

## **The Relation of Electronic Commerce and Sales Taxes: A Consumer Survey**

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## **The Relation of Electronic Commerce and Sales Taxes: A Consumer Survey**

### **Abstract**

In 1992, state and local governments were prohibited from imposing taxes on electronic commerce without sufficient nexus. Tax limitations were expanded in 1998 through the Internet Tax Freedom Act (ITFA) which prohibited state and local governments from imposing “multiple or discriminatory taxes on electronic commerce” and taxes on Internet access from October 1, 1998 through its expiration on November 1, 2003. Primarily, the basis for exclusion was a fear that sales taxes would stunt the growth of the Internet and the growth of online transactions. Yet, little relevant research exists to support this contention. Over 1,000 state, county, and local sales taxing authorities have challenged this controversial moratorium since its imposition. Estimates of lost sales tax revenues are projected at \$11 billion by 2003 (Bruce & Fox, 2001).

This study examines consumer attitudes towards sales tax on Internet purchases. We investigate whether sales taxes are an important factor to consumers in deciding whether to buy online. We surveyed a sample of 1,661 individuals, aimed at ascertaining whether they are aware of the sales tax moratorium and whether the imposition of any state or local sales tax would change their Internet shopping behavior. The survey also solicits other information concerning consumers’ general attitudes and behaviors related to electronic commerce.

In light of the rather contentious argument for and against the imposition of sales taxes on electronic commerce, this study offers insights into the effects of imposing sales taxes on consumer purchasing patterns. Results indicate that the majority of consumers are aware of the sales tax moratorium on Internet transactions and their online buying habits would not change if sales taxes were imposed. We suggest that the moratorium on internet sales taxes be re-examined and that policymakers concentrate on resolving the considerable administrative problems associated with electronic sales tax collections.

## The Relation of Electronic Commerce and Sales Taxes: A Consumer Survey

### I. Introduction

In 1992, the Supreme Court<sup>1</sup> prohibited the 7,800 state and local sales tax jurisdictions from requiring vendors to collect sales taxes on shipments to states where they do not have sufficient “nexus”. The Court held that states couldn’t impose sales tax collection duty on an out-of-state seller with no physical presence in the state. However, this decision does not preclude state tax authorities from imposing taxes on mail order or electronic commerce sales with Congressional approval. As a result of lost tax revenues, such Congressional action may be warranted<sup>2</sup>.

One of the primary reasons stated for excluding online sales from sales taxes, except where nexus exists, is the fear that imposing sales taxes would stunt the growth of the Internet and business to consumer electronic commerce. For example, Congressman Christopher Cox (1997) has said, “It is not hyperbole to say that taxes might drive the Internet to an early grave.”<sup>3</sup> While the Congressman’s view may well be valid, little research has been provided to support his claim. However, estimates of lost sales tax

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<sup>1</sup> *Quill Corporation v. North Dakota*, 504 U.S. 298 (1992). Most states also impose “use” taxes which require the user to voluntarily pay the sales tax to the state when it is not collected by the vendor. Most states do not enforce this tax on individuals, because it is administratively very difficult to collect.

<sup>2</sup> The Internet Tax Freedom Act (P.L. 105-277, H.R. 4328) expanded moratoriums on tax collections by prohibiting state and local governments from imposing “multiple or discriminatory taxes on electronic commerce” and taxes on Internet access through October 21, 2001. This moratorium was recently extended for two additional years until November 1, 2003. Contrary to popular belief this act did not address the sales tax issue with regard to collection of out of state sales by Internet and mail order companies, which was prohibited by the *Quill* decision.

<sup>3</sup> See also statements by Sen. Ron Wyden, “The crazy quilt of state and local taxes could do irreparable harm to the Internet, killing the goose that could lay billions of dollars in golden eggs.” Statement on the Internet Tax Freedom Act. (Online). <http://www.senate.gov/-wyden/leg/cybstate.htm> (Sept. 1997).

revenues are projected at \$10.8 billion by 2003 (Bruce & Fox, 2001). This conflict is the subject of this study.

Most research has focused on the complex administrative and equity issues surrounding the taxation of e-commerce transactions (sales and income taxes) while few researchers have investigated the potential consumer reaction to the imposition of sales taxes on Internet purchases (see, for example, Houghton & Hellerstein, 2000; Owen, 1998; Houghton & Cornia, 2000). This study examines consumer knowledge of sales taxes on Internet purchases. We examine whether consumers are aware that they may be able to save sales taxes when buying online from some vendors, versus buying in person, and we examine whether consumers consciously trade-off savings on sales tax versus increased shipping and other costs when buying online.

Section II discusses the e-commerce consumer research and how the present study extends and contributes to our understanding in this area. Section III discusses the research design and the results of this study. Section IV summarizes our findings and discusses implications for e-commerce tax policy in the state and local tax area, as well as limitations of the research.

## II. Literature Review

Research on the e-commerce sales tax issue has centered on estimates of lost revenue to states, cities, and towns, as well as the legal hurdles in crafting a workable solution.<sup>4</sup> Bruce & Fox (2001) estimate that e-commerce will cause an incremental revenue loss of about \$10.8 billion, nationwide, in 2003. Goolsbee and Zittrain (1999)

have analyzed the costs and benefits of enforcing sales and use taxes including revenue losses, competition with retail, and distribution and compliance costs. The e-commerce issue has serious international ramifications as well. Federal governments are concerned about lost income and national sales tax revenues due to apportionment problems, which mirror the same issues that face states (Hofheinz, 2002).

Goolsbee (2000) examines the impact of e-commerce taxation on consumer behavior through the use of proprietary survey data from Forrester Research, conducted in December 1997. This survey of 110,000 households includes detailed information on various demographic characteristics, computer ownership, online access, online buying behavior, as well as area of residence. The author attempts to match each person to his or her local sales tax rate to determine whether tax rates influence buying decisions. Goolsbee concludes that people living in high sales tax locations are significantly more likely to buy online and that imposing sales taxes on Internet commerce might reduce the number of online buyers by up to 24 percent.

Our survey differs from Goolsbee's in several ways. First, the Goolsbee (2000) study relied upon secondary data conducted by Forrester Research, a market research company, and inferred results from these data. Consequently, the quantity and types of questions surveyed could not be controlled. Further, the Forrester questionnaire did not specifically question consumers about the impact of e-commerce taxation on their behavior. Thus, various assumptions and manipulations of the data had to be made in order to draw meaningful conclusions regarding the research questions. In addition, the process of matching the purchase data to local sales tax rates was complicated by the fact

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<sup>4</sup> For example, Hellerstein (1998) discusses difficult questions such as who is subject to the tax, where the tax base is, nexus issues, pyramiding problems, and constitutional issues inherent in any legislative

that the data did not include town names, only state and metropolitan areas. A direct matching of individual responses to accurate tax rates was impossible. Furthermore, given the rapid development of e-commerce, the Forrester data used may be somewhat dated (1997) and may not accurately reflect current or potential consumer attitudes regarding sales taxes, especially since this issue was not widely publicized at the Forrester data collection date and the exponential growth of e-commerce transactions since 1997.

In contrast to the Goolsbee (2000) study, we conducted our own survey, which directly targets consumer attitudes about taxes and Internet purchases.. While the Goolsbee study examines consumer behavior regarding sales taxes and e-commerce by interpolating their behavior from aggregate data, the present study avoids the problems inherent in this approach by direct questioning of consumers regarding their knowledge of, and potential behavioral reaction to, sales taxes on Internet transactions. The limitation of our approach is, of course, a potential bias in which respondents indicate a planned course of action that differs from what they actually do. Such bias is inherent in survey research and should be considered when interpreting our results.

### III. Research Design and Results

A web-based survey questionnaire was sent by email to a sample of 1,661 individuals, aimed at ascertaining whether consumers were aware of the sales tax moratorium and whether the imposition of any state or local sales or use tax would change their Internet shopping behavior. The survey also solicited other data concerning

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solution.

consumers' general attitudes and behaviors related to electronic commerce and various demographic information on respondents.

The individuals selected were alumni of a private, northeastern United States management school. A total of 179 respondents completed the survey, which provided us with an 11% response rate. Table 1 provides summary demographic information about our sample.

[Insert Table 1 about here]

The respondents were 33.5% female and 66.5% male (see Table 1, Panel A). A distribution of the ages of the respondents suggests that our sample evenly represents adults across all ages (see Panel B). Those participating in the survey had at least an undergraduate degree with 125 indicating a master's degree, and 13 indicating other advanced degrees (i.e., JD, MD, etc.) (see Panel C). A distribution of annual family income suggests that over 60% of our respondents earned at least \$100,000 (see Panel D). Panel E shows the number of people per household and Panel F indicates that over 86% of our respondents either live in a city or a suburban area, with 7% living in rural areas and 5% residing outside of the United States. It is important to note that fewer than 2% of the respondents reside in a state with no sales taxes.

We asked the respondents if they were aware of the sales tax moratorium on Internet commerce and whether the imposition of any state or local sales tax would change their shopping behavior. Of the 179 respondents to our survey, 97 (55.1%) were aware that such a moratorium existed, 79 (44.9%) were unaware of the moratorium, and 3 individuals did not respond (see Table 2). Table 3 indicates the likelihood that the respondents would continue to purchase goods through the Internet if taxes were

imposed. Over 60% responded that they would be “very likely” or “likely” to continue to purchase via the Internet, and only 9.1% indicated that they would be “unlikely” or “highly unlikely” to continue to purchase if taxes were imposed ( the remainder indicated uncertainty).

[Insert Tables 2 through 4 about here]

It is possible that consumers buy online because they know they will save sales taxes. They may also know that they may pay shipping charges that they would not pay when buying locally. Table 4 indicates that 55.2% consider this trade-off when purchasing online. Statistical tests were conducted to ascertain how respondents viewed the trade-off between sales tax savings and shipping charges and whether there views varied depending on the dollar value of purchases made by consumers annually. Results indicate that consumers perceived no significant difference in the trade-off between sales tax and shipping charges regardless of their annual amount of purchases. In other words, whether a consumer considers saving sales tax versus additional shipping charges does not vary with his or her level of Internet spending.

Using Spearman’s Rho test of correlation, we find that as the annual amount of purchases on the Internet increases, respondents increasingly felt that they would continue to purchase over the Internet even if sales taxes were imposed. They would also be less likely to change their level of buying if sales taxes were imposed. Individuals who purchase online the most would be least likely to alter their online purchase behavior if sales taxes were imposed. We consider this to be a significant finding.

#### IV. Conclusions, Limitations and Recommendations

This study offers insights into the effect of the imposition of sales taxes on consumer purchasing patterns. To the extent that our respondents represent Internet consumers, our results indicate that most consumers are aware of the moratorium on Internet sales taxes, and their online buying habits would not change if sales tax were imposed on Internet purchases. The results also show that the majority of consumers do consider the tradeoff between sales taxes and shipping charges.

These results indicate that the imposition of sales taxes on e-commerce transactions may not decrease online purchasing activity to the extent projected by the Goolsbee (2000) study and that fears in this regard may be misplaced. Additional study is warranted to determine if our results represent consumer behaviors and not just consumer attitudes. In light of these findings we suggest that ending the moratorium may not adversely affect Internet revenues, and that policy makers may maximize efficiencies by concentrating on resolving the considerable administrative problems associated with Internet sales tax collections, rather than being concerned with the impact on the growth of e-commerce.

The main limitation of this study is that since the sample was obtained through a college alumni database, all respondents had at least an undergraduate college degree and live primarily within a specific geographic area. The findings suggest that our sample may be more representative of consumers who live in large urban and suburban areas and who have higher disposable incomes. While this sample is not random, it represents a significant sub-sample of the United States population and provides insights for decision makers in assessing the continuation of tax prohibitions on Internet purchases. They may

not be representative of the general population of Internet shoppers. Annual incomes, level of knowledge of tax issues, and other considerations may vary from the general population. Further, due to the geographic location of the university, the vast majority of the respondents live in states in which a conventional sales tax is imposed (although this could add more credibility to these consumers' consideration of any sales tax savings on Internet purchases). Respondents' answers also were based primarily on self-perceptions rather than actual consumer data. Given these limitations, we believe our results provide insights into the attitudes of relatively well-educated consumers on the relation between sales taxes and Internet purchases.

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Table 1  
Respondent Demographic Attributes

Panel A: Gender	<u>Number</u>	<u>Percent</u>
Male	59	33.5
Female	117	66.5
No Response	3	
Panel B: Age	<u>Number</u>	<u>Percent</u>
21-25	14	7.9
26-30	24	13.6
31-35	34	19.2
36-40	31	17.5
41-50	44	24.9
51-70	30	16.9
No Response	2	
Panel C: Education	<u>Number</u>	<u>Percent</u>
Undergraduate	41	23.0
Master's degree	125	70.3
Professional degree	13	7.3
Panel D: Income Range	<u>Number</u>	<u>Percent</u>
Under \$20,000	3	1.8
\$20,000-29,999	2	1.2
\$30,000-39,999	5	2.9
\$40,000-49,999	5	2.9
\$50,000-74,999	19	11.2
\$75,000-99,999	32	18.8
\$100,000-149,999	52	30.6
\$150,000 or more	52	30.6
No Response	9	
Panel E: Number in Household	<u>Number</u>	<u>Percent</u>
One	27	15.3
Two	60	33.9
Three	46	26.0
Four or more	44	24.9
No Response	2	
Panel F: Residency Location	<u>Number</u>	<u>Percent</u>
Rural area	13	7.3
City	54	30.5
Suburban	101	57.1
Outside the US	9	5.1
No Response	2	

Table 2  
Awareness of Moratorium of Taxes on Internet Sales

	<u>Number</u>	<u>Percent</u>
Yes	97	55.1
No	79	44.9
No Response	3	

Table 3  
Likelihood of Continued Purchases if Sales Taxes Imposed

Response	<u>Number</u>	<u>Percent</u>
Very Likely	35	19.9
Likely	72	40.9
Uncertain	53	30.1
Unlikely	9	5.1
Very Unlikely	7	4.0
No Response	3	

Table 4  
Consideration of Sales Tax Savings to be a Trade-off on Shipping Charges

Response	<u>Number</u>	<u>Percent</u>
Yes	96	55.2
No	78	44.8
No Response	5	