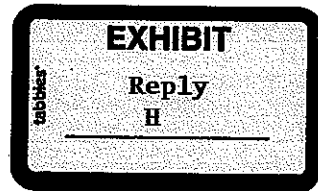


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLORADO



THE DIRECT MARKETING ASSOCIATION,

Plaintiff,

v.

CIVIL ACTION NO.

10-cv-01546-REB-CBS

ROXY HUBER, in her capacity
as Executive Director, Colorado
Department of Revenue,

Defendant.

* * * * *

DEPOSITION OF WILLIAM F. FOX

November 16th, 2010

=====

TRUESDEL & RUSK
Registered Professional Reporters

Ginger Truesdel, RPR, RDR, CRR
Certified Realtime Reporter
LCR #003
7047 Duncan's Glen Drive
Knoxville, Tennessee 37919
(865) 450-9772

www.truesdelrusk.com
gingertrue@comcast.net

1 Q So over the run of businesses
2 dealing in e-commerce, you've viewed it as being a
3 reasonable measure to apply about 1.7 percent of
4 those sales to Colorado?

5 A We do.

6 Q Page 2 of your report, Exhibit 95,
7 under the heading Estimated Sales and Use Tax Losses
8 for Colorado, you provide certain estimates, is that
9 correct?

10 A Yes.

11 Q And to be more specific, why don't
12 you tell me what those estimates are listed there in
13 the first line of that section?

14 A The estimates are the dollar amount
15 that we believe will go uncollected in Colorado in
16 2010, 2011, and 2012 because of the state's
17 inability to fully collect the sales and use taxes
18 due on e-commerce sales.

19 Q Okay. And what you're measuring
20 there is the loss on all e-commerce sales delivered
21 into Colorado?

22 A That's correct.

23 Q And I think as you note on the same
24 page in the prior paragraph, these are almost
25 exclusively use taxes, not sales taxes?

1 A Yes.

2 Q When you say almost exclusively,
3 what percentage are we talking about?

4 A Yeah, I mean it's very high. It's
5 hard for me to come up with examples when it would
6 not have been a use tax situation that's involved,
7 but I'm not saying it's impossible, it's just -- all
8 the examples that I think of would be use tax.

9 Q Now, if you look at your April 2009
10 report, Exhibit 96, Page 4 of that report --

11 A Okay.

12 Q -- talking about national findings,
13 you indicate there at the top of Page 4, and tell me
14 if I read these right:

15 "These losses are equal to what
16 states would collect if they could achieve
17 100 percent compliance on the sales and use
18 taxes due on e-commerce sales, and arise
19 because states are unable to enforce
20 collection, particularly because of
21 limitations such as those imposed by Quill
22 v. North Dakota."

23 Did I read that right?

24 A You did.

25 Q And is that same statement

1 applicable to the estimates you have here in Exhibit
2 95 with regard to Colorado?

3 A Yes.

4 Q So these are amounts that could be
5 collected if Quill v. North Dakota were overturned
6 by the Supreme Court or by federal legislation
7 enacted by Congress, is that correct?

8 A And if there was 100 percent
9 compliance.

10 Q So Quill would need to be
11 overturned by the legislation or by the Supreme
12 Court, 100 percent compliance. Is it also true
13 that, I think you note in your 2009 report that it
14 presumes there's no small seller exception?

15 A That is true.

16 Q Okay.

17 A If it were federal legislation, it
18 would depend on the characteristics of that
19 particular federal legislation.

20 Q And, in fact, isn't it true that
21 your longer report from 2009 has been cited by
22 advocates of federal legislation seeking to overturn
23 Quill as a -- in support of their efforts to
24 convince Congress to enact such legislation?

25 A At least they've used the numbers

1 to explain their revenue consequences to state and
2 local governments.

3 Q Was the 2009 update to your report,
4 was it funded by the streamline sales and use tax
5 agreement?

6 A By the project, that's correct.

7 Q By the project, the governing
8 board?

9 A The governing board, exactly.

10 Q And the governing board of the
11 sales and use tax agreement is one of those groups
12 that advocates for the -- for Congressional
13 legislation to overturn the Quill rule?

14 A I think they're in support of it,
15 yes.

16 Q Do you, in fact, agree that the
17 proper course of action for addressing the perceived
18 problem of under collection of state sales and use
19 tax is for Congress to act consistent with its
20 authority under the commerce clause to overturn
21 Quill?

22 A I think the best approach would
23 either be for Congress to act or the courts to
24 overturn Quill.

25 Q That would be more effective than

1 state-by-state efforts in your point of view in
2 addressing this perceived problem of unreported use
3 tax?

4 A Yes.

5 Q And that also would be, I take it,
6 that is Congressional action would be consistent
7 with the authority of Congress under the commerce
8 clause of the United States Constitution?

9 A Let me carefully add I am not a
10 lawyer and not a legal expert, I have been told
11 that.

12 Q That Congress has that power under
13 the commerce clause?

14 A Congress has that power, yes.

15 Q Whereas state efforts potentially
16 raise concerns about whether or not they are
17 consistent with the commerce clause as interpreted
18 by the Supreme Court?

19 A And, again, I'm not a legal expert.
20 Clearly, that's something anybody could choose to
21 litigate. Where it goes I don't know.

22 Q Okay. For example, you've read the
23 complaint in this case --

24 A I have.

25 Q -- and you know it's the DMA's

1 position, is it not, that the Colorado effort in
2 this case, in fact, runs afoul of limitations on
3 state authority under the commerce clause?

4 A That is my understanding, yes.

5 Q Now, are you aware that there are
6 others, who have analyzed the issue of unreported
7 sales and use tax on e-commerce sales, who disagree
8 with your estimates?

9 A Yes.

10 Q And these other reports conclude
11 that your estimates are too high?

12 A I've heard that, yes.

13 Q I'm going to mark as the next
14 exhibit a document, which I'll describe once I have
15 it marked.

16 MR. SCHAEFER: And, Melanie, I'll
17 read the title out carefully for you, this
18 was a document that was not Bates stamped so
19 I want to make sure you know what it is.

20 So we've marked as Exhibit 97 a
21 report by Empiris, LLC, that's
22 E-M-P-I-R-I-S, specifically two individuals
23 named Jeffrey Eisenach, E-I-S-E-N-A-C-H, and
24 Robert Litan, L-I-T-A-N, dated
25 February 2010, entitled "Uncollected Sales

1 Taxes On Electronic Commerce: A Reality
2 Check."

3 Do you see that document in front
4 of you, Professor Fox?

5 A I do.

6 (Exhibit No. 97 marked)

7 Q Are you familiar with this
8 document?

9 A I've never read it. I am aware
10 that it had been prepared.

11 Q And if you turn to Page 25 of that
12 document, you will see that there is on that page a
13 Table 8, which is entitled Comparison of
14 Eisenach-Litan vs. Fox Projected Uncollected Taxes
15 with numbers given in the billions for the years
16 2008 to 2012; do you see that?

17 A I do.

18 Q Now, I just want to direct you to
19 the far right column, you'll see that essentially
20 you have year-by-year analysis with -- in two
21 large -- with two assumptions. The first is with --
22 without a small business exception and then below
23 that the three columns indicate with a small
24 business exception. Do you see that?

25 A I do.

1 Q So you have year by year and then
2 the far right column is an average of those years.

3 Do you see that with regard to
4 both, assuming a small business exception and then
5 assuming there is no small business exception, that
6 Eisenach and Litan conclude that the average
7 uncollected use tax on e-commerce is something less
8 than half of your estimate?

9 A I do see that.

10 Q Now, are you aware that there are
11 others besides Eisenach and Litan, who have also
12 opined that your estimates might be too high?

13 A I am.

14 Q We'll mark as the next document
15 this Exhibit 98, which I have handed you and,
16 Melanie, I'll read it carefully for you, it's a
17 document entitled "Setting The Record Straight: The
18 Modest Effect of E-commerce on State and Local Sales
19 Tax Collections," prepared by Peter A. Johnson,
20 Ph.D., and this dated July 31, 2008.

21 (Exhibit No. 98 marked)

22 Q Now, among the folks who have
23 offered counter-estimates is, in fact, the Direct
24 Marketing Association, is that correct?

25 A That was my understanding, right.

1 said.

2 Q In general, would you agree with me
3 that there are a variety of different things that
4 states can do to try to improve use tax compliance
5 by businesses?

6 A They certainly are trying to do a
7 series of things, yes.

8 Q And at least this report from
9 California identifies two measures that the
10 California legislature or Board of Equalization has
11 undertaken?

12 A Yes.

13 Q And there may be others?

14 A There may be.

15 Q We discussed earlier that this case
16 concerns the Direct Marketing Association's
17 challenge to House Bill 10-1193?

18 A Yes.

19 Q Have you attempted to analyze the
20 revenue impact of Colorado law House Bill 10-1193?

21 A No.

22 Q Are you aware of the revenue impact
23 assigned to House Bill 10-1193 by the Colorado
24 General Assembly?

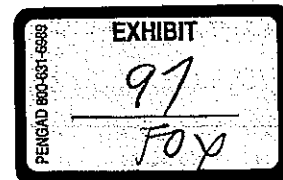
25 A If so, I don't remember it.

EMPIRIS LLC

UNCOLLECTED SALES TAXES ON ELECTRONIC COMMERCE:
A REALITY CHECK

JEFFREY A. EISENACH
ROBERT E. LITAN[†]

February 2010



[†] The authors are, respectively, Chairman, Empiris LLC and Adjunct Professor, George Mason University School of Law; and Senior Fellow, Economic Studies and Global Economics Programs, The Brookings Institution and Vice President, Research and Policy, The Kauffman Foundation. We are grateful to Allan Ingraham, Robert Kulick, Molly Wells and Billy Schwartz for assistance, though any errors or omissions are our own. The views here are those of the authors, and should not be attributed to any of the institutions with which they are affiliated, or to the trustees, officers, or employees of those institutions. Support for this study was provided by NetChoice.

UNCOLLECTED SALES TAXES ON ELECTRONIC COMMERCE: A REALITY CHECK

EXECUTIVE SUMMARY

Under the Supreme Court's 1992 *Quill* decision, online retailers are not required to collect sales taxes in states where they do not have a physical presence, or "nexus." As a result, state and local sales taxes are not collected on some proportion of interstate sales. Since the early days of the Internet, state and local governments have lobbied Congress to overturn *Quill* and force e-retailers to collect taxes on all sales, regardless of whether they have nexus.

The amount of uncollected taxes involved is central to the debate. Overturning *Quill* would impose significant administrative costs, especially on small businesses (where administrative costs account for as much as 13.5 percent of taxes collected), and would have other negative consequences as well. If, the resulting tax collections would be too small to materially affect state and local government finances, then governments arguably should look elsewhere for a solution to their fiscal difficulties.

In this study, we present an estimate of the amount of potential uncollected sales tax revenues for 2008, and a forecast of uncollected revenues through 2012. Our primary findings are:

- Total potential uncollected sales tax revenues in 2008 were approximately \$3.9 billion, or less than three-tenths of one percent of state and local tax revenues.
- More than one third of uncollected revenues are associated with small businesses. If firms with less than \$5 million in remote sales were exempt (as proposed by legislation introduced in recent Congresses), potential uncollected revenues fall to approximately \$2.45 billion, or less than two-tenths of one percent of state and local tax revenues.
- Uncollected revenues are not rising rapidly. Uncollected revenues (from firms with more than \$5 million in remote sales) will average approximately \$2.67 billion over the 2008-2012 period, or about two tenths of one percent of total state and local tax revenues.
- The growth of "brick and click" retailing (i.e., brick and mortar retailers with substantial online sales) is likely to reduce the proportion of online sales on which taxes are not collected. In addition, states are using various tactics to promote tax collection by "out-of-state" firms. These two trends suggest that uncollected revenues are likely to fall over time -- i.e., that the uncollected revenue problem is "solving itself."
- A few large firms account for the bulk of uncollected tax revenues. For example, the top 10 firms (ranked by uncollected taxes) account for approximately 47 percent of total uncollected revenues. This finding provides some support for those who have argued that the states should focus their efforts on firms with large uncollected tax revenues.

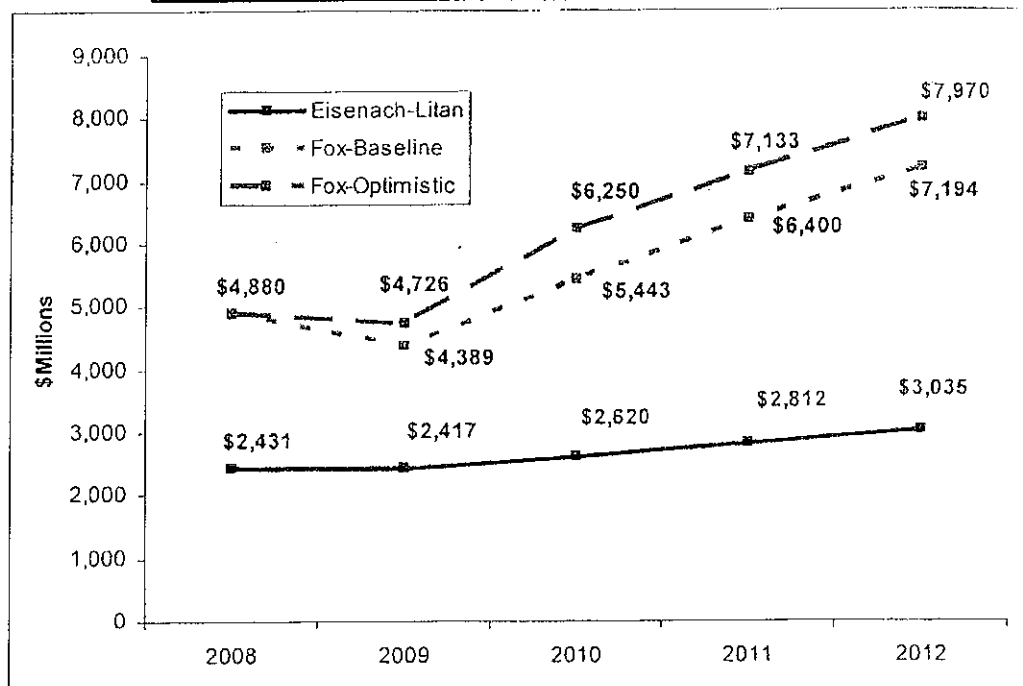
Our findings differ markedly from those of a recent study by a group at the University of Tennessee (the *Fox Study*), which estimated uncollected tax revenues associated with *Quill* at

over \$7.7 billion in 2008, rising to as much as \$12.7 billion in 2012. The differences can be attributed to three primary factors:

- First, the *Fox Study* substantially overstates uncollected taxes associated with business-to-business (B2B) online sales.
- Second, the *Fox Study* understates tax collections by small firms.
- Third, with respect to “out-year” projections, the *Fox Study* assumes an unrealistically high and unsustainable growth rate for online sales, especially considering the fact that the growth of broadband penetration among U.S. households – one of the primary drivers of online sales growth – is slowing as household broadband penetration approaches saturation.

The differences between our results and those of the *Fox Study* are summarized in the figure below. In our view, the most significant difference is in the rates of growth: Rather than growing rapidly, as the *Fox Study* suggests, our analysis demonstrates that uncollected revenues are, at most, growing slowly. Given that uncollected revenues account for such a small proportion of revenues, our assessment is that state and local tax collectors would be best served by focusing their efforts on other potential revenue sources.

POTENTIAL UNCOLLECTED REVENUE FORECASTS, 2008-2012



CONTENTS

I.	INTRODUCTION	1
II.	DATA, METHODOLOGY AND ASSUMPTIONS	5
	A. Estimating the Tax Base	5
	B. Establishing Nexus.....	9
	C. Apportioning Sales Among States	12
III.	ESTIMATES OF UNCOLLECTED TAXES.....	14
	A. Uncollected Revenues in 2008.....	14
	B. Forecast of Uncollected Revenues, 2009-2012	20
IV.	DISCUSSION AND IMPLICATIONS	27
V.	CONCLUSIONS.....	30
	APPENDIX: STATE-BY-STATE ESTIMATES OF POTENTIAL UNCOLLECTED REVENUE	31

I. INTRODUCTION

In its 1992 *Quill* decision,¹ the Supreme Court affirmed prior holdings that state sales tax regimes were so complex that forcing out-of-state firms to collect taxes would present an unreasonable burden on interstate commerce. Consequently, the court ruled that retailers could not be forced to collect sales taxes for states where they do not have a physical presence, or “nexus.” While states also require buyers to pay “use taxes” in lieu of unpaid sales taxes, and businesses generally do so, use tax compliance is generally agreed to be relatively low among consumers. As a result, states and localities have long complained that the growth of e-commerce – a portion of which is comprised of remote sales – is depriving them of significant tax revenues, and have sought legislation that would overturn *Quill* and force online retailers to collect and remit state and local sales taxes on remote sales. Retailers, on the other hand, argue that the administrative costs of collecting taxes for several thousand state and local sales tax jurisdictions would be overly burdensome, especially for small businesses that likely have *de minimis* sales in many states.

Whether it makes sense to overturn *Quill* depends in part on how much additional tax revenue would actually be generated. If the potential increase in tax revenues is sufficiently large, some would argue that it would be worthwhile to incur the administrative costs (both public and private) required for collection; otherwise, the government should look elsewhere for revenue sources that involve lower welfare costs to society (as a share of taxes collected).²

¹ 504 U.S. 298, 112 S.Ct. 1904.

² Of course, administrative costs are not the only consideration. In general, the most efficient taxes are those which generate the lowest deadweight losses, including the costs of economic distortions as well as administrative costs. See e.g., Edgar K. Browning and Jacqueline M. Browning, *Public Finance and the Price System* (New York: MacMillan Publishing, 1979) at 288-294.

Several studies have attempted to estimate the magnitude of uncollected sales taxes associated with out-of-state online sales. The most widely cited analysis, by Donald Bruce, William F. Fox, and LeAnn Luna at the University of Tennessee (the "*Fox Study*"), estimates that state and local governments will fail to collect between \$44.8 billion and \$49.1 billion in tax revenues on online sales over the five-year period between 2008 and 2012.³ While these estimates are still quite low as a proportion of total state and local tax revenues (about 0.6 percent), or even state and local sales tax revenues (about 2.5 percent),⁴ they are sufficiently large that states and localities have cited them in support of their efforts to promote Federal legislation. Other analysts have suggested these estimates are too high, that the actual amount of tax revenues foregone is much lower, and that the amount of additional taxes that might plausibly be collected is lower still, especially since Congressional proposals to mandate collection of remote sales tax have exempted small business retailers.⁵

In this study, we provide estimates of the potential state and local sales tax revenues from Internet retailers, using data from a range of sources, including a recent comprehensive survey of retailers doing business both on and off the Net (both pure Net retailers and those using the "bricks and clicks" model). Our estimates of lost revenue are far lower than those in the *Fox Study* – at \$3.9 billion for 2008, slightly more than half. Moreover, assuming – as seems

³ Donald Bruce, William F. Fox, and LeAnn Luna, *State and Local Government Sales Tax Revenue Losses from Electronic Commerce, University of Tennessee Working Paper* (April 13, 2009) (hereafter *Fox Study*).

⁴ For example, the *Fox Study* estimates uncollected revenues of \$7.26 billion in 2008. The Census Bureau reports total state and local tax revenues for the 12 months ended December 2008 were \$1.304 trillion, and state and local sales and gross receipts taxes for this period were \$305 billion. See U.S. Census Bureau, *Federal, State and Local Governments: Quarterly Summary of State and Local Government Tax Revenue* (<http://www.census.gov/govs/www/ntax.html>, viewed August 31, 2009).

⁵ See, e.g., Billy Hamilton, "Internet Sales Tax: What If There's No There There," *State Tax Notes* 49 (September 1, 2008) at 627 and Peter A. Johnson, *Setting the Record Straight: The Modest Effect of Ecommerce on State and Local Sales Tax Collection* (Direct Marketing Association, January 19, 2008).

extremely likely – that a sales tax collection mandate would include an exemption for small businesses, the amount would be even less: Approximately \$2.4 billion, or *less than two-tenths of one percent* of state and local government tax revenues. In the balance of this introductory section we explain why our estimates differ from the *Fox Study*, and in the rest of the paper, we provide the details.

The amount of revenue that would be generated by a mandate to collect remote sales tax depends on three primary factors: (1) The dollar amount of taxable e-commerce sales on which taxes currently are due, but not collected; (2) the applicable tax rates on these sales; and, (3) the “reach” of the mandate, i.e., the revenues that would be exempted if, for example, small businesses were not covered (or, realistically, if there was a significant amount of non-compliance). Unfortunately, none of these three magnitudes is directly observable, and it is therefore necessary to develop estimates. For example, while there are both public and private estimates of the total amount of retail online sales, it is necessary to estimate the proportion of these sales accounted for by products (e.g., food products, intangibles) that are exempt from state and local sales taxes. Of the remainder, it is necessary to estimate the proportion of sales for which taxes are already collected, either because they are made to customers in states where the seller has nexus, or because the buyer pays use taxes, which is typical for most business-to-business (B2B) sales. Once an estimate of untaxed sales is developed, the overall sales figure must be allocated across jurisdictions in order to apply the appropriate tax rates. Finally, in order to make going-forward projections of lost tax revenues, it is necessary forecast the key underlying variables for future periods.

In this study, we utilize data from a variety of sources to estimate the amount of uncollected sales taxes on electronic sales for 2008-2012. The starting point for our analysis is a

survey of sales tax collection practices of the largest online retailers as reported by *Internet Retailer*, which reports annual online sales revenues for the 500 largest Internet retailers, including both “pure play” online retailers (like Amazon.com) and “brick-and-click” or “multichannel” retailers (like Target and Wal-Mart). To ascertain the extent to which these firms collect sales taxes on online sales, we went beyond the data in the *Internet Retailer* report to survey the sales tax collection practices of 250 firms (including the top 150, the bottom 50 firms and 50 from the “middle” of the distribution) to ascertain the states in which sales taxes are already collected on online sales by the top 500 firms. We also develop estimates for uncollected taxes by smaller firms, which represent about \$28 billion, or 21 percent, of 2008 online sales. Finally, we also forecast online sales and uncollected revenues for the five-year period 2008-2012.

As indicated, we estimate that uncollected sales taxes on state and local sales in 2008 totaled approximately \$3.9 billion, slightly more than half of what is estimated by the *Fox Study*. Over the course of the five-year period from 2008-2012, our estimates diverge still further from those of the *Fox Study*. For example, the *Fox Study* estimates uncollected revenues could be as high as \$12.7 billion in 2012, compared with our estimate of \$4.7 billion. As we explain below, there are three major reasons for the differences between our estimates and those of the *Fox Study*: First, the *Fox Study* substantially overstates uncollected taxes associated with business-to-business (B2B) online sales; second, the *Fox Study* understates tax collections by small firms; third, with respect to “out-year” projections, the *Fox Study* assumes what we regard as an unrealistically high and unsustainable growth rate for online sales, especially considering the fact that the growth of broadband penetration among U.S. households – one of the primary drivers of online sales growth – is slowing as household broadband penetration approaches saturation.

The remainder of this paper is organized as follows. Section II describes our approach and key assumptions, and describes our data set and survey methodology. Section III presents our results for both the baseline (2008) estimate of uncollected taxes and our five-year (2008-2012) forecast. Section IV puts our results in context and briefly discusses policy implications. Section V presents a brief summary of our findings.

II. DATA, METHODOLOGY AND ASSUMPTIONS

Our central objective is to estimate the amount of online retail sales made by firms in states where they are not required to collect sales taxes, and then to estimate the taxes not being collected on those sales. To do so, we begin by establishing the size of the overall tax base (i.e., the universe of taxable online sales). Next, we estimate the proportion of sales that occur in states where the seller lacks nexus (and therefore is assumed not to collect sales taxes). Third, we distribute these sales across states, and multiply by the appropriate tax rates. In this section, we describe the data, methodology and assumptions we used in conducting each step. Where appropriate, we note where our approach differs from that adopted in the *Fox Study* and explain why we believe our approach is more appropriate for evaluating alternative sales tax policies.

A. Estimating the Tax Base

Our first step is to estimate total retail e-commerce sales which are subject to state and local sales and use taxes. The authoritative source of such data is the U.S. Census Bureau, which conducts both monthly and annual surveys of retail trade and, on the basis of those surveys, reports retail e-commerce on both a quarterly and annual basis. Quarterly reports are based on the Monthly Retail Trade Survey (MRTS), and annual reports are based on the Annual Retail

Trade Survey (ARTS).⁶ While the Census publishes separate estimates for B2B and B2C e-commerce, its B2C estimates in fact count *all* retail e-commerce, including retail e-commerce involving sales from one business to another.⁷ The Census online sales data are also comprehensive with respect to types of sellers, as they include “catalog and mail order operations, many of which sell through multiple channels; ‘pure plays’ (i.e., retail businesses selling solely over the Internet); and e-commerce units of traditional brick-and-mortar retailers (i.e., ‘brick and click’).”⁸ Thus, we believe the Census Bureau data represents the best estimate of the total amount of e-commerce potentially subject to sales tax, although, as we explain below, there are some reasons to believe it represents an overestimate of the overall tax base. Table 1 below shows the Census Bureau’s estimates of retail e-commerce from 1999 through the second quarter of 2009.

**TABLE 1:
RETAIL E-COMMERCE 1999-2009 (\$BILLIONS)**

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008*	2009**
E-Retail Sales	\$15	\$28	\$34	\$45	\$57	\$76	\$87	\$107	\$127	\$133	\$128
% of Total Retail	0.5%	0.9%	1.1%	1.4%	1.8%	2.2%	2.4%	2.8%	3.2%	3.4%	3.6%
YOY % Change	-	86.7%	21.4%	32.4%	26.7%	33.3%	14.5%	23.0%	18.7%	4.7%	-3.8%

Source: U.S. Census Bureau/E-Stats
*Based on most recent revised quarterly reports.
** Annual rate based on Q1, Q2.

Our estimate of retail e-commerce differs from the one advanced by the *Fox Study*, which takes a very different approach. For reasons which are not apparent (given that the Census Bureau retail sales data include B2B as well as B2C sales), the *Fox Study* begins by including all

⁶ See <http://www.census.gov/retail/mrts/www/data/pdf/09Q2.pdf> and <http://www.census.gov/econ/estats/2007/2007reportfinal.pdf>.

⁷ See <http://www.census.gov/econ/estats/2007/2007reportfinal.pdf> at 2 (“We estimate business-to-business (B-to-B) and business-to-consumer (B-to-C) e-commerce by making several simplifying assumptions: manufacturing and wholesale e-commerce is entirely B-to-B, and retail and service e-commerce is entirely B-to-C.”)

⁸ <http://www.census.gov/econ/estats/2007/2007reportfinal.pdf> at 3.

e-commerce sales, *including sales classified by the Census Bureau as B2B sales*. These sales have little or no potential for uncollected sales tax, for two reasons: First, wholesale sales or “inputs-to-production” generally are exempt from sales and use taxes.⁹ Second, even if some retail sales are captured in the Census Bureau’s B2B category, nearly all businesses file and pay the use tax due on their retail purchases, largely because state tax auditors can readily close use tax compliance gaps by examining business records.

Recognizing that its approach is over-inclusive, the *Fox Study* next attempts to exclude some B2B sales, based in part on a survey the authors conducted of state sales tax personnel, who were asked to estimate the proportion of various categories of B2B sales which might be subject to sales tax. Having conducted the survey, however, the *Fox Study* concludes that the results are unreliable, and discards many of the responses in favor of *ad hoc* corrections based on a subset of the data which more closely match the authors’ *a priori* expectations.

The ultimate effect of the Fox Study’s approach is to inflate the taxable base by including a substantial amount of B2B sales which are not subject to sales and use taxes, and then to apply an *ad hoc* and arbitrary approach to correcting the error.¹⁰ In our view, the entire exercise is both unnecessary and inappropriate: While the Census Bureau data are labeled “B2C,” they in fact include *all* retail sales, that is, all sales that are potentially subject to state and local sales and use taxes. There is no valid basis for adding in additional B2B sales.

⁹ For example, the Census Bureau’s definition of “wholesale” establishments clearly excludes retailers, yet the *Fox Study* includes sales by such establishments in the tax base for retail commerce. See U.S. Census Bureau, 2002 NAICS Definitions, 42 Wholesale Trade (at <http://www.census.gov/epcd/naics02/def/NDEF42.HTM#N42>).

¹⁰ The *Fox Study* does not document the methodology by which it arrives at its baseline estimates of the electronic commerce. Moreover, the study provides only an unlabelled bar graph showing historical electronic commerce data, making it impossible to compare the underlying data used in the study to actual data from the Census Bureau. As a result, it is not possible to estimate the precise amount by which the *Fox Study* overstates the tax base.

In fact, there at least three good reasons for believing the Census Bureau retail e-commerce estimates are over-inclusive with respect to taxable sales, even without adding in additional B2B sales. First, the Census Bureau's retail e-commerce data include sales by motor vehicle and parts dealers, which comprise 19 percent (\$24 billion in 2007) of total retail e-commerce. Including these sales in the total likely overstates the potential tax base both because automobile sales – regardless of how they are conducted – are subject to taxation at the time of registration, and because many sales of automobile parts are likely B2B sales which are not subject to sales or use taxes in the first instance.

Second, while the Census Bureau data exclude online travel services, financial brokers and ticket sales agencies, they include sales of at least three types of items – food, clothing, and intangibles (e.g., downloaded software,) – which often are not subject to sales tax. The *Fox Study* attempts, through its survey of state finance department personnel, to estimate the proportion of B2C sales that are subject to taxation, and ultimately concludes that about 30 percent of B2C sales are exempt from sales and use taxes. While we agree that many B2C sales are not taxable, we do not believe the *Fox Study's* survey results are sufficiently reliable to form the basis for such a precise estimate.

Third, to the extent the Census Bureau data include B2B sales, it is likely that the purchasing businesses pay use taxes on purchases for which sales tax is not collected by the seller. Past research suggests that the use tax compliance rate among businesses is between 85 and 100 percent.¹¹

We considered various approaches to adjusting for these issues of over-inclusion, including – for example – excluding e-commerce sales by automobile dealers, supermarkets and

¹¹ See e.g., Johnson at 6.

online music services), but we ultimately chose not to make such adjustments because we lack the underlying data needed to do so with precision. As a result, our estimate of the overall retail e-commerce tax base is likely to be significantly above the true amount, meaning that our estimates of uncollected taxes are likely also biased upwards relative to the actual amount.

B. Establishing Nexus

The second step in our analysis is to ascertain the extent to which sales taxes are already being collected on retail e-commerce sales, that is, to determine the extent to which retail e-commerce involves sales to customers in states where the seller has nexus or is, for whatever reason, collecting sales taxes.¹² To do so, we began by researching the firms listed in the 2009 edition of *Internet Retailer Top 500 Guide*, which provides data on 2008 retail e-commerce sales by the largest online retailers, or all those with annual online sales exceeding \$9 million.¹³ Specifically, for 250 of the 495 U.S. firms listed in the guide,¹⁴ we ascertained the states in which each firm collected sales taxes on online sales. For each firm, we followed the following sequence: First, we visited the firm's website and searched for a listing of states in which tax was collected; second, if the website data was inconclusive, we contacted the firm's customer service department; third, if customer service was unable or unwilling to provide the information, we

¹² As we discuss further below, "nexus" is an inexact and evolving concept. For example, New York has recently passed legislation defining nexus as including a situation where an online retailer has sales affiliates in the state (e.g., an Amazon advertising partner). Amazon has sued the state over this law, and is collecting sales tax on sales to New York residents, pending the outcome of its lawsuit.

¹³ Information on the *Guide* is available at www.internetretailer.com/top500.

¹⁴ Five firms are Canadian and thus not subject to U.S. sales taxes or included in the U.S. Census Bureau data. Of the remainder, we surveyed each of the top 150 firms and bottom 50 firms, and an additional 50 firms ranked between 150 and 450.

researched the firm's website, its Securities and Exchange Commission filings, and other public data, for a list of states in which the firm in has a retail store or other physical presence¹⁵

Several findings from this portion of our analysis are worth highlighting. First, there is an extremely wide variance in the number of states where firms collect taxes. For the top 150 *Internet Retailer* firms, for example, 77 collect in 10 states or fewer, and 62 collect in 30 or more; only 11 collect in 11 or more states but fewer than 30. This bi-polar distribution reflects the distinction between "pure play" retailers (such as Amazon.com) which have nexus in very few states, and "brick and click" retailers (such as Staples) which collect taxes in most or all states. As shown in Table 2, most of the largest online retailers (ranked by 2008 U.S. online sales) are "brick and click" firms which collect taxes in most or all of the states with sales taxes.

¹⁵ When no determination could be made, we assumed that the firm in question *did not* collect sales taxes in any state. Our approach was similar to that used by the *Fox Study*, though their data was based on the 2007 edition of *Internet Retailer*, and they surveyed only 100 firms (the top 50 plus 50 more chosen at random). See *Fox Study* at 20. Note that, like the Census Bureau data, the *Internet Retailer* guide excludes online travel agents and brokerages, but includes several categories of sellers (e.g., music and game download sites, grocery stores) whose sales are likely largely exempt from sales taxes.

**TABLE 2:
STATES WHERE SALES TAXES ARE COLLECTED, TOP 20 E-RETAILERS**

Firm	2008 Online Sales	States Where Taxes Are Collected
Amazon.com ¹⁶	\$10,228,000,000	5
Staples	\$7,700,000,000	44
Dell	\$4,830,000,000	47
Office Depot	\$4,800,000,000	47
Apple	\$3,642,118,080	47
OfficeMax	\$3,083,730,683	47
Sears Holdings	\$2,693,433,600	47
CDW	\$2,600,122,100	47
Newegg	\$2,100,000,000	3
Best Buy	\$2,015,183,282	47
QVC	\$1,993,361,800	47
SonyStyle.com	\$1,827,577,534	47
Walmart.com	\$1,740,000,000	47
Costco	\$1,700,000,000	38
J.C. Penney Co.	\$1,500,000,000	47
HP Home & Home Office Store	\$1,497,000,000	47
Circuit City Stores *	\$1,414,000,000	29
Victoria's Secret	\$1,333,000,320	45
Target	\$1,209,208,320	46
Systemax	\$1,072,071,000	5

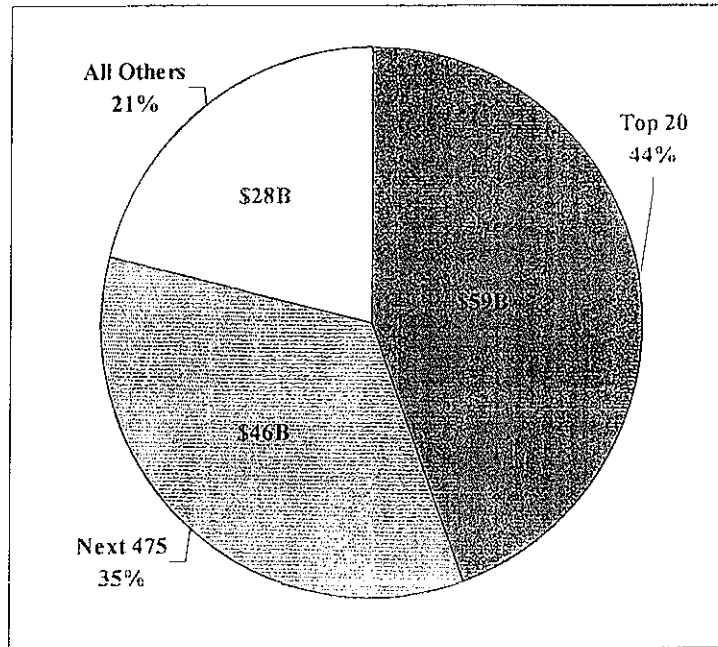
Source: Internet Retailer
**Circuit City Stores went through Chapter 7 in 2008*
Note: While it does not have a state sales tax, we count Alaska as a sales tax state, given that multiple local jurisdiction levy sales and use taxes.

Second, as shown in Figure 1, the distribution of e-retail sales is heavily skewed towards the largest retailers. Overall, we found that the top 20 internet retailers accounted for nearly \$59 billion in 2008 sales (44 percent of the \$133 billion total), and the top 495 firms accounted for approximately \$105 billion in sales, or 79 percent of all sales. The remaining retail e-commerce

¹⁶ We adjusted Amazon's total sales to reflect the fact that approximately 47 percent of its \$19 billion in sales (about \$9 billion) are made outside the United States. See Amazon.Com, Inc., *Form 10-K for the Fiscal Year Ended December 31, 2008* at 30.

sales (\$28 billion) are associated with smaller firms, i.e., those with less than \$9 million in online sales.¹⁷

FIGURE 1:
DISTRIBUTION OF RETAIL E-COMMERCE BY FIRM SIZE, 2008



C. Apportioning Sales Among States

Uncollected tax revenues in any given state are the product of online sales in the state upon which taxes are not collected and the applicable tax rate. Thus, the next step in our analysis is to apportion each company's sales among the states. We do so by assuming that individual firm e-commerce revenues are distributed across the 50 U.S. states (and Washington D.C.) in the

¹⁷ As we discuss further below, the *Fox Study* cites a recent draft working paper which argues that the Census Bureau data underestimates sales by small firms. (See Joe Bailey *et al.*, "The Long Tail is Longer than You Think: The Surprisingly Large Extent of Online Sales by Small Volume Sellers," Draft, University of Maryland, May 12, 2008.) While a complete critique of that paper is beyond the scope of this study, it is clear that it suffers from numerous methodological problems which make its results unreliable. (To cite just one example, the Bailey paper relies on comScore data on web sales by the top 140 online retailers (with average annual online sales of \$675 million) to estimate sales by firms with sales below \$1 million.) While the *Fox Study* relies on the Bailey paper to estimate the distribution of sales by firm size, it does not embrace the Bailey paper's contention that the Census Bureau underestimates overall e-commerce sales and does not rely on the Bailey paper for its estimate of total online sales.

same proportions as overall 2008 total retail sales, as reported by the Census Bureau. That is, for example, if a particular state accounts for five percent of retail commerce in the United States, we attribute five percent of each firm's online sales to that state.¹⁸

We considered other approaches to apportioning sales across states. The *Fox Study*, for example, apportions sales on the basis of total state and local sales tax collections, thus weighting sales towards states with higher tax rates. The authors defend this approach on the basis of studies which show that consumers in high tax states are more likely to shop online than consumers in low tax states, presumably to avoid paying sales taxes.¹⁹ One problem with this approach is that tax rates are only one of many factors that affect the geographic distribution of online sales, including (for example) the proximity of the retailer to the buyer,²⁰ and demographic factors such as personal income, Internet penetration and broadband adoption.²¹ Thus, while there is some evidence that people in high tax states are more likely to shop online *other things equal*, there is no evidence we are aware of that suggests that differences in tax rates explain a significant portion of the variation in online retail sales across states. Moreover, we suspect one of the strongest determinants of the distribution of firm sales across states is domicile – that is, given the growing significance of “brick and click” retailing, we suspect many retailers' online sales are concentrated in states where customers can visit their affiliated retail stores to preview items and seek the convenience of returning or exchanging items they have

¹⁸ We deviated from this method in the case of only three firms in our sample: Peapod, Safeway, and FreshDirect. These three firms are brick and click grocers with very specific areas of operations. We contacted these firms and determined the states in which they provide their online grocery service and applied their total online sales, as listed in *Internet Retailer*, only to those states.

¹⁹ See, e.g., Austan Goolsbee, 2000. “In a World Without Borders: The Impact of Taxes on Internet Commerce,” *Quarterly Journal of Economics* 115;2 (May 2000) 561-576..

²⁰ See, e.g., Glenn Ellison and Sara Ellison. “Internet Retail Demand: Taxes, Geography, and Online-Offline Competition,” (Massachusetts Institute of Technology Department of Economics Working Paper Series, May 2006).

²¹ See e.g., John Horrigan, *Online Shopping* (Pew Project on the Internet and American Life, February 2008) (available at <http://www.pewinternet.org/Reports/2008/Online-Shopping/01-Summary-of-Findings.aspx?r=1>).

purchased online. This phenomenon which would tend to work against the *Fox Study's* bias of allocating more sale to high-tax states. In the end, rather than introducing spurious (or even biased) variation into our data set (as we believe the approach taken by the *Fox Study* does), we elected to simply apportion online sales according to overall retail sales.

III. ESTIMATES OF UNCOLLECTED TAXES

The next steps in our analysis are to calculate estimates of uncollected taxes for 2008, based on the estimates of underlying variables discussed above, and then to forecast uncollected taxes into the future, i.e., for the period from 2009-2012.

A. Uncollected Revenues in 2008

To estimate uncollected revenues for 2008, we begin by estimating uncollected revenues for the large firms covered in the *Internet Retailer* report, and then add an estimate for smaller firms (those with revenues below \$9 million). We note, however, that the estimate for smaller firms is, in a sense, less significant, as there appears to be general agreement that the administrative costs of collecting from smaller firms is much higher than for larger firms (For example, a survey commissioned by the Streamlined Sales Tax Project found that firms with annual retail sales of between \$150,000 and \$1 million incur collection costs averaging 13.5 cents for every dollar of sales tax they collect.²²), and that even if larger firms were to be required to collect taxes on out-of-state sales, smaller firms would be exempted.

To estimate uncollected revenues for large firms, we multiplied state-specific retail e-commerce revenues for each firm by the applicable sales tax rates for each state.²³ Thus, for

²² See PriceWaterhouseCoopers, *Retail Sales Tax Compliance Costs: A National Estimate* (April 7, 2006) at 18 (available at <http://www.netchoice.org/library/cost-of-collection-study-sstp.pdf>).

²³ We utilized the same source for sales tax rates as in the *Fox Study*, namely the Sales Tax Clearinghouse. Rates represent statewide rates plus local tax rates divided by the state sales tax base, i.e., they represent blended state and local sales tax rates for each state. See <http://www.thestc.com/STrates.stm>.

each firm, we calculated the amount of taxes that would be owed in each state, if the firm had nexus in that state. Next, for each firm, we sum this amount across all states in which the firm does not collect sales taxes. As shown in Table 3 below, the total for the top 150 firms in 2008 was \$1.985 billion; for the bottom 50 firms, the total was \$27 million. For the middle group of 300 firms, we first calculated the average ratio of taxes collected to potential taxes due for the 50 firms whose tax collection practices we sampled from this group, and applied this ratio to all 300 firms. On that basis, we estimate the total for the 300 middle firms at \$418 million.

The last step in our analysis was estimate the ratio of taxes collected to potential taxes for smaller firms, or those not included in the *Internet Retailer 500* survey. As noted above, we estimate these firms constitute approximately 21 percent (or \$28 billion in 2008) of retail e-commerce sales.

We considered but rejected the approach adopted in the *Fox Study*, which was to simply assume extremely small tax compliance rates for small firms. Specifically, the *Fox Study* assumes, without any empirical basis, that “medium-sized firms” (those with online revenues of less than \$10 million) pay taxes only in their home states, and thus (dividing 1 by 50) the *Fox Study* assigns these firms a two-percent compliance rate – even if their home state is California; and, it assumes that “small” firms (online revenues less than \$1 million) only pay half of the taxes due even in their home states (on average), and hence have a compliance rate of one percent. In our view, these assumptions are arbitrary and unsupported, and at odds with our research on states where the top 500 e-retailers already collect sales tax.

We believe the *Fox Study* errs in this regard primarily by assuming (or seeming to assume) that all or almost all firms with relatively low online sales fit some combination of two criteria: (a) they are exclusively or almost exclusively “pure play” online retailers, with few if

any brick and mortar retail outlets; or (b) they are small firms that lack rigorous tax compliance programs, and/or are not subject to tax audits by state governments. This characterization, however, simply does not comport with the data. While some firms with small online revenues meet these criteria, others are actually large, multi-state brick-and-click retailers that collect taxes in multiple jurisdictions. For example, both Hancock Fabrics and Sur La Table have less than \$10 million in online sales, as reported by Internet Retailer. Yet, Hancock Fabrics collects taxes in 36 states, and on 92 percent of its sales, while Sur La Table collects taxes in 21 states, and on 73 percent of its sales. To assume, as the *Fox Study* does, that both of these firms collect taxes on only two percent of sales clearly biases upward their estimate of uncollected sales tax.

Upon examination of the data, we found only a weak correlation between online sales revenues and the proportion of taxes collected. Accordingly, we assumed that the ratio of taxes collected to potential tax collections for smaller firms (those with revenues less than \$9 million) is the same as for the "bottom 50" firms in the Internet Retail 500 (firms with online sales of between \$9 million and \$11.8 million in 2008 online sales), or approximately 26 percent. On that basis, as shown in Table 3, we estimate uncollected taxes among these firms at less than \$1.5 billion, assuming no *de minimis* exemption.

TABLE 3:
RETAIL SALES AND POTENTIAL UNCOLLECTED TAXES, BY FIRM SIZE, 2008

Size Category (Ranked by 2008 E-Retail Sales)	e-Retail Sales (\$millions)	Potential Uncollected Sales Tax (\$millions)
Large (Top 150)	\$95,145	\$1,985
Middle (Next 300)	\$9,351	\$418
Small (Bottom 50)	\$514	\$27
<i>Subtotal (Internet Retailer 500)</i>	<i>\$105,010</i>	<i>\$2,430</i>
Micro (Sales under \$9 million)	\$27,990	\$1,477
Total	\$133,000	\$3,907

As the table indicates, summing across these four classes of firms, we estimate total uncollected revenues for 2008 at \$3.9 billion.

The last step is to estimate the impact of applying a *de minimis* exemption. As noted above, even proponents of overturning *Quill* recognize that the administrative burdens placed on small sellers (and tax collection agencies) would be very high relative to the amount of taxes collected; and, since some proposals contemplate reimbursing businesses for the collection charges, at least some of those collection costs would have the effect ultimately of reducing net tax collections, thus defeating the purpose altogether. Accordingly, most proposals would create a small business exemption which, for example, would exempt all firms with gross remote (i.e., out-of-state) sales of less than \$5 million.²⁴

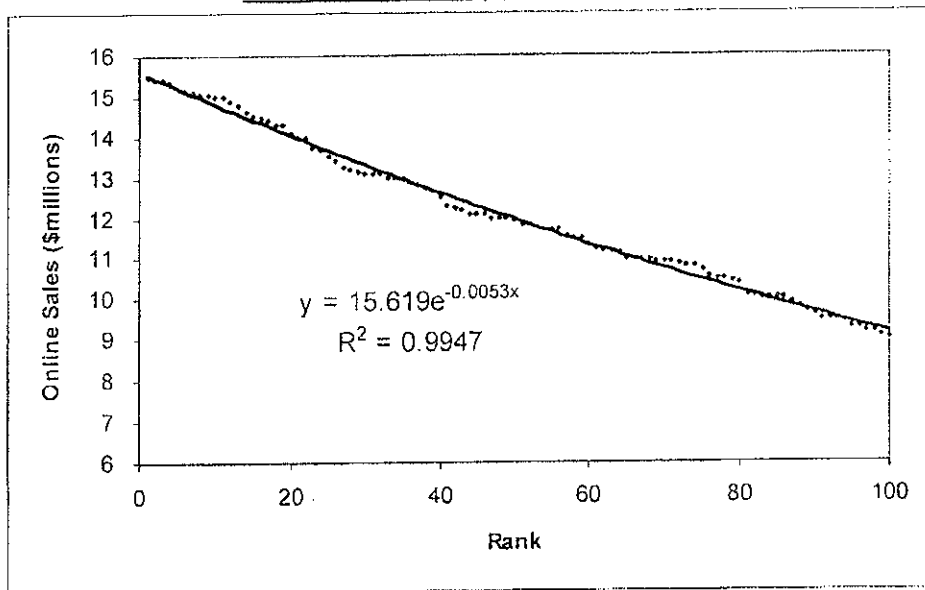
To estimate the impact of such an exemption, we first estimated the amount of remote sales for each firm on the *Internet Retailer 500* list. Then, for firms with less than \$5 million in remote sales, we summed our firm-specific estimates of uncollected sales taxes across the firms with less than \$5 million in sales. We identified 39 firms out of the top 500 that (a) had less than

²⁴ See, e.g., H.R. 3184, 108th Congress, 1st Session, Sec. 4(b).

\$5 million in remote sales and (b) did not collect taxes in one or more states.²⁵ The estimated uncollected taxes for these 39 firms totaled only \$4 million.

To assess the impact of a \$5 million exemption for those retailers which are not on the *Internet Retailer 500* list, we first estimated the shape of the size distribution (based on online sales) for smaller firms. To do so, we fitted an exponential curve (i.e., a regression equation) based on the bottom 100 firms in the *Internet Retailer 500*, and used the regression coefficients to estimate the sales revenues of the next 500 firms. The results of the regression analysis are shown in Figure 2, which demonstrates that our regression model is an excellent fit, with the R-squared statistic indicating we have explained approximately 99 percent of the variation in firm size over the relevant range.

FIGURE 2:
REGRESSION ANALYSIS OF FIRM SIZE



²⁵ Note that these firms include both "large" and "small" firms as ranked by overall sales, since the criterion for exemption is that a firm have less than \$5 million in *remote* sales.

The results of applying the regression coefficients in Figure 2 to estimate the size of the “next 500” online retailers are shown in Table 4. As the table indicates, the bottom 500 firms on the *Internet Retailer 500* list (firms ranked 401-500) have average e-commerce sales of \$12.1 million; the next 100 (ranked 501-600) have estimated average sales of \$7.2 million; the next 100 (601-700) have estimated average sales of \$4.1 million, and so forth.

TABLE 4:
ESTIMATED RETAIL E-COMMERCE SALES BY FIRM SIZE

Firm Rank	Total e-Commerce Sales	Average e-Commerce Sales
401-500	\$1,208,032,677	\$12,080,327
501-600 (est.)	\$717,102,300	\$7,171,023
601-700 (est.)	\$413,539,010	\$4,135,390
701-800 (est.)	\$243,411,117	\$2,434,111
801-900 (est.)	\$143,272,993	\$1,432,730
901-1000 (est.)	\$84,977,289	\$849,773
Total (501-1000) (est.)	\$1,602,302,708	\$3,204,605

One important implication of the data in Table 4 is the fact that estimated retail e-commerce sales for the “second 500” – firms ranked 501-1000 in online sales – total only about \$1.6 billion annually, accounting for only 5.7 percent of the \$28 billion in online sales we attribute to firms with less than \$9 million in sales, based on the Census Bureau and *Internet Retailer* data. Thus, our estimates are consistent with the notion that there is indeed a “long tail” of small online retailers, for example, a tail consisting of five million sellers averaging \$5,280 in online sales per year, or a total of \$26.4 billion for all firms outside the top 1000.²⁶

To assess the impact of a small business exemption on this group of firms, we assumed that small retailers had the same ratio of in-state to out-of-state sales as the bottom 50 in the

Internet Retailer list (that is that remote sales accounted for 74 percent of total sales), and on that basis estimate that firms with more than \$6.76 million in online sales (= \$5 million/0.74) would be required to collect sales taxes and all others would be exempt. There are 58 such firms, with estimated remote sales revenues of \$339 million. Applying the national average tax rate (7.13%) to these sales yields potential uncollected revenues from these firms of approximately \$24 million.

With these estimates in hand, we can now calculate the impact of a \$5 million small business exemption. We begin with our total estimate of potential uncollected revenues of \$3.9 billion, which includes \$2.4 billion from the top 500 firms and \$1.5 billion from all other firms. As explained above, we estimate that a small business exemption would reduce collections from the top 500 firms by only \$4 million. For all other firms it would reduce collections by \$1.477 billion minus \$24 million, or \$1.453 billion. Thus, for 2008, we estimate a small business exemption would reduce potential collections by a total of \$1.457 billion. Accordingly, we estimate that the maximum amount of additional revenue that would result from overturning *Quill*, assuming a small business exemption is adopted, is \$2.45 billion.²⁷

B. Forecast of Uncollected Revenues, 2009-2012

We developed two forecasts for uncollected revenues for the period 2009-2012. The first (baseline) forecast is based on the projected growth of online sales over this period, assuming all other variables remain unchanged. The second (adjusted) forecast is based on the assumption

²⁶ Indeed, projecting our results to the next 1,000 firms suggests the average online sales of firms ranked 1001-2000 are only \$120,000, with the 2000th firm having less than \$35,000 in sales; total sales in this group are only about \$120 million.

²⁷ The *Fox Study* also calculates the effect of a *de minimis* exemption. While it takes a very different approach (for example, it appears to base its exemption thresholds on total online sales rather than remote online sales), the effect is, coincidentally, entirely consistent with our estimate: Both methods find that a \$5 million *de minimis* exemption would reduce collections by 37 percent of total uncollected revenues.

that current trends with respect to collection rates continue – that is, that the proportion of online sales for which firms collect and remit state and local sales taxes continues to increase.

To arrive at our baseline projection, we estimated a simple model of the level of retail e-commerce, variations in which we hypothesize can be explained by (a) overall retail sales and (b) the level of household broadband penetration. Accordingly, we collected data quarterly data on retail e-commerce, total retail commerce, and broadband penetration from 2000 through 2009. We acquired the e-commerce data and total retail commerce data from the Census Bureau's Quarterly E-Commerce Reports.²⁸ We acquired household broadband penetration data from the Pew Internet & American Life Project's Broadband at Home Survey.²⁹ Using these data, we specified a regression model where retail e-commerce was the dependent variable and total retail commerce and broadband penetration were the independent variables. Table 5 depicts the results of this analysis:

**TABLE 5:
REGRESSION ANALYSIS OF RETAIL E-COMMERCE**

Variable	Coefficient	T-Stat	P-Value
Constant	17396.6	3.47	0.00
Retail Commerce	0.029	4.45	0.000
Broadband Penetration	37110.7	11.54	0.000
<i>Adjusted R-Squared</i>	0.95		
<i>Observations</i>	38		

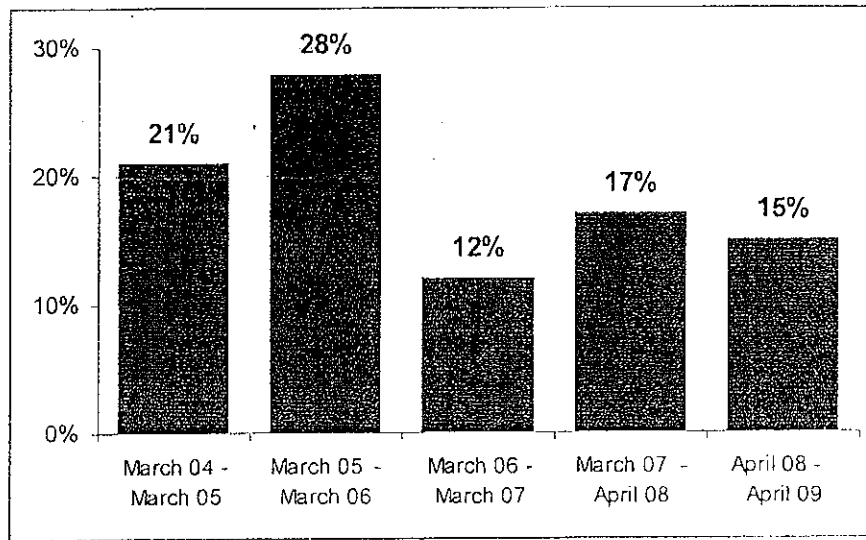
²⁸ U.S. Census Bureau, *Quarterly Retail E-Commerce Sales*, Q1 2000 - Q2 2009. We note that data for prior years are often restated in subsequent reports. In these cases, we used the data reported in the most recent available E-commerce report.

²⁹ Pew Internet & American Life Project, *Broadband at Home, 2000-2009*. The Pew survey data is reported in different months across different years. Thus, we used a two step algorithm to match the Pew broadband survey data to the census bureau's quarterly e-commerce reports. First, we looked to see if for each quarter there was a survey date that was within that quarter. If there was we assigned that value to the quarter. If there were two surveys within a quarter, we assigned the later survey date. For quarters that were missing survey data, we used the value of the *next* quarter with available data.

As the data in Table 5 indicate, our two-variable regression analysis explains approximately 95 percent of the variation in retail e-commerce over the nine-year period. Regression coefficients on both of the explanatory variables are, as expected, positive, and t-statistics indicate that they are significantly different from zero at a confidence level of greater than 99 percent. In short, our model is statistically robust and explains nearly all of the variation in retail e-commerce over the sample period.

We then used this model to forecast retail e-commerce sales for each quarter from Q2 2009 to Q4 2012, using forecasted broadband growth data from Gartner Research and forecasted nominal GDP growth data from the Congressional Budget Office (CBO). With respect to broadband adoption, our forecasts – from the Gartner Group – are consistent with the slowing growth of broadband penetration in recent years. For example, the latest data from the Pew Project on the Internet and American Life, shown in Figure 3, shows that the average annual growth in broadband penetration has fell by nearly 50 percent between 2005-6 and 2008-9, from 28 percent to only 15 percent.

**FIGURE 3:
GROWTH IN BROADBAND PENETRATION, 2004-2009³⁰**



Specifically, we based our estimates of broadband penetration on forecasts from Gartner Research, which predicts that U.S. household broadband penetration in 2012 will be 77 percent.³¹ Thus, for the purposes of projecting broadband growth we assigned Gartner's penetration estimate of 77 percent to Q4 2012, and allocated the difference between this final projection and Pew's Q2 2009 survey estimate of 63 percent linearly across the remaining quarters.

To project total Retail Commerce through Q4 2012 we simply grew total retail commerce in each quarter by the nominal GDP growth rate projected by the CBO relative to the same quarter in the previous year.³² Thus, Q3 2009 would simply be total retail sales in Q3 2008 plus the projected 2009 CBO growth rate times total retail sales in Q3 2008. Our projections for 2009-2012 are shown in Table 6 below.

³⁰ Source: Pew Project on the Internet and American Life.

³¹ Gartner Research, *Gartner Says 17 Countries to Surpass 60 Percent Broadband Penetration into the Home by 2012*, Jul. 24, 2008, available at <http://www.gartner.com/it/page.jsp?id=729907> (Last visited Aug. 31, 2009).

TABLE 6
RETAIL E-COMMERCE BASELINE FORECAST, 2008-2012 (\$BILLIONS)

	2008	2009	2010	2011	2012
Retail Commerce					
Level	\$3,973	\$3,726	\$3,834	\$3,988	\$4,199
YOY % Change		-6.2%	2.9%	4.0%	5.3%
Broadband Penetration					
Level*	57.3%	63.8%	67.5%	71.5%	75.5%
YOY % Change		11.3%	5.8%	5.9%	5.6%
Retail E-Commerce					
Level	\$133	\$131**	\$142	\$152	\$164
YOY % Change		-1.5%	8.4%	7.0%	7.9%

* Note that annual BB penetration represents the average value for the year based on our estimates derived from Pew and Gartner.
 **Note that this figure differs from the 2009 value given in Table 1 because the retail e-commerce figure listed in this table was predicted based on our model's estimates for Q3 and Q4, 2009, while in Table 1 the 2009 projection was created by multiplying the sum of e-retail sales in Q1 and Q2, 2009 by two. The close proximity of the two values serves as a good robustness check on accuracy of our model.

Table 7 compares our projections for e-commerce growth with those used in the *Fox Study*. Our projections vary substantially, but we believe appropriately, from those advanced in the *Fox Study*, which projects dramatically higher growth in retail e-commerce.

TABLE 7:
COMPARISON OF FOX VS. EISENACH-LITAN PROJECTED E-RETAIL GROWTH RATES

	2008	2009	2010	2011	2012	CAGR (2008-2012)
Fox Baseline	6.6%	-10.0%	24.0%	17.6%	12.4%	10.2%
Fox Optimistic	6.9%	-3.1%	32.2%	14.1%	11.7%	13.0%
Eisenach-Litan	3.9%*	-1.3%	8.4%	7.3%	7.9%	5.5%

*Actual, as reported by Bureau of the Census, E-Stats

The *Fox* estimates are based on a regression model which the authors develop by “regressing the log of e-commerce shipments on the log of nominal GDP and the real GDP

³² Congressional Budget Office, *Table 2.1: CBO's Economic Projections for Calendar Years 2009 to 2019*, available at <http://www.cbo.gov/doc.cfm?index=10521> (Last visited Aug. 31, 2009).

growth rate for 1999 through 2006,” and then applying projections for GDP growth from a private forecaster, Global Insight, to forecast e-commerce from 2007 through 2012. The result, as shown in Figure 4, is a “hockey-stick” shaped forecast, with a dramatic and unexplained surge in growth in 2010 and beyond. We find no basis for projecting such high growth rates into the future, especially given the slowdown in broadband penetration growth, which effectively limits the growth of “new shoppers” entering the online marketplace.³³

Applying our projected growth rates to our baseline estimate of \$3.9 billion in uncollected 2008 revenues, and assuming no other changes in the makeup of online sales, tax policy, or otherwise, we estimate potential uncollected revenues for the period 2008-2012 will average approximately \$4.24 billion annually. Assuming enactment of a small business exemption, however, reduces the figure to an average of \$2.67 billion annually. As shown in Table 8, our estimates are substantially less than the *Fox Study's* forecasts over the same period.

TABLE 8:
COMPARISON OF EISENACH-LITAN VS. FOX PROJECTED UNCOLLECTED TAXES
(\$BILLIONS, 2008-2012)

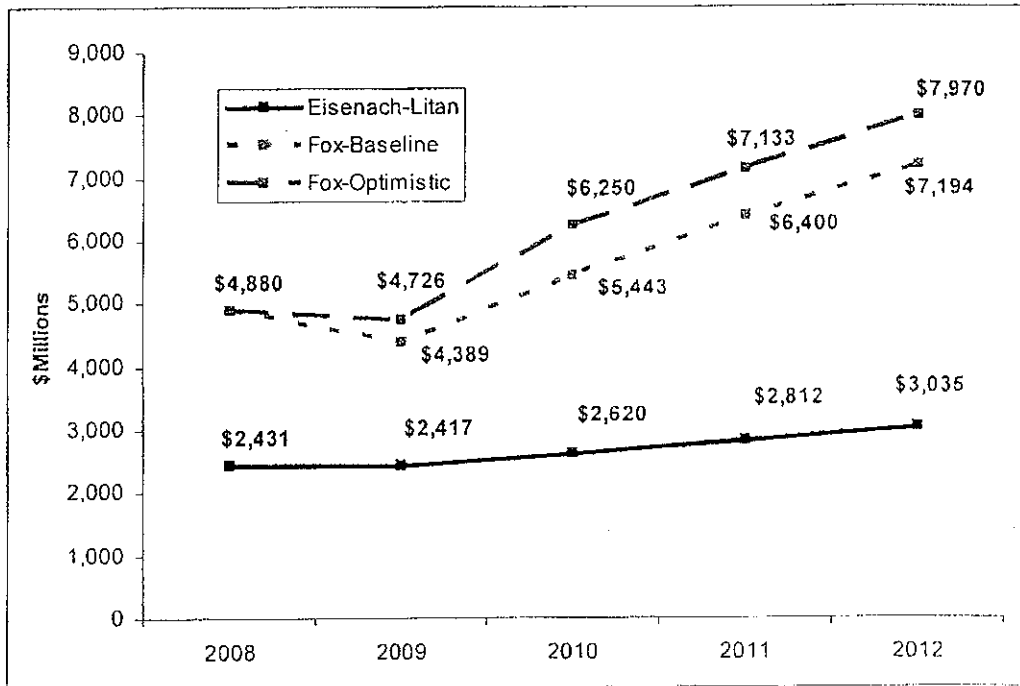
	2008	2009	2010	2011	2012	Average
Without Small Business Exemption						
Eisenach-Litan	\$3.91	\$3.85	\$4.17	\$4.48	\$4.83	\$4.25
Fox Baseline	\$7.73	\$6.95	\$8.62	\$10.14	\$11.39	\$8.97
Fox Optimistic	\$7.75	\$7.50	\$9.92	\$11.32	\$12.65	\$9.83
With Small Business Exemption						
Eisenach-Litan	\$2.45	\$2.42	\$2.62	\$2.81	\$3.04	\$2.67
Fox Baseline	\$4.88	\$4.39	\$5.44	\$6.40	\$7.19	\$5.66
Fox Optimistic	\$4.88	\$4.73	\$6.25	\$7.13	\$7.97	\$6.19

³³ We also note that the *Fox Study* authors have dramatically overestimated e-commerce growth rates in their previous studies. See, e.g., Johnson at 2.

The differences in these projections are both quantitative and qualitative in nature. As shown in Figure 5, the *Fox Study* – based on its “hockey stick” forecast for the growth of electronic commerce – forecasts that uncollected tax revenues will grow rapidly in the future. Our forecast, which is based on what we believe to be a far more realistic forecast for e-commerce growth, shows uncollected revenues growing only modestly. Indeed, our five-year forecast shows *nominal* uncollected revenues growing at only about 5.2 percent per year, only slightly higher than recent inflation rates – that is, in real terms, uncollected revenues are growing very slowly, if at all. Perhaps most importantly, our estimates show uncollected revenues – assuming no changes in either state tax collection policies or in the makeup of online sales – remaining nearly constant as a proportion of state and local revenues, remaining below 0.22 percent (one quarter of one percent) of total state and local revenues, and below one percent of sales and use tax revenues, throughout the projection period.³⁴

³⁴ These ratios assume state and local taxes grow at the same rate as Gross Domestic Product throughout the period, i.e., at the same rate assumed in our e-commerce forecast for total retail sales.

FIGURE 5:
POTENTIAL UNCOLLECTED REVENUE FORECASTS, 2008-2012
 (ASSUMING *DE MINIMIS* EXEMPTION)



IV. DISCUSSION AND IMPLICATIONS

Our results have several important policy implications.

Most importantly, our results suggest that uncollected sales taxes are much smaller than previously thought, and that they are growing, if at all, at a much slower rate. Indeed, two factors we have not yet mentioned suggest uncollected sales tax revenues are likely to fall over time, at least as a proportion of all taxes. First, there is some evidence that the online sales of the brick-and-click retail model are growing more rapidly than those of “pure play” purveyors such as Amazon.com. For example, according to a survey conducted by the LakeWest Group, nearly three quarters of the top 100 retailers have embraced multichannel retailing and that “[o]f retailers who operate websites, 60 percent have at least some integration between store and Web

site, and more than half allow returns to cross channel.”³⁵ To confirm this trend, we analyzed the growth of sales by “pure play” versus “brick and click” retailers in the *Internet Retailer 500* list, and found that firms that paid taxes on more than 50 percent of their online sales did indeed grow faster between 2007 and 2008 than firms that paid taxes on less than 50 percent of their online sales. These results are consistent with other research suggesting that online sales growth is occurring most rapidly among firms that collect sales taxes on large proportions of their sales. Johnson, for example, concludes that “the future of Internet growth has been shown to be in multi-channel, clicks and bricks,”³⁶ citing studies performed by Forrester Research that demonstrate “consumers’ desire to couple ‘clicks’-based shopping with ‘bricks’-based merchandise pick-ups and returns.”³⁷ Thus, there are strong reasons to believe that the proportion of online commerce associated with out-of-state sales is falling and will continue to fall over time.

Second, states are not standing still waiting for *Quill* to be overturned, but instead are moving aggressively to use the tools at their disposal. For example, in April 2008, New York State passed legislation asserting nexus for any retailer that has sales affiliates in the state that generate a combined total of \$10,000 or more annually in revenues for the retailer.³⁸ In 2009, at least two state legislatures (Rhode Island and North Carolina) have enacted laws that assert nexus when remote retailers compensate in-state websites for displaying the retailer’s advertisements.³⁹ In July 2009, California Governor Arnold Schwarzenegger signed legislation

³⁵ See Hamilton at 4.

³⁶ Johnson at 6.

³⁷ *Id.*

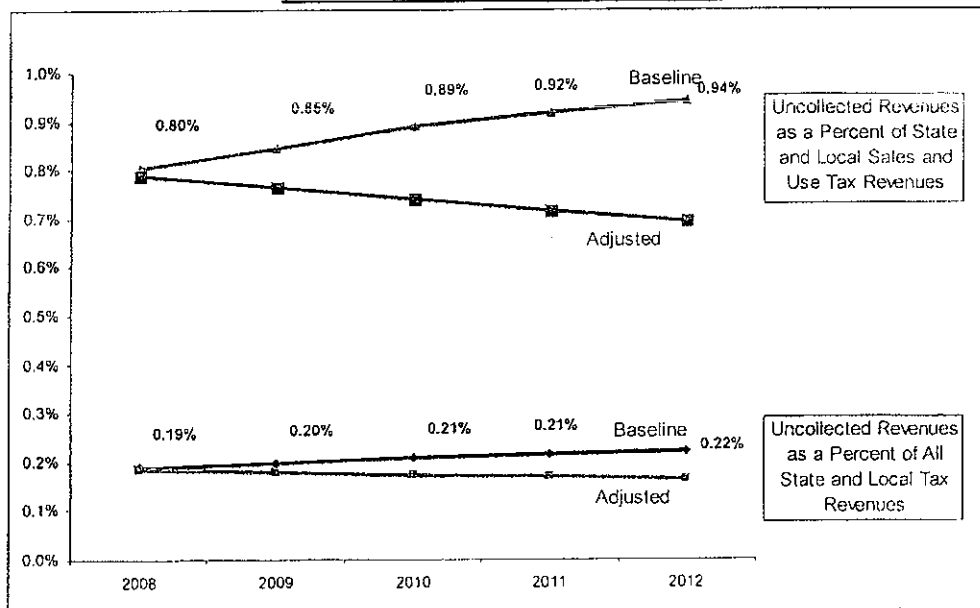
³⁸ See Hamilton at 5.

³⁹ See North Carolina GEN. STAT. § 105-164.8, as amended 7-Aug-2009. See also North Carolina Department of Revenue, Form E-505 (9-09) at 2-3 (available at http://www.dornr.com/downloads/e505_8-09.pdf), and Rhode Island Division of Revenue, Department of Taxation, “Important Notice: Definition of Sales Tax ‘Retailer’ Amended” (available at http://www.tax.state.ri.us/notice/Retailer_definition_NoticeC.pdf).

to improve business compliance with the state's use tax. The California Board of Equalization estimated the new legislation, along with ongoing measures aimed at shrinking the "tax gap," would reduce uncollected revenues from businesses by over 60 percent in the next two years.⁴⁰ Furthermore, in recent years, some states have used their leverage as large purchasers to force sales tax collection by online retailers.⁴¹

Taken together, these two factors suggest that, rather than growing very slowly, as our uncorrected baseline estimates suggest, uncollected sales tax revenues may actually be declining as a proportion of state and local tax revenues, as illustrated in Figure 6 below.

FIGURE 6:
POTENTIAL UNCOLLECTED REVENUE AS A
PROPORTION OF STATE AND LOCAL TAX COLLECTIONS, 2008-2012
(ASSUMING SMALL BUSINESS EXEMPTION)



⁴⁰ State of California, Board of Equalization, *Electronic Commerce and Mail Order Sales* (November 3, 2009) (available at <http://www.boe.ca.gov/legdiv/pdf/e-commerce-11-09.pdf>). The Board of Equalization estimates uncollected revenues in 2012 at \$1.0 billion, far below the *Fox Study's* baseline estimate of \$1.9 billion.

⁴¹ See, e.g., Institute for Local Self-Reliance, "Internet Sales Tax Fairness - State Purchasing Provision - North Carolina" (available at <http://www.newrules.org/retail/rules/internet-sales-tax-fairness/internet-sales-tax-fairness-state-purchasing-provision-north-carolina>).

A second implication of our research is to provide some support for those who have suggested imposing a collection obligation on only those e-retailers with the highest amounts of uncollected sales tax. Our analysis of 2008 data shows that the ten firms with the largest amounts of uncollected taxes account for 47.3 percent of all uncollected taxes for the *Internet Retailer 500* e-retailers, and 46.9 percent of uncollected revenues for all firms not subject to a \$5 million small business exemption.

V. CONCLUSIONS

Taxation of remote sales is a hotly debated issue, and as states and localities experience the fiscal stresses associated with the current economic downturn, it is not surprising to hear renewed calls for overturning *Quill* and forcing e-retailers to collect taxes on out-of-state sales. However, a decision to impose such a mandate would have costs as well as benefits. The costs would include increased compliance costs for businesses, increased administrative costs for tax collection agencies, higher vendor compensation payments, and, of course, higher taxes for price-sensitive consumers who rely on online shopping. On the other side of the scale, state and local tax collections would increase. From the perspective of state and local governments, the relevant question is whether the increase in collections would more than outweigh the higher costs. Our research suggests that the increased collections associated with overturning *Quill* would be substantially lower than previously thought – approximately \$2.5 billion annually rather than the \$7 billion or more estimated in the *Fox Study*. Moreover, our analysis shows that uncollected taxes are not growing rapidly and, indeed, are likely constant or even shrinking as a proportion of state and local tax revenues. With this data in mind, policymakers should consider carefully whether the benefits of overturning *Quill* would exceed the costs.

APPENDIX: STATE-BY-STATE ESTIMATES OF POTENTIAL UNCOLLECTED REVENUE

In addition to the national estimates presented in the text, we also estimated potential uncollected revenues on a state-by-state basis. As explained in the text, our survey of firms' tax collection practices in each state allowed us, for the firms surveyed, to directly estimate uncollected taxes on a firm-by-firm basis. (Indeed, our national estimates for these firms represent the summation of uncollected taxes across states and firms.) For firms not surveyed, i.e., un-surveyed firms from the *Internet Retailer 500* and firms in the "tail," we estimated potential uncollected revenues through a two-step process. First, we applied our sampling methodology for estimating the taxes avoided for the middle 300 *Internet Retailer* firms on a state-by-state basis.⁴² The reason for applying this state-by-state method was that it allowed for variation in each state's ratio of sample avoided taxes to sample total taxes, creating a more accurate portrayal of the each state's estimated avoided taxes. Adding the estimated avoided taxes for the middle 300 firms to the avoided taxes for the top 150 and bottom 50 firms within each state yielded the total avoided tax for the top 500 internet retailers in each state. Second, we then distributed the avoided taxes attributable to firms in the "tail" by allocating the total estimated avoided taxes for firms in the tail on a pro-rata basis according to each state's proportion of taxes avoided by the top 500 internet retailers.

Having arrived at baseline estimates for 2008, we next calculated an estimate of the impact of applying the small business exemption (SBE). To do so, we first adjusted potential uncollected taxes on a state-by-state basis to omit the surveyed firms in the Internet Retailer Top 500 from the state-by-state calculation, and then calculated potential uncollected taxes for the

⁴² That is, for the 50 firms we surveyed in the middle 300, we calculated for each state the proportion of those firms' sales upon which they collected taxes, and then applied that percentage to the estimated state-by-state sales of all 300 firms.

“tail” by allocating to the states only those potential revenues that would not be affected by the SBE.

Finally, we calculated estimated uncollected revenues for 2012 by applying our national projected growth rate for uncollected revenues to the 2008 estimate for each state.

Our estimates, as well as the 2008 and 2012 baseline estimates from the *Fox Study*, are presented in Table A-1. As the data there indicate, our estimates are substantially below those of the *Fox Study* for every state other than Alaska; and, for some key states, they are dramatically lower. For example, the *Fox Study*'s baseline estimate suggests that uncollected revenues in California could reach \$1.9 billion by 2012, whereas our estimate of less than \$390 million (assuming an SBE) is only one fifth as high. Similarly, the *Fox Study*'s baseline estimate indicates state and local governments in New York State could lose as much as \$865 million, while our SBE-adjusted results show the correct figure is approximately \$105 million. To the extent state revenue collectors and fiscal authorities have viewed the repeal of *Quill* as a “silver bullet” that would make up for a significant portion of current budget shortfalls, the figures in Table A-1 clearly demonstrate otherwise.

TABLE A-1:
STATE-BY-STATE ESTIMATES OF POTENTIAL UNCOLLECTED REVENUES
(\$MILLIONS, 2008, 2012)

State	2008			2012		
	Fox (baseline)	Eisenach-Litan	Eisenach-Litan with SBE	Fox (baseline)	Eisenach-Litan	Eisenach-Litan with SBE
Alabama	\$115.5	\$75.3	\$46.8	\$170.4	\$92.8	\$57.8
Alaska	\$1.0	\$3.6	\$2.0	\$1.5	\$4.4	\$2.4
Arizona	\$250.8	\$79.3	\$49.5	\$369.8	\$97.8	\$61.1
Arkansas	\$77.2	\$49.6	\$30.6	\$113.9	\$61.2	\$37.7
California	\$1,291.6	\$503.9	\$316.1	\$1,904.5	\$621.4	\$389.8
Colorado	\$117.1	\$67.8	\$42.4	\$172.7	\$83.6	\$52.2
Connecticut	\$43.2	\$48.2	\$30.1	\$63.8	\$59.4	\$37.1
DC	\$24.1	\$3.5	\$2.2	\$35.5	\$4.4	\$2.7
Florida	\$545.1	\$227.7	\$142.9	\$805.8	\$280.8	\$176.2
Georgia	\$278.2	\$117.2	\$73.5	\$410.3	\$144.5	\$90.6
Hawaii	\$40.7	\$16.2	\$9.6	\$60.0	\$19.9	\$11.8
Idaho	\$31.4	\$17.8	\$11.1	\$46.4	\$21.9	\$13.7
Illinois	\$343.7	\$196.1	\$123.0	\$506.8	\$241.8	\$151.7
Indiana	\$132.5	\$95.9	\$59.9	\$195.3	\$118.2	\$73.8
Iowa	\$60.1	\$48.7	\$30.1	\$88.7	\$60.1	\$37.1
Kansas	\$96.9	\$29.5	\$18.4	\$142.9	\$36.3	\$22.6
Kentucky	\$74.6	\$36.0	\$22.4	\$109.9	\$44.4	\$27.6
Louisiana	\$268.5	\$95.9	\$60.1	\$395.9	\$118.2	\$74.1
Maine	\$21.7	\$18.3	\$11.2	\$32.1	\$22.6	\$13.8
Maryland	\$124.9	\$69.4	\$43.5	\$184.1	\$85.6	\$53.6
Mass.	\$89.0	\$87.9	\$55.1	\$131.3	\$108.4	\$68.0
Michigan	\$96.0	\$134.0	\$83.9	\$141.5	\$165.2	\$103.4
Minnesota	\$159.6	\$86.2	\$54.0	\$235.3	\$106.2	\$66.5
Miss.	\$91.5	\$40.6	\$24.9	\$134.9	\$50.1	\$30.8
Missouri	\$142.9	\$87.6	\$54.7	\$210.7	\$108.0	\$67.4
Nebraska	\$41.6	\$28.5	\$17.5	\$61.3	\$35.1	\$21.6
Nevada	\$114.6	\$40.6	\$25.4	\$168.9	\$50.0	\$31.3
New Jersey	\$137.3	\$123.0	\$77.0	\$202.5	\$151.7	\$94.9
New Mexico	\$81.7	\$26.4	\$16.5	\$120.5	\$32.6	\$20.3
New York	\$586.9	\$135.3	\$84.8	\$865.5	\$166.8	\$104.6
N. Carolina	\$145.0	\$112.4	\$70.2	\$213.8	\$138.6	\$86.6
N. Dakota	\$10.4	\$9.0	\$5.5	\$15.3	\$11.1	\$6.7
Ohio	\$208.8	\$156.1	\$97.7	\$307.9	\$192.5	\$120.4
Oklahoma	\$95.5	\$60.4	\$37.4	\$140.8	\$74.5	\$46.1
Pennsylvania	\$234.6	\$157.0	\$98.5	\$345.9	\$193.6	\$121.4
Rhode Island	\$19.7	\$16.8	\$10.5	\$29.0	\$20.7	\$12.9
S. Carolina	\$84.5	\$63.6	\$39.7	\$124.5	\$78.4	\$49.0
S. Dakota	\$20.2	\$13.2	\$8.1	\$29.8	\$16.2	\$10.0
Tennessee	\$278.6	\$105.1	\$65.7	\$410.8	\$129.6	\$81.0
Texas	\$590.3	\$319.6	\$200.4	\$870.4	\$394.1	\$247.2
Utah	\$60.0	\$35.3	\$21.8	\$88.5	\$43.5	\$26.8
Vermont	\$17.0	\$11.3	\$6.8	\$25.1	\$13.9	\$8.3
Virginia	\$140.4	\$71.9	\$45.1	\$207.0	\$88.7	\$55.6
Washington	\$191.2	\$78.3	\$49.1	\$281.9	\$96.5	\$60.6
W. Virginia	\$34.3	\$24.2	\$14.8	\$50.6	\$29.9	\$18.3
Wisconsin	\$96.4	\$66.9	\$41.9	\$142.1	\$82.5	\$51.7
Wyoming	\$19.4	\$7.9	\$4.8	\$28.6	\$9.8	\$5.9

POLICY BRIEF
Research Department
Minnesota House of Representatives
600 State Office Building
St. Paul, MN 55155

Nina Manzi, Legislative Analyst
651-296-5204

Updated: June 2010

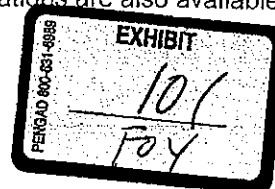
Use Tax Collection on Income Tax Returns in Other States

The use tax is a complement to the sales tax. Individuals owe the use tax on goods and services purchased outside their state of residence, by mail order, or over the Internet, but it is difficult for states to enforce compliance. Several states provide for individuals to report both state and local use tax liability on the individual income tax return. This policy brief explains the use tax, other states' efforts to collect it via the income tax return, and options for Minnesota to use the income tax return to increase use tax reporting and collections.

Contents

The Use Tax and Collection Methods: A Summary	2
The Use Tax and Minnesota's de Minimis Exemption	3
Other States—Reporting	5
Other States—Collections	7
Options for Minnesota	11

Copies of this publication may be obtained by calling 651-296-6753. This document can be made available in alternative formats for people with disabilities by calling 651-296-6753 or the Minnesota State Relay Service at 711 or 1-800-627-3529 (TTY). Many House Research Department publications are also available on the Internet at: www.house.mn/hrd/hrd.htm.



The Use Tax and Collection Methods: A Summary

All states with a general sales tax have also enacted complementary use taxes. In general, a use tax is due on a transaction in which the sales tax is not collected and the good or service is used in the jurisdiction imposing the tax. For example, if a Minnesota resident travels to a jurisdiction that does not have a sales tax and purchases items to bring home for use in Minnesota, or orders nonexempt items by mail or over the Internet, a use tax is due to Minnesota on those purchases. The use tax is intended to put in-state merchants on an equal competitive footing with merchants in lower tax jurisdictions and with merchants who are not required to collect sales tax on sales to Minnesota residents. The use tax equals the state sales tax rate plus the local sales tax rate, if any.

Minnesota allows individual taxpayers a de minimis exemption from the use tax. Individuals whose total purchases subject to use tax do not exceed \$770 in a calendar year are not subject to use tax.¹ The exemption amount of \$770 equals the amount of purchases necessary to generate \$50 of use tax liability, at Minnesota's state sales and use tax rate of 6.5 percent. Minnesota is one of five states with some form of de minimis exemption for individuals.²

Of the 45 states with sales and use taxes, 38 also have an individual income tax. Of these 38 states, 23 provide for taxpayers to report use tax obligations on the individual income tax return, and another seven, including Minnesota, provide information about the use tax in the individual income tax booklets. The experience in other states and past Department of Revenue estimates suggest the following results for eliminating the de minimis exemption and/or providing for collection on the individual income tax return:

- Eliminate de minimis exemption and provide for individuals to pay use tax on the income tax return. Estimated revenue raised: between \$0.3 million and \$11.4 million per year³
- Eliminate de minimis exemption and require individuals with purchases of less than \$770 to file use tax returns. Estimated revenue raised: \$100,000 per year⁴
- Retain de minimis exemption and provide for individuals with purchases greater than \$770 to pay use tax on the income tax return. Estimated revenue raised: minimal⁵

¹ Minn. Stat. § 297A.67, subd. 21. When enacted in 1997, the \$770 exemption equaled the amount of purchases necessary to generate \$50 of use tax liability at the sales tax rate, which was then 6.5 percent. At the current statewide rate of 6.875 percent, \$770 of purchases would result in \$53 of use tax liability.

² Michigan does not require taxpayers to pay use tax on purchases valued at less than \$10 over the course of a month (Mich. Comp. Laws § 205.94). Missouri does not require payment of use tax on purchases totaling less than \$2,000 during the year (Mo. Rev. Stat. § 144.655). Virginia has a de minimis exemption for mail-order catalog sales totaling \$100 or less over the course of a year (Va. Code Ann. § 58.1-604(5)). California exempts \$800 of purchases made in foreign countries and hand-carried into California (Cal. Rev. & Tax. Code § 6405). Colorado had a de minimis exemption of \$100 in purchases per year for individuals (Colo. Rev. Stat. § 39-26-203), but the exemption was repealed in 2004.

³ Estimate based on other states' experience with collecting use tax on income tax returns.

⁴ Minnesota Department of Revenue, Analysis of 1996 Tax Conference Committee Report, April 11, 1996; if this change were proposed now, the revenue estimate would likely increase because of population growth, inflation, and the increase in the sales tax rate from 6.5 percent to 6.875 percent.

The Use Tax and Minnesota's de Minimis Exemption

The use tax complements the general sales tax and is due on transactions in which the sales tax is not collected, but the good or service purchased is used in the jurisdiction imposing the sales tax.⁶ Use tax typically applies to goods that an individual purchases in one state but uses in another, either by traveling to another state, or by purchasing the good remotely through mail order or over the Internet. The use tax rate equals the state sales tax rate plus the local sales tax rate in effect at the taxpayer's place of residence, if any.⁷

An alternative to the use tax would be to require businesses that make sales through catalogs or over the Internet to collect the sales tax at the time a sale is made. However, several U.S. Supreme Court rulings, most recently *Quill Corp. v. Heitkamp* (1992), have prevented the states from requiring businesses to collect sales tax unless the business has a physical presence in the state.⁸ Because of the complexity of state sales tax laws, the court considered a collection requirement to be an undue burden on interstate commerce.

An excerpt from Form M-1 instructions for Minnesota income tax filers

If you purchased items for your own use without paying sales tax, you probably owe use tax. Here are some cases when use tax is due:

- You buy taxable items over the internet, by mail order, from a shopping channel, etc., and the seller doesn't collect Minnesota sales tax from you.
- A seller in another state or country does not collect any sales tax from you on a sale of an item that is taxed by Minnesota.
- An out-of-state seller properly collects another state's sales tax at a rate lower than Minnesota's. In this case, you owe the difference between the two rates.

If your total purchases subject to use tax are less than \$770 in a calendar year, you are not required to file a use tax return. This exemption applies only to items for personal use, not to items for business use.

If your total purchases subject to use tax are \$770 or more, you owe use tax on all taxable items purchased during the year. File for free online at www.taxes.state.mn.us. Click on "Login to e-File Minnesota" on the right side of the screen. Enter your Social Security number and click on "Individual use tax," or you may file a paper Form UT1, *Individual Use Tax Return*. Form UT1 and Fact Sheet 156, *Use Tax for Individuals*, are available at www.taxes.state.mn.us, or by calling 651-296-6181 or 1-800-657-3777.

Source: Form M-1 Instructions, Minnesota Department of Revenue, Tax Year 2009

⁵ Minnesota Department of Revenue, Analysis of House File 2682, January 29, 1998.

⁶ In Minnesota, the use tax applies to taxable tangible personal property and taxable services that were not subject to the *Minnesota* sales tax. Minn. Stat. § 297A.63, subd. 1. Thus, even if sales tax is paid to the state in which the sale took place, the use tax still technically applies. However, the rate of the use tax is reduced to the difference between the Minnesota rate and sales tax rate in the state in which the tax was paid. Minn. Stat. § 297A.80. No tax is owed if the sales tax paid was as high or higher than the Minnesota sales (both state and any applicable local) tax. As a practical matter, most remote sales (catalog and Internet) are not subject to sales tax in the seller's state. Thus, the offset for taxes paid to another state rarely applies.

⁷ In Minnesota, the city of Duluth and Cook County (effective April 1, 2010) impose 1 percent local sales taxes; Albert Lea, Austin, Baxter, Bemidji, Brainerd, Clearwater, Hermantown, Mankato, Minneapolis, New Ulm, North Mankato, Owatonna, Proctor, Rochester, St. Augusta, St. Cloud, St. Joseph, St. Paul, Sartell, Sauk Rapids, Two Harbors, Waite Park, and Willmar impose 0.5% local sales taxes; Hennepin County imposes a 0.15% local sales tax; and Anoka, Dakota, Hennepin, Ramsey and Washington counties impose a 0.25% local sales tax for transit improvement.

⁸ *National Bellas Hess, Inc. v. Department of Revenue of the State of Illinois*, 386 U.S. 753 (1967) and *Quill Corp. v. Heitkamp*, 504 U.S. 298 (1992).

Twenty states are full members of the Streamlined Sales Tax Agreement (SSTA),⁹ a voluntary compact that simplifies sales tax collections among the member states. The goal of the agreement is to persuade Congress to intervene and impose a duty on remote sellers to collect sales tax in member states. In the meantime, collecting the use tax directly from consumers of goods purchased while traveling, on-line, or through a catalog remains the states' only alternative to simply foregoing tax revenue owed on remote sales.

States have historically viewed the use tax on individuals as impractical to enforce—the tax typically involves a small amount owed on a large number of transactions for which the individual has not kept records, and the costs of collection could easily exceed the revenues collected. In 1996, the Sales Tax Advisory Council recommended that Minnesota adopt a de minimis exemption from the use tax, recognizing that most taxpayers are unaware of the tax and the Department of Revenue is unlikely to collect the tax due to high administrative costs. The legislature adopted the council's recommendation, and the exemption took effect in 1997.

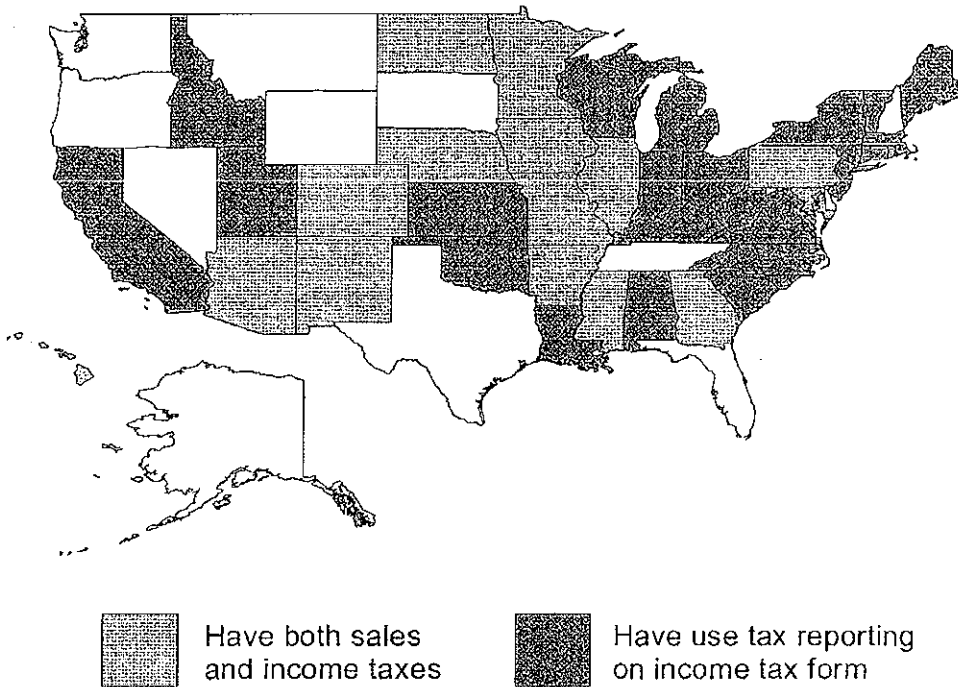
Individuals with less than \$770 in purchases during a calendar year are exempt from the tax and are able to make incidental purchases by mail order, over the Internet, or while traveling without keeping records for the use tax. This amount, \$770, is the amount of purchases necessary to generate \$50 of tax at the 6.5 percent rate in effect when the exemption was enacted in 1997. Minnesota's statewide sales and use tax rate is now 6.875 percent, following passage of the constitutional amendment at the 2008 general election. At the same time the de minimis exemption went into effect, Minnesota began including information on the use tax in the individual income tax instructions, directing individuals with purchases in excess of the de minimis exemption amount to file a use tax return. The box on page 3 reproduces some of the information provided in Minnesota's 2009 individual income tax form.

⁹ Another three states are associate members, with delayed effective dates that have not yet been reached. For general background on SSTA, see <http://www.streamlinedsalestax.org>

Other States—Reporting

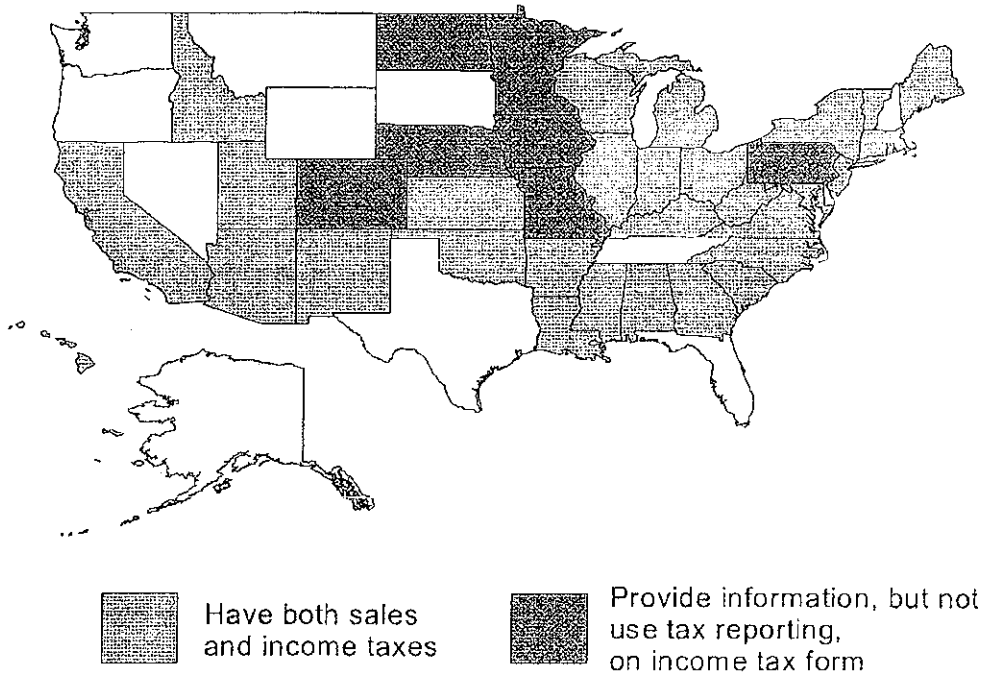
Other states have taken steps to make the use tax more visible, rather than exempting a flat amount of purchases. Twenty-three of the states with both an income tax and a sales tax provide for use tax reporting on individual income tax returns. In 1974, Vermont added a line for use tax reporting to its income tax return, followed by a number of states, including Wisconsin, in the early 1980s. Additional states provided for use tax reporting on the income tax form in the following years, and 13 have added use tax lines since 1999, perhaps in response to the perception of tax base erosion due to electronic commerce. West Virginia, which added the use tax reporting line in 2007, is the state that most recently provided for reporting on the personal income tax return. The map below shows the states with both an income tax and a sales tax, and highlights those that provide for use tax reporting on the income tax return.

States with Use Tax Reporting on Individual Income Tax Return



In addition to the 23 states that collect use tax on the income tax return, seven (including Minnesota) provide information about the use tax in the income tax instruction booklet.¹⁰

States with Use Tax Information in Individual Income Tax Booklet



House Research Graphics

The two maps show that a large number of states throughout the country are taking steps to make individual taxpayers aware of use tax obligations, either by providing for payment through the income tax or by providing information on how to file an individual use tax return.

¹⁰ The states that mention use tax requirements in the income tax booklet but do not provide a reporting line are Colorado, Iowa, Minnesota, Missouri, Nebraska, North Dakota, and Pennsylvania. Arkansas stopped providing information in its instruction booklet after 2006.

Other States—Collections

The information in this section is based on data obtained from the 23 states that collect use tax on the income tax return.¹¹ Data are for tax year 2007 with the exceptions of California, Louisiana, New Jersey, Rhode Island, South Carolina, and Virginia.¹²

Some states that placed a use tax line on the income tax return reported significant increases in collections. Collections in Louisiana, Massachusetts, and Michigan all increased substantially in the year following implementation of use tax reporting on the income tax return; Louisiana and Michigan had previously included information on the use tax in their income tax booklets, while Massachusetts did not.

Michigan collections increased from \$240,000 in 1998 to \$2.9 million in 1999 and have increased since then, reaching \$4.1 million in 2007.

Louisiana's collections via individual filings increased from about \$20,000 per year prior to 2000 to over \$500,000 reported on the income tax form in 2000, and nearly \$640,000 for tax year 2004, but dropped off to just over \$300,000 in 2008.

In Massachusetts, addition of a use tax line to the income tax return resulted in a sharp increase in the number of individuals reporting use tax, from 200 in 2001 to over 11,000 in 2002, the first year of reporting, and further increased to almost 40,000 in 2005. Revenues have increased sharply since the reporting line was first added, from about \$1 million in 2001 to over \$3 million in 2005, and about \$4.5 million in 2007.

Other states that have recently added use tax lines do not have data available on personal use tax collections for prior years.

The states that collect use tax on the income tax form use different techniques to try to maximize voluntary reporting by taxpayers. Some specifically require taxpayers to write in "zero" if they have no use tax liability. Others have combined use tax reporting with compliance initiatives, and several states provide tables in which taxpayers can "look up" their use tax liability based on their income.

¹¹ Data from Alabama and Connecticut were removed from the analysis. Both Alabama and Connecticut reported large amounts of collections relative to the number of returns reporting collections not likely to be representative of a typical year's collections. Department of Revenue staff in Alabama and Department of Revenue Services staff in Connecticut thought it reasonably likely that a small number of returns had reported large purchases (such as artwork) or as a result of audit activity. Connecticut income tax returns with income over \$1 million were responsible for over two-thirds of the total use tax amount reported; staff at the Department of Revenue indicated that collections from high income returns may have resulted from an audit or proposed audit.

¹² The data for California includes tax returns filed in fiscal year 2007-2008; most of the returns are for tax year 2007 but some late returns from previous years may also be included. Data for South Carolina are for tax year 2006, data for Louisiana are for calendar year 2008, and data for New Jersey, Rhode Island, and Virginia are for tax year 2008.

Eleven states require taxpayers to clearly indicate if no use tax liability is owed.¹³ States with the requirement and states without it collect use tax revenue from similar percentages of income tax returns (1.61 percent of returns compared to 1.63 percent of returns), but the states that do require the indication collect more use tax revenue per taxpayer: \$1.26 compared to \$0.85.

A small number of states combine reporting on the income tax return with compliance initiatives or education efforts. Two states have sent information about the use tax to a random sample of taxpayers, resulting in higher collections in following years (Indiana¹⁴ and Rhode Island¹⁵), and one state saw use tax collections peak in 1995 in conjunction with an individual compliance program (Kentucky). More recently, Massachusetts and Maine have experimented with compliance programs. Massachusetts sent letters to some taxpayers that resulted in unusually high use tax collections for tax year 2005, possibly due to a few taxpayers reporting large purchases. Maine legislators approved a compliance program that took place from July to December of 2006. The program included television commercials, letters sent to individuals and business owners, and interest-free payment of past unreported use tax liabilities.

Nine states with use tax reporting on the personal income tax return provide taxpayers with lookup tables for estimating their use tax liability.¹⁶ Lookup tables provide estimates of use tax liability by taxpayer income. The tables typically consist of two columns. Taxpayers find their income in the left column and read across to the right column to find their estimated use tax liability. Use tax liability is assumed to represent a percentage of income. The percentage is intended to represent average use tax liability of taxpayers. The states using lookup tables did not have records of how the percentages they use were determined. There was some indication from the states first implementing lookup tables that they may have been derived from federal tables used prior to 1987 for estimating sales tax liability of taxpayers claiming the itemized deduction for sales tax paid.¹⁷ The states that have subsequently provided lookup tables appear to have modeled their tables on those used in other states. The tables make compliance with the tax more convenient for taxpayers who know they have made untaxed purchases, either while traveling, through catalogs, or over the Internet, but have not maintained records of those purchases. Taxpayers with large purchases must report those separately from the use tax calculated using the lookup table, and those who did not make any purchases subject to use tax

¹³ States that require taxpayers to indicate when they have no use tax liability are: California, Connecticut, Kansas, Louisiana, Massachusetts, Michigan, New Jersey, New York, Ohio, Oklahoma, and Utah.

¹⁴ In 1993, Indiana identified taxpayers who had not reported use tax and had incomes above a certain level and sent educational letters explaining the use tax to a random sample of taxpayers identified, with the purpose of improving compliance.

¹⁵ In 1995, Rhode Island sent letters explaining the use tax to about 15,000 taxpayers who had not reported use tax liability in 1994. This action was in response to low compliance with the use tax after the use tax line first appeared on the income tax return. The mailings resulted in negative publicity and have not been repeated.

¹⁶ Kansas, Maine, Massachusetts, Michigan, New Jersey, New York, North Carolina, Oklahoma, and Vermont provide lookup tables for estimating use tax liability.

¹⁷ Beginning in tax year 2004, the federal income tax has allowed taxpayers to deduct state and local sales taxes instead of state income taxes, and the IRS has prepared tables of estimated sales tax liability by taxpayer income range for each state. It does not appear that any of the states with use tax liability lookup tables have changed their tables in response to the new IRS estimates.

are not required to use the lookup table and may report liability equal to \$0. Only one state (Kansas) allows taxpayers with purchases over \$1,000 to use the lookup table to estimate liability.

As an example of how the lookup tables work, Michigan's lookup table gives estimated use tax liability by income ranges up to \$100,000. Estimated liability equals 0.05 percent of the taxpayer's Michigan adjusted gross income. Taxpayers with incomes over \$100,000 are instructed to multiply their income by 0.0005 to obtain an estimate of use tax liability.

The following table summarizes the characteristics of the various state lookup tables. Note that in three states, the percentages implicit in the tables vary with income. In New Jersey and New York, the percentage decreases as income increases, while in Kansas it increases with income.

Table 1
Characteristics of State Use Tax Lookup Tables

State	Income base	Lookup table percentage	Use of lookup table limited to purchases less than \$1,000
Kansas	State adjusted gross income	0.033% to 0.068%	No
Maine	State adjusted gross income	0.04%*	Yes
Massachusetts	State adjusted gross income	0.05%	Yes
Michigan	State adjusted gross income	0.05%	Yes
New Jersey	State adjusted gross income	0.0933% to 0.0426%	Yes
New York	Federal adjusted gross income	0.08% to 0.0377%	Yes
North Carolina	State taxable income	0.0675%**	Yes
Oklahoma	Federal adjusted gross income	0.056%	Yes
Vermont	Federal adjusted gross income	0.04%	Yes

* The percentage used in Maine increased to 0.08 percent in tax year 2008.
 **Note that while the percentage used is higher than in other states with lookup tables, it is applied to a narrower tax base—taxable income, which is income after all deductions and exemptions, rather than adjusted gross income, which is typically income before deductions and exemptions.

States that provide lookup tables for estimating liability have higher participation rates. About 1.6 percent of taxpayers report use tax across all states with use tax reporting on income tax returns. The participation rate is 3.1 percent for states with lookup tables and only 0.5 percent for those without. Seven states¹⁸ have higher than average participation rates, led by Maine at 11.3 percent and Vermont at 8.4 percent. All of the states with higher participation rates allow taxpayers to estimate use tax liability using a lookup table. Maine's exceptionally high participation rate in this and earlier years may be the result of its previous practice (through 1999) of assuming liability equal to 4 percent of income if none was reported. Maine has had a

¹⁸ Kansas, Maine, Michigan, New York, North Carolina, Oklahoma, and Vermont all have participation rates above the 1.6 percent average for all states.

higher participation rate than other states since then, and taxpayers who in past years received a use tax bill from the state may now choose to use the lookup table provided. Maine's aggressive 2006 publicity program for the use tax may have also contributed to the high participation rate.

States with lookup tables collect slightly less use tax per return than do states without lookup tables.¹⁹ Individuals who report use tax liability pay \$69 on average across all states with use tax reporting on the income tax return. The amount collected per return reporting use tax is lower in states that provide a lookup table than in those that do not: \$68 compared with \$71. This differs from results from past years' data, in which states with lookup tables collected substantially less per return than those without lookup tables.

Maine, which provides a lookup table, collected \$31 on average from returns reporting use tax, the lowest per return of any state. States with high per-return collections are led by New Jersey, with \$135 per return, and California with \$128 per return.²⁰

Ten states collect local as well as state use tax on the income tax return (California, Kansas, Louisiana, New York, North Carolina, Ohio, Oklahoma, South Carolina, Utah, and Wisconsin). Most of these either provide listings of local rates or a table of combined state and local rates. Kansas and Oklahoma direct taxpayers to a web page showing local rates for various jurisdictions. Louisiana instructs taxpayers to multiply taxable purchases by 8 percent, of which 4 percent represents state use tax liability, and the remaining 4 percent is in lieu of the actual local rate, which ranges from 3 percent to 5 percent.

Most states that collect local use tax on the income tax return distribute a portion of collections to the local jurisdictions. California, New York, Ohio, and Wisconsin distribute amounts collected to counties and other jurisdictions based on taxpayers' county of residence as reported on the income tax return. North Carolina, Oklahoma, and Utah distribute use tax collected on the income tax return to counties based on each county's proportionate share of sales tax collections. Kansas distributes local use tax to cities and counties based on their share of population weighted by the local sales tax rate. Louisiana distributes the local share of use tax collections to all 64 parishes, including the one parish that does not impose a sales/use tax, on a per-capita basis. The parish tax collectors then distribute their share of use tax collections to tax-levying authorities within the parish, based on the previous year's pro-rata share of actual sales tax collections. The local portion of South Carolina's use tax that is collected on the income tax is directed to a local option supplemental revenue fund, used to provide a minimum amount to all counties with local sales and use taxes.

¹⁹ While states with lookup tables tend to have a higher share of returns reporting use tax and a lower average amount reported, the average amount reported will vary depending on the combined state and local sales/use tax rate and the state's sales/use tax base.

²⁰ It's impossible to determine to what extent average amounts per return are skewed upward because of a small number of returns reporting very large liability, such as for purchases of artwork. In the case of Alabama and Connecticut, which were omitted from the analysis, agency staff shared that their understanding was that reporting of a few big-ticket items resulted in high average results. Something similar may have occurred in California and Rhode Island.

Options for Minnesota

This section discusses three options that could increase use tax collections in Minnesota:

- Eliminate the \$770 de minimis exemption and provide for use tax reporting on the income tax return (either with or without a lookup table)
- Eliminate the \$770 de minimis exemption and require taxpayers to file use tax returns
- Retain the de minimis exemption and provide for use tax reporting on the income tax return

Option #1: Eliminate de minimis exemption and require reporting on the income tax return

Experience in other states suggests that Minnesota could increase use tax collections by repealing its de minimis exemption requirements and placing a use tax reporting line on the individual income tax return. Additional collections could equal about \$4.9 million if Minnesota included a lookup table for taxpayers to use in estimating liability, and about \$0.9 million without a lookup table. Estimates depend on Minnesota taxpayers reporting use tax liability at similar rates to taxpayers in other states. Use tax collected in other states was divided by the state's typical combined state and local sales/use tax rate to determine total purchases subject to use tax, and then the total from other states that apply the sales tax to clothing was adjusted to reflect Minnesota's exclusion of clothing from the sales tax base.²¹

Table 2 shows the participation rate and average purchases reported per return (adjusted for states that apply the sales/use tax to clothing) for each state collecting use tax on its income tax return, with the exceptions of Alabama and Connecticut.²² The final column shows the amount of use tax that Minnesota would collect through the income tax system if it experienced the same participation rate and average amount of purchases in each of the states listed. The estimated collections for Minnesota assume 2.6 million returns filed annually by resident taxpayers, the total for tax year 2007.

²¹ Average purchases reported in states that tax clothing were adjusted downward by 10.3 percent, to reflect Minnesota's exclusion of clothing from the tax base. The adjustment was calculated based on the share that clothing makes up of e-commerce, as reported by U.S. Census Bureau's 2007 *E-Stats* report.

²² See footnote 11, *supra*.

Table 2
**Estimated Use Tax Collected on Income Tax Returns in Minnesota
 if de minimis exemption repealed and income tax reporting implemented**
 (based on data from other states)

	Participation rate	Average purchases per return	Estimate of use tax collections for Minnesota (in millions)
States without lookup tables			
California	0.3%	\$1,437	\$0.7
Idaho	1.2	740	1.6
Indiana	0.9	789	1.3
Kentucky	1.0	794	1.4
Louisiana	0.5	366	0.3
Ohio	0.8	668	1.0
Rhode Island	0.2	1,344	0.4
South Carolina	0.6	991	1.0
Utah	0.5	687	0.7
Virginia*	0.5	1,383	1.3
West Virginia	0.3	1,068	0.7
Wisconsin	1.0	961	1.8
States with lookup tables			
Kansas	2.2	513	2.0
Maine	11.3	561	11.4
Massachusetts	1.5	1,677	4.7
Michigan	2.3	583	2.4
New Jersey	0.3	1,935	1.1
New York	4.9	1,080	9.5
North Carolina	2.6	655	3.1
Oklahoma	3.6	597	3.9
Vermont	8.4	561	8.5
All states	1.6%	\$929	\$2.7
States without lookup table	0.5%	\$967	\$0.9
States with lookup table	3.1%	\$921	\$5.2
* Virginia's participation rate may be low relative to other states because it exempts annual purchases of under \$100 from use tax.			

The final rows of Table 2 show the aggregate results for all states with use tax reporting on the income tax return, and the aggregates for states that do and do not provide a lookup table. While average purchases per return is slightly higher in states without a lookup table—\$967 compared

with \$921—participation rates are higher in states that do provide a lookup table—3.1 percent of returns, compared with 0.5 percent.

Applying experience in other states to Minnesota gives a wide range of estimates. Use tax collections in Minnesota would equal \$11.4 million if Minnesota's experience corresponded to Maine's with 11.3 percent of returns reporting average purchases of about \$561. However, collections would only equal about \$300,000 if Minnesotans behaved more like Louisianans, with only 0.5 percent of returns reporting liability. What would actually happen in Minnesota would depend on how many Minnesotans make purchases subject to use tax, how much they purchase, and how well they comply with reporting use tax liability on the income tax return. To the extent those factors vary with geography, Minnesota results might be expected to be similar to the experience in Michigan and Wisconsin. Applying participation rates and average purchases from these two states implies collections of between \$1.8 million and \$2.4 million in Minnesota.

Repealing the de minimis exemption and placing a reporting line on the income tax return, but not providing a lookup table for estimating use tax liability, could result in an additional \$0.9 million in use tax collections in Minnesota. The amount of revenue Minnesota would collect by repealing the use tax de minimis exemption and placing a use tax reporting line on its income tax return would depend on the participation rate and the average amount of use tax purchases reported by return.²³ If Minnesota's experience was like that of the nine states listed in Table 2 without lookup tables, collections would be close to the estimated \$0.9 million per year.

Use tax collections could be higher—up to \$5.2 million—if Minnesota provided a lookup table for taxpayers to use in estimating liability. States with lookup tables tend to experience a higher participation rate and higher overall collections than states without lookup tables. If Minnesota were to employ a lookup table for use tax liability in the income tax instructions, collections could reach \$5.2 million if Minnesota taxpayers behaved similarly to taxpayers in other states with lookup tables. The actual amount collected would depend on whether Minnesota taxpayers complied with the reporting requirement at a similar rate to taxpayers in other states.

Option #2: Eliminate the de minimis exemption and require taxpayers to file use tax returns

Simply repealing the exemption without requiring reporting on the income tax return could result in about \$100,000 per year in additional use tax collections. This would be a return to individual use tax reporting requirements as they existed prior to enactment of the de minimis exemption. Each individual would be required to file a use tax return if he or she made any purchases subject to use tax—through a catalog, on-line, or while traveling out of state. Many taxpayers would remain unaware of the use tax obligation, though technically even those with only small amounts of purchases would owe the tax. At the time the exemption was

²³ Alabama and Connecticut are omitted from the analysis (see footnote 11, supra).

enacted, the Department of Revenue estimated the loss of about \$100,000 annually through exempting the first \$770 of purchases from the tax.²⁴

Option #3: Retain the de minimis exemption and allow for use tax payment on the income tax return

Minnesota would not be likely to collect any additional use tax by placing a line on the income tax return if the de minimis exemption provision were retained. House File 2682, introduced during the 1998 legislative session, proposed adding a line to the income tax return for use tax reporting, but left the exemption in place. The Department of Revenue estimate for this bill indicated that the revenue gain was "indeterminable, [but] it appears any impact would be small."²⁵ The same is likely to be true today.

Revenue gains from adding a use tax line to the income tax return would be offset by administrative costs to the Department of Revenue. Inclusion of the use tax line would require an additional line on the individual income tax return and additional instructions in the booklet. The change would also require programming changes to account for the amount of use tax paid via the income tax return.²⁶ Earlier estimates prepared by the department did not detail the amount of these administrative costs.

For more information about taxes, visit our web site, www.house.mn/hrd/hrd.htm.

²⁴ Minnesota Department of Revenue, Analysis of 1996 Tax Conference Committee Report, April 11, 1996; see footnote 4, *supra*.

²⁵ Minnesota Department of Revenue, Analysis of House File 2682, January 29, 1998.

²⁶ *Ibid*.



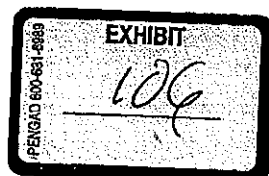
ELECTRONIC COMMERCE AND MAIL ORDER SALES

Summary

Updated Estimates. Based on information released by the U.S. Census Bureau and other sources in 2009, we have updated our estimates of remote sales (electronic and traditional mail order sales) revenue losses from out-of-state vendors. We now estimate annual revenue losses of \$1.085 billion in calendar year 2009 (to be remitted in fiscal year 2009-10). Of the total, \$600 million are owed by consumers and \$485 million were unpaid by businesses. These revenues are spread among approximately 12.7 million households and 2.9 million businesses. Unpaid sales and use tax liabilities in 2009-10 average \$166 per year for each California business, and \$47 per year for each California household. Revenue from these out-of-state electronic commerce and mail order purchases are a significant component of the sales and use tax gap. (As defined here, the tax gap is the difference between what taxpayers owe and what they voluntarily pay.) This paper documents our estimates of sales and use tax revenues associated with electronic commerce and mail order sales that are not voluntarily paid from fiscal years 2007-08 through 2011-12.

Comparisons to Previous Estimates. Our previous estimates of remote sales revenue losses were released in 2007 and estimated for calendar year 2005. The estimates presented in this paper reflect several developments since 2005, including the following ones:

- The U.S. Census Bureau significantly revised historical e-commerce estimates of purchases for both businesses and consumers. Most of the revisions were upward for both consumers and businesses.
- E-commerce purchases made by businesses and consumers have grown rapidly, continuing a long-term trend.
- A recession began in December 2007. Available evidence indicates that e-commerce growth rates have slowed sharply for consumers and have dramatically turned negative for businesses since the recession began.
- The Board of Equalization implemented the Instate Service Business Component of the Tax Gap program in July 2008.
- Legislation was passed and signed into law in 2009 (ABx4 18, statutes of 2009) that should significantly improve compliance of use tax payments by businesses, starting in fiscal year 2009-10.
- SB 1009 (Statutes of 2003), requires a line on the income tax form to encourage consumers to pay their use tax obligations. This legislation and Board of Equalization outreach efforts have contributed to more consumers paying their use tax obligations on their income tax forms in recent years. However, SB 1009 does not apply to purchases of taxable sales made after December 31, 2009. While it is possible that another bill could pass extending this sunset date, under current law there will no longer be a line



on the income tax form for reporting use tax for purchases made on or after January 1, 2010.

In our opinion these changes combined are so great as to render comparisons to the 2007 estimates meaningless.

Background, Methodology, and Assumptions

(1) Background Sources and Data Assumptions

The methodology used to derive these estimates is very similar to that which we used in our previous revenue estimates. There are two major markets for electronic commerce: business-to-consumer (B-to-C) and business-to-business (B-to-B). Each market has its own separate data sources and critical assumptions. We will assume all mail order sales are B-to-C. A more detailed description of our methodology and assumptions is found in our technical documentation.¹

(2) Business-to-Consumer (B-to-C)

Other than reflecting the developments discussed above, we made no major changes in our methodology used to estimate business-to-consumer (B-to-C) purchases.

(A) Data Sources. We define remote sales as all sales from retail sellers to households that are made electronically or by using traditional mail order sales channels. Our basic data source is the U.S. Census Bureau, as it was in previous estimates. The Census Bureau publishes sales estimates for North American Industrial Classification System (NAICS) Industry 4541 ("Electronic Shopping and Mail Order Houses," or ESMOH) monthly, annually and every five years in various reports.² This industry data is our basic data source, and it consists of retailers whose primary business (or a separate subsidiary) is mail order or electronic commerce sales. From another Census Bureau publication we split sales into e-commerce and traditional mail order sales and we add an estimate of e-commerce sales from companies that make a portion of their sales from websites, but have no separate website subsidiaries.³

(B) Taxable Portion of Remote B-to-C Sales. Data from the 2007 *Economic Census* for remote sales for NAICS Industry 4541 include detailed product categories and sales volumes of each. Based on this list of products, we estimate that about 30.5 percent of U.S. remote sales were exempt in 2007 under the California sales and use tax law. The vast majority of these exempt sales, 25.8 percent of the 30.5 percent, are prescription drugs. These percentages apply to all remote sales; there are no separate product data for electronic and mail order sales. We will assume that these national product category percentages of remote sales also apply to

¹ "2009 Electronic Commerce and Mail Order Sales Revenue Estimates – Technical Documentation," November 3, 2009.

² Every five years the U.S. Census Bureau takes a census of businesses. The most recent census year was 2007. Data for the 2007 census is just starting to become available. It will take several years for all of the 2007 data to be released.

³ 2007 *E-Commerce Multi-sector Report*, U.S. Census Bureau, May 28, 2009, web site: <http://www.census.gov/eos/www/ebusiness614.htm>.

California. This premise implies that 69.5 percent of remote sales are taxable to California purchasers.

(C) Compliance and Nexus Percentage Assumptions. For revenue estimation purposes, we assume that all retailers registered with the Board of Equalization (firms with California nexus) are remitting the sales and use taxes they owe. We further assume that all use tax payments made by households were remitted on their income tax forms.

Based on research done in 2004 and updated with more recent information from the 2002 *Economic Census of Retail Trade*, we estimate that about 64 percent of remote sales to California households were made from retailers that have nexus in California. This estimate is based on company reports and employment and sales by employment size category.⁴ We also confirmed this estimate with data from the *Internet Retailer Top 500 Guide*. This percentage implies that 36 percent of revenues related to sales made by remote sellers to California households are not paid except for the amounts paid on income tax forms.

(D) Estimate and Forecast Assumptions. The most detailed data available are for 2007, the year of the most recent economic census. The e-commerce portion of ESMOH for 2008 and future years was estimated based on the e-commerce portion in 2007. An estimate of ESMOH for 2009 was made based on data available for the first six months of 2009. Forecasts for 2010 and 2011 growth are identical to those used in the revenue estimate made for ABx4 18. (The revenue estimate for ABx4 18 assumes a pattern of B-to-B sales for 2010 and 2011 that follows the forecasted percent change in national spending on business equipment and software, according to a leading national macroeconomic forecasting firm. Based on historical trends, we assume the B-to-C spending will grow in a similar manner as business equipment and software spending.)

Table 1 shows how these assumptions and data were combined to result in revenue estimates for each year. The data in the table are documented with line number references. We assume that all calendar year liabilities are all paid in the fiscal year ending July 1 of the following year. We first estimate what we call baseline revenues and then adjust them by subtracting use tax liabilities, most of which are paid by consumers on their income tax forms.⁵

⁴ Memo from Joe Fitz, Chief Economist, to Board Member Leonard, "Electronic Commerce," August 30, 2005.

⁵ Line 15 of Table 1 includes use taxes paid by businesses.

Table 1						
Business to Consumer (B-to-C) Sales and Revenues (Millions of Dollars Unless Otherwise Noted)						
Line No.		Calendar Years				
		Actual	Estimated	Estimated	Forecast	
		2007	2008	2009	2010	2011
1	U.S. Sales Made by Electronic Shopping and Mail-Order Houses (ESMOH, NAICS 4541)		221,433	221,433	226,839	247,185
2	Percent Change	8.7%	2.5%	0.0%	6.2%	16.9%
3	On-line	88,915	92,817	92,817	96,890	114,648
4	Mail Order	127,048	128,616	128,616	129,949	132,538
5	Add Non-ESMOH online sales to Line 3 (Assume 8% of All Retail E-Commerce)1/	99,051	103,398	103,398	107,935	127,717
6	Total Remote Sales (Line 4 + Line 5)	226,099	232,013	232,013	237,884	260,255
7	Taxable Percentage in 2007		69.5%	69.5%	69.5%	69.5%
8	Estimated Taxable U.S. Remote Sales (Line 6 x Line 7)	157,139	161,249	161,249	165,329	180,877
9	California Share of U.S. California-Taxable U.S. Remote Sales (Line 8 x Line 9)	18,857	19,350	19,350	19,840	21,705
10	Noncompliance Rate	36%	36%	36%	36%	36%
11	Revenue Loss Tax Base (Line 10 x Line 11)	6,788	6,966	6,966	7,142	7,814
12	Tax Rate (Average Annual Rate for Calendar Year)	8.00%	8.00%	8.75%	9.00%	8.50%
		Fiscal Years				
		<u>2007-08</u>	<u>2008-09</u>	<u>2009-10</u>	<u>2010-11</u>	<u>2011-12</u>
14	Estimated Baseline Revenues (Line 12 x Line 13)	\$543	\$557	\$610	\$643	\$664
15	Estimated Taxes Paid (SB 1009)	\$8	\$9	\$10	\$0	\$0
16	Estimated Revenues Losses (Line 14 - Line 15)	\$535	\$548	\$600	\$643	\$664
Notes:						
1/ Line 5 adjusts online sales to include sales from companies without website subsidiaries. These are generally relatively small sellers.						

(2) Business-to-Business (B-to-B)

(A) Data Sources and Definitions

We based our B-to-B revenue estimate on data from the Merchant Wholesale Trade Sales Survey published by the U.S. Census Bureau.⁷ Unlike the B-to-C data, we are not aware of any Census Bureau estimates that include traditional mail order sales to businesses. We assume that B-to-B electronic commerce sales include traditional mail order sales from one business to another business.

(B) California Adjustments

Vehicle Sales Adjustments and Industry Exemptions. We excluded transportation equipment purchases from our estimates because most vehicles are registered with the Department of Motor Vehicles and sales and use tax compliance is generally very high as a result. Some industries have exemptions or partial exemptions that reduce their use tax liabilities. The industries with exemptions for which we made adjustments are insurance (which is exempt from the use tax) and agriculture, which is exempt from the state portion of sales and use taxes for equipment purchases.

We adjusted for vehicle sales and these specific industry exemptions because we found data sources that in our judgment could reasonably estimate the exemptions. No data exists, to our knowledge, for online purchases for these adjustments. Therefore, we assumed that the overall purchase data relationships matched the online data relationships. Sources of data for these adjustments are the U.S. Census Bureau and the U.S. Bureau of Economic Analysis (BEA).⁸

California Share of U.S. Sales. Unlike B-to-C sales, we excluded the California portion of sales explicitly. (In B-to-C sales, the California portion is subsumed in the portion of all U.S. retail companies selling online that are registered with the Board. For B-to-B sales we are unable to determine the percentage of all companies that are registered with the Board.) Instead, we assume an estimate of the California share of all U.S. companies are registered with the Board. We use an estimate of 13 percent for the California share of U.S. B-to-B sales, which is slightly higher than our population share of the nation (12 percent) to reflect the share of California to U.S. gross domestic product.

⁷ 2007 E-Commerce Multi-sector Report, U.S. Census Bureau, May 28, 2009, web site: <http://www.census.gov/eos/www/ebusiness614.htm>.

⁸ Sources: 2009 Capital Spending Report: U.S. Capital Spending Patterns, 1999-2007, U.S. Census Bureau; Table 5.5.5U and "Industry Tables," U.S. Bureau of Economic Analysis.

(C) Exempt Sales.

Sales data tabulated by the Census Bureau include all sales, both final sales and sales of intermediate goods used as inputs in the production process. We assume that 60 percent of sales are exempt, either because the exemption is related to the kinds of final goods sold or because the sales are not of final goods, but are instead sales for resale or intermediate goods used in production. If 60 percent of sales are exempt, this implies that the remaining 40 percent of sales are taxable under California law.

(D) Compliance by Businesses. After talking to Sales and Use Tax Department staff, we assumed that sales and use taxes are paid on 80 percent of the California taxable B-to-B electronic commerce sales (registered and unregistered taxpayers). A report on electronic commerce sales tax revenue impacts by the U.S. General Accountability Office (GAO) assumed a range of 50 to 95 percent compliance rates for taxable B-to-B purchases excluding cars.⁹ Our 80 percent assumption for all purchases would be in the middle portion of the GAO range.¹⁰ A 2008 study by the Washington Department of Revenue found a use tax compliance rate of about 74 percent.¹¹ However, Washington compliance rates documented in previous studies were close to 80 percent, and it seems reasonable that California could have somewhat higher compliance than Washington currently has. Eighty percent compliance implies that the remaining 20 percent of taxes due are not paid.

(E) Estimate and Forecast Assumptions. The most recent B-to-B e-commerce data are available for 2007. Census Bureau and BEA data indicate that the vast majority of business spending for final consumption are for capital equipment items. We estimated B-to-B e-commerce for 2008 and 2009 using the growth rates in capital equipment spending for 2008 and the first half of 2009. (First half spending in 2009 compared to first-half spending in 2008 represents all of 2009.) Forecasts for 2010 and 2011 growth are identical to those used in the revenue estimate made for ABx4 18.

Table 2 shows how these assumptions and data were combined to result in revenue estimates for each year. The data in the table are documented with line number references. We assume that all calendar year liabilities are all paid in the fiscal year ending July 1 of the following year. We first estimate what we call baseline revenues and then adjust them by subtracting estimates of use tax liabilities to be paid by businesses because of both the BOE Tax Gap program efforts and AB x4 18. Revenues from BOE Tax Gap Program efforts are estimated to be \$70 million per year. The revenue estimates for AB x4 18 are quite large, ranging from \$151 million in fiscal year 2009-10 to \$437 million in fiscal year 2011-12. These estimates have the effect of subtracting about 60 percent of baseline revenues from the estimates in fiscal year 2011-12.

⁹ *Sales Taxes: Electronic Commerce Growth Presents Challenges; Revenue Losses Are Uncertain*, U.S. General Accounting Office, June, 2000. Car sales are often excluded in such analyses because with vehicle registration requirements, tax compliance rates for car purchases are assumed to be close to 100 percent.

¹⁰ Excluding car sales would reduce the 80 percent compliance assumption, but it would likely still be in the middle of the GAO range.

¹¹ "Department of Revenue Compliance Study," Washington Department of Revenue Research Report 2008-5, July 10, 2008, website:
http://dor.wa.gov/Docs/Reports/Compliance_Study/compliance_study_2008.pdf

Table 2						
Business to Business (B-to-B) Sales and Revenues (Millions of Dollars Unless Otherwise Noted)						
Line No.		Calendar Years				
		Actual	Estimated	Estimated	Forecast	
		2007	2008	2009	2010	2011
1	Merchant Wholesale Trade Sales (MWTS) E-commerce	1,226,071	1,170,194	913,605	970,248	1,134,220
2	Percent Change	2.7%	-4.6%	-21.9%	6.2%	16.9%
<u>California Adjustments:</u>						
3	Transportation equipment	36,704	26,726	11,962	12,704	14,851
4	Partial exemption for agricultural equipment	3,248	3,777	4,337	4,606	5,384
5	Insurance equipment	7,719	7,367	5,752	6,109	7,141
6	U.S. E-commerce Adjusted for Industry Exemptions (Line 1 - Line 3 - Line 4 - Line 5)	1,178,400	1,132,323	891,553	946,830	1,106,844
7	California share of U.S. Gross Domestic Product	13%	13%	13%	13%	13%
8	Exclude Estimated Sales Made by CA Businesses (Line 6 x Line 7)	153,192	147,202	115,902	123,088	143,890
9	California-Adjusted U.S. Remote Sales (Line 6 - Line 8)	1,025,208	985,121	775,651	823,742	962,954
10	Estimated Share of Taxable Sales California-Taxable U.S. Remote	40%	40%	40%	40%	40%
11	Sales (Line 7 x Line 9 x Line 10)	53,311	51,226	40,334	42,835	50,074
12	Baseline Noncompliance Rate Revenue Loss Tax Base	20%	20%	20%	20%	20%
13	(Line 11 x Line 12)	10,662	10,245	8,067	8,567	10,015
14	Tax Rate (Average Annual Rate for Calendar Year)	8.00%	8.00%	8.75%	9.00%	8.50%
		Fiscal Years				
		2007-08	2008-09	2009-10	2010-11	2011-12
15	Estimated CA-adjusted baseline revenues (Line 13 x Line 14)	\$853	\$820	\$706	\$771	\$851
16	<u>Revenue Adjustments:</u>					
17	BOE Tax Gap Program			70	70	70
18	ABx4 18			151	253	437
19	Estimated Revenues Losses (Line 15 - Line 17 - Line 18)	\$853	\$820	\$485	\$448	\$344

Revenue Summary

California electronic commerce and mail order sales and use tax revenue estimates for fiscal years 2007-08 through 2011-12 are summarized in Table 3 below.

Table 3					
Estimated Revenue Losses From Total Remote Sales (B-to-B and B-to-C)					
(Millions of Dollars)					
	Fiscal Years				
	<u>2007-08</u>	<u>2008-09</u>	<u>2009-10</u>	<u>2010-11</u>	<u>2011-12</u>
Total Estimated State and Local Revenue Losses ^{1/}	\$1,388	\$1,368	\$1,085	\$1,091	\$1,008
State General Fund	\$868	\$855	\$713	\$727	\$653
State Fiscal Recovery Fund	\$43	\$43	\$31	\$30	\$30
Local Funds	\$477	\$470	\$341	\$333	\$326

^{1/} Total estimated state and local revenue losses are the sum of figures from Table 1, Line 16 and Table 2, Line 19.

Qualifying Remarks

The most cost efficient method of collecting sales and use tax is to have the seller collect the tax and remit it to the Board. The state's sales and use tax law is designed to collect the revenue in this manner. The electronic commerce transactions that this estimate addresses are from an out-of-state seller who is not registered with the Board because he or she is not "engaged in business" in California. Federal law precludes states from requiring businesses not engaged in business in their states to collect the use tax from the purchaser. Without the ability to require the seller to collect the use tax and remit it to the Board, collecting these use tax liabilities from the purchaser can become very difficult and expensive.

In these electronic commerce transactions, since the seller is not registered with the Board, the purchaser has a use tax liability. Our estimate identifies electronic commerce transactions as either business-to-business or business-to-consumer. For the most part neither the purchasing business nor the consumer may be aware of their use tax liability.

According to the 2002 Economic Census of California there are 2,920,443 businesses in California. The total unpaid use tax from electronic commerce sales made to these businesses is estimated to be \$485 million in fiscal year 2009-10. (This is 20 percent of total taxable B-to-B spending on which taxes are not being paid referenced on Line 12 in Table 2.) That means that the average use tax liability is about \$166 per year. While some taxpayers may owe large amounts, others will have paid their liability in full or may not have use tax liabilities from remote purchases. Without the expensive process of auditing a large number of these taxpayers, it would be difficult to know how much of this revenue we can expect to receive.

For business to-consumer electronic commerce sales, it would be even less cost effective to pursue individual purchasers. There are over 12.7 million households in California. The average liability for electronic commerce sales would be about \$47 per household per year. (This is 36 percent of total taxable B-to-C spending on which taxes are not being paid referenced on Line 11 in Table 1.)

Preparation

This revenue estimate was prepared by Joe Fitz, Research and Statistics Section. For additional information, please contact Mr. Fitz at (916) 323-3802.

Current as of November 3, 2009.

cc: Mr. Ramon J. Hirsig
Ms. Randie L. Henry
Mr. Jeff McGuire
Ms. Margaret S. Shedd