support

## **V. Remedies for Improving Use-Tax Compliance**

The final part of this study develops two remedies that could help states improve use-tax compliance. Although there are numerous potential remedies, I first develop remedies based on whether it addresses factors determined in the survey, could be easily implemented by both the state and the Internet vendor on the website, and do not involve the website automatically collecting the use tax. This last requirement is important since *Quill Inc. vs. North Dakota* determined that vendors did not have to collect a sales tax for a state unless they had nexus in that state.

The first specific remedy chosen was one developed to address the *Effort* salient belief. This remedy was chosen since it met the criteria listed above, was the most frequently listed disadvantage in the survey, and an easy to implement solution for this remedy already exists (as explained below).

### Remedy – Effort

The effort remedy examined is a situation where the online vendor asks the customer if they would like the use-tax and payment to the appropriate state to be automatically collected by the vendor at the time of purchase. The technology for this remedy already exists due to the Streamlined Sales and Use Tax Agreement (SSUTA) discussed previously. This agreement allows companies to use computer programs (called “certified service providers”) to calculate the amount of tax to be collected from each customer, and to determine the state to which the tax should be paid. The company then collects the use tax owed from the customer and submits it to the proper state. The SSUTA is a voluntary program and a business does not have

to comply. Under the current remedy proposed in this study, the website would not be forced to collect the use tax, but rather simply gives the customer the option of having the website collect the use tax due on behalf of the customer. If the customer wishes to pay, the vendor would collect the money and submit it to the proper state based on the shipping address of the customer. This remedy would thus remove almost all effort (and/or complexity) required for compliance. A customer would just pay an additional amount (i.e., the use tax) on the online purchase. Based on this, I predict the following hypothesis:

*H<sub>3</sub>: When given the effort remedy, participants' intention to comply with the use tax will be higher than when not given the remedy.*

#### Remedy - Information

As discussed above, the participants in the initial survey and pilot test were given a brief description of the use tax prior to reading the scenario. This use tax information was provided since anecdotal evidence indicates that many individuals know little or nothing about the use tax. Without providing some minimal knowledge of the use tax to participants, antecedents to use tax compliance could not fully be examined in the model-testing phase of this study. However, providing participants this information did not allow an examination of whether the information itself may improve compliance intentions.

In this final step of the study, an information manipulation is included for two reasons.<sup>26</sup> First, it provides me with a control sample. In the absence of the remedy, having a condition with no information allows me to measure what the use-tax

---

compliance rate currently would be for a representative sample of the current real world population. In the presence of the remedy, having a condition with no information allows me to measure what the use-tax compliance rate would be for individuals if they only saw the remedy. In other words, it would reveal what would happen if a state chose to implement the remedy while taking *no other action* (e.g., an education campaign).

The second reason this study includes the information manipulation is because it allows me to understand how knowledge of the use tax influences compliance. As discussed above, anecdotal evidence suggests that most individuals have little knowledge of the use tax. Results of the survey in this study lend support to the notion that most people have limited knowledge of the use tax. Given this, it would be unlikely that the compliance rate for the use tax would ever increase given that the current state of knowledge of the use tax for individuals is virtually zero. Smith and Kinsey (1987) support this claim by stating that in order for individuals to engage in the decision making process on whether to comply with a tax, the tax must be salient to them. One of the factors that determines if a tax is salient to the individual is whether the individual has information about the tax itself. Thus, at a bare minimum, states will need to inform individuals of what the use tax is and how to comply with the use tax. Stated in hypothesis form:

***H<sub>4</sub>**: When given information of the use tax, participants' intention to comply with the use tax will be higher than when not given the knowledge.*

An important point warrants further discussion. This hypothesis is not intended to argue that a positive linear relationship exists between an individual's knowledge base of the use tax and use-tax compliance. Rather, it is built on the Smith and Kinsey (1987) argument that before a person can engage in a tax compliance decision, he or she must have knowledge of the tax. In layman's terms, zero knowledge will lead to zero compliance. Giving an individual the information on a tax will allow them to make a tax compliance decision. The individual may still decide not to comply, but the information allows the opportunity for compliance if the person chooses.

It could be argued that individuals, even without information of the use tax, could still click the button to have the website automatically collect the tax in the remedy condition. It seems unlikely, however, that individuals would choose to pay the use tax using the remedy unless they have some basic knowledge of the use tax. In other words, in order for the state to see a significant increase in compliance, the state must not only implement the remedy, but also provide some information about the use tax to individuals. Based on this, I propose the following hypothesis:

*H<sub>5</sub>: Intention to comply with the use tax will be highest when individuals are given information pertaining to the use tax and when given the effort remedy.*

#### Method

The method for testing the remedy uses a 2x2 between-subjects design manipulating the effort remedy (no remedy, remedy) and information remedy

(present, absent).<sup>27</sup> In the information-present condition, participants saw the same paragraph describing the use tax shown in the survey and the model validation steps. Participants in the information-absent condition did not receive any information regarding the use tax. Participants were then given the same decision scenario as in the first two steps of the study. After reading the scenario the participants saw a screen resembling a check-out screen from a typical vendor website. In the effort remedy treatment, participants were given an option to have the website automatically collect and remit the use-tax owed to the state in addition to paying a shipping and handling charge. In the no-effort remedy treatment, participants were not given the option, but were only shown the purchase price and shipping and handling charges. The participants in the effort remedy condition made a decision whether to have the website collect the use-tax due. In the other no-effort remedy condition and in the effort remedy condition if the participant chooses not to have the website collect the tax, the participant was asked how likely are they to submit the use tax on the purchase. This measure serves as the dependent variable.<sup>28</sup> A figure describing the conditions can be seen in Figure 3.

**Figure 3 – Experimental Set-up for Remedy**

		Effort Remedy (website collects tax)	
		Present	Absent
Information Remedy	Present		
	Absent		

<sup>27</sup> The instrument used in the Remedy step can be found in Appendix B. The instrument used in the Model validation step was virtually identical except those participants did not have the option to have the website collect the use tax.

<sup>28</sup> If the participant chooses to have the website collect the tax, the dependent measure becomes 100.



All participants were then asked the identical questions used in the model testing phase (i.e., importance of salient beliefs, weights, background).

*Participants*

One hundred and twenty-two graduate and undergraduate students at a large university participated in this portion of the experiment. Demographic data for the participants can be found in Table 10.

**TABLE 10 –  
Demographic Data for Participants in the Remedy Step**

	<b>Number</b>	<b>% of Total</b>
<b>Gender</b>		
<i>Male</i>	67	54.92%
<i>Female</i>	55	45.08%
<b>Age</b>		
<i>Under 20</i>	24	19.67%
<i>20 to 29</i>	87	71.31%
<i>30 to 39</i>	11	9.02%
<i>40 +</i>	0	0.00%
<b>Household Income</b>		
<i>Zero to \$20,000</i>	55	45.08%
<i>\$20,001 to \$35,000</i>	26	21.31%
<i>\$35,001 to \$50,000</i>	18	14.75%
<i>\$50,001 to \$65,000</i>	7	5.74%
<i>\$65,001 to \$80,000</i>	5	4.10%
<i>\$80,001 to \$100,000</i>	3	2.46%
<i>\$100,000+</i>	8	6.56%
<b>Tax Return Status (2007 Return)</b>		
<i>Single</i>	95	77.87%
<i>Married Filing Jointly</i>	11	9.02%
<i>Married Filing Separately</i>	0	0.00%
<i>Head of Household</i>	2	1.64%
<i>Qualifying Widow(er)</i>	2	1.64%
<i>Did Not File</i>	12	9.84%

n = 122

The participants in the experiment were similar to the participants in the model validation step. The average participant tended to be under 30, unmarried, and had an annual income under \$50,000.

Descriptive statistics pertaining to the participants' use-tax knowledge and internet purchasing habits can be found in Table 11.

**TABLE 11 –  
Internet Buying Habits and Use Tax Data for Participants in the Remedy Step**

	<b>Number</b>	<b>% of Total</b>
<b>Awareness (Self-Reported, 1 to 7 scale)</b>		
<i>1 (No Knowledge)</i>	80	65.57%
2	16	13.11%
3	11	9.02%
4	7	5.74%
5	5	4.10%
6	1	0.82%
<i>7 (High Knowledge)</i>	2	1.64%
<b>Purchased Online Before</b>		
<i>Yes</i>	120	98.36%
<i>No</i>	2	1.64%
<b>Spent Online in Past Year</b>		
<i>Zero</i>	24	19.67%
<i>\$1 to \$100</i>	47	38.52%
<i>\$101 to \$500</i>	29	23.77%
<i>\$501 to \$1,000</i>	21	17.21%
<i>\$1,001 to \$5,000</i>	1	0.82%
<i>\$5,000 +</i>	2	1.64%
<b>Paid Florida Use Tax Before</b>		
<i>Yes*</i>	8	6.56%
<i>No</i>	36	29.51%
<i>Not Sure</i>	78	63.93%
<b>Paid a Use Tax in any State Before</b>		
<i>Yes</i>	8	6.56%
<i>No</i>	33	27.05%
<i>Not Sure</i>	81	66.39%

n = 122

\* To ensure that participants actually had paid the use tax, a follow-up question was used asking whether or not the participant had filled out and submitted form DR-15MO. None of the 8 who indicated they had paid the use tax in the past had filled out this form.

The typical participants had little self-reported knowledge on use tax, had purchased online before, and either had never paid the use tax or did not recall paying the use tax before.

### *Manipulation Checks*

Two manipulation checks were used in this part of the study. First, participants were asked whether or not they were in the effort remedy condition, “Did ABC Inc. offer to collect the use tax for you?” Eleven people missed this question of the 122 participants (91% pass rate). Results did not differ when these participants were excluded.

The second manipulation check asked participants their awareness of the use tax before and after taking the experiment on a 7-point scale. The difference between these two questions was then compared between the participants in the group who received the information on the use tax and the group who did not. The results showed a significant difference in the increase in the amount of awareness on the use for those participants who received the information on the use tax over those who did not receive the information (p-value < .001).<sup>29</sup> This result indicates successful manipulation of information.

### *Assumptions of ANOVA*

For ANOVA to be the proper statistical technique for analyzing the data, three assumptions should be checked: independence of observations, normality of the dependent variable, and equality of variance of the cells. All observations were independent of each other, supporting the first assumption.

Normality of the independent variable was tested using the Kolmogorov-Smirnov test. Results indicated that the data was not normally distributed (p-value

---

<sup>29</sup> The means (standard deviations) for the manipulation check for the participants in the knowledge and no-knowledge conditions were 3.11 (1.64) and 1.41 (1.60) respectively.

<.001). This is not surprising given the nature of the independent variable. Most participants either said there was a very low or very high chance they would comply. ANOVA is robust to violations of this assumption depending on the reason why the normality assumption was violated (Becker 1998; Pyzdek 2009). If the violation of the assumption is caused by heavy skewness of the data, ANOVA is not the proper statistical technique to use. If the problem is caused by heavier tails, however, ANOVA is robust to the violation of the assumption normality. In this case, the data is bimodal (i.e., responses clustered in the tails). Given the nature of the problem, ANOVA is robust to this violation of normality and is still a proper statistical technique.

The equality of variance assumption was checked using Levene's test. The test revealed that a potential problem with equality of variances (p-value = .007). ANOVA, however, is robust to this violation as well if the cell sizes are approximately equal (DeCoster 2006). In this study the cell sizes are approximately equal; ANOVA is therefore robust to the violation of unequal variances.

## Results

Hypotheses 3 through 5 were tested using ANOVA. The dependent variable was the likelihood the participant would pay the use tax on an internet purchase.<sup>30</sup> The mean compliance rate, standard deviation for the compliance rate, and number of participants in each treatment can be seen in Table 12. ANOVA results can be found in Table 13.

---

<sup>30</sup> Likelihood to comply could range from 0 to 100 percent. As mentioned above, if a person in the remedy condition elected to have the website collect the use-tax owed, likelihood was coded as 100.

**TABLE 12 –  
Cell Mean and Standard Deviations for Treatment Conditions in Remedy Step for Likelihood of Paying the Use Tax**

	Mean	Effort remedy (website collects tax)		
		Present	Absent	
	Std. Dev.			
<b>Information</b>	<b>Present</b>	60.68%	25.30%	43.28%
		45.87	30.53	42.67
<b>Remedy</b>	<b>Absent</b>	n = 31	n = 30	n = 61
		48.22%	15.69%	32.75%
		44.20	27.05	40.24
		n = 32	n = 29	n = 61
		54.35%	20.58%	
		45.10	29.03	
		n = 63	n = 59	

**TABLE 13 –  
ANOVA Results**

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	38557.217	3	12852.4	8.859	<.001
Intercept	171071.043	1	171071	117.915	<.001
Effort Remedy Condition	35113.834	1	35113.8	24.203	<.001
Information Remedy Condition	3708.696	1	3708.7	2.556	0.114
Interaction	61.778	1	61.778	0.043	0.837
Error	171194.75	118	1450.8		
Total	386072	122			
Corrected Total	209751.967	121			

R<sup>2</sup> = .184 / Adjusted R<sup>2</sup> = .163

The results indicate that participants in the effort remedy condition are more likely to comply than participants in the non-remedy condition (p-value < .001). This provides strong support for Hypothesis 3, and indicates that the remedy proposed would increase compliance on the use tax. In addition, Hypothesis 4 is also supported (p-value = .057, one-tailed test). This indicates that providing information to individuals will also increase compliance on the use tax. Finally, there was no

significant interaction (p-value = .837). Thus, Hypothesis 5 is not supported. Two possible explanations for this exist. First, these two remedies are mutually independent of each other and there is simply no interaction (i.e., they will each improve compliance at the same rate regardless of whether the other is present). The second potential explanation is that perhaps there is a confounding problem between the two remedies. Specifically, that the effort remedy manipulation is providing information about the use tax and, thus, is masking the interaction effects. This potential explanation is explored in the *Supplementary Results* section.

Next, to determine why exactly people were more likely to comply in the *Remedy* condition, multiple t-tests were run comparing salient belief scores for the six salient beliefs between participants in the remedy and non-remedy conditions.<sup>31</sup>

Results of the t-tests can be found in Table 14.

---

<sup>31</sup> T-tests compared only the scores between the remedy conditions for people who received information on the use tax. Factor load values determined in the model validation step were used to determine the salient belief values in this step.

**TABLE 14 –  
T-Tests Comparing Salient Beliefs between Participants in the Effort Remedy Conditions**

Salient Belief	No Remedy (Std. Dev.)	Remedy (Std. Dev.)	T-Test P-Value (2-Tailed)
Effort	97.42 (64.37)	64.37 (42.99)	3.272 0.002
FundingState	29.57 (17.32)	35.27 (18.67)	-1.234 0.222
MonConcerns	22.90 (13.08)	23.39 (13.87)	-.141 0.888
Knowledge*	14.93 (7.52)	17.58 (11.01)	-1.10 0.276
Fairness	13.40 (7.21)	15.23 (8.64)	-0.894 0.375
AnotherTax	41.70 (19.63)	49.07 (20.11)	-1.446 0.153

\* - Equity of variance tests revealed that the salient belief *Knowledge* did not have equal variances. The t-test for *Knowledge* was used then assuming non-equal variances. All other reported p-values assume equal variances.

The only salient belief score that was significantly different was the *Effort* (p-value = .002). This finding indicates that the only thing that differed between participants in the two conditions was the *Effort* salient belief. This result supports the conclusion that the effort remedy lowered effort and this lowering of effort increased compliance.

#### Supplementary Analysis

Additional t-tests were run comparing the effort remedy conditions. The first test examined whether the participant would buy from the website in the future (7-point scale). This question was asked to determine whether the effort remedy would have a negative impact on future buying behavior, a potential concern for website vendors. Results indicate that there is not a significant difference of future buying



habits of participants in the effort remedy present and absent condition (p-value = .109).

The second t-test dealt with the question regarding the perceived likelihood that Florida (the state where the use tax would be applicable) would find out about the purchase. Participants were asked how likely they thought it was that Florida would find out about the purchase (7-point scale). This question was asked due to the potential concern that a person would feel it more likely they would be caught non-complying in the remedy condition if they selected not to have the website collect. There was no significant difference in a person's perceived likelihood they would get caught between the effort remedy present and absent conditions (p-value = .559).

Finally, t-tests were run to check to ensure that the effort remedy did not add any additional information to the participants. Specifically, a potential confounding problem could occur if the effort remedy was, by itself, providing information to the participant on the use tax. Two t-tests were conducted comparing *Knowledge* scores between participants in the effort remedy present and absent conditions within the information present and absent conditions. No significant results were found. Specifically, there was no significant difference between the *Knowledge* scores in the effort remedy present and absent conditions within the information present condition (p-value = .666) or within the information not present condition (p-value = .230). These results provide support for the position that the effort remedy did not itself enhance knowledge of the use tax, which was the intent of the separate information remedy.

## **VI. Conclusion**

This study investigated use-tax compliance using a three-step approach. The first step involved building a survey based on the suggestions of Ajzen and Fishbein (1980) to determine potential factors (termed salient beliefs) that are pertinent to individuals when facing a use-tax compliance decision. Results of the initial survey reveal that the effort of complying with the use tax, potential revenue to the state if the individual complied, fairness of the use tax, monetary concerns of the individual, perceived knowledge of the use tax, and social influences were the most mentioned factors contributing to individuals' use tax compliance decisions.

The second step in this study develops a model, based on the Theory of Planned Behavior, incorporating these salient beliefs. Results of the model testing indicate that the salient beliefs Effort, Funding for State, Fairness, and Another Tax identified in the survey were correlated to an individual's attitude.

Finally, the third step involved testing remedies that (1) provided explicit information about the use tax on the web site at the time of purchase and (2) gave the individual the option to have the website automatically collect the use tax due. Results indicate that both remedies increased use-tax compliance – compliance increased when individuals were given more knowledge on the use tax and also when presented with the option to have the website automatically collect the use tax. Interaction effects, however, were not significant.

The results of this study contribute to the academic accounting literature and have implications for policy makers. First, this study expands tax compliance

research into a relatively unexplored tax. Virtually all prior empirical tax compliance research has focused on the income tax. Specifically, prior research has focused on the federal income tax. Given the multitude of differences between different types of taxes, it is important to begin to explore whether or not compliance decisions differ based on the tax in question.

Second, this study identifies six specific factors that help to explain an individual's use-tax compliance decision. These results give policy makers and future researchers specific areas to explore when trying to find solutions for the use-tax compliance problem.

Third, this study provides some evidence that factors that influence a tax compliance decision change based on the tax in question. Specifically, the factors that influence a use-tax compliance decision are different from the factors that influence a federal income tax compliance decision. Specifically the *Effort, Funding for the State, Monetary Concerns, Knowledge, and Another Tax* salient beliefs were different from the salient beliefs determined in Bobek and Hatfield (2003). This result gives support to the conclusion that it is not prudent for policy makers and researchers to look for compliance solutions for a tax based on prior federal tax research. One must take into account the *specific* tax in question.

Fourth, this study provides policy makers with two potential solutions to the use-tax compliance problem. The first potential solution involves having internet vendors give the customer a choice whether or not the website would automatically collect the tax. This solution would be beneficial to the state, by increasing use-tax

revenue, without hurting internet vendors' profit (i.e., those customer who do not wish to pay the use tax do not have to and website could still collect the profits). This solution could be viewed as a compromise between the state forcing the vendor to collect the use tax and the website not having to do anything.

The second potential solution this study offers states would not involve any new law. Simply improving the residents' knowledge base of the use tax would also improve compliance. This could be accomplished by an advertising campaign. This is a low cost remedy for a potentially large tax revenue gain.

There are several limitations of this study that should be considered when interpreting the results. First, participants all came from one state that does not have an income tax and, thus, participants do not have an income tax return to fill out that has a line item pertaining to the use tax. Different states have different use-tax compliance rules and regulations and, perhaps, publicity regarding their use tax. Future research could replicate the study using participants from a state that does have a state income tax to determine whether the results differ when participants potentially have increased awareness of their state-level tax obligations. A second potential limitation is that the amount of use tax due did not vary, but was held constant throughout all steps. It is unclear whether people would behave differently if more or less use tax was owed. Third, the type of information provided was not manipulated in anyway. Providing slightly more or less information or changing the wording on the information might lead to different compliance decisions. Finally, only one coder was used when deriving the salient belief list.

This paper provides several avenues for future research. First, research could compare the proposed remedies in this study to remedies implemented by states (i.e., line item on tax return). Second, research could continue to explore differences between federal and state taxes. For example, are there potential differences between a state and federal income tax compliance decision? Third, research could examine in more detail the specific factors identified in this study. For example, what are the psychological factors behind the salient belief *Another Tax*? Fourth, research could potentially examine the most optimal way to improve knowledge on a tax. This current study did not manipulate the type or amount of information received on the use tax. Future research could also examine what specific pieces of information are useful for improving compliance.

## References

- Ajzen., I. The Theory of Planned Behavior, *Organizational Behavior and Human Decision Processes* (1991) pp. 179-211.
- Ajzen, I. and M. Fishbein. Understanding Attitudes and Predicting Social Behavior, Englewood Cliffs, NJ: Prentice Hall, Inc. (1980).
- Albring, S., L. F. Mills, and M. Plumlee. Beanie Baby Billions? Unpaid Taxes on Internet Auctions, *Tax Notes* (2000) pp. 1153-1159.
- Allingham, M. G. and A. Sandmo. Income Tax Evasion: A Theoretical Analysis, *Journal of Public Economics* (November 1972) pp. 323-338.
- Alm, J., B. Jackson, and M. McKee. Estimating the Determinants of Taxpayer Compliance with Experimental Data, *National Tax Journal* (March 1992) pp. 107-114.
- Alm, J. and M. McKee. Extending the Lessons of Laboratory Experiments on Tax Compliance to Managerial and Decision Economics, *Managerial and Decision Economics* (1998) pp. 259-275.
- Ashforth, B.E. and F. Mael. Social Identity Theory and the Organization, *Academy of Management Review* (1989) pp. 20-39.
- Beck, L., and I. Ajzen. Predicting Dishonest Actions Using the Theory of Planned Behavior, *Journal of Research in Personality* (1991) pp. 285-301.
- Beck, P. J., J. S., Davis, and W. Jung. Experimental Evidence on an Economic Model of Taxpayer Aggression Under Strategic and Nonstrategic Audits, *Contemporary Accounting Research* (Fall 1992) pp. 86-112.
- Becker, L.A. Explore: Assumption testing for ANOVA, <http://web.uccs.edu/lbeckerspss80/explore2.htm>, (1998).
- Ben-Sharar, O., and A. Harel. Blaming the Victim: Optimal Incentives for Private Precautions Against Crime, *Journal of Law and Economics* (1995) pp. 434-455.

- Bobek, D. D., and R. C. Hatfield. An Investigation of the Theory of Planned Behavior and the Role of Moral Obligation in Tax Compliance, *Behavioral Research in Accounting* (2003) pp. 13-38.
- Bobek, D. D., R. C. Hatfield, and K. Wentzel. An Investigation of Why Taxpayers Prefer Refunds: A Theory of Planned Behavior Approach, *Journal of the American Taxation Association* (2007) pp. 93-111.
- Bruce, D. and W. F. Fox. E-Commerce in the Context of Declining State Sales Tax Bases, *National Tax Journal* (2000) pp. 1373-1388.
- Bruce, D. and W.F. Fox. State and Local Tax Revenue Losses from E-Commerce: Estimates as of July 2004, *The University of Tennessee Center for Business and Economic Research* (2004).
- Carnes, G. and T. D. Englebrecht. An Investigation of the Effect of Detection Risk Perceptions, Penalty Sanctions, and Income Visibility on Tax Compliance, *Journal of the American Taxation Association* (1995) pp. 26-41.
- Christian, C.W., S. Gupta, G. J. Weber, and E. Willis. The Relation Between the Use of Tax Preparers and Taxpayers' Prepayment Position, *The Journal of the American Taxation Association* (1994) pp. 17-40.
- Cohen, J., L. Pant, and D. Sharp. An Empirical Investigation of Attitudinal Factors Affecting Course Coverage of International Issues, *International Journal of Accounting* (1991) pp. 286-301.
- Cornia, G. C., D. L. Sjoquist and L. C. Walters. Sales and Use Tax Simplification and Voluntary Compliance, *Public Budgeting and Finance* (2004) pp. 1-31.
- Cowell, F. A. Tax Evasion and Inequity, *Journal of Economic Psychology* (1992) pp. 521-543.
- Cuccia, A. D. The Economics of Tax Compliance: What Do We Know and Where Do We Go?, *Journal of Accounting Literature* (1994) pp. 81-104.
- DeCoster, J. Testing Group Differences using T-Tests, ANOVA, and Nonparametric Measures, <http://www.stat-help.com/notes.html> (2006).
- Druker, J. Struggling States Let Retailers Keep \$1 Billion in Sales Taxes, Study Says, *The Wall Street Journal Online* (November 18<sup>th</sup>, 2008).

- Falsetta, D., J. B. Kahle, and G. T. Tsakumis. The Influence of Goal Conflict and Information Asymmetry on Individuals' Tax Evasion Judgments, Working Paper (2007).
- Field, A.P. *Discovering Statistics Using SPSS – 2<sup>nd</sup> Edition* (2005), London: Sage.
- Festinger, L. A Theory of Social Comparison Processes, *Human Relations* (1954) pp. 117-140.
- Florida Tax Watch. Out-of-State Online Shopping Costs Florida Thousands of Jobs, Online Website (February 2009).
- Friedland, N., A Note on Tax Evasion as a Function of the Quality of Information about the Magnitude and Credibility of Threatened Fines: Some Preliminary Research, *Journal of Applied Social Psychology*, (February 1982) pp. 52-59.
- Folkman, S., R. S. Lazarus, S. Pimley, and J. Novacek. Age Differences in Stress and Coping Processes, *Psychology and Aging* (1987) pp. 171-184.
- Forsythe, S. M. and B. Shi. Consumer Patronage and Risk Perceptions in Internet Shopping, *Journal of Business Research* (2003) pp. 867-875.
- Fox, W. F. and M. N. Murray. The Sales Tax and Electronic Commerce: So What's New?, *National Tax Journal* (1997) pp. 573-592.
- Goolsbee, A. In a World Without Borders: The Impact of Taxes on Internet Commerce, *Quarterly Journal of Economics* (2000) pp. 561-576.
- Goolsbee, A. and J. Zittrain. Evaluating the Costs and Benefits of Taxing Internet Commerce, *National Tax Journal* (1999) pp. 413-428.
- Grasmick, H.G., and L. Appleton. Legal Punishment and Social Stigma: A Comparison of Two Deterrence Models, *Social Science Quarterly* (1977) pp. 15-28.
- Hageman, A. Understanding the Antecedents and Consequences of Sales & Use Tax Policy: Evidence from Three Studies, University of Central Florida (Dissertation 2008).
- Hanno, D. M. and G. R. Violette. An Analysis of Moral and Social Influences on Taxpayer Behavior, *Behavioral Research in Accounting* (1996) pp. 56-75.



- Heckman, Candace. Well Spent: Do I Need to Collect State Sales Tax at My Yard Sale?, Seattle Post-Intelligencer Online Website (September 28, 2005) [http://seattlepi.nwsourc.com/local/242523\\_wellspent28.html](http://seattlepi.nwsourc.com/local/242523_wellspent28.html).
- Hite, P. and G. McGill. An Examination of Taxpayer Preference for Aggressive Tax Advice, *National Tax Journal* (December 1992) pp. 389-403.
- Internet Tax Freedom Act. <http://www.ecommercecommission.org/ITFA.htm>.
- IRS News Releases, Report to Congress: IRS Tax Compliance Activities, Online Website (2003).
- IRS News Releases, IRS Updates its Tax Gap Estimates, Online Website (2006).
- Jackson, B. R. and V. C. Milliron. Tax Compliance Research: Findings, problems, and Prospects, *Journal of Accounting Literature* (1986) pp. 124-165.
- Jackson, B. R. and Jones, S. M., Salience of Tax Evasion Penalties Versus Detection Risk, *Journal of the American Taxation Association* (Spring 1985) pp. 7-17.
- Kaplow, L. Accuracy, Complexity, and the Income Tax, *The Journal of Law, Economics, & Organization* (1998) pp. 61-83.
- Kasipillai, J., N. Aripin, and N. A. Amram. The Influence of Education on Tax Avoidance and Tax Evasion, *eJournal of Tax Research* (2003) <http://www.austlit.edu.au/au/journals/eJTR/2003/7.html>.
- King, S., and S. M. Sheffrin. Tax Evasion and Equity Theory: An Investigative Approach, *International Tax and Public Finance* (2002) pp. 505-521.
- Kovar, S. E., K. G. Burke and B. R. Kovar. Consumer Responses to the CPA Webtrust Assurance, *Journal of Information Systems* (2000) pp. 17-35.
- Krause, K. Tax Complexity: Problem or Opportunity? *Public Finance Review* (2000) pp. 395-414.
- Liska, A. E. and Messner, S. F., *Perspectives on Crime and Deviation: Third Edition* (Prentice Hall 1999).
- Long, S. B. and J. A. Swingen. Taxpayer Compliance: Setting New Agendas For Research, *Law and Society Review* (1991) pp. 637-684.

- Maine Revenue Services Website.  
<http://www.state.me.us/revenue/Compliance/UseTaxComplianceFAQs.htm#indrpt>.
- Malani, Helen. Will Online Shopping Remain Tax-Free?, Shopzilla.com (2007).
- Maroney, J. J., T. J. Rupert and B. H. Anderson. Taxpayer Reaction to Perceived Inequity: An Investigation of Indirect Effects and the Equity-Control Model, *The Journal of the American Taxation Association* (1998) pp. 60-73.
- Maroney, J. J., T. J. Rupert and M. L. Wartick. The Perceived Fairness of Taxing Social Security Benefits: The Effect of Explanations Based on Different Dimensions of Tax Equity, *The Journal of the American Taxation Association* (2002) pp. 79-92.
- Masselli, J.J., R.C. Ricketts, V. Arnold, and S.G. Sutton. The Impact of Embedded Intelligent Agents on Tax-Reporting Decisions, *The Journal of the American Taxation Association* (2002) pp. 60-78.
- Mauldin, E., and V. Arunachalam. An Experimental Examination of Alternative Forms of Web Assurance for Business-to-Consumer e-Commerce, *Journal of Information Systems* (2002) pp. 33-54.
- McClure, C. E. Jr. Electronic Commerce and the State Retail Sales Tax: A Challenge to American Federalism, *International Tax and Public Finance* (1999) pp. 193-224.
- Moser, D. V., J. H. Evans III, C. K. Kim. The effects of Horizontal and Exchange Inequity on Tax Reporting Decisions, *The Accounting Review* (1995) pp. 619-634.
- O'Donnell, E., B. Kock, and J. Boone. The Influence of Domain Knowledge and Task Complexity on Tax Professionals' Compliance Recommendations, *Accounting, Organization, and Society* (2005) pp. 145-165.
- Porcano, T. M. and C. E. Price. The Effects of Social Stigmatization on Tax Evasion, *Advances in Taxation* (1993) pp.197-217.
- Pyzdek, T. Does Normality Really Matter in ANOVA? Six Sigma Training.ORG (2009).
- Quill Corp. v. North Dakota (91-0194), 504 U.S. 298 (1992).

- Ritsema, C. M., D. W. Thomas, and G. D. Ferrier. Economic and Behavioral Determinants of Tax Compliance: Evidence from the 1997 Arkansas Tax Penalty Amnesty Program, IRS Research Conference (2003).
- Roberts, M. L. Tax Accountants; Judgment/Decision-Making Research: A Review and Synthesis, *The Journal of the American Taxation Association* (Spring 1998) pp. 78-121.
- Sanders, D.L., P. M. J. Reckers, and G. S. Iyer. Influence of Accountability and Penalty Awareness on Tax Compliance, *The Journal of the American Taxation Association* (Fall 2008) pp. 1-20.
- Schepanski, A. and T. Shearer. A Prospect Theory Account of the Income Tax Withholding Phenomenon, *Organizational Behavior and Human Decision Processes* (August 1995) pp. 174-186.
- Smith, K.W. and K.A. Kinsey. Understanding Taxpaying Behavior: A Conceptual Framework with Implications for Research, *Law & Society Review* (1987) pp. 639-663.
- Stalans, L. J., K. A. Kinsey, and K. W. Smith. Listening to Different Voices: Formation of Sanction Beliefs and Taxpaying Norms, *Journal of Applied Social Psychology* (1991) pp. 119-138.
- State of Florida Long-Range Financial Outlook Fiscal Year 2008-08 through 2010-11.
- Streamlined Sales Tax Project. <http://www.streamlinedsalestax.org/>.
- Tannenwald, Robert. Are State and Local Revenue Systems Becoming Obsolete?, *National Tax Journal* (2002) pp. 467-489.
- Taylor, S., and P. Todd. An Integrated Model of Waste Management Behavior: A Test of Household Recycling and Composting Intentions, *Environment and Behavior* (1995) pp. 603-630.
- Taylor, S. and P. Todd. Understanding Information Technology Usage: A Test of Competing Models, *Information Systems Research* (1995) pp. 144-176.
- Taylor, S. and P. Todd. Understanding the Determinants of Consumer Composting Behavior, *Journal of Applied Social Psychology* (1997) pp. 602-628.
- Trandel, G. A. Evading The Use Tax On Cross-border Sales, *Journal of Public Economics* (1992) pp. 313-331.

United States Sales Tax Site. <http://www.usa-sales-use-tax-e-commerce.com/>.

United States Census Bureau. <http://www.census.gov/eos/www/ebusiness614.htm>.

Wagner, R. T. Hearing Before the U.S. Senate Committee on Finance (July 21, 2004).

Witte, A. D. and D. F. Woodbury. The Effect of Tax Laws and Tax Administration on Tax Compliance: The Case of the U.S. Individual Income Tax, *National Tax Journal* (1985) pp. 1-13.

## **APPENDICES**

# Survey on the Florida Use Tax

**Researcher:**

Chris Jones  
The University of South Florida  
COB – School of Accountancy  
Tampa, FL 33620-5500  
[jonesc@coba.usf.edu](mailto:jonesc@coba.usf.edu)

**General Instructions**

In completing this survey you will be asked to answer questions relating to state taxes. The survey also contains general questions related to your background. Please answer the questions as if you were actually faced with the decisions described. Your responses to all questions will remain **strictly confidential** and will be analyzed only after being combined with data from all other participants. Please do not put your name, social security number, school ID, or any other identifying information on the materials.

There are no right or wrong answers.

By completing the case and related questions, you agree to voluntarily participate in this survey.

This study is **NOT** affiliated with the Florida Department of Revenue or the Internal Revenue Service (IRS). The information provided in this survey will only be used by the researcher listed above for his research.

Your participation in this survey is greatly appreciated. If you have any questions or comments, please feel free to email the researcher listed above.



The following paragraphs define what a use tax is. Do **NOT** go back and change what you wrote on the previous page.

**Definition**

A use tax is a tax imposed by the state to use, store, or consume an item in the state. For example, if you purchase a television in Georgia to use in your apartment in Florida, you might be subject to the Florida Use Tax.

A sales tax is collected at the point of purchase from the retailer (vendor), and the retailer remits the tax to the state. Conversely, a use tax is paid by the individual directly to the state.

Generally, states offer a credit for any sales tax paid in another state. That is, individuals typically do not have to pay both use tax and sales tax on the same item.

To pay the use tax in Florida, an individual must fill out and submit Form DR-15MO (Florida Department of Revenue Out-of-State Purchase Return) on a quarterly basis.

**Online Purchases**

Often times when an individual makes a purchase online, no sales tax is charged. Generally in this situation, the individual would owe a use tax to the state where the product is used. For example, suppose you purchase a DVD player from Amazon.com for use in your home in Florida. If Amazon.com does not charge a sales tax at the time of your purchase, you would owe the use tax to the state of Florida.

Currently, the use tax rate in Florida is 6%. If the DVD player in the preceding example cost \$100, it would be your responsibility to submit the \$6 use tax to the state of Florida.

**Instructions for proceeding**

Based on the use tax information provided above, please read the scenario on the next page and answer the questions that follow.



### **Internet Purchase Scenario**

You recently received a gift of \$250 for your birthday. After thinking about it for a few days you decide to purchase an 8 GB Apple iPod Touch with the money. You shop around and look online for the best deal. You find a website selling the 8 GB Touch for \$200. You decide to place your order with the website. You notice the website does not charge a sales tax on the purchase.

The Florida Use Tax due on this purchase is \$12.00 (6% of \$200) and this amount is not withheld by the internet site where you made your purchase. So to comply with the Florida Use Tax, you will need to complete and send Form DR-15MO with a \$12.00 check to the Florida Department of Revenue.



- The following questions relate to your background information.
- Please check or circle your response unless otherwise indicated.

1. Gender:

Female     Male

2. Age:

Under 20                       50 – 59  
 20 – 29                         60 – 69  
 30 – 39                         70+  
 40 – 49

3. Education Level (please mark the selection that best describes your education status):

Currently pursuing a bachelor's degree  
 I have a bachelor's degree  
 Currently pursuing a master's degree  
 I have a master's degree  
 Currently pursuing a doctoral degree  
 I have a doctoral degree  
 Other    Please describe \_\_\_\_\_

4. Tax Return Status (on 2007 return):

Single     Head of Household  
 Married Filing Jointly                       Married Filing Separately  
 Qualifying Widow(er) with Dependent Child  
 Did Not File

5. What is your household income?

- |  |   |
|--|---|
| <input type="checkbox"/> Zero - \$20,000     | <input type="checkbox"/> \$65,001 - \$80,000  |
| <input type="checkbox"/> \$20,001 - \$35,000 | <input type="checkbox"/> \$80,001 - \$100,000 |
| <input type="checkbox"/> \$35,001 - \$50,000 | <input type="checkbox"/> \$100,000+           |
| <input type="checkbox"/> \$50,001 - \$65,000 |   |

6. How many years of work experience do you have?

Years  Months

7. Have you ever purchased an item via the internet?

- Yes  
 No

8. If you answered “Yes” to Question #7 – in general, on your online purchases, please estimate the percentage of vendors that collect a sales and/or use tax by making a slash mark (“/”) at the appropriate place on the scale below.

|-----|-----|-----|-----|-----|-----|-----|-----|-----|  
0% 10 20 30 40 50 60 70 80 90 100%

9. In the past year, what is your estimate of how much you have spent on purchases made via the internet (in dollars)?

- |   |  |
|---|--|
| <input type="checkbox"/> Zero             | <input type="checkbox"/> \$1,001 to \$5,000  |
| <input type="checkbox"/> \$1 to \$100     | <input type="checkbox"/> \$5,001 to \$10,000 |
| <input type="checkbox"/> \$101 to \$500   | <input type="checkbox"/> \$10,000+           |
| <input type="checkbox"/> \$501 to \$1,000 |  |



## Appendix B: Remedy Instrument

### Experiment Examining the Florida Use Tax

Researcher:

Chris Jones

The University of South Florida

COB – School of Accountancy

Tampa, FL 33620-5500

jonesc@coba.usf.edu

### General Instructions

In completing this survey you will be asked to answer questions relating to state taxes. The survey also contains general questions related to your background. Please answer the questions as if you were actually faced with the decisions described. Your responses to all questions will remain strictly confidential and will be analyzed only after being combined with data from all other participants. Please do not put your name, social security number, school ID, or any other identifying information on the materials.

There are no right or wrong answers.

By completing the case and related questions, you agree to voluntarily participate in this survey.

This study is NOT affiliated with the Florida Department of Revenue or the Internal Revenue Service (IRS). The information provided in this survey will only be used by the researcher listed on the previous slide.

Your participation in this survey is greatly appreciated. If you have any questions or comments, please feel free to email the researcher listed on the previous page. The following paragraphs define what a use tax is.

### Definition

A use tax is a tax imposed by the state to use, store, or consume an item in the state. For example, if you purchase a television in Georgia to use in your apartment in Florida, you might be subject to the Florida Use Tax.

A sales tax is collected at the point of purchase from the retailer (vendor), and the retailer remits the tax to the state. Although the use tax could be potentially withheld by the vendor, it is often paid by the individual directly to the state.

Generally, states offer a credit for any sales tax paid in another state. That is, individuals typically do not have to pay both use tax and sales tax on the same item.

Assuming the internet vendor does not withhold the use tax due, to pay the use tax in Florida, an individual must fill out and submit Form DR-15MO (Florida Department of Revenue Out-of-State Purchase Return).

### Online Purchases

Often times when an individual makes a purchase online, no sales tax is charged. Generally in this situation, the individual would owe a use tax to the state where the product is used. For example, suppose you purchase a DVD player from Amazon.com for use in your home in Florida. If Amazon.com does not charge a sales tax at the time of your purchase, you would owe the use tax to the state of Florida.

Currently, the use tax rate in Florida is 6%. If the DVD player in the preceding example cost \$100, it would be your responsibility to submit the \$6 use tax to the state of Florida.

### Instructions for Proceeding

Based on the use tax information provided above, please read the scenario on a following page and answer the questions that follow.



On the next page you will be shown a scenario in which you will be asked to make a compliance decision about whether you would pay a use tax. Before proceeding, take a moment to think about use tax. Please feel free to go back and reread the use tax definition by hitting the "<<Back" button located on the bottom right portion of the screen if you feel it is necessary.

When you are ready, please hit the "Next>>" button to proceed to the scenario.

## Internet Purchase Scenario

You recently received a gift of \$250 for your birthday. After thinking about it for a few days you decide to purchase an 8 GB Apple iPod Touch with the money. You shop around and look online for the best deal. You find a website (ABC Inc.) selling the 8 GB Touch for \$200. You decide to place your order on ABC Inc.'s website. You notice ABC Inc. is an out-of-state vendor and does not charge a sales tax on the purchase. So you owe a \$12.00 ( $\$200 \times 6\%$ ) use tax to Florida.

The use tax amount is not withheld by the internet site where you made your purchase. So to comply with the Florida Use Tax, you will need to complete and send Form DR-15MO with a \$12.00 check to the Florida Department of Revenue.

The next page shows the order form on ABC Inc.'s website.

ABC Inc.

Please review your purchase

Description	Price
· Item #1001 8 GB Apple iPod Touch	\$200.00 USD
Shipping and Handling	\$5.00 USD
Sales and Use Tax	
· Sales Tax	\$0.00 USD
· Use Tax*	\$0.00 USD
<b>TOTAL</b>	<b>\$205.00 USD</b>

\*Based on your shipping information, you may be subject to the Florida Use Tax. You are responsible for paying any use tax associated with this purchase. Note that ABC Inc. WILL NOT disclose to FLORIDA any information pertaining to this purchase.

If this information is correct please select the "Next>>" button located on the bottom right portion of the screen. If you wish to return to the previous screen select the "<<Back" button.

## Compliance Decision

How likely are you to fill out Form DR-15MO and pay the Florida Use Tax on this purchase (0 to 100, with 0 indicating a 0 percent likelihood you would pay and 100 being a 100 percent likelihood you would pay)?

Questions

The following questions relate to various issues associated with previous screens.

There are no right or wrong answers

Before getting to the check-out screen, how much information was presented to you in this experiment on the use tax?

1 (No information was presented)	2	3	4	5	6	7 (Much information was presented)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Did ABC Inc. offer to collect the use tax for you?

Yes  
 No

How *much* awareness of the use tax did you have before taking this experiment?

1 (None)	2	3	4	5	6	7 (A lot)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

How much awareness of the use tax, based on information presented in this experiment, do you have now?

1 (None)	2	3	4	5	6	7 (A lot)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Assuming ABC Inc. actually existed, how likely would you be to purchase from their website in the future?

Very Unlikely	Unlikely	Somewhat Unlikely	Undecided	Somewhat Likely	Likely	Very Likely
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

How likely is it that Florida would find out about this purchase?

Very Unlikely	Unlikely	Somewhat Unlikely	Undecided	Somewhat Likely	Likely	Very Likely
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The following questions ask your opinion on various issues associated with paying the Florida Use Tax and on your compliance decision.

You may go back and look at the scenario and/or use tax definition at any time by hitting the "<<Back" button located on the bottom right portion of the screen.

There are no right or wrong answers

Paying the use tax on this purchase would be a hassle.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The hassle involved in paying the use tax on this purchase was \_\_\_\_\_ to me when making my compliance decision.

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Paying the use tax on this purchase would require effort.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The effort involved in paying the use tax on this purchase was \_\_\_\_\_ to me when making my compliance decision.

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Paying the use tax on this purchase would be inconvenient.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The inconvenience involved in paying the use tax on this purchase was \_\_\_\_\_ to me when making my compliance decision.

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Paying the use tax on this purchase would be time consuming.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The amount of time it would take to pay the use tax on this purchase was \_\_\_\_\_ to me when making my compliance decision.

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Paying the use tax on this purchase would give Florida more money.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The fact that payment of the use tax on this purchase would result in Florida receiving money was \_\_\_\_\_ to me when making my compliance decision.

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Florida would benefit if I pay the use tax on this purchase.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The fact that Florida would benefit if I would pay the use tax was \_\_\_\_\_ to me when making my compliance decision.

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Paying the use tax on this purchase would affect my finances.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The effect payment of the use tax would have on my finances was \_\_\_\_\_ to me when making my compliance decision.

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

I think I know a lot about the use tax.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The amount of knowledge I have on the use tax was \_\_\_\_\_ to me when making my compliance decision.

Not at all Important	Very Unimportant	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Very Important	Extremely Important
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

I think the use tax is fair.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



The fairness of the use tax was \_\_\_\_\_ to me when making my compliance decision.

			Neither			
Not at all	Very	Somewhat	Important	Somewhat	Very	Extremely
Important	Unimportant	Unimportant	nor	Important	Important	Important
			Unimportant			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

I think of the use tax as another tax among a multitude of taxes.

Strongly		Somewhat	Neither	Somewhat	Agree	Strongly
Disagree	Disagree	Disagree	Agree nor	Agree		Agree
			Disagree			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The fact that the use tax is just another tax among a multitude of taxes was \_\_\_\_\_ to me when making my compliance decision.

			Neither			
Not at all	Very	Somewhat	Important	Somewhat	Very	Extremely
Important	Unimportant	Unimportant	nor	Important	Important	Important
			Unimportant			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

I think of the use tax as just another way the government is trying to get my money.

Strongly		Somewhat	Neither	Somewhat	Agree	Strongly
Disagree	Disagree	Disagree	Agree nor	Agree		Agree
			Disagree			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The fact that the use tax is just another way the government is trying to get my money was \_\_\_\_\_ to me when making my compliance decision.

			Neither			
Not at all	Very	Somewhat	Important	Somewhat	Very	Extremely
Important	Unimportant	Unimportant	nor	Important	Important	Important
			Unimportant			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

My family would want me to pay the use tax on this purchase.

Strongly		Somewhat	Neither	Somewhat	Agree	Strongly
Disagree	Disagree	Disagree	Agree nor	Agree		Agree
			Disagree			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Whether my family would want me to pay the use tax on this purchase was \_\_\_\_\_ to me when making my compliance decision.

Not at all	Very	Somewhat	Neither	Somewhat	Very	Extremely
Important	Unimportant	Unimportant	Important	Important	Important	Important
			nor			
			Unimportant			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

My friends would want me to pay the use tax on this purchase.

Strongly	Disagree	Somewhat	Neither	Somewhat	Agree	Strongly
Disagree		Disagree	Agree nor	Agree		Agree
			Disagree			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Whether my friends would want me to pay the use tax on this purchase was \_\_\_\_\_ to me when making my compliance decision.

Not at all	Very	Somewhat	Neither	Somewhat	Very	Extremely
Important	Unimportant	Unimportant	Important	Important	Important	Important
			nor			
			Unimportant			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

My co-workers would want me to pay the use tax on this purchase.

Strongly	Disagree	Somewhat	Neither	Somewhat	Agree	Strongly
Disagree		Disagree	Agree nor	Agree		Agree
			Disagree			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Whether my co-workers would want me to pay the use tax on this purchase was \_\_\_\_\_ to me when making my compliance decision.

Not at all	Very	Somewhat	Neither	Somewhat	Very	Extremely
Important	Unimportant	Unimportant	Important	Important	Important	Important
			nor			
			Unimportant			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

I believe I have the ability to pay the use tax on this purchase.

Strongly	Disagree	Somewhat	Neither	Somewhat	Agree	Strongly
Disagree		Disagree	Agree nor	Agree		Agree
			Disagree			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Whether I have the ability to pay the use tax on this purchase was \_\_\_\_\_ to me when making my compliance decision.

Not at all	Very	Somewhat	Neither	Somewhat	Very	Extremely
Important	Unimportant	Unimportant	Important nor Unimportant	Important	Important	Important
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

I believe I have access to all necessary items/resources that are needed to pay the use tax on this purchase.

Strongly	Disagree	Somewhat	Neither	Somewhat	Agree	Strongly
Disagree		Disagree	Agree nor Disagree	Agree		Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Whether I have access to all necessary items/resources that are needed to pay the use tax on this purchase was \_\_\_\_\_ to me when making my compliance decision.

Not at all	Very	Somewhat	Neither	Somewhat	Very	Extremely
Important	Unimportant	Unimportant	Important nor Unimportant	Important	Important	Important
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

I think it would be morally wrong to try to avoid paying the use tax on this purchase.

Strongly	Disagree	Somewhat	Neither	Somewhat	Agree	Strongly
Disagree		Disagree	Agree nor Disagree	Agree		Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

I think it would be unethical to avoid paying the use tax on this purchase.

Strongly	Disagree	Somewhat	Neither	Somewhat	Agree	Strongly
Disagree		Disagree	Agree nor Disagree	Agree		Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

I think it would be morally right to pay the use tax on this purchase.

Strongly	Disagree	Somewhat	Neither	Somewhat	Agree	Strongly
Disagree		Disagree	Agree nor Disagree	Agree		Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

I feel it is ethical to pay the use tax on this purchase.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

I have a positive attitude towards paying the use tax on this purchase.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

I think paying the use tax on this purchase is a good idea.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

I think paying the use tax on this purchase would be a wise idea.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

I like the idea of paying a use tax on this purchase.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

People who influence my behavior think I should pay the use tax on this purchase.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

People who are important to me think I should pay the use tax on this purchase.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Paying the use tax on this purchase is entirely within my control.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

I have the resources and ability to pay the use tax on this purchase.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

I would be able to comply with use tax laws for this purchase if I chose to do so.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The following questions relate to your background information.

Gender:

- Male
- Female

Age:

- |                          |          |                          |         |
|--------------------------|----------|--------------------------|---------|
| <input type="checkbox"/> | Under 20 | <input type="checkbox"/> | 50 - 59 |
| <input type="checkbox"/> | 20 - 29  | <input type="checkbox"/> | 60 - 69 |
| <input type="checkbox"/> | 30 - 39  | <input type="checkbox"/> | 70+     |
| <input type="checkbox"/> | 40 - 49  |                          |         |

Education Level (please mark the selection that best describes your education status):

- Currently pursuing a bachelor's degree
- I have a bachelor's degree
- Currently pursuing a master's degree
- I have a master's degree
- Currently pursuing a doctoral degree
- I have a doctoral degree
- Other (Please describe)

What is your household income? For purposes of this question, assume household income means the amount of money you have access to in a given year (i.e., you make \$20,000 a year at a job and your parents give you \$15,000 to cover living expenses, your household income would be \$35,000).

- |                          |                     |                          |                      |
|--------------------------|---------------------|--------------------------|----------------------|
| <input type="checkbox"/> | Zero - \$20,000     | <input type="checkbox"/> | \$65,001 - \$80,000  |
| <input type="checkbox"/> | \$20,001 - \$35,000 | <input type="checkbox"/> | \$80,001 - \$100,000 |
| <input type="checkbox"/> | \$35,001 - \$50,000 | <input type="checkbox"/> | \$100,000+           |
| <input type="checkbox"/> | \$50,001 - \$65,000 |                          |                      |

Tax Return Status (on 2008 return):

- |  |  |
|--|--|
| <input type="checkbox"/> Single                    | <input type="checkbox"/> Head of Household                         |
| <input type="checkbox"/> Married Filing Jointly    | <input type="checkbox"/> Qualifying Widow(er) with Dependent Child |
| <input type="checkbox"/> Married Filing Separately | <input type="checkbox"/> Did (or Will) Not File                    |

How many months of work experience do you have?

Have you ever purchased an item via the internet?

- Yes  No

In general, on your online purchases, please estimate the percentage of vendors that collect a sales and/or use tax (0 to 100).

In the past year, what is your estimate of how much you have spent on purchases made via the internet (in dollars)?

- |   |  |
|---|--|
| <input type="checkbox"/> Zero             | <input type="checkbox"/> \$1,001 to \$5,000  |
| <input type="checkbox"/> \$1 to \$100     | <input type="checkbox"/> \$5,001 to \$10,000 |
| <input type="checkbox"/> \$101 to \$500   | <input type="checkbox"/> \$10,000+           |
| <input type="checkbox"/> \$501 to \$1,000 |  |

How often would you estimate you purchase an item via the internet?

- |  |   |
|--|---|
| <input type="checkbox"/> Daily             | <input type="checkbox"/> Once a Month         |
| <input type="checkbox"/> 4-6 Times a Week  | <input type="checkbox"/> Several Times a Year |
| <input type="checkbox"/> 2-3 Times a Week  | <input type="checkbox"/> Once a Year or Less  |
| <input type="checkbox"/> Once a Week       | <input type="checkbox"/> Never                |
| <input type="checkbox"/> 2-3 Times a Month |   |

Have you ever paid a use tax in Florida?

- Yes  
 No  
 Don't know

Did you complete form DR-15MO?

- Yes  
 No  
 Don't know

Have you ever paid a use tax in any state?

- Yes
- No
- Don't know

Have you ever taken a tax course at USF or any other college or university?

- Yes
- No
- Don't know

Please list any comments/concerns/questions you have regarding the use tax or this survey below. If you have none, please just put "N/A."



### **About the Author**

Christopher Robert Jones, Ph.D. was born and raised in Muscatine, Iowa – a small town located along the Mississippi River. He attended both undergraduate and graduate school at the University of Miami (FL) where he received a Bachelor's Degree in Business Administration with a concentration in Accounting, a Master's Degree in Business Administration, and a Master's in the Science of Taxation.

He passed the CPA exam in 2003 and has professional work experience with KPMG (internship) and Berkowitz Dick Pollack and Brant. In 2004, he started his Ph.D. program at the University of Alabama. In 2006, he transferred to the University of South Florida. He defended his dissertation on July 9<sup>th</sup>, 2009.

Starting in the fall of 2009, Chris will be a faculty member at Western Illinois University located in Macomb, IL. Macomb is a college town located about ninety minutes away from his mother and brother. He currently has 2 cats (Mia and Teag) and an English bulldog (Tori). He is a die-hard Miami Hurricane fan and in his free time enjoys spending time with his pets, watching sports, playing video games, and reading.