Eroding Sales Tax Base: The Effects of E-Commerce

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U.S. SALES TAX BASE AS A PERCENT OF PERSONAL INCOME, 1979-2010

Percent

79 81 83 84 87 89 91 93 95 97 99 01 03 05 07 09
STATE GENERAL SALES TAX COLLECTIONS AS A PERCENT OF GDP

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Number of Sales Tax Rate Changes

[Bar chart showing the number of sales tax rate changes from 1982 to 2010, with bars indicating decreases and increases for each year.]
Reasons for Sales Tax Base Erosion

- State policy decisions
  - Economic Development
  - Fairness
- Changes in consumption behavior
- Remote commerce
  - E-commerce
  - Mail order
  - Driving next door
## Personal Consumption Expenditures 1979 and 2009

<table>
<thead>
<tr>
<th></th>
<th>1979 Percent</th>
<th>2009 Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Expenditure</td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Durable Goods</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Autos</td>
<td>13.4</td>
<td>10.3</td>
</tr>
<tr>
<td>Furn &amp; Household</td>
<td>5.2</td>
<td>2.5</td>
</tr>
<tr>
<td>Other Durables</td>
<td>2.4</td>
<td>1.4</td>
</tr>
<tr>
<td>Nondurable Goods</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Food and Beverage</td>
<td>39.1</td>
<td>22.0</td>
</tr>
<tr>
<td>Other Nondurables</td>
<td>20.3</td>
<td>7.8</td>
</tr>
<tr>
<td>Services</td>
<td>47.4</td>
<td>67.7</td>
</tr>
</tbody>
</table>
Estimated Total E-Commerce Sales

*Sales-taxing states only.

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Vendors for E-Commerce Transactions, 2008

- Manufacturing: 68.1%
- Wholesale: 22.8%
- Retail: 4.6%
- Services: 4.5%

Source: U.S. Department of Commerce
Overall Taxability of Electronic Commerce

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<table>
<thead>
<tr>
<th></th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>B2B</strong></td>
<td>2,767.0</td>
<td>3,253.4</td>
<td>3,656.9</td>
</tr>
<tr>
<td><strong>B2C</strong></td>
<td>200.0</td>
<td>235.1</td>
<td>264.3</td>
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<tr>
<td><strong>Total E-commerce</strong></td>
<td>2,967.0</td>
<td>3,488.5</td>
<td>3,921.1</td>
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<tr>
<td>Estimated Taxes Due</td>
<td>34.7</td>
<td>40.8</td>
<td>45.9</td>
</tr>
<tr>
<td>Estimated Taxes</td>
<td></td>
<td></td>
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<tr>
<td>Collected</td>
<td>26.1</td>
<td>30.7</td>
<td>34.5</td>
</tr>
<tr>
<td>S &amp; L Revenue Loss</td>
<td>8.6</td>
<td>10.1</td>
<td>11.4</td>
</tr>
</tbody>
</table>
No retail job creation in the past 10 years. 1.9 percent annual growth from 1984 to 2000
Employment/Sales, 2009 Selected Firms

Jobs per million sales

Walmart | OfficeMax | Best Buy | QVC | Systemax | Netflix | Amazon

6 | 5 | 4 | 3 | 2 | 1 | 0
Employment/Sales, 2009

Jobs per $million Sales

- Bricks and Mortar
- Catalog/Call Center
- Web only
$96.8 billion in e-tailer sales growth between 2002 and 2008.

We estimate this created 85,000 jobs.

Would have created 264,200 more jobs in bricks and mortar stores.

258,200 retail jobs actually created between 2002 and 2008 (no retail job between 2000 and 2010)
State Responses

- SST Governing Board
- Affiliate nexus
  - Affiliate nexus through ownership
  - Agency nexus through contractors
  - Click through nexus (Amazon Laws) – NY, AR, NC, RI, IL, CA
- Reporting requirements
  - Colorado
  - Oklahoma
  - South Dakota
  - Vermont
We examine trade flows between states, and allow for the possibility of tax evasion.
Stream of literature that examines cross-border shopping and how taxes affect specific commodities (e.g., cigarettes).
Other literature examines the inability to collect sales taxes ordered via mail order and the Internet.
Use Census Commodity Flow Survey data.
Hypothesis: the probability of tax evasion increases with distance to the destination market because the probability of audit and detection decreases.
Why evasion may be linked to distance

- Identifying taxpayers is easier for in-state sellers and compliance is better when payment responsibilities are not shifted to the buyer.
  - States may be more aware of businesses that are based nearby.
  - States may be more likely to share audit and tax information.
  - All but the most simple audits require in-person audits, and the costs increase with distance.
- Buyers have an incentive to purchase from sellers that do not collect sales tax for their state if they want to evade taxes.
- Sellers can ensure payment responsibility is with the buyer by not creating physical presence.
Findings and Implications

Findings

• Transportation costs (proxied by distance) and taxes represent trade barriers. Both have a negative direct impact on commodity flows.
• Long distances mitigate the impact of a sales tax, consistent with a probability of tax evasion that increases in the distance.

Implications

• Evidences the difficulty of enforcing destination taxation in open economies
State Cigarette Excise Tax Rates per 20 Pack (in $), as of July 2010

Greater than $2.5
$1.60 to $2.50
$0.91 to $1.59
$0.55 to $0.90
Less than $0.55

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Tobacco Tax Rates, 1981-2010

Average Year-End State Tax (per pack)

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Revenue potential from rate increases

- Lovenheim (2008) – 13-25 percent of consumers purchase in lower tax states or Native American reservations, so
  - Revenues relatively unresponsive to rate increases
  - Consumption may actually rise with rate increases
- Anti-smuggling policies may be necessary