

Sales and Use Tax Compliance in E-Commerce: A Multidimensional Approach

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This study investigates whether individuals exhibit different ethical attitudes toward non-compliance with respect to sales tax versus use tax in an e-commerce context. Based on a sample of 128 business students, the results indicated that the participants perceived sales tax non-compliance as more unethical than use tax non-compliance. Thus, they were more willing to comply with sales tax rather than use tax. This study further found that individuals' compliance intentions were associated with their ethical judgments in regard to the dimensions of the Multidimensional Ethics Scale (MES). Implications for policy makers and ethical education are discussed.

INTRODUCTION

According to the U.S. Census Bureau 2011 second quarter analysis, e-commerce sales increased 17.6% as compared to the second quarter of 2010. The rapid growth of e-commerce is further highlighted by the estimate that e-commerce transactions could increase from \$3 trillion to \$4 trillion in 2012 (Bruce, Fox, & Luna, 2009).

This trend toward e-commerce has prompted concerns regarding sales and use tax compliance (e.g., Fox & Murray, 1997; Luna, 2004; Mikesell, 1997; Murray, 1995, 1997). Bruce et al. (2009) have estimated that state and local governments would lose approximately \$10 billion in uncollected e-commerce taxes in 2011. Similarly, tax compliance researchers (e.g., Alm & Melnik, 2005; Charles & Jaimin, 2007; Goolsbee, 2000) have found evidence that consumers make Internet purchases to avoid sales taxes. According to state and local tax laws, Internet purchases are subject to use taxes if sales taxes have not been collected.¹ Therefore, use taxes complement sales taxes. However, it is generally believed that consumers are even less likely to report use taxes (e.g., Alm & Melnik, 2010; Bruce & Fox, 2000; Iyer, Reckers, & Sanders, 2010; Sanders, Reckers, & Iyer, 2008). The expansion of e-commerce significantly increases opportunities for avoiding both sales and use tax.

Due to the important contribution of sales and use tax to state and local government revenues, further research is necessary in the area of sales and use tax reporting behaviors in an e-commerce context (e.g., Johnson, Masclet, & Montmarquette, 2010). The concern with regard to sales and use tax compliance in e-commerce provides the motivation for this paper.

To provide a clearer understanding of sales and use tax compliance, this paper reports the results of a study that examined individuals' ethical evaluations and their compliance intentions in an e-commerce context. The participants in this study were business students who were exposed to two scenarios that described a non-compliance action of a taxpayer. The non-compliance scenarios specifically involved the action of not collecting sales taxes with respect to online sales (in the first scenario), or not reporting use

taxes with respect to online purchases (in the second scenario). The participants were then required to provide a response that represented their intentions to undertake the same action and to evaluate the ethical level of the non-compliance action. To obtain insights into the ethical considerations that influence the participants' ethical evaluations and their compliance intentions, this study utilized the Multidimensional Ethics Scale (MES) developed by Reidenbach and Robin (1988) and refined by Cohen, Pant, and Sharp (1993, 1996).

Because of the significant role of e-commerce in the economy, understanding the intentions of individuals to comply with sales and use tax is an important topic for researchers and policy makers. A limited number of studies have investigated sales and use tax reporting behaviors (e.g., Alm & Melnik, 2010; Charles & Jaimin, 2007; Iyer et al., 2010; Sanders et al., 2008). These studies have identified numerous factors that potentially influence sales and use tax compliance, such as increased accountability and increased awareness of penalties or detection (e.g., Iyer et al., 2010; Sanders et al., 2008). However, these studies have generally not addressed the ethical considerations (e.g., Collins, Milliron, & Toy, 1992; Jackson & Milliron, 1986) that may influence sales and use tax compliance. Furthermore, previous research has not explicitly focused on the extent to which individual ethical evaluations of a non-compliance action differ with respect to sales tax versus use tax, nor has previous research explored ethical considerations in sales and use tax from a multidimensional perspective. This study contributes to the literature by explicitly examining individuals' ethical evaluations and their compliance intentions with respect to sales and use tax by employing a multidimensional approach.

This study provides evidence that individuals have stronger intentions to comply with sales tax than with use tax. Such evidence may be informative to policy makers who are interested in understanding and increasing the willingness of online retailers to collect sales taxes or the inclination of online buyers to report use taxes if sales taxes were not collected. Tax losses from e-commerce generally arise because e-commerce significantly expands potential online sales, and thus it is necessary to shift from collecting sales taxes at the point of sale to collecting use taxes for goods that are used and consumed within a state (Bruce & Fox 2001, p. 1379). The results of this study may provide interested parties with insights into the potential importance of the tax collecting point for online sales.

Finally, information regarding individuals' ethical considerations with respect to sales and use tax also provides significant insights into the effectiveness of ethical education in improving compliance (e.g., Kaplan, Newberry, & Reckers, 1997; Trivedi, Shehata, & Lynn, 2003). This paper suggests that the compliance intentions of individuals are related to their ethical considerations of MES dimensions (i.e., moral equity, relativism, contractualism, and utilitarianism). Policies that encourage and/or emphasize education and ethical behaviors via these dimensions may be more effective in increasing sales and use tax compliance (Trivedi et al., 2003, p. 193).

LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Sales and Use Tax Compliance

The rapid growth of e-commerce sales in recent years suggests that e-commerce will become a vital contributor to tax revenues for state and local governments. Given the prevalence of e-commerce and its effects on the economy, sales and use tax compliance in e-commerce is increasingly becoming an area of concern for researchers. Bruce et al. (2009) predicted that the annual national state and local sales tax losses from e-commerce were expected to increase from \$8.6 billion in 2010 to \$11.4 billion in 2012, with a total loss of \$52 billion from 2007 to 2012.

The above estimate suggests that tax losses from e-commerce are significant. Tax compliance researchers (e.g., Alm & Melnik, 2005; Charles & Jaimin, 2007; Goolsbee, 2000) have consistently cited evidence that consumers make Internet purchases to avoid sales taxes. People who live near counties with higher sales tax rate are more likely to make Internet purchases, for which sales taxes are generally not collected. In contrast, Charles and Jaimin (2007) found that the residents of counties with lower sales tax rates were less likely to make online purchases.

According to a 1992 Supreme Court ruling (*Quill Corporation v. North Dakota*), an online retailer is not required to collect sales taxes from customers in a particular state unless it has a physical presence (e.g., a store, business office, or warehouse) in that state. Even when an online retailer does not collect sales taxes, consumers are legally required to self-report their online purchases and remit unpaid taxes (use taxes rather than sales taxes) directly to the state in which the goods are consumed. In other words, individuals are subject to use taxes on their online purchases when sales taxes are not paid. Theoretically, a use tax is a backup method for state and local governments to collect tax revenues. The difference between the sales and use tax lies in which person (i.e., the seller or the buyer) remits the tax. However, few people actually report use taxes (e.g., Iyer et al., 2010; Sanders et al., 2008). Thus, sales and use tax non-compliance is considered a serious problem. E-commerce provides opportunities for buyers and consumers to avoid both sales and use taxes.

Researchers have become increasingly interested in investigating sales and use tax compliance. For example, using data from the sales of “consumer electronics” from the U.S. eBay website, Alm and Melnik (2010) found that online sales tax compliance was generally low, but the tax compliance of established sellers was relatively higher.² Alm and Melnik (2010) further suggest that the estimated tax losses that result from seller noncompliance are relatively low because the majority of online retailers are established sellers. This finding is consistent with the results of other studies (e.g., Bruce & Fox, 2001; Sanders et al., 2008), which suggest that the use tax compliance problem might be more severe than the sales tax compliance problem. For example, Bruce and Fox (2001) posit that sales tax compliance rates are significantly higher than use tax compliance rates. The Washington State Department of Revenue has consistently found that use taxes have the lowest compliance rate among the major taxes (Sanders et al., 2008, p. 15). These studies suggest that use tax non-compliance might be more severe than sales tax non-compliance in an e-commerce context because of the low visibility that is associated with use taxes.

According to the foregoing discussions, it is reasonable to predict that individuals might be more willing to comply with sales tax than with use tax. This paper further posits that individuals might tend to view sales non-compliance as more unethical than use tax non-compliance, as prior research suggests that the compliance intentions of taxpayers are generally associated with their ethical beliefs (e.g., Henderson & Kaplan, 2005; Kaplan et al., 1997; Trivedi et al., 2003). Based on the above rationales, this paper proposes the following hypotheses:

H1a: Participants are likely to evaluate sales tax non-compliance as more unethical than use tax non-compliance.

H1b: Participants are more likely to comply with sales tax than use tax.

Ethical Judgments and Compliance Intentions

The influence of individuals’ ethical judgments on tax compliance has been investigated frequently in prior research. Ethical judgments were found to influence the compliance behaviors of taxpayers (e.g., Henderson & Kaplan, 2005; Kaplan et al., 1997; Reckers, Sanders, Roark, 1994; Trivedi et al., 2003; Wenzel, 2005b) and the ethics of tax practitioners (e.g., Doyle, Frecknall Hughes, & Glaister, 2009; Hume, Larkins, & Iyer, 1999; Marshall, Armstrong, & Smith, 1998).

The previous literature on tax compliance suggests that the ethical beliefs of taxpayers generally increase their tax compliance intentions and behaviors (e.g., Blanthorne & Kaplan, 2008; Ghosh & Crain, 1995, 1996; Trivedi et al., 2003). Taxpayers with higher levels of ethics have lower rates of intentional non-compliance and are less likely to engage in noncompliance “because they believe that cheating is wrong” (Alm, 1991, p. 584).

The foregoing discussion suggests that individuals’ ethical considerations might affect their intentions of complying with sales and use tax in an e-commerce context. It is reasonable to expect that sales and use tax compliance will be higher for individuals with higher levels of ethics. However, the influence of ethical considerations on sales and use tax compliance has not been addressed in the previous literature. In addition, the majority of tax compliance research has focused only on one-dimensional ethical judgment (for a review, see Henderson & Kaplan, 2005). This study extends the prior research by

investigating the effects of multidimensional ethical considerations on individuals' intentions to comply with sales and use tax. To obtain insights into the dimensions of ethical judgments that influence sales and use tax compliance, this study employs the MES, which is described in the following section.

MES

The MES was first developed by Reidenbach and Robin (1988) to measure multidimensional rationales that are used in the ethical judgments of individuals. These multidimensional rationales have distinct influences across various unethical situations (Reidenbach & Robin, 1990, p. 639). In this regard, the MES provides a method by which researchers can interpret the ethical judgments of individuals.

Cohen et al. (1993, 1996) extended Reidenbach and Robin's MES scale into the accounting context using a modified 12-item MES that represents five dimensions (i.e., moral equity, relativism, contractualism, utilitarianism, and egoism). To date, the MES has been used in tax compliance research (e.g., Cruz, Shafer, & Strawser, 2000; Henderson & Kaplan, 2005) to examine how multidimensional evaluations of ethics influence individuals' ethical decision making. The following section briefly describes each of the five dimensions and reviews the application of the MES in tax compliance literature.

The "moral equity" dimension measures the extent to which an individual perceives that an action is fair and just. Fairness and justice have long been investigated in income tax compliance research (e.g., Collins et al., 1992; Kirchler, Hoelzl, & Wahl, 2008; Trivedi et al., 2003). Tax non-compliance is viewed as unethical if individuals benefit from tax revenues that are paid by other people (e.g., Kaplan et al., 1997).

The "relativism" dimension measures the extent to which an action is considered to be acceptable in relation to the guidelines that are embedded in a specific society or culture. Several studies have found that individuals were more likely to be compliant in situations in which tax compliance behaviors were socially acceptable (e.g., Bobek, Roberts, & Sweeney, 2007; Collins et al., 1992; Kaplan & Reckers, 1985; Trivedi et al., 2003; Wenzel, 2004, 2005a). In contrast, individuals have greater intentions to engage in tax non-compliance if they perceive that non-compliance is approved by other people in their social group. For example, people are more likely to engage in tax evasion when they observe that their peers also avoid paying taxes (e.g., Collins et al., 1992; Kaplan & Reckers, 1985) or when they believe that tax evasion is common (e.g., Torgler, 2003).

The "contractualism" dimension measures the extent to which an action violates an individual's duties and obligations. Individuals are required to pay taxes when they receive public goods that are provided by governments from tax revenues (Alm, 1991). Tax non-compliance violates the contractual legal obligations of individuals to government and society as a whole if they actually benefit from public goods (e.g., Kaplan et al., 1997; Sakurai & Braithwaite, 2003; Trivedi et al., 2003).

The "utilitarianism" dimension measures the extent to which an action produces the greatest good for the largest number of people. In the taxation context, individuals are found to be more compliant if the largest number of people could benefit from government expenditures (e.g., Hasseldine, Hite, James, & Toumi, 2007).

The "egoism" dimension measures the extent to which an action promotes an individual's long-term interests. Tax non-compliance may lead to long-term benefits, such as tax saving (e.g., Sakurai & Braithwaite 2003). Cruz et al. (2000) contend that tax compliance also involves an egoism consideration, but they found no support for an egoism dimension in their study.

Several studies (e.g., Cruz et al., 2000; Henderson & Kaplan, 2005) have investigated the tax compliance using the MES. These studies have generally validated the existence of the moral equity, relativism, contractualism, and utilitarianism dimensions and supported the influence of these dimensions on individuals' ethical judgments and compliance intentions. For example, Cruz et al. (2000) found that aggressive reporting intentions were largely influenced by the moral equity dimension and partially influenced by the contractualism dimension. The utilitarianism and relativism dimensions were significantly associated with ethical judgments and behavior intentions only in some circumstances. Henderson and Kaplan (2005) found that the moral equity, relativism, and contractualism dimensions all

significantly influenced tax compliance behaviors, but they found that the moral equity dimension had a stronger effect than that of the relativism and contractualism dimensions.

Thus, linking the MES approach with sales and use tax compliance facilitates predictions regarding the influence of ethical considerations on sales and use tax compliance intentions. This study posits that individuals' ethical considerations with regard to sales tax versus use tax may differ and thus may affect their compliance intentions. The foregoing discussion suggests that the MES dimensions (except the egoism dimension) may influence individuals' ethical judgments and their compliance intentions. This possibility leads to the following research hypotheses:

H2a: The participants' overall ethical evaluations with regard to sales and use tax are positively related to the MES dimensions (i.e., moral equity, relativism, contractualism, and utilitarianism).

H2b: The participants' intentions to comply with sales and use tax are positively related to the MES dimensions (i.e., moral equity, relativism, contractualism, and utilitarianism).

METHODOLOGY

Instrument

To evaluate the participants' ethical considerations and their compliance intentions, this study developed two specific scenarios with respect to sales and use tax. These two scenarios involved collecting sales taxes on Internet sales (in the first scenario) and reporting use taxes on Internet purchases (in the second scenario). Consistent with the procedures of prior studies that have utilized the MES (e.g., Cruz et al., 2000), each scenario described an action that has been taken in response to a dilemma. In both scenarios, the actions involved avoiding sales or use taxes. These two scenarios were selected because of their frequency in practice as well as their straightforward effects on tax revenues.³ All participants responded to both scenarios, which are presented in Appendix A. The order of the two scenarios was counterbalanced. There were no order effects in the results.

After reviewing each scenario, the participants were required to respond to four questions. First, the participants were required to indicate the probability that they would take a similar action in the same circumstance on a seven-point scale that ranged from 1 (high) to 7 (low); on this scale, higher scores represent stronger intentions to comply. Second, participants were asked to indicate the probability that their peers would undertake the same actions. This measure was used to control for potential social desirability bias (e.g., Cohen et al., 1996; Cruz et al., 2000). The third question asked the participants to provide an overall evaluation of the ethicality of the described action on a seven-point scale that ranged from 1 (ethical) to 7 (unethical); on this scale, higher scores indicate that a described action is perceived as more unethical. Finally, the participants were asked to assess the described actions according to the four MES dimensions (i.e., moral equity, relativism, contractualism, and utilitarianism), which included 10 items from the study of Cohen et al. (1996). Each item of the four dimensions was measured using a seven-point scale. Higher scores for these items suggest that a specific action is perceived as more unethical according to a specific dimension.

Procedure

The participants completed a questionnaire that included a brief introduction to sales and use tax. Subsequently, each participant read the information regarding two scenarios and responded to four questions at the end of each scenario. Finally, the participants were required to report their age, gender, and other demographic information.

Participants

A total of 128 business students at a large public university participated in this study. According to a survey by Experience Inc., college students between the ages of 18 to 34 years account for \$175 billion in

consumer spending each year, and 98% of college students possess online shopping experience. Prior consumer research (e.g., Bateman & Valentine, 2010) also suggests that college students are appropriate surrogates for customers.

The data was collected during several sessions, and participation in this study was voluntary. The average age of the participants was 20.7, and 59% of the participants were male. In addition, 90% of the participants possessed online shopping experience, and 22% of the participants possessed online selling experience. Finally, 69% of the participants possessed tax-filing experience.

Multivariate analyses of variance (MANOVA) were performed to determine whether demographic characteristics influenced the participants' overall ethical evaluations and their compliance intentions. No statistically significant differences were found with respect to the age, tax filing experience, major, class standing, online shopping experience, and online selling experience of the participants. This study also measured the perceptions of the participants regarding audit probability and sanctions with respect to sales and use tax. This study found no statistically significant influences of the participants' perceived audit probability and sanctions on their responses to the dependent measures.

RESULTS

To test H1a and H1b, MANOVA for repeated measures examined the participants' overall ethical evaluations and their compliance intentions. With respect to the analyses for each hypothesis, participant gender was a between-subjects independent variable, and scenario was a within-subjects independent variable. The dependent measures were the participants' overall ethical evaluations and compliance intentions (themselves and their peers) for each scenario. The descriptive statistics are presented in Table 1, and the statistical results of the MANOVA are presented in Table 2.

TABLE 1
MEANS (STANDARD DEVIATIONS) FOR COMPLIANCE INTENTION (SELF, PEERS) AND
OVERALL ETHICAL EVALUATION

Gender	Sales tax scenario			Use tax scenario		
	Compliance intention (self) ^a	Compliance intention (peers) ^a	Overall ethical evaluation ^b	Compliance intention (self) ^a	Compliance intention (peers) ^a	Overall ethical evaluation ^b
Female	3.89 (2.12)	3.42 (1.92)	4.26 (1.60)	3.18 (1.90)	2.50 (1.56)	4.16 (1.49)
Male	3.69 (2.17)	3.26 (1.82)	4.24 (1.66)	2.14 (1.67)	2.06 (1.44)	3.78 (1.55)
Total	3.78 (2.14)	3.33 (1.86)	4.25 (1.62)	2.58 (1.84)	2.24 (1.50)	3.94 (1.53)

^a 1 = high, 7 = low, higher scores represent a stronger intention to comply.

^b 1 = ethical, 7 = unethical, higher scores represent that a non-compliance action is perceived as more unethical.

H1a predicted that the participants would tend to evaluate sales tax non-compliance as more unethical than use tax non-compliance. H1b predicted that the participants would have stronger intentions to comply with sales tax than to comply with use tax. As shown in Table 2, the MANOVA results revealed a significant difference in the participants' compliance intentions (both themselves and their peers) and their overall ethical evaluations with respect to sales tax and use tax. Specifically, as shown in Table 1, the cell means on the participants' overall ethical evaluations of sales tax non-compliance were statistically higher than that of use tax non-compliance.

This result suggests that, on average, the participants considered sales tax non-compliance to be less ethically acceptable than use tax non-compliance. Likewise, the cell means of the participants' compliance intentions (themselves and their peers) in the sales tax scenario were higher than that in the use tax scenario. This result indicates that participants were more likely to comply with sales tax than use tax. Overall, the preceding results provided support for H1a and H1b.

TABLE 2
REPEATED MEASURES MANOVA FOR COMPLIANCE INTENTION (SELF, PEERS) AND
OVERALL ETHICAL EVALUATION

Source of variation	Dependent variables	Mean square	<i>F</i> -value	<i>p</i> -value ^a
Between subjects				
Gender	Compliance intention (self)	23.20	4.42	0.038*
	Compliance intention (peers)	5.42	1.47	0.228
	Overall ethical evaluation	2.57	0.72	0.399
Error	Compliance intention (self)	5.25		
	Compliance intention (peers)	3.69		
	Overall ethical evaluation	3.60		
Within subjects				
Scenario	Compliance intention (self)	78.18	31.04	0.000**
	Compliance intention (peers)	68.83	34.22	0.000**
	Overall ethical evaluation	4.82	3.48	0.064
Scenario × gender	Compliance intention (self)	10.98	4.36	0.039*
	Compliance intention (peers)	1.31	0.65	0.421
	Overall ethical evaluation	1.92	1.39	0.241
Error (scenario)	Compliance intention (self)	2.52		
	Compliance intention (peers)	2.01		
	Overall ethical evaluation	1.38		

^a All reported *p*-values are two-tailed.

*, ** *p* < 0.05, *p* < 0.01, respectively.

A confirmative factor analysis (CFA) was conducted to examine the reliability and validity of the MES. The factor loadings and internal reliabilities are presented in Table 3. The Cronbach's alpha measures of reliability for each dimension exceeded 0.60, as recommended by Robinson, Shaver, and Wrightsman (1991). This result suggests that the internal reliabilities for the moral equity, contractualism, relativism, and utilitarianism dimensions were acceptable (e.g., Nunnally, 1978).

H2a and H2b proposed that the participants' overall ethical evaluations and their compliance intentions with respect to sales and use tax would be significantly influenced by the MES dimensions (i.e., moral equity, contractualism, relativism, and utilitarianism). To test these two hypotheses, this study regressed the participants' overall ethical evaluations and compliance intentions (both themselves and their peers) on the mean responses to each MES dimension.

The results, which are presented in Table 4, indicated that the MES dimensions exhibited a higher degree of explanatory power for the sales tax scenario than for the use tax scenario. As shown in Table 4, the adjusted R-square values of the regression models for the sales tax scenario ranged from 0.445 to 0.518, and were higher than the values that were obtained for the use tax scenario, which ranged from 0.135 to 0.475.

The moral equity dimension has a statistically significant effect on the participants' overall ethical evaluations in both scenarios. The relativism and utilitarianism dimensions did not significantly influence the participants' overall ethical evaluation in either of these scenarios. The contractualism dimension influenced overall ethical evaluations only in the sales tax scenario; this dimension did not affect overall ethical evaluations in the use tax scenario.

The above findings suggest that the participants were more likely to evaluate sales and use tax non-compliance as unethical when they perceived unfairness. The consideration of fairness has the greatest effect on the participants' overall ethical evaluations.

TABLE 3
FACTOR LOADINGS OF ITEMS REPRESENTING THE MORAL EQUITY, RELATIVISM, CONTRACTUALISM, AND UTILITARIANISM DIMENSIONS OF THE MES

	Sales tax scenario	Use tax scenario
Moral equity1	0.82 ^a	0.79
Moral equity2	0.86	0.73
Moral equity3	0.82	0.83
Moral equity4	0.86	0.69
Cronbach's α	0.90	0.85
Relativism1	0.98	0.93
Relativism2	0.84	0.88
Cronbach's α	0.91	0.90
Contractualism1	0.85	0.87
Contractualism2	0.95	0.97
Cronbach's α	0.90	0.91
Utilitarianism1	0.65	0.68
Utilitarianism2	0.66	0.66
Cronbach's α	0.60	0.62

^a All factor loadings are significant at the 0.001 level.

TABLE 4
MULTIPLE REGRESSIONS OF COMPLIANCE INTENTION (SELF, PEERS) AND OVERALL ETHICAL EVALUATION ON THE MES DIMENSIONS

	Sales tax scenario			Use tax scenario		
	Compliance intention (self)	Compliance intention (peers)	Overall ethical evaluation	Compliance intention (self)	Compliance intention (peers)	Overall ethical evaluation
Moral equity	0.382 ^a (0.000)**	0.381 (0.000)**	0.575 (0.000)**	0.263 (0.022)*	0.163 (0.190)	0.701 (0.000)**
Relativism	0.287 (0.003)**	0.362 (0.000)**	0.136 (0.125)	0.121 (0.252)	0.194 (0.094)	-0.038 (0.672)
Contractualism	0.137 (0.057)	0.034 (0.626)	0.116 (0.080)	0.237 (0.004)**	0.129 (0.138)	0.076 (0.263)
Utilitarianism	0.023 (0.774)	-0.017 (0.832)	0.024 (0.748)	0.168 (0.054)	0.074 (0.433)	0.012 (0.871)
<i>F</i> -value	25.436 (0.000)**	26.417 (0.000)**	34.087 (0.000)**	12.569 (0.000)**	5.878 (0.001)**	29.083 (0.000)**
Adjusted R ²	0.445	0.453	0.518	0.270	0.135	0.475

^a Regression standardized coefficients or *F*-values are outside parentheses; significance levels are within parentheses. All reported *p*-values are two-tailed.

*, ** $p < 0.05$, $p < 0.01$, respectively.

The influences of the MES dimensions on the participants' compliance intentions varied between the two scenarios. Specifically, in the sales tax scenario, the participants' compliance intentions were primarily influenced by the moral equity dimension, but they were also partially influenced by the relativism and contractualism dimensions. Therefore, the participants were more likely to comply with

sales tax when they perceived that their compliance behaviors enhanced fairness, received social acceptance, and fulfilled their legal obligations to society. In the use tax scenario, the participants' compliance intentions were heavily influenced by the contractualism dimension, but their compliance intentions were also influenced by the moral equity and utilitarianism dimensions to a lesser extent. This result suggests that the considerations of legal obligation, fairness, and outcomes for society as a whole were the most influential factors in determining the participants' intentions to comply with use tax.

Generally, these results supported H2a and H2b; there was a positive association between the MES dimensions and the participants' overall ethical evaluations and their compliance intentions.

DISCUSSION

Summary

The results indicated that the participants evaluated sales tax non-compliance as more unethical than use tax non-compliance, suggesting use tax non-compliance was viewed more leniently than sales tax non-compliance. Accordingly, the participants indicated that they had stronger intentions to comply with sales tax than use tax. The findings further suggest that the perception of general fairness (i.e., moral equity), acceptability within one's social group (i.e., relativism), and obedience to one's legal obligations (i.e., contractualism) were the primary determinants of the participants' compliance intentions in the sales tax scenario. However, in the use tax scenario, the participants' compliance intentions were largely influenced by their perceptions of the extent to which they believed that they had violated their duties and legal obligations (i.e., contractualism). In addition, their intentions were also influenced by the perceived fairness (i.e., moral equity) and the overall consequence of tax compliance for society as a whole (i.e., utilitarianism).

Implications

The results of this study reinforce and extend the previous research in at least three important ways. First, these results have important implications for policy makers who are attempting to control sales and use tax. Although prior research has investigated the sales tax compliance (e.g., Alm & Melnik, 2010) and use tax compliance (e.g., Iyer et al., 2010; Sanders et al., 2008) of taxpayers, this study represents the first attempt to simultaneously consider sales and use tax in an e-commerce context. Because of the importance of e-commerce for tax revenues, the improvement of tax compliance rates is a particular concern for policy makers (e.g., State Departments of Revenue). In an attempt to increase sales and use tax compliance, policy makers should direct online retailers to collect sales taxes and encourage customers to report use taxes if sales taxes have not been collected. The results of this study found that sales tax non-compliance was viewed as more unethical than use tax non-compliance. This finding suggests that it is important to enhance e-commerce tax compliance at the point of sales.

Second, this study extends prior research by examining the MES dimensions in sales and use tax compliance. The results of the data analyses provide insight into the reasons that sales tax compliance intentions are stronger than use tax compliance intentions. The two regression models differ in the extent to which the participants use the MES dimensions to determine compliance intentions. Therefore, individuals may view sales and use tax compliance differently; this difference, in turn, causes individuals to resolve sales versus use tax dilemmas differently.

Third, the link between compliance intentions and the MES dimensions may provide important insights with regard to ethical education. The results indicate that moral equity was the primary mode of evaluating the ethicality of sales tax non-compliance. Relativism and contractualism were also frequently used modes of reasoning with respect to sales tax compliance. The above results suggest that the training of taxpayers to comply with sales tax should focus on fairness, social norms, and obligations, but should desist from using utilitarianism as a mode of reasoning. However, the relativism dimension was not found to influence use tax compliance; thus, efforts to persuade or train individuals to comply with use tax should be based on the modes that are associated with contractualism, moral equity, and utilitarianism rather than the relativism mode of reasoning.

Limitations and Future Research

The results of this study should be interpreted with caution as a result of some limitations. First, this study used two scenarios to elicit the participants' compliance intentions in a hypothetical e-commerce context. Although this method has been used in previous research (e.g., Cruz et al., 2000) to explore tax compliance, this approach does not measure how respondents would actually behave in a real-world environment. The scenarios that were utilized in this study may not simulate the same pressures that would be experienced in an actual environment. Future research could mitigate this effect by investigating the tax compliance behaviors of taxpayers who have experienced similar situations. However, the use of scenarios is particularly appropriate for this study, which focused on understanding potential differences in reporting sales and use tax by providing the participants with the same amount of background information in both scenarios (e.g., Robertson, Hoffman, & Herrmann, 1999). In addition, it is difficult to determine the actual influence of online shopping on sales and use tax compliance as a result of difficulties in measuring the tax base.

Second, this study utilized only two scenarios to represent sales versus use tax reporting in an e-commerce context. Although this study selected a common example, which held the non-compliance behavior constant, the compliance intentions may have been sensitive to the particular nature of non-compliance.

This study presents several opportunities for future research. This study has been unable to capture the actual sales and use tax reporting behaviors of the respondents. The challenge of future research is to develop a methodology for examining these behaviors. Second, this study used a convenient sample rather than a sample that was randomly selected. The samples were collected from one university. It is possible that the students who responded were not representative of the population. Future research could extend the scope of this study to more experienced taxpayers. Such an extension would greatly enhance the generalizability of the findings. Future research could also explore potential mechanisms or actions that policy makers could undertake to further reduce non-compliance with sales and use taxes.

ENDNOTES

1. Forty-five states impose sales and use tax on retail sales and some services. The purpose of use taxes is to collect sales taxes on sales in which sales taxes have not been collected. A use tax is imposed when individuals use, store, or consume tangible properties in a state while properties were purchased in another state. The use tax has the same tax base and rate as the sales tax.
2. Established sellers were defined as sellers with 1000 or more rating points in the study that was conducted by Alm and Melnik (2010).
3. The scenarios were reviewed by one tax professor. Prior to the data collection process, a pilot test was conducted to gather information regarding each scenario. The participants in the pilot test were provided with opportunities to freely comment on each scenario. According to the comments of the participants in the pilot test, several revisions were made.

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APPENDIX A

Sales Tax Scenario

Chris is a website retailer and sells merchandises via the Internet. Last year, Chris sold and shipped goods over the Internet to customers in the same state. According to the state tax law, Chris is required to collect and remit state sales taxes on taxable items delivered to customers. Most online sellers do not collect sales taxes from customers. Chris has realized that this is a common practice of not collecting sales taxes on Internet sales.

Action: Chris decides not to collect sales taxes from customers.

Use Tax Scenario

Casey likes to shop online. Last year, Casey made several purchases over the Internet from vendors outside the state and did not pay any sales taxes on these purchases. According to the state tax law, Casey is required to report and remit use taxes on taxable items purchased through the Internet. Most people do not report use taxes for their online purchases. Casey has heard that this is a common practice of not reporting use taxes on Internet purchases.

Action: Casey decides not to report use taxes on Internet purchases.