taxes on sales of goods or services delivered in-State, without regard to the location of the seller or to the means by which the good or service is sold;

(6) the States have experience, expertise, and a vital interest in the collection of sales and use taxes, and thus should take the lead in developing and implementing sales and use tax collection systems that are fair, efficient, and nondiscriminatory in their application;

(7) States, by their own initiative, have formed the Streamlined Sales Tax System Project, a cooperative effort with local governments to radically simplify the sales and use tax system by bringing uniformity to tax bases, definitions, and administration, by simplifying the tax rate structure and administration, and by incorporating stringent privacy controls and technology into the collection process to preserve the basic tenets of consumer privacy, and that such project should be allowed to proceed without intervention by Congress; and

(8) online consumer privacy is of paramount importance to the growth of electronic commerce and must be protected.

SEC. 3. EXTENSION OF INTERNET TAX FREEDOM ACT MORATORIUM THROUGH 2006.

Section 1101(a) of the Internet Tax Freedom Act (47 U.S.C. 151 note) is amended by striking "3 years after the date of the enactment of this Act—" and inserting "on October 21, 2006:".

SEC. 4. STREAMLINED SALES AND USE TAX SYSTEM.

(a) DEVELOPMENT OF STREAMLINED SYSTEM.—It is the sense of the Congress that States and localities should work together to develop a streamlined sales and use tax system that addresses the following:

(1) A centralized, one-stop, multi-state registration system for sellers.

(2) Uniform definitions for goods or services that may be included in the tax base.

(3) Uniform and simple rules for attributing transactions to particular taxing jurisdictions.

(4) Uniform rules for the designation and identification of purchasers exempt from sales and use taxes, including a database of all exempt entities and a rule ensuring that reliance on such database shall immunize sellers from liability.

(5) Uniform procedures for the certification of software that sellers rely on to determine State and local use tax rates and taxability.

(6) Uniform bad debt rules.

(7) Uniform tax returns and remittance forms.

(8) Consistent electronic filing and remittance methods.

(9) State administration of all State and local sales taxes.

(10) Uniform audit procedures.

(11) Reasonable compensation for sellers for tax collection obligations that reflects the complexity of an individual State's tax structure, including the structure of its local taxes.

(12) Exemption from use tax collection requirements for remote sellers falling below a specified de minimis threshold.

(13) Appropriate protections for consumer privacy.

(14) Such other features that the member States deem warranted to promote simplicity, uniformity, neutrality, efficiency, and fairness.

(b) NO UNDUE BURDEN.—Congress finds that if States adopt the streamlined system described in subsection (a), such a system does not place an undue burden on interstate commerce or burden the growth of electronic commerce and related technologies in any material way.

SEC. 5. INTERSTATE SALES AND USE TAX COMPACT.

(a) AUTHORIZATION AND CONSENT. States are authorized to enter into an Interstate Sales and Use Tax Compact, and Congress hereby consents to such a compact. The Compact shall provide that member States agree to adopt a uniform, streamlined sales and use tax system consistent with section 4(a).

(b) EXPIRATION.—The authorization and consent in subsection (a) shall automatically expire if the Compact has not been formed before January 1, 2004.

SEC. 6. AUTHORIZATION TO SIMPLIFY STATE USE TAX RATES THROUGH AVERAGING.

Notwithstanding any other provision of law, any State levying a sales tax is authorized to administer a single uniform statewide use tax rate relating to all remote sales on which it assesses a use tax, provided that for each calendar year in which such statewide rate is applicable, if such rate had been assessed during the second calendar year prior to such year on all such sales on which a sales tax was assessed by such State or its local jurisdictions, the total taxes assessed on such sales would not have exceeded the total taxes actually assessed on such sales during such year.

SEC. 7. AUTHORIZATION TO REQUIRE COLLECTION OF USE TAXES.

(a) GRANT OF AUTHORITY.—Subject to the limitations in subsection (b), any member State that has adopted and participates in the streamlined system prescribed by the Compact is authorized, notwithstanding any other provision of law, to require all sellers not qualifying for the de minimis exception specified in such system to collect and remit use taxes on remote sales in such State.

(b) CONDITIONS.—The authority in subsection (a) shall be of no effect unless all of the following conditions are met:

(1) The streamlined system prescribed by the Compact has been submitted to the President of the United States prior to January 31, 2004, with the approval of at least 20 member States.

(2) The President has submitted a report to the Congress certifying that the streamlined system prescribed by the Compact satisfies the requirements of section 4(a).

(3) 90 days have passed from the date of the submission of the report to Congress under paragraph (2), and no joint resolution disapproving the system has been enacted pursuant to the procedures in subsection (c).

(c) PROCEDURE FOR JOINT RESOLUTION OF DISAPPROVAL.—A joint resolution disapproving the streamlined system prescribed by the Compact may be enacted no later than 90 days from the date of the submission of the report to Congress under subsection (b)(2). Such submission and such 90-day period shall be governed by the provision of section 2194 of title 19, United States Code. Consideration of such joint resolution shall be pursuant to the expedited procedures prescribed in section 2192 of title 19, United States Code, with the following modifications:

(1) Sections 2192(b) and 2192(f)(1)(a)(i) shall be inapplicable.

(2) Section 2192(a) shall be inapplicable, and shall for purposes of this section be replaced by the following:

"(a) CONTENTS OF RESOLUTION.—For purposes of this section, the term 'resolution' means only a joint resolution of the 2 Houses of the Congress, the matter after the resolving clause of which is as follows: 'That the Congress does not approve of the determination of the President under section 7(b)(2) of the Fair and Equitable Interstate Tax Compact Simplification Act of 2000 transmitted on _____.', the blank space being filled with the appropriate date.".

(3) Section 2192(f)(3) shall be applicable in the case of a veto message with respect to any joint resolution under this section.

SEC. 8. LIMITATIONS.

(a) NO EFFECT ON NEXUS.—No obligation imposed by virtue of authority granted in section 7(a) shall be considered in determining whether a seller has a nexus with any State for any tax purpose.

(b) NO EFFECT ON LICENSING, REGULATION, ETC.—Nothing in this Act shall be construed to permit a State to license or regulate any person, to require any person to qualify to transact intrastate business, or to subject any person to State taxes not related to the sales of tangible personal property.

SEC. 9. DEFINITIONS.

For purposes of this Act—

(1) the term "State" means 1 of the 50 States of the United States and the District of Columbia;

(2) the term "the Compact" means the Interstate Sales and Use Tax Compact authorized by section 5;

(3) the term "goods or services" includes any tangible or intangible personal property and services;

(4) the term "member State" means a State that has joined the Compact;

(5) the term "remote sale" means a sale in interstate commerce of goods or services attributed, under the rules of section 4(a)(3) of this Act, to a particular taxing jurisdiction which jurisdiction could not, except for the authority granted by this Act, require the seller of such goods or services to collect and remit sales or use taxes on such sale;

(6) a remote sale "in" a particular taxing jurisdiction means a remote sale of goods or services attributed, under the rules of section 4(a)(3) of this Act, to a particular taxing jurisdiction;

(7) the term "seller" means a seller of goods or services; and

(8) the term "uniform" refers to interstate uniformity.

NASRAE COMMITTEE ON INTERNET TAXATION

May 25, 2000

TO: State Retail Association Executives

FROM: Charles McDonald

Attached is a copy of a study by the Center for Business and Economic Research of the University of Tennessee. Among other important data is an estimate of what each state will lose ***annually*** by 2003 in sales tax revenue as a result of Internet sales (see page 16).

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E-Commerce in the Context of Declining State Sales Tax Bases

by

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February 2000

ABSTRACT: This paper extends the quantitative estimates of sales tax revenue losses from electronic commerce in a variety of ways. First, we place the effects of e-commerce in the context of general sales tax base trends, arguing that e-commerce is only one of the factors reducing sales tax bases. Second, we take a forward looking view, estimating both the loss today and the expected losses several years hence. Third, we estimate the deadweight losses that would result from the revenue-neutral increase in the sales tax rate that will become necessary to offset the base declines. Revenue loss estimates are prepared for every state with a sales tax. Our baseline estimates suggest that e-commerce will cause about $10.8 billion in additional tax revenue losses nationwide in 2003.

Introduction

Much has been said about the importance of e-commerce to state tax revenues, with particular attention to effects that interstate sales have on the ability of states to impose and collect sales and use taxes. Estimates of the state and local government revenue losses for states, at least in general discussions, cover the spectrum from the expectation that state tax bases will be devastated to the contention that tax revenues will be increased by an economy that is invigorated by the internet.[1] The differences depend on the perspective taken on issues such as the role that taxes play in allowing development of e-commerce, the time period analyzed, and forecasts of how rapidly e-commerce will expand. Nearly everyone agrees that the revenue losses-to-date have been relatively limited because e-commerce is still in its infancy. The important question from a policy perspective is how the losses will grow in the near and longer term, since it is future rather than current losses that will be affected by policy changes and which should be a factor in structuring policy. As with most issues, the probable reality of the revenue implications lies between the purported extremes.

A common assertion by those arguing that tax revenues will increase as a result of failure to impose the sales tax on e-commerce transactions is that the productivity enhancements stimulated by the Internet and electronic commerce will expand the economy and raise all states' tax revenues. A case has been made that new electronic technologies are allowing output quality to rise and production costs to fall (for example, see OECD, 1999). However, the productivity gains are only dependent on tax exemption if there is a network or information externality that requires a subsidy to achieve efficiency. Goolsbee and Zittrain (1999) argued that to the extent that any externalities exist they will be short lived and any tax exemption should also be short

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[1]See Cline and Neubig (1999) and Goolsbee and Zittrain (1999).

lived. It seems hard to imagine that the externalities would remain in the near future (and require subsidies equal to an average sales tax rate of 6.5 percent), given the expected magnitude of e-commerce transactions over the next several years. In the absence of externalities, the non-neutral tax treatment of e-commerce transactions reduces rather than expands the economy, even though the overall presence of e-commerce expands the economy. The corresponding efficiency losses from non-neutral taxes are estimated below.

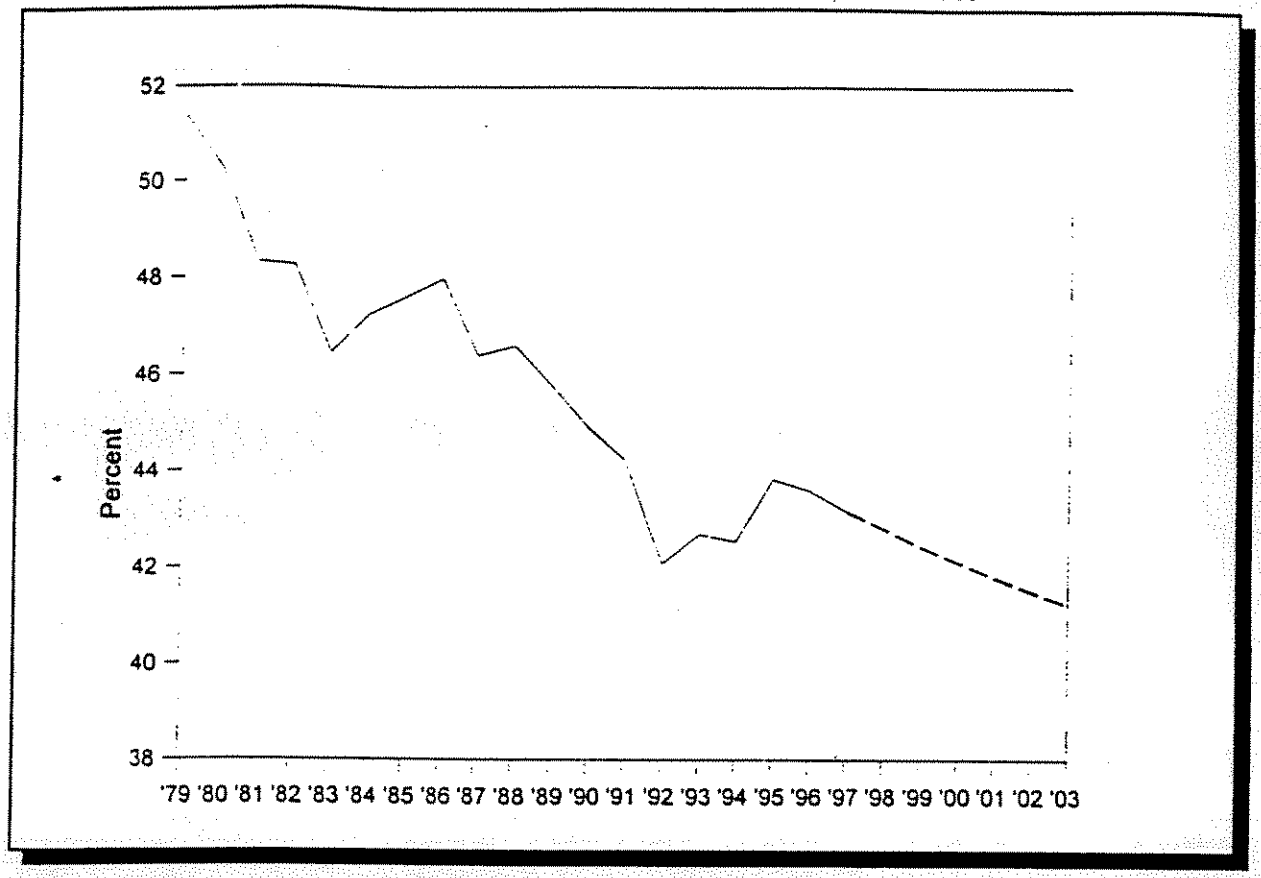
This paper seeks to extend the quantitative estimates of sales tax revenue losses in a variety of ways. First, we place the effects of e-commerce in the context of general sales tax base trends, arguing that e-commerce is only one of the factors reducing sales tax bases. Second, we take a forward looking view, estimating both the loss today and the expected losses several years hence. Third, we estimate the deadweight losses that would result from the revenue neutral increase in the sales tax rate that will become necessary to offset the base declines. Finally, estimates are prepared for every state with a sales tax.

Sales Tax Trends

State sales tax bases have been declining relative to state personal income for many years. For the average sales taxing state, the tax base equaled 51.4 percent of the state's personal income in 1979, but had fallen to 42.8 percent in 1998 (see Figure 1).[2] The breadth of sales tax bases varied widely by state, from 27.6 percent of personal income in Rhode Island to 109.2 percent in Hawaii. The base does not narrow every year, despite the overall trend. Immediately after a recession, and in very strong consumption years like much of the latter part of the 1990's,

[2]These percentages are weighted averages for sales taxing states.

FIGURE 1—Sales Tax Base as a Percent of Personal Income, 1979-2003



the base rises as a share of income, but this cyclical pattern must be distinguished from the downward trend.

The narrowing of sales tax bases is attributable to three major factors. The first is remote sales, including e-commerce, catalog sales, and cross state shopping, all of which have been rapidly expanding in recent years. Every state with a sales tax imposes a corresponding use tax on remote purchases, effectively intended to convert the overall tax structure to a destination basis. Thus, to the extent that the base is shrinking because of remote purchases, tax evasion rather than avoidance or re-definition is the cause. Administration and compliance costs could be limited through collection of the use tax from vendors rather than buyers, but the U.S. Supreme

Court in Quill v. North Dakota, 112 U.S. 298 (1992) ruled that states could only require firms with physical presence in the state to collect use tax on their behalf. As a result, the use tax frequently relies on voluntary compliance, which is very limited for individuals except for a small set of commodities such as automobiles and boats. Use tax compliance is somewhat greater for businesses, but still falls far short of the legislated burdens. The court's limitation of collection responsibility to firms with physical presence was based on the commerce clause, meaning that Congress has the authority to override the decision through legislation.

The second and perhaps foremost factor is the shift in consumption patterns towards greater consumption of services and less consumption of goods. Services are much less broadly taxed than goods, meaning the base shrinks relative to the economy as services become more prominent. Evidence of the shift in spending is that services were 47.4 percent of consumption in 1979 but rose to 58.8 percent in 1998. The implications for base decline would be even larger except that much of the decline in goods consumption has been for food at home, which is exempt in most states.

Third, the continuing process of legislated exemptions has narrowed the base in essentially every state. To be sure, some of the recently legislated exemptions, such as for industrial equipment, are consistent with good tax policy, but they still have the effect of lowering the taxable base. Other exemptions are intended to improve equity, such as the exemption of food for consumption at home. These equity enhancing exemptions may come at a high price in terms of targeting and of administration and compliance, and improved equity may be better achieved in most states though direct taxes. Still other exemptions are given mostly for politic

al reasons. These exemptions are often for business inputs, which should be excluded from a consumption tax, but they are given in a haphazard fashion that may not be efficiency enhancing. For example, the exemptions are often firm specific or are very narrowly construed, and can lead to differential taxation within industries.

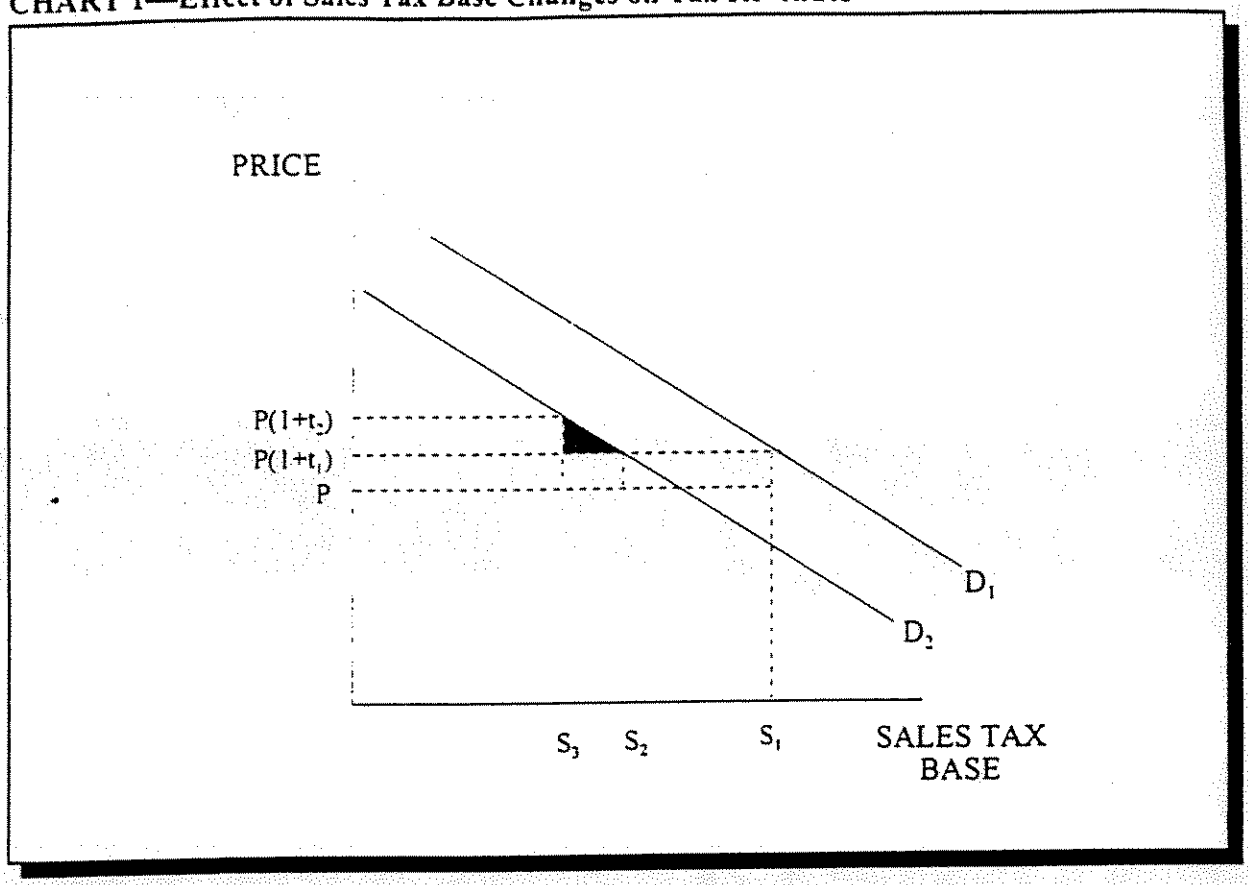
States have responded to the narrowing tax bases by raising tax rates, though the extent of a causal relationship has not been carefully studied. Thus, the median state sales tax rate increased from 3.25 percent in 1970 to 4.0 percent in 1980 and to 5.0 percent in 1990. Seventeen states now have rates at or above six percent. The rate increases have allowed states to slightly increase revenues as a percent of GDP since 1986. Local governments in 32 states are also permitted to impose sales taxes.[3] A pattern of rate increases appears to have occurred at the local level as well.

Revenue and Efficiency Losses from Sales Tax Patterns

The combined effects of the trend decline in demand for sales taxable commodities and e-commerce is summarized by Chart 1. D_1 is the demand for sales taxable commodities, which in this simple example can be thought of as in-state purchases of goods. Changes in tastes for non-taxed services and development of a non-taxed substitute commodity (through e-commerce) reduce demand for sales taxable commodities, as evidenced by movement of the demand curve to D_2. States lose tax revenue equal to $t_1*(S_1-S_2)$, at the initial tax rate t_1. Based on past patterns, states raise their tax rates to offset the lost revenues, which will reduce the tax base further (evidenced by S_2 to S_3), depending on the price elasticity for sales taxed commodities. States

[3]The Census of Governments reports local sales tax revenues in 32 states.

CHART 1—Effect of Sales Tax Base Changes on Tax Revenues



could increase their tax rate to t_2, where the additional revenue from the higher tax rate ($(t_2-t_1)*S_3$) equals the lost tax revenues from fewer taxable purchases ($t_1*(S_1-S_3)$).

Higher tax rates necessitated by both the trend reduction in sales tax bases and the development of e-commerce, entail an efficiency loss as illustrated by the shaded area. If the failure to impose sales taxes on e-commerce is viewed as the marginal impact, the share of the efficiency loss from e-commerce is particularly large, based on the well known finding that the loss depends on the square of the tax rate increase.

Estimates of Revenue Loss

This section presents estimates of sales tax losses from e-commerce in the context of the broader decrease in sales tax bases. To accomplish this objective, we first estimate the trend reduction in sales tax bases that is occurring independent of e-commerce, and then estimate the loss from e-commerce. The focus in this paper is on an estimate of revenue losses for 2003, because the nascent state of e-commerce makes a current year estimate of limited value for policy purposes.

Estimating Trend Decreases in State Sales Tax Bases

The first step in our analysis involves calculating state level estimates of the trend decrease in sales tax bases as a percent of personal income. The process involves arithmetic calculations of state sales tax bases, panel model estimates of the relationship between the tax base and personal income, state by state estimates of personal income growth, and tax base forecasts as a function of the personal income forecasts. The first step, estimation of state sales tax bases, was accomplished by dividing each state's sales tax revenues by its sales tax rate.[4] Then a sales tax base equation was fit for all 45 sales taxing states plus the District of Columbia, using panel data for 1979 to 1996. The equation was estimated through 1996 in an attempt to find the underlying relationships prior to any effect from e-commerce. Controls in this equation include state personal income and state fixed effects to account for differences across states in the underlying sales tax base and other state specific impacts. The growth in real GDP was used

[4]Census sales tax data include some revenues from sources other than the general sales tax. Also, some states use multiple tax rates. John Mikesell used painstaking means to develop a data series on sales tax bases for 1995-1998, and has graciously provided the data for this study. Census derived sales tax bases were ratioed from 1979 to 1996 to match the difference between the 1996 Mikesell data and the 1996 data drawn directly from the census.

instead of fixed effects for time, presuming that differences across time are heavily determined by the point in the business cycle. Results of the panel model are shown in equation 1. The key variable of interest is personal income, and the 0.85 elasticity on personal income is consistent with previous findings.[5] The finding of an elasticity below 1 results in the forecast of a trend decrease in the base as a share of the economy, consistent with the pattern generally observed since 1979.[6]

$$\ln \text{Tax base} = \underset{(7.96)}{1.94} + \underset{(61.62)}{.85}\ (\ln \text{personal income}) + \underset{(0.41)}{.097}\ \text{GDP growth} \qquad (1)$$

Equation 1 is used to forecast the state specific sales tax base for each year through 2003, based on a forecast of personal income for each state. Personal income forecasts were developed using a time series equation for each state, relating state personal income to national personal income and the growth rate in real GDP.[7] The latter was intended to account for any state specific differences in the response to national business cycles. Then, state personal income estimates

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[5]For example, see Fox and Campbell (1984) who find the income elasticity varies from 0.15 to 1.0, depending on the category of goods, and Mikesell (1991) who finds the elasticity varies from 0.76 to 1.22, depending on the state.

[6]The personal income elasticity is significantly different from 1.0 at the 0.99 level of confidence. Estimated t-statistics are in parenthesis.

[7]Correcting these equations for auto-correlation yielded forecasts for state personal income that differed from prior expectations in some cases. Consequently, we used uncorrected results. The coefficient estimates, which are still unbiased and consistent, yielded very similar overall conclusions.

through 2003 were made based on WEFA's November 1999 forecast for U.S. personal income and growth in GDP.[8]

In Table 1, the tax base as a share of personal income is given for each state for 1996 and an estimate is provided for 2003. All states are forecast to experience a reduction in the tax base during this time period. It should be noted that Table 1 does not include effects from the development of e-commerce. It is these effects to which we now turn.

Revenue Losses from E-Commerce

The revenue losses from e-commerce are the result of tax evasion, not tax avoidance, since the use tax is due even if the sales tax cannot be collected. The losses can be expected to arise for several reasons. The major loss is because e-commerce significantly expands the potential for remote sales, and states lose revenues that were formerly paid through sales taxes on local purchases. Also, use tax compliance, which even before e-commerce was less effective than sales tax compliance, is expected to fall because of e-commerce. There appears to be a feeling, at least among some taxpayers, that e-commerce transactions are free from sales and use taxes. The limited moratorium enacted through the Internet Tax Freedom Act may be one explanation for this misunderstanding. Further, taxpayers who generally comply with use taxes may be less willing to pay because of the perception that others are reducing their compliance.

State and local revenue losses from e-commerce sales are measured here by estimating the reductions in the sales tax base, and then multiplying the lost tax base times the state specific

[8]All estimates were corrected for jump-off error in 1996, presuming that the model fails to adequately account for shifts in the tax base during the last two years. These adjustments had the effect of reducing the estimated decline in the tax base between 1996 and 2003.

Table 1: Sales Tax Base as a Percentage of Personal Income, 1996 and 2003

State	1996	2003
AL	39.90	37.78
AR	64.90	61.74
AZ	47.80	45.32
CA	39.60	37.34
CO	45.10	43.00
CT	36.70	34.64
DC	44.04	41.57
FL	55.40	52.21
GA	56.70	53.63
HI	109.20	102.30
IA	46.40	44.49
ID	51.30	48.84
IL	32.20	30.65
IN	44.30	42.08
KS	48.70	46.37
KY	46.50	44.21
LA	64.70	61.91
MA	29.00	27.41
MD	35.80	33.71
ME	42.30	39.85
MI	47.80	45.45
MN	46.60	44.25
MO	48.10	45.70
MS	55.50	52.87
NC	45.80	43.33
ND	51.90	49.96
NE	43.10	41.13
NJ	29.10	27.46
NM	86.20	81.84
NV	58.40	55.36
NY	34.40	32.51
OH	38.80	36.88
OK	67.20	64.34
PA	32.20	30.54
RI	27.60	26.02
SC	52.60	49.72
SD	65.90	62.79
TN	51.00	48.26
TX	48.70	46.33
UT	61.80	58.89
VA	42.80	40.34
VT	41.60	39.26
WA	49.90	47.25
WI	45.50	43.28
WV	48.00	45.84
WY	71.50	68.93

Source: Authors' calculations.

effective state and local sales tax rate.[9] Key inputs to estimating the tax base loss for e-commerce transactions are forecasts of e-commerce sales, identification of the sales taxable components of these sales, assumptions about what share of taxable sales could be collected in the absence of e-commerce, and estimates of the share of taxes due that can be collected.

E-commerce sales are drawn from Forrester Research Inc.'s annual forecasts for the years 1999 through 2003 for 24 categories of business to consumer (B2C) sales and 13 categories of business to business (B2B) sales. Forrester anticipates a rapid compound growth rate of 83.7 percent annually through 2003.[10] B2B sales are expected to dominate e-commerce activity, representing 90.3 percent of the 2003 total.

Forrester's forecasts were adjusted to net out purchases by businesses and residents in non-sales taxing states.[11] The assumption was that the share of e-commerce sales in these states is proportionate to their share of the national population.[12] The remaining transactions are assumed to be made by residents and businesses in sales taxing states. Sales tax bases differ by state and

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[9]The estimated tax rate is the sum of the legislated state rate and a weighted average local rate defined as local sales tax revenues divided by the state sales tax base.

[10]Forrester's estimates were made prior to the rapid creation by large bricks and mortar based firms of parallel corporations (with very similar names) that operate through e-commerce, and may not have nexus in most states. These developments could result in even faster sales growth. The Boston Consulting Group (2000) has recently estimated e-commerce sales of the $2.0 trillion in 2003, versus the less than $1.5 trillion estimated by Forrester, and used in this paper. Forrester is currently preparing a new forecast.

[11]The five states without sales taxes, Alaska, Delaware, Montana, New Hampshire, and Oregon, comprise 2.48 percent of the U.S. population.

[12]The percentage could have been adjusted for the expected differences in the propensity to purchase over the internet, but the simple population weighted assumption was chosen as a more conservative option.

the categories which Forrester uses are relatively broad, so it was necessary to make assumptions for each sales category about the percentage of sales that would be taxable on average across the U.S. For sales that are expected to occur through e-commerce, major exempt purchases on B2C transactions are for most of leisure travel (which includes airline tickets purchased through e-commerce), much of the food and beverage purchases (at least 27 states exempt food for consumption at home), some health and beauty expenditures (medical expenditures are exempt in most states), and a portion of apparel (part of apparel expenditures are exempt in some states). Based on the specific assumptions adopted, 70.2 percent of forecast 2003 e-commerce B2C sales will be taxable. States are assumed to collect about 20.9 percent of the due revenues through either the sales or use tax, based on the assumptions that all liabilities on automobile sales are collected and 10 percent of liabilities on other categories are collected.[13] The assumption is that no use taxes are voluntarily paid by consumers.

Many categories of B2B e-commerce sales are exempt, but the largest categories of expected sales are computing and electronics and motor vehicles. The vast majority of both is taxable. Examples of exemptions in these categories are for custom software and computers used for research in some states and for computers used directly in the manufacturing process. Paper and office products and pharmaceutical and medical purchases are examples of other categories where many purchases are taxable. In total, 52.5 percent of expected B2B sales are taxable, based on reasonable assumptions about what percentage of each of Forrester's categories is taxable.

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[13]The latter is comparable to assuming that consumers randomly purchase from firms that have nexus in states representing 10 percent of the U.S. population.

Revenue losses from e-commerce equal taxes due minus use taxes collected. Further, an incremental loss from e-commerce occurs only to the extent that taxes on the transactions would have been collected without e-commerce. These two factors must be combined to obtain the final loss estimate. No precise estimates are available on the extent to which use taxes are being paid on B2B transactions. Discussions with state revenue officials suggest 40 to 50 percent compliance is the current average, except for motor vehicles where compliance should be much better. The baseline estimates used here assume 50 percent use tax compliance for all items, except for vehicles where the compliance rate is 100 percent. This results in a weighted average 65.2 percent compliance rate. This would appear to be an upper bound on compliance for e-commerce sales. Also, the baseline assumption used in this analysis is that 50 percent of the B2B revenue loss would have occurred even without e-commerce transactions and 35 percent of the B2C revenue would be lost.

Based on the assumptions, forecasts of the incremental revenue loss from e-commerce sales are shown in Table 2 for 1999 through 2003. The incremental loss is estimated to be $10.80 billion in 2003.[14] The incremental loss is the amount that would not have occurred without e-commerce, after recognizing the substitution of e-commerce sales for other remote sales.

The dominant role that B2B is expected to play in e-commerce sales means that the ability to collect revenues on B2B transactions is very important to the revenue loss for state and local governments. B2B is responsible for 65.6 percent of the expected incremental revenue loss in 2003, with the other 34.4 percent coming from B2C sales. Economists have argued that

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[14]The assumptions on compliance and incremental loss were each increased by 10 percent and decreased by 10 percent. This resulted in a range of estimates from $9.8 billion on the low side to $11.8 billion on the high side.

Table 2: Estimated Sales Tax Revenue Losses from E-Commerce

(Millions)	1999	2000	2001	2002	2003
Total Business-to-Business[1]	106,589	244,873	486,625	821,801	1,297,796
Less Exempt Sales	-47,539	-105,050	-208,762	-369,810	-616,453
Less B2B on which sales/use tax collected	-34,072	-80,957	-164,773	-281,590	-444,236
Equals B2B Base Loss	24,978	58,865	113,090	170,400	237,107
Less substitution for other remote sales	-12,489	-29,433	-56,545	-85,200	-118,554
Equals Incremental B2B Base Loss	12,489	29,433	56,545	85,200	118,554
Approximate Revenue Loss from B2B	738	1,756	3,393	5,092	7,081
Total Business-to-Consumer[1]	19,750	37,794	62,587	98,620	140,193
Less Exempt B2C	-8,315	-15,344	-23,533	-32,742	-41,777
Less B2C on which sales/use tax collected	-1,144	-2,604	-5,507	-10,541	-20,569
Equals B2C Base Loss	10,292	19,845	33,548	55,338	77,847
Less substitution for other remote sales	-2,058	-3,969	-6,710	-11,068	-15,569
Equals Incremental B2C Base Loss	8,233	15,876	26,838	44,270	62,277
Approximate Revenue Loss from B2C	487	947	1,611	2,646	3,720
Approximate Incremental Revenue Loss	1,225	2,703	5,004	7,737	10,801

1. Sales taxing states only.
Source: Authors' calculations based on E-Commerce forecasts provided by Forrester Research, Inc.

exemption of B2B sales is consistent with structuring the sales tax as a consumption tax. This could lead some to conclude that loss of revenues on B2B transactions is good. However, the case cannot be made for only exempting transactions over the internet. Elimination of the B2B sales from the base should be part of broader policy reform.

State specific estimates of the revenues lost from e-commerce were prepared based on the 2003 calculations. The distribution between states was proxied based on two factors. First, each state's e-commerce sales were assumed to be proportionate to the state's share of the combined sales tax base for all states. Estimates of each state's sales tax base were drawn from the

calculations described in the section on trend base losses. Second, each state's tax base was weighted for the propensity of residents to shop via e-commerce depending on the state and local sales tax rate. Goolsbee (1999) found that each 1 percent increase in the sales tax rate led to a 0.5 percent increase in the probability of buying something online. Thus, differences across states in the share of the national loss from e-commerce are a function of the breadth of the states' sales tax base (a determinant of the state's existing share of the combined base), the states' income growth (determining the forecasted growth in the general sales tax base) and differences in state sales tax rates (determining the relative propensity to purchase through e-commerce).

Table 3 lists the 2003 state and local government revenue losses from trend narrowing of the tax base, total e-commerce loss, incremental e-commerce loss, and the total revenue loss. The total revenue loss shown in column 4 is $23.86 billion. This includes trend base erosion and e-commerce losses. An estimated 45.2 percent of the revenue loss comes from incremental e-commerce sales. This is a surprisingly large share, given that the trend sales tax base losses over the past several decades appear to have been driven more by shifts to consumption of services than by increases in remote sales. The incremental revenue loss of $10.8 billion is shown in column 3. The incremental losses from e-commerce are estimated to range from $17.1 million in Vermont to $1.49 billion in California. The dollar losses are highly correlated with state population (0.98) and the state and local tax rate (0.48). The incremental loss should not be interpreted as the taxes that states would collect if Congress enacted legislation establishing nexus for firms with economic rather than physical presence. Column 2, the total e-commerce

Table 3: Combined State and Local Revenue Losses in 2003 (Thousands)

(1) = Revenue Loss Without E-Commerce
(2) = Total Revenue Loss Due to E-Commerce
(3) = Incremental Revenue Loss Due to E-Commerce
(4) = Total Combined Revenue Loss

State	(1)	(2)	(3)	(4)
AL	177,220	269,680	144,845	322,066
AR	113,858	188,581	101,287	215,145
AZ	218,703	341,447	183,391	402,094
CA	1,964,386	2,780,186	1,493,238	3,457,624
CO	167,480	290,749	156,161	323,641
CT	201,508	288,022	154,697	356,205
DC	38,575	55,071	29,579	68,154
FL	1,006,795	1,403,047	753,577	1,760,371
GA	419,573	620,696	333,376	752,948
HI	127,041	158,572	85,169	212,211
IA	82,439	162,712	87,392	169,831
ID	39,859	67,059	36,017	75,877
IL	497,730	844,810	453,747	951,477
IN	202,118	324,607	174,347	376,465
KS	112,268	189,547	101,806	214,073
KY	145,260	238,600	128,152	273,412
LA	239,190	453,927	243,804	482,995
MA	207,649	303,619	163,074	370,723
MD	215,860	294,142	157,983	373,843
ME	56,742	78,471	42,147	98,889
MI	460,741	757,462	406,833	867,574
MN	254,314	408,643	219,482	473,796
MO	243,835	394,951	212,128	455,963
MS	119,918	206,075	110,683	230,601
NC	300,076	444,942	238,979	539,055
ND	17,705	38,591	20,727	38,433
NE	59,422	105,601	56,718	116,140
NJ	359,965	510,657	274,274	634,240
NM	119,817	191,074	102,626	222,443
NV	122,804	191,148	102,665	225,469
NY	1,073,128	1,581,285	849,308	1,922,436
OH	411,418	671,417	360,618	772,036
OK	155,450	298,338	160,237	315,687
PA	427,569	666,836	358,158	785,727
RI	39,497	55,504	29,811	69,308
SC	158,647	231,366	124,267	282,914
SD	33,827	57,729	31,006	64,834
TN	361,126	545,583	293,032	654,159
TX	1,039,523	1,735,897	932,350	1,971,874
UT	91,904	158,226	84,983	176,887
VA	262,628	363,751	195,371	457,998
VT	22,408	31,775	17,066	39,475
WA	422,004	646,230	347,090	769,094
WI	193,490	320,138	171,946	365,436
WV	57,912	104,678	56,222	114,134
WY	16,937	38,485	20,670	37,607
US	13,060,322	20,109,924	10,801,040	23,861,362

Source: Authors' calculations.

revenue loss, of $20.1 billion, is the estimate of additional revenues for the state from taxation of e-commerce.[15]

The share of total tax revenues that each state loses is a useful way to measure the importance of the loss to specific states. For purposes of this calculation, each state's total tax revenue is assumed to be the same percentage of personal income in 2003 as in 1996.[16] The loss to state governments is given in Table 4 and the loss to local governments is in the Appendix. The incremental loss from e-commerce ranges from a low of 0.90 percent of state tax revenues (setting aside D.C.) in Massachusetts to a high of 2.62 percent in Texas. The combined loss ranges from 2.05 percent in Massachusetts to 5.83 percent in Florida. The estimated incremental revenue loss as a share of tax revenues is positively correlated with the importance of the sales tax to states' pre-e-commerce tax structures (0.87), the breadth of state's sales tax bases (0.52) and states' tax rates (0.25).

Efficiency Losses from Higher Tax Rates

States have demonstrated a propensity to raise tax rates to offset previous base reductions, and it is reasonable to expect states to respond to further base narrowing with additional rate hikes. As rates are increased, the sales tax base will be narrowed further as purchasers substitute non-taxable items and use remote purchasing to evade the tax. Sales tax rate increases necessary to replace the lost revenues were calculated for each state and are given in Table 5. Washington

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[15]States would collect a somewhat lower amount if Congress created nexus on the basis of economic presence, but with the minimum rule excluding small firms.

[16]There has been a slight upward progression in taxes as a percent of personal income. State tax revenues grew from 6.10 percent of personal income in 1979 to 6.53 percent in 1996 and local tax revenues rose from 3.94 percent to 4.22 percent during the same time period.

Table 4: State Revenue Losses as Percentages of Total State Taxes, 2003

(1) = Revenue Loss without E-Commerce
(2) = Total Revenue Loss Due to E-Commerce
(3) = Incremental Revenue Loss Due to E-Commerce
(4) = Total Combined Revenue Loss

State	(1)	(2)	(3)	(4)
AL	1.37	2.09	1.12	2.49
AR	1.81	3.00	1.61	3.42
AZ	1.80	2.82	1.51	3.32
CA	1.87	2.65	1.42	3.30
CO	1.28	2.22	1.19	2.47
CT	1.75	2.50	1.34	3.09
DC	1.06	1.51	0.81	1.87
FL	3.33	4.64	2.49	5.83
GA	2.01	2.97	1.59	3.60
HI	2.67	3.33	1.79	4.46
IA	1.35	2.66	1.43	2.78
ID	1.55	2.60	1.40	2.95
IL	1.74	2.95	1.58	3.32
IN	1.70	2.73	1.47	3.17
KS	1.69	2.85	1.53	3.22
KY	1.60	2.63	1.41	3.01
LA	1.94	3.68	1.98	3.91
MA	1.15	1.68	0.90	2.05
MD	1.77	2.41	1.29	3.06
ME	2.01	2.78	1.49	3.50
MI	1.76	2.90	1.55	3.32
MN	1.75	2.81	1.51	3.25
MO	1.70	2.76	1.48	3.19
MS	2.25	3.86	2.07	4.32
NC	1.34	1.99	1.07	2.41
ND	1.28	2.79	1.50	2.78
NE	1.56	2.78	1.49	3.05
NJ	1.70	2.41	1.29	2.99
NM	2.27	3.62	1.94	4.21
NV	2.82	4.39	2.36	5.18
NY	1.16	1.72	0.92	2.09
OH	1.58	2.58	1.38	2.96
OK	1.77	3.40	1.83	3.60
PA	1.61	2.51	1.35	2.96
RI	1.71	2.41	1.29	3.01
SC	2.07	3.02	1.62	3.69
SD	2.57	4.39	2.36	4.93
TN	3.08	4.65	2.50	5.58
TX	2.92	4.88	2.62	5.54
UT	1.89	3.26	1.75	3.65
VA	1.61	2.22	1.19	2.80
VT	1.81	2.57	1.38	3.19
WA	2.24	3.43	1.84	4.08
WI	1.37	2.27	1.22	2.60
WV	1.54	2.79	1.50	3.04
WY	1.49	3.39	1.82	3.31

Source: Authors' calculations.

Table 5: Sales Tax Rate Changes Necessary in 2003 to Maintain Constant Revenue

(1) = Without E-Commerce
(2) = Total Due to E-Commerce
(3) = Incremental Due to E-Commerce
(4) = Total Combined Rate Change

State	(1)	(2)	(3)	(4)
AL	0.40	0.67	0.36	0.76
AR	0.29	0.53	0.29	0.58
AZ	0.38	0.65	0.35	0.73
CA	0.47	0.72	0.39	0.86
CO	0.30	0.57	0.31	0.61
CT	0.37	0.58	0.32	0.69
DC	0.35	0.55	0.30	0.66
FL	0.39	0.60	0.33	0.72
GA	0.33	0.54	0.29	0.63
HI	0.28	0.38	0.21	0.48
IA	0.23	0.50	0.27	0.50
ID	0.26	0.48	0.26	0.52
IL	0.39	0.72	0.39	0.78
IN	0.27	0.48	0.26	0.53
KS	0.31	0.57	0.31	0.62
KY	0.32	0.58	0.31	0.64
LA	0.36	0.74	0.40	0.75
MA	0.30	0.48	0.26	0.56
MD	0.32	0.48	0.26	0.58
ME	0.38	0.58	0.32	0.70
MI	0.32	0.58	0.31	0.64
MN	0.36	0.64	0.34	0.71
MO	0.33	0.58	0.31	0.64
MS	0.36	0.68	0.37	0.73
NC	0.31	0.50	0.27	0.58
ND	0.22	0.52	0.28	0.50
NE	0.29	0.57	0.31	0.60
NJ	0.37	0.58	0.32	0.69
NM	0.34	0.59	0.32	0.66
NV	0.39	0.67	0.36	0.75
NY	0.45	0.73	0.40	0.85
OH	0.32	0.57	0.31	0.63
OK	0.30	0.62	0.33	0.63
PA	0.35	0.59	0.32	0.67
RI	0.44	0.68	0.37	0.82
SC	0.31	0.49	0.27	0.58
SD	0.27	0.50	0.27	0.54
TN	0.47	0.78	0.42	0.89
TX	0.40	0.72	0.39	0.79
UT	0.30	0.57	0.31	0.61
VA	0.27	0.41	0.22	0.50
VT	0.31	0.48	0.26	0.57
WA	0.47	0.79	0.43	0.91
WI	0.28	0.50	0.27	0.55
WV	0.29	0.58	0.31	0.61
WY	0.19	0.48	0.26	0.45

Source: Authors' calculations.

(0.91 percentage points) will need the largest rate increase and Wyoming (0.45 percentage points) will need the smallest increase to offset the total base decline (column 4 of Table 3). The tax rate increases are correlated with tax rates (0.94), population (0.47), breadth of the initial tax base (-0.30), and the percent of revenues raised from sales taxes (0.29).

The higher tax rates entail efficiency losses, which were estimated by state and aggregated to a national total. For the purposes of this calculation, we assume that the price elasticity of sales taxable commodities was assumed to be 0.7 (see Hawkins, 1999). The total deadweight loss is estimated to be $5.9 billion, which is 24.8 percent of the total revenue loss. The total efficiency loss can be de-composed into the loss from the trend erosion and the loss from e-commerce. The assumption is that reductions in the base resulting from e-commerce represent the marginal declines. Given that efficiency losses increase with the square of the tax rate, the additional rate increases necessitated by e-commerce account for 71.3 percent of the total efficiency loss.

Policy Implications

The sales tax base erosion that is stimulated by e-commerce is part of a downward trend in the tax base that has been underway for many years. However, e-commerce has accelerated the trend which otherwise appeared to have been slowing in the middle 1990's. The revenue loss estimates provided here suggest that the combination of the trend decline and e-commerce, estimated to be $24 billion in 2003, will significantly alter state tax structures during the next several years, unless states increase their sales tax rates. State and local governments will be confronted with several choices: cut expenditures, increase sales tax rates, or shift to another tax source, such as the property or income tax. Each choice has important implications. The effects

of the first option, shrinking government, depends on the choices that are made. For example, reducing education and infrastructure spending could lower the economy's growth potential.

If the size of government is not cut, the issue comes down to the way in which state and local governments are to finance themselves. With these decisions goes the full range of implications regarding taxation, including equity, administration and compliance, and behavioral incentives. From a public policy perspective the issue is whether state and local governments are better financed with the triad of sales, property, and income taxes, or whether the sales tax base should be allowed to continue shrinking and the focus increasingly shifted toward other broad-based taxes. Replacement of the lost local sales tax revenues with higher property taxes and the lost state revenues with higher income taxes would change the overall revenue mix. In our baseline scenario, the sales tax would fall from 25.1 percent to 22.6 percent of revenues between 1996 and 2003 if there were no rate hikes. In order to recover this loss in a revenue-neutral fashion, the personal income tax would have to rise from 21.2 to 23.2 percent of total taxes and the property tax would have to rise from 30.2 percent to 30.6 percent. These are large structural changes in the short window examined here, and the shifts could be much larger over the next decade.

Alternatively, higher sales tax rates result in efficiency losses, which we estimated to be about one-fourth of the revenue that must be replaced. The narrowing base will entail efficiency losses even without the rate hikes, and there will be additional efficiency losses from higher income and property taxes. Further, there is evidence that both horizontal and vertical equity will be significantly reduced by continued strong reliance on the sales tax.

In the Quill case findings, the Supreme Court placed in Congress' hands the capacity to design a sales tax base that enhances equity, allows lower tax rates, and lessens efficiency losses. Congress can act to limit tax base erosion by establishing nexus on an economic presence basis. Congress should require states to simplify their tax structures, perhaps in exchange for a broader nexus definition. Simplifying provisions such as one tax rate per state, common definitions of tax base components, and *de minimus* rules of use tax responsibility are certainly reasonable expectations on base simplification. More far-reaching reforms of the system should be considered as well.

Adoption of simplifications could change the revenues the states get from a broader nexus standard. For example, one option is to require uniform tax bases. The discussion included here goes farther than uniform definitions of base components, actually requiring the states to have identical tax structures. The revenue implications from such a requirement depend on the specific base that is selected. Revenues would be slightly higher ($20.2 billion compared with $20.1 billion in column 2 of Table 3) if all states had an average tax base rather than the current state-specific base.[17] The reason for this is that there is a slight tendency for small tax base states to have high tax rates. Alternatively, state revenues would be much lower than in Table 3 if a narrow uniform base was selected. Suppose Pennsylvania's base, which is the fifth smallest in the nation, was selected. The states would collect about $14.8 billion, noticeably less than the $20.1 from state specific tax bases.

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[17]We assume that the nationwide total base subject to e-commerce sales is unaffected by a uniform base at the average level. Further, we assume that the base would be distributed across states according to their percentage of national personal income. Finally, we assume that states impose the weighted average sales tax rate.

Of course, Congress and the states may choose to do nothing at all, especially in light of outstanding recent revenue growth. It is important to note, however, that the recent revenue growth is a cyclical phenomenon that is probably not indicative of long-term trends. Consequently, a time of relative surplus is the optimal time for long-term policy change. The absence of a short-term revenue pressures will inevitably make any necessary reform more effective over the long run.

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Appendix Table 1: Local Revenue Losses as Percentages of Total Local Taxes, 2003

(1) = Revenue Loss Without E-Commerce
(2) = Total Revenue Loss Due to E-Commerce
(3) = Incremental Revenue Loss Due to E-Commerce
(4) = Total Combined Revenue Loss

State	(1)	(2)	(3)	(4)
AL	2.15	3.27	1.76	3.91
AR	1.28	2.11	1.13	2.41
AZ	1.01	1.57	0.85	1.85
CA	0.86	1.22	0.66	1.52
CO	1.36	2.36	1.27	2.63
CT	0.00	0.00	0.00	0.00
DC	0.00	0.00	0.00	0.00
FL	0.15	0.21	0.11	0.26
GA	1.18	1.74	0.94	2.11
HI	0.00	0.00	0.00	0.00
IA	0.10	0.19	0.10	0.20
ID	0.00	0.00	0.00	0.00
IL	0.36	0.61	0.33	0.69
IN	0.00	0.00	0.00	0.00
KS	0.58	0.98	0.52	1.10
KY	0.00	0.00	0.00	0.00
LA	2.34	4.44	2.38	4.72
MA	0.00	0.00	0.00	0.00
MD	0.00	0.00	0.00	0.00
ME	0.00	0.00	0.00	0.00
MI	0.00	0.00	0.00	0.00
MN	0.03	0.05	0.03	0.05
MO	1.13	1.83	0.98	2.11
MS	0.01	0.01	0.01	0.01
NC	1.04	1.54	0.83	1.86
ND	0.25	0.54	0.29	0.54
NE	0.36	0.64	0.34	0.70
NJ	0.00	0.00	0.00	0.00
NM	1.88	2.99	1.61	3.48
NV	0.31	0.49	0.26	0.58
NY	0.88	1.30	0.70	1.58
OH	0.37	0.61	0.33	0.70
OK	1.78	3.42	1.83	3.61
PA	0.04	0.07	0.04	0.08
RI	0.00	0.00	0.00	0.00
SC	0.13	0.20	0.10	0.24
SD	0.81	1.38	0.74	1.55
TN	1.56	2.36	1.27	2.83
TX	0.60	1.00	0.54	1.13
UT	0.84	1.44	0.77	1.61
VA	0.51	0.70	0.38	0.88
VT	0.00	0.00	0.00	0.00
WA	1.15	1.76	0.95	2.10
WI	0.12	0.21	0.11	0.24
WV	0.00	0.00	0.00	0.00
WY	0.59	1.34	0.72	1.31

Source: Authors' calculations.

United States General Accounting Office

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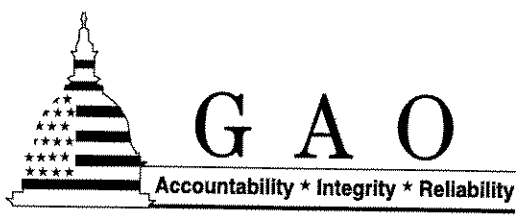
Report to Congressional Requesters

June 2000

SALES TAXES

Electronic Commerce Growth Presents Challenges; Revenue Losses Are Uncertain



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General Government Division

B-284955

June 30, 2000

The Honorable George V. Voinovich, Chairman
Subcommittee on Oversight of Government Management,
Restructuring, and the District of Columbia
Committee on Governmental Affairs
United States Senate

The Honorable Bob Graham
United States Senate

The rapid growth of electronic commerce (e-commerce), especially the sale of goods and services over the Internet, has fueled a debate about the taxation of such commerce. On the one hand, there are concerns about the impact of e-commerce growth on state and local government sales tax collections. These concerns arise because, while states can impose a tax on residents' purchases from out-of-state vendors, they cannot impose an obligation on those vendors to collect the tax unless the vendor has a substantial presence, or nexus, in the state.[1] Without collection by sellers, and absent intrusive and costly collection actions aimed at purchasers, portions of sales and use taxes can be avoided.[2]

On the other hand, there are concerns that the taxation of Internet sales could slow innovation and growth in the economy. E-commerce and the Internet are viewed as part of a productivity-enhancing "information technology revolution." Taxation of e-commerce, it is feared, could discourage such innovation.

Congress has recognized the need for more information about the implications of taxing e-commerce. For example, in 1998, Congress passed the Internet Tax Freedom Act,[3] which, among other actions, established the Advisory Commission on Electronic Commerce to study the tax treatment of Internet transactions.[4] The act also temporarily banned the

[1]Based on case law, out-of-state remote sellers generally meet the nexus standards if they have an office or place of business, agent, or significant property in the taxing state.

[2]A use tax, generally imposed on the purchaser when a sales tax has not been paid, is imposed on the privilege of ownership, possession, or use of a taxable good or service.

[3]P.L. 105-277, Div. C, Title XI.

[4]The Commission reported in April 2000. The Background section of our report contains more details about the Commission's report.

imposition of certain types of taxes on e-commerce, but not the collection of existing taxes, such as sales and use taxes.

Given your interest in the taxation of e-commerce, and particularly the impact of e-commerce growth on state and local government sales tax collections, you asked us for information specific to sales and use tax collections for Internet sales as well as for all remote sales. In response to your request, this report addresses the following questions:

1. How do the taxes associated with the sale of goods and services over the Internet differ from taxes associated with sales by other remote sellers and in-store sellers?

2. To what extent does each state rely on sales and use tax revenues to fund the services they provide?

3. How much revenue are state and local governments losing this year by not being able to collect sales and use taxes on sales made by all remote sellers and, particularly, by Internet sellers?

4. How much revenue would state and local governments likely lose in 2003 under various growth scenarios for all remote and Internet sales?

In light of the considerable uncertainty surrounding the volume of Internet and all remote sales and any resulting tax losses, we agreed with your office to model different possible scenarios.[5] The scenarios are based on different assumptions about the volume of Internet and remote sales, the proportion of sales that are taxable, the proportion in different taxing jurisdictions, the proportion of taxes actually collected, and other factors that affect tax revenue. We developed lower and higher scenarios to demonstrate an overall range of uncertainty and the potential effects on revenue loss. We also performed a sensitivity analysis to show the revenue loss effects due to uncertainty about specific assumptions. Because of the uncertainty surrounding the assumptions, the scenarios are not estimates but, rather, are illustrations of the importance of the various assumptions. The data and specific assumptions that we used in developing our scenarios are described further in the methodology section of this letter and in appendix I.

[5]Revenue loss is calculated as the amount of tax liability minus the amount already being paid.

Results in Brief

In-store, Internet, and other remote sales are generally taxed at the same rate by a state or local government. However, compliance rates differ significantly depending on nexus. In-store and remote sellers (including Internet sellers) with a substantial presence, or nexus, with the state are legally required to collect and remit the tax. For sales without nexus, purchasers are themselves legally required to remit the tax, but purchaser compliance is generally much lower than seller compliance. The continued growth of e-commerce is likely to magnify existing compliance problems and, as new types of digital goods and transactions are developed, create new ones, such as identifying the location of a sale. Such compliance challenges have led some observers to question the long-term viability of sales and use taxes.

States' reliance on general sales taxes—whether measured as a percentage of tax revenues, own-source revenues, or total general revenues—varies considerably across states.[6] For example, in Delaware, Montana, New Hampshire, and Oregon, neither state nor local governments collect such taxes. In contrast, state governments in Florida, Nevada, South Dakota, Tennessee, Texas, and Washington and local governments in Louisiana obtain over 50 percent of their tax revenues from general sales taxes. In 1999, state and local governments collected $203 billion in general sales tax revenues. On average, general sales taxes account for 33 percent of state and 11 percent of local tax revenues.

Little empirical data exist on the key factors needed to calculate the amount of sales and use tax revenues that state and local governments lose on Internet and other remote sales. What information does exist is often of unknown accuracy. Consequently, we constructed scenarios representing different assumptions about the important determinants of the loss. Under all of our scenarios, the size of the tax loss from Internet sales for 2000 is less than 2 percent of aggregate general sales tax revenues. Under all of our scenarios, the size of the loss from all remote sales is less than 5 percent of aggregate sales tax revenues.

The rapid change in the Internet economy makes projections of revenue losses from Internet and total remote sales for future years even more uncertain than they are for 2000. Under the scenarios we constructed for

[6]General revenues include all revenues except the non-tax revenues generated by government-owned liquor stores or utilities and insurance trust fund revenues (contributions to and investment earnings of public employee retirement and social insurance systems). In addition to tax revenues, own-source general revenues include charges for specific general government services, such as tuition at state universities, and miscellaneous general revenues, such as interest earnings and proceeds from the sale of property. Total general revenues equal own-source revenues plus transfers from other levels of government.

2003, the size of the tax loss from Internet sales ranged from less than 1 percent to about 5 percent of projected sales tax revenues (see p. 21). For all remote sales, the corresponding loss ranged from about 1 percent to about 8 percent.

The results of our scenarios highlight the importance of developing better data about Internet tax losses and understanding the limits of such data. Some of our scenarios show tax losses that by 2003 could present significant revenue challenges for state and local government officials, while other scenarios produce smaller revenue losses. Better data, from efforts such as one by the Bureau of the Census, could reduce the uncertainty. However, even with better data, the rapid and fundamental nature of innovations in e-commerce means that policymaking regarding the tax treatment of Internet sales will be done in an environment of significant uncertainty.

Background

Sales and use taxes are imposed on specific sales transactions. Generally, states require that in-state sellers collect sales tax on the goods and services they sell at the time of sale, based on the price or value of the goods or services sold. States require that out-of-state remote sellers collect a use tax on the sale of goods and services if the sellers have a substantial presence, or nexus, with the state.[7] The use tax, which complements the sales tax, is imposed on the purchaser for the privilege of use, ownership, or possession of taxable goods or services. If the out-of-state remote seller does not collect the use tax, the purchaser is required to remit the tax.

Based on case law interpreting the constitutional requirements, out-of-state remote sellers generally meet the nexus standards if they have an office or place of business, agent, or property in the taxing state. Nexus is not established if the seller's property is insignificant. The Supreme Court has ruled that contact with in-state purchasers by mail or common carrier, only, does not constitute nexus.[8] Although a business can establish dual entity operations to minimize tax liabilities, the extent to which Internet and in-store operations may interact and retain their distinction has not been resolved.

[7]A "remote seller" can be located in the same state as the purchaser; we use the term "out-of-state remote seller" when the remote seller is not located in the same state as the purchaser.

[8]See appendix II for discussion of National Bellas Hess Inc. v. Department of Revenue of Illinois, 386 U.S. 753 (1967) (addresses Due Process and Commerce Clause nexus standards for mail-order sellers); Quill Corp. v. North Dakota, 504 U.S. 298 (1992) (draws distinction between Due Process Clause and Commerce Clause requirements);and other precedent-setting decisions.

Forty-five states and the District of Columbia have general sales tax programs under which they administer the sales and use tax provisions.[9] About 7,600 local jurisdictions have general sales tax programs authorized by 34 states. Generally, state governments administer the state and local sales taxes.[10]

In 1999, the combined state and local general sales and use tax rates ranged from about 5 to 8 percent in most states. State general sales tax rates were about 4 or 5 percent in most states. Local general sales tax rates varied more and ranged from 0.5 percent to about 4 percent in some jurisdictions.

A number of prior studies have made nationwide estimates of the amount of sales and use tax revenues that state and local governments lose on Internet and other remote sales.[11] The Advisory Commission on Intergovernmental Relations (ACIR) published a series of studies from 1986 through 1994 estimating revenue losses from mail-order sales. ACIR estimated that in 1994, before the recent growth in Internet use, the state and local revenue loss was about $3.3 billion.[12] In more recent years, there have been efforts to estimate the lost tax revenue from Internet sales. A study by Ernst & Young for the eCommerce Coalition[13] concluded that the sales and use taxes not collected from the increase in remote sales due the Internet was less than $170 million in 1998. The authors of that study did not estimate losses on business-to-business Internet sales, but they suggested that these losses would be very small. Researchers, Goolsbee and Zittrain,[14] assumed zero revenue losses from business-to-business Internet sales when they estimated that tax losses from Internet sales in 1998 ranged from $210 million to $430 million and that losses would be about $3.5 billion in 2003.

[9]Alaska, Delaware, Montana, New Hampshire, and Oregon do not have general sales tax programs. Delaware does, however, impose a gross receipts tax.

[10]Local jurisdictions in some states, such as Alabama, Colorado, and Alaska, administer local sales tax programs.

[11]Appendix I identifies specific assumptions and data sources used in these past studies.

[12]U.S. Advisory Commission on Intergovernmental Relations, Taxation of Interstate Mail Order Sales: 1994 Revenue Estimates (1994).

[13]Robert J. Cline and Thomas S. Neubig, The Sky Is Not Falling: Why State and Local Revenues Were Not Significantly Impacted by the Internet in 1998, Ernst & Young, Economics Consulting and Quantitative Analysis (June 18, 1999).

[14]Austan Goolsbee and Jonathan Zittrain, "Evaluating the Costs and Benefits of Taxing Internet Commerce," National Tax Journal, 52(3), Sept. 1999, pp. 413-28.

In contrast, a recent study by researchers, Bruce and Fox,[15] produced much larger revenue loss estimates because the authors assumed that more than half of business-to-business Internet sales are taxable and that compliance on the part of purchasers is well below 100 percent. Bruce and Fox estimated that the revenue loss from Internet sales will grow from $1.23 billion in 1999 to $10.8 billion in 2003. Finally, a study by Forrester Research, Inc.,[16] which focused only on business-to-consumer sales, estimated that sales tax revenue losses from those sales were $525 million in 1999. The authors of most of these studies acknowledged that there is a limited empirical basis for many of the assumptions that need to be made when making such estimates.

The Internet Tax Freedom Act established the Advisory Commission on Electronic Commerce to study "Federal, State and local, and international taxation and tariff treatment of transactions using the Internet and Internet access and other comparable intrastate, interstate or international sales activities."[17] The majority of the Commission issued its report to Congress in April 2000. The Commission voted in favor of a policy proposal relating to state and local government taxation of Internet sales that, among other things, would:

- extend the current moratorium on multiple and discriminatory taxation of e-commerce;
- encourage state and local governments to make their sales and use taxes more uniform;
- prohibit taxation of sales of digitized goods and their nondigitized equivalents; and
- modify the definition of nexus in order to allow out-of-state vendors to conduct additional operations in a state, such as allowing for the return of merchandise or for repairs, without subjecting the vendor to the requirement of remitting sales taxes to the state.

Those voting for the proposal argued that the it would foster innovation and growth of the Internet and e-commerce while recognizing the role of state and local governments to continue providing needed services to their citizens. Those who voted against or abstained were particularly concerned that it would result in large revenue losses for state and local

[15]Donald Bruce and William F. Fox, "E-Commerce in the Context of Declining State Sales Tax Bases," mimeo, University of Tennessee Center for Business and Economic Research (Apr. 2000).

[16]James L. McQuivey, with Gillian DeMoulin, States Lose Half A Billion In Taxes To Web Retail, A Technographics Brief, Forrester (Cambridge, MA, Feb. 24, 2000).

[17]P.L. 105-277, Div C, Title XI, Oct. 21, 1998.

governments, impairing their ability to provide needed services to their citizens. Since these proposals did not receive the two-thirds vote required by the Internet Tax Freedom Act, they were not given the status of formal findings or recommendations of the Commission.

Scope and Methodology

To determine how taxes associated with the sale of goods and services by Internet sellers, other remote sellers, and in-store sellers differ, we reviewed information relating to (1) the federal, state, and local taxes that apply to sales goods and services and to the businesses that sell them and (2) the conditions under which sellers are required to collect state and local sales and use taxes. We reviewed published tax guides, conducted legal research of precedent-setting court cases, and interviewed officials from state tax agencies, the Department of the Treasury, and national organizations representing sellers and state and local governments. We also attended numerous conferences addressing tax issues and the Internet, including the meetings of the Advisory Commission on Electronic Commerce.

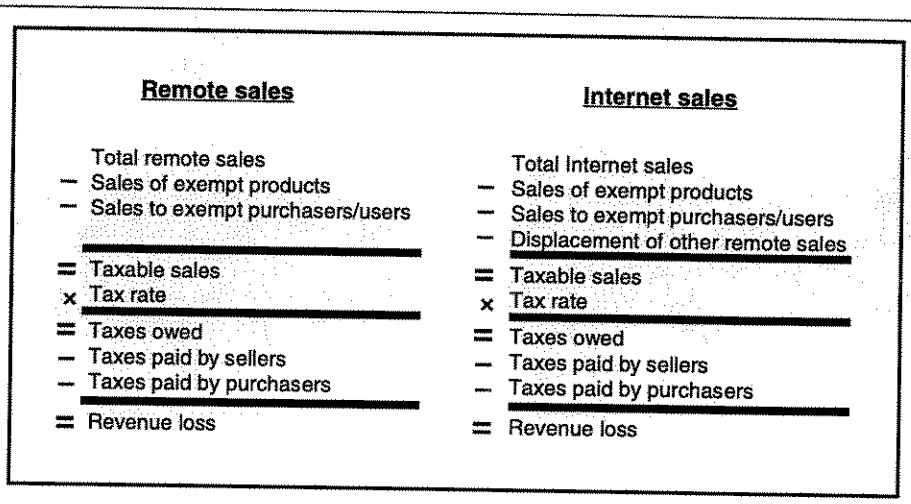
To determine the extent that state and local governments rely on sales and use tax revenues, we analyzed data from the Census Bureau relating to U.S. totals for those revenues in calendar year 1999. We also analyzed Census data on state government revenues for fiscal year 1998 and local government revenues for fiscal year 1996, the latest years for which state-by-state data were available.

To model different scenarios for the state and local government sales and use tax revenue losses, we obtained estimates of the total amount of sales that will be transacted remotely in 2000 and subjected them to a series of computations that reflect (1) details of state sales tax systems and (2) assumptions relating to the various factors that determine the size of the revenue losses. In addition to the revenue loss associated with all remote sales, we modeled different scenarios for the loss that was attributable to Internet sales alone. Figure 1 summarizes the steps in our revenue loss computations.

To approximate the amount of remote sales that will be taxable, we apportioned the sales data among individual states and then subtracted state-specific exemptions for particular types of products, services, purchasers, and uses. We then multiplied the taxable sales in each state by the appropriate tax rate to obtain an approximation of the sales or use tax owed to each state. To compute the amount of revenue that each state government is unable to collect, we made assumptions regarding the amount of the tax owed on remote sales that would be paid to each state

by either sellers or purchasers. We then subtracted that amount from the amount owed to the state to obtain the state-level revenue loss.

Figure 1: Steps Involved in Computing Revenue Losses



Source: GAO methodology.

We report high and low estimates for all remote and Internet only sales for the years 2000 and 2003. To calculate the potential sales and use tax losses for the higher scenario, we use the endpoint of the range for each of our assumptions that leads to a higher revenue loss. For example, we use the high estimate of sales, a low estimate of nexus for sellers, a low rate of purchaser compliance, and a low rate of product and purchaser exemptions. We use the other endpoints of our estimated ranges to calculate the sales tax losses for our low tax loss scenario. Combining assumptions in this way increases the likelihood that the actual tax losses fall between the high tax and low tax scenario results.

We obtained the local government revenue loss in each state by multiplying the state government loss by the ratio of local sales tax collections to state sales tax collections in each state.[18] We also modeled the amounts of revenue that state and local governments would potentially lose on Internet and other remote sales in 2003 under alternative scenarios for the growth of those sales.

There were few reliable data sources on which to base the calculations and adjustments summarized above. The growth of on-line sales has been

[18]In the case of Alaska, where local governments collect general sales taxes but the state government does not, we assumed that the state's share of the nationwide local government revenue loss was proportionate to its share of nationwide local government sales tax collections.

so rapid that the economic data available from federal and state governments have not been modified to provide this kind of information, and those that are collected are not well suited for this purpose. Most of the sales estimates that are available are from private-sector sources, and some of these providers view their data sources and details as proprietary. Finally, projections of sales are particularly difficult to make given the rapidly changing environment and the importance of decisions yet to be made by consumers, businesses, and policymakers that will determine the ultimate level of those sales. We were not able to assess the accuracy of any of the available estimates and projections of sales.

In addition to the uncertainty regarding the magnitude of remote sales, there is considerable uncertainty about the amount of tax that state and local governments are already collecting from these remote sales and the extent to which Internet sales replace other forms of remote sales. Little empirical data exist to reduce these uncertainties. To ensure that we did not overlook any important data, we reviewed the existing literature and spoke with numerous experts in academia, the private sector, and in government, including officials from 17 states.[19] In certain cases, we collected our own data on important parameters where we believed we had an opportunity to improve upon the information that prior analysts had used. For example, we gathered information from 150 large remote retailers regarding the specific states for which they were already collecting sales taxes. We also used Department of Commerce data as a basis for our assumptions relating to the proportions of business-to-business remote sales that are sold to various types of tax-exempt purchasers. We also performed a sensitivity analysis to show the revenue loss effects due to uncertainty about specific assumptions.

We also subjected our work to peer review by noted experts in the field of tax policy. These experts agreed with the general approach that we followed in making our estimates, but they provided different estimates about specific factors that determine the size of the revenue loss, such as the extent to which purchasers are currently complying with their use tax obligations. The experts confirmed that uncertainty surrounds many of these factors incorporated into the model. Our approach reflects their suggestions and comments, particularly the use of ranges of estimates for key determinants of the revenue loss.

[19]We selected the states to contact on the basis of referrals from national organizations, including the Multistate Tax Commission and the Federation of Tax Administrators, which indicated that these states were conducting studies on the issue of remote sales or had cutting-edge compliance programs.

The definition of revenue loss that we use in our scenarios is the amount of sales or use tax owed on remote sales, minus any amount already being paid by sellers or purchasers. There are two reasons why this amount is likely to be higher than the amount that state and local governments would receive if all remote retailers were required to collect and remit taxes on their sales. First, even if all remote sellers were required to collect the taxes due on their sales, compliance is not likely to be 100 percent. Second, the total volume of taxable sales may decline in response to a higher rate of tax collection on these sales. In computing the revenue loss attributable solely to the advent of Internet sales, we excluded losses associated with the portion of Internet sales that would have been transacted by other remote means, such as mail order, in the absence of the Internet.

Detailed information about our methodology, including the data sources that we used, are provided in appendix I. We conducted our work from June 1999 to May 2000 in accordance with generally accepted government auditing standards.

Tax Liabilities for Internet and Other Sales Are Generally the Same, but Compliance Can Differ

For a particular good or service and taxing jurisdiction, remote sales, Internet sales, and in-store sales are generally subject to the same rate of sales or use tax. However, tax compliance differs by type of sale, with nexus being an important influence. For example, remote sellers with nexus are required to collect the tax but sellers without nexus are not. E-commerce presents compliance challenges for sales and use tax administration beyond those created by other remote sales.

Tax Liabilities for Internet, Other Remote, and In-store Sales Are Generally the Same

After reviewing published information and talking to state tax officials, officials from several national organizations representing state governments, and private-sector representatives, we were unable to identify significant differences in the tax rates on in-store sales, Internet sales, and other remote sales. Although states vary in which goods and services they tax and in their tax rates for a given good or service in a particular location, the rate does not depend on whether the sale is in-store, Internet, or other remote.[20]

[20]We asked officials from state revenue departments and national associations, such as the Multistate Tax Commission, National Governors' Association, and National Retail Federation, to identify specific examples of different tax requirements for in-store and out-of-state remote sales. None identified any significant different sales, excise, or income tax requirements, but several referred to Connecticut's tax on the on-line sale of a newspaper that purchasers could buy untaxed at the newsstand. A Connecticut official advised that the state taxes paid-for digital services that include newspapers sold on-line. Connecticut expects to phase out its on-line newspaper tax by 2002.

The type of goods and services included in the sales and use tax base vary by taxing jurisdiction. In states with sales and use taxes, retail goods are taxed unless exempted. The list of exempt goods varies by state. For example, most but not all states exempt groceries. Unlike goods, services are generally untaxed, although there are exceptions. Tables III.1 and III.2 in appendix III provide more detailed information about the tax treatment of goods and services by state.

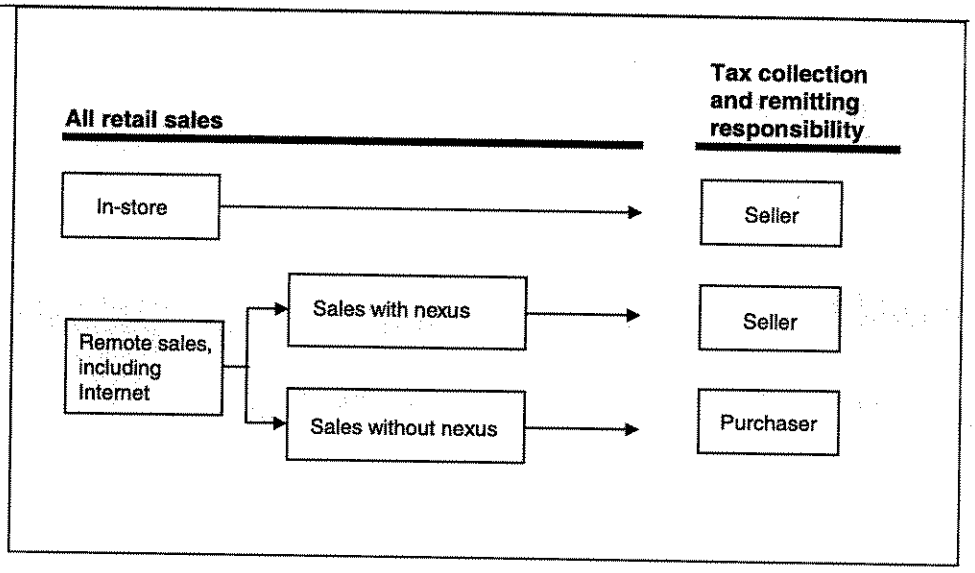
Sales and use tax rates also vary by taxing jurisdiction. Five states do not impose a state-level general sales or use tax. The 1999 combined state, county, and city tax rates for selected jurisdictions ranged from 4 to 9 percent. Table III.3 in appendix III provides more details on 1999 general sales tax rates for each state and selected local jurisdictions.

Collection Responsibilities for Remote Retailers Depend Upon Nexus

Whether a remote retailer is legally required to collect a sales tax depends on whether the retailer has substantial presence or nexus with the taxing jurisdiction. As defined by case law, remote sellers generally meet the nexus standard if they have an office or other place of business, property, or agent in the taxing state. Remote sellers, including Internet sellers, that have nexus with a taxing state are responsible for collecting the use tax from purchasers at the time of sale and remitting the tax to the taxing jurisdiction. Remote sellers with nexus have the same tax collection responsibilities as an in-store seller. Figure 2 summarizes tax collection and remittance responsibilities for in-store, Internet, and other remote sellers.

Court decisions interpreting the provisions of the Commerce and Due Process Clauses of the Constitution preclude the states from requiring a remote seller without nexus to collect the use tax. If the remote seller does not collect a use tax, then the purchaser is responsible for paying the tax to the taxing state where they use, consume, or store the purchased goods or service. Appendix II contains a more detailed discussion of the constitutional restrictions on state authority to require a remote retailer to collect the use tax.

Figure 2: Responsibility for Sales and Use Tax Collection and Remittance



Source: GAO analysis.

Sales and Use Tax Compliance Differs by Type of Sale

While reliable national estimates of sales and use tax compliance do not exist, state officials and other observers believe that compliance is highest for in-store sales, next highest for remote sales with nexus, and lowest for remote sales without nexus.[21] Their belief rests on three facts. First, in-store sellers are more visible to the states than remote sellers, leaving the states better positioned to enforce compliance through audits and other actions. Second, the states have legal authority to enforce sales and use tax collection by in-store sellers and remote sellers with nexus. Third, because of enforcement costs, the states generally rely on purchasers to voluntarily comply with the use tax when there is no nexus. The differences in compliance thus depend on whether the sale is in-store or remote and, for remote sales, on whether the remote seller has nexus.

Electronic Commerce Presents Challenges for Sales and Use Tax Systems

Electronic commerce and the related changes in technology present challenges for the administration of sales and use taxes. One challenge is presented by continued growth in the volume of Internet sales. To the extent that such growth occurs, it increases remote sales where compliance is already most problematic. Another challenge is that the expanding variety of e-commerce transactions and products may create new types of compliance problems, such as identifying the location and

[21]Available evidence suggests that compliance among businesses is also highest for in-store sales and lowest for remote sales without nexus. However, the rate of business purchaser compliance for remote sales without nexus is believed to be considerably higher than consumer purchaser compliance.

nature of a sale. Such challenges have led some observers to question the long-term viability of the sales and use tax system.

Although the future growth rate of Internet sales is not known, certain characteristics favor the rapid growth of Internet sales. For example, Commerce has reported that e-commerce not only reduces the cost and time of doing business but also provides alternative shopping sites, expands existing markets, and creates new markets. E-commerce also frees some sellers from the "geographic confines and the costs of running actual stores." These characteristics have the potential to increase the number of remote sellers and purchasers as well as increase the volume of remote sales. To the extent that such sales growth occurs, it will magnify the existing sales and use tax compliance problems associated with remote sales, such as the difficulty of enforcing compliance by purchasers in the case of remote sales without nexus.

The expanding variety of electronic transactions may also create new compliance challenges. Shifts from traditional forms of sales to Internet sales can make it more difficult to identify the location of the buyer and the seller, the status (business, individual, other) of the buyer or seller, and the nature of the product itself. In terms of the location, both sellers and purchasers may have multiple locations, and the Internet makes it easier for these firms to conduct their transactions from the location that offers the greatest tax advantages. Businesses may also choose to establish a presence in certain jurisdictions in order to maximize these advantages. As a result, determining the location of buyers and the sellers' activities for nexus purposes, which is important for the collection of sales and use taxes, is more difficult in an environment with Internet sales.

A related challenge for the collection of sales and use taxes is determining the status of the buyer and seller in Internet transactions. The status of the seller, for example, is relevant since certain sales by individuals are not subject to sales and use taxes. However, the development of new markets, such as Internet auctions, has created a new opportunity for businesses as well as individuals to avoid sales and use taxes. To the extent that businesses are using these new markets to make sales, it would be necessary for tax authorities to be able to identify those sellers as businesses rather than as individuals in order to assess the appropriate taxes.

The increasing variety of digital products also creates challenges for sales and use taxes. Currently, purchasers can buy many digital products, such as books, music, software, and videos, that were only available as tangible