Taxation in an E-Commerce Generation

International Tax and Public Finance

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E-Commerce elevates issues for subnational transactions taxes

- State and local sales taxes in the US
- Selective sales taxes
- Some types of sales tax in Barcelona, Sao Paulo, Beijing
- VAT subnational in Brazil, Canada, India
- Open economy of the EU raises concerns similar to subnational
- Cross border e-commerce sales are a key issue for national VATs
ESTIMATED TOTAL U.S. E-COMMERCE SALES

*Sales-taxing states only.
Europe 500: The Top 10

<table>
<thead>
<tr>
<th>Retailer</th>
<th>2014 web sales (millions of euros)</th>
<th>2013 web sales (millions of euros)</th>
<th>Growth</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amazon.com Inc.</td>
<td>21,091.2</td>
<td>17,576.0</td>
<td>20.0%</td>
<td>U.S.</td>
</tr>
<tr>
<td>Otto Group</td>
<td>6,500.0</td>
<td>6,000.0</td>
<td>8.3%</td>
<td>Germany</td>
</tr>
<tr>
<td>Tesco Stores</td>
<td>4,000.0</td>
<td>3,600.0</td>
<td>11.1%</td>
<td>U.K.</td>
</tr>
<tr>
<td>Staples Inc.</td>
<td>3,370.0</td>
<td>3,445.2</td>
<td>-2.2%</td>
<td>U.S.</td>
</tr>
<tr>
<td>Apple Inc.</td>
<td>2,790.0</td>
<td>2,585.0</td>
<td>7.9%</td>
<td>U.S.</td>
</tr>
<tr>
<td>Home Retail Group</td>
<td>2,600.3</td>
<td>2,469.6</td>
<td>5.3%</td>
<td>U.K.</td>
</tr>
<tr>
<td>Cnova NV/Groupe Casino</td>
<td>2,333.2</td>
<td>1,900.0</td>
<td>22.8%</td>
<td>France</td>
</tr>
<tr>
<td>Zalando SE</td>
<td>2,214.0</td>
<td>1,762.0</td>
<td>25.7%</td>
<td>Germany</td>
</tr>
<tr>
<td>Asda</td>
<td>1,990.0</td>
<td>1,621.7</td>
<td>22.7%</td>
<td>U.K.</td>
</tr>
<tr>
<td>Shop Direct</td>
<td>1,982.3</td>
<td>1,819.2</td>
<td>9.0%</td>
<td>U.K.</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>48,871.0</strong></td>
<td><strong>42,778.6</strong></td>
<td><strong>14.2%</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Total Euro 500 sales</strong></td>
<td><strong>126,219.5</strong></td>
<td><strong>109,156.6</strong></td>
<td><strong>15.6%</strong></td>
<td></td>
</tr>
</tbody>
</table>

Source: Internet Retailer 2015 Europe 500.
Percentage Distribution of State Tax Collections, 2016

- Corporate Income: 5.0%
- Individual Income: 37.2%
- Selective Sales*: 16.2%
- Sales: 31.3%
- Other: 8.3%
- Property: 2.0%
State General Sales Taxes as a Percentage of Total State Taxes, 2015

- Greater than 40.0%: --11--
- 31.2% to 40.0%: --10--
- Less than 31.2%: --24--
- Not Levied: --5--

U.S. = 31.2%
Local General Sales Taxes as a Percentage of Total Local Taxes, 2014

U.S. = 12.1%

- 0.0% to 12.1% (14 states)
- Greater than 12.1% (20 states)
- Not Applicable (16 states)
STATE GENERAL SALES TAX COLLECTIONS AS A PERCENT OF GDP

[Bar chart showing the sales tax collections as a percent of GDP from 1990 to 2014, with peaks in 1994 and 2000, and a decline towards 2014.]
Sales Tax Base as Percentage of Personal Income, 1979-2014

Sales Tax Base as Share of Personal Income

June 23, 2017
Causes of base erosion

- Remote commerce
- Growth in service sector – health care
- Policy changes
  - Food, clothing, tax holidays
Elements of a good tax system

- Fairness
  - Horizontal equity
  - Vertical equity
  - E-commerce and the sharing economy may be used more by younger, higher income, and urban residents

- Revenues – losses probably modest ($27 billion in US) at this point. Also puts downward pressure on sales tax rates

- Neutrality

- Administration and Compliance – more taxpayers, many of which could be small, will raise costs somewhat, but almost all firms are collecting for some jurisdiction. Can purchase the compliance service
Key issues

• Should transactions taxes be imposed at origin or destination?
• Are preferential rates for remote sales preferred (Bruce, Fox, Murray (2003); Zodrow (2006))?
• Are there means to enhance enforcement of destination taxation?
Destination or Origin Tax?

• Issues arise for cross-border sales, not so much when origin and destination are in the same jurisdiction

• Generally believed that origin easier for administration and compliance

• Both create distortions
  • Origin distorts cross-state input prices – production tax
  • Destination distorts cross-state output prices
Wide literature on Efficiency of Destination versus Origin Taxation

- Diamond and Mirrlees (1971) suggest that the DP is preferred
- Kanbur and Keen (1993) indicate OP taxes result in inefficiently low tax rates and similar externalities do not result from DP
- Lockwood (1993) shows that when taxes are set competitively, neither is superior
- Haufler et al (2005) show that OP is preferred if trade barriers are low and DP if they are high
- Behrens, et al (2007, 2009) conclude that how state economies are affected by origin versus destination taxation is an empirical question –
  - Never equivalent except with full harmonization
  - Origin principle raises tax competition, reduces tax revenues and results in more equal economic activity
  - No strong presumption of origin or destination being preferred
Destination versus Origin Tax

• Fox and Yang (2016) investigate impacts of the choice based on movements of the state corporate income tax towards destination. Conclude that greater destination taxation enhances state economic activity
• Equity concerns across large and small cities
• Economists frequently prefer destination and policy in both the EU and US is focused on destination
How do we situs destination?

• Can be hard to know where consumption takes place for e-commerce, particularly for digitized transactions

• Can use rules based systems, such as customer address, bank or credit card details, IP address, though can plan around some of this
Poor enforcement of Tax on E-commerce

• Not directly observable – look for behavior consistent with evasion, such as in Dutt and Traca (2010)
• One possible implication is that incidence depends on relative ability/willingness to evade taxes (Kopczuk et al, 2016)
• Also, companies that are better able or more willing to evade will crowd out companies that comply with taxes – creates rents for the evading firm
Impact on Trade

• Inability to enforce tax on cross border sales will shift purchases outside the government
• Uneven ability to enforce based on distance from a state will increase trade and likely the distance between buyer and seller – Fox, Luna and Schaur (2014)
• Information sharing across jurisdictions can help enforce destination, but info sharing between neighbors may encourage even more trading from further distances
Should e-commerce be tax favored?

- Effective tax rates on e-commerce often lower because of enforcement problems or because the tax structure did not anticipate them (such as with digitized transactions)

- Arguments for lower tax on e-com
  - Build the internet network and users
  - Perhaps efficiency enhancing
Optimal Tax and E-commerce

• OT can be drawn on if goods delivered via different channels are different? Is a book ordered through e-commerce channel the same as in B&M store? What if the book is digitized when ordered online? Gorman/Lancaster characteristics based approach

• Optimal tax rules don’t generally indicate identical tax rates, so when should rates for online be lower
  • Ramsey rule – more elastic
  • Tax at lower rates if less complementary with leisure
  • Zodrow notes if increase supply of labor
E-commerce and remote elasticities

• E-Commerce Elasticity
  • Einav et al (2014) – tax price elasticity driven both by elasticity of demand and salience of the tax – higher elasticity on higher priced items
  • Ellison and Ellison (2009)
  • Suggestive of tax evasion, transfer across channels, and movement to a vendor with lower effective tax rates

› Excise taxes
  › Goldin and Homonoff (2013) – regressiveness depends on portion of tax levied at register – only low income respond to taxes at the cash register
  › Goolsbee, Lovenheim, and Slemrod (2010) tax price elasticity has risen significantly because of Internet access

› Cross border shopping – studies on sales taxes along borders (Mikesell (1970, 1971) and Fox (1986)) show high elasticities
Optimal Tax and E-commerce

• Intermediate goods – differential, non-zero factor taxes if
  • Imperfect markets
  • Limitation on commodity taxes – political problem in taxing many services
Optimal taxation and e-commerce

- Very hard to make case that e-commerce should be tax preferred – strongest case is for uniform taxation
- Seems really unlikely that differential effective rates (even within e-commerce) arising from inability to enforce on some remote e-commerce would achieve optimal taxation
- Case for lower tax on e-commerce is even less likely if bring in equity and administration/compliance costs
U.S. sales/use tax structure

- Tax due on a destination basis on most consumer goods purchases, some service purchases, and a wide range of intermediate input purchases
- Birkland and Ring (2014) estimate that 53 percent of base is domestic consumption purchases
- Compliance operates through two channels
  - Sellers are responsible for collecting and remitting the tax in cases where they have physical presence in the state, and can voluntarily comply in other states
  - Compliance by the buyer when seller does not collect - very poor compliance
- Complicated by local taxes because of vertical and horizontal relationships- Agrawal
US enforcement of tax


• U.S. reforms have been bottom up
States are using several approaches to improve enforcement at destination

- The status quo is one option
- Nexus rules
Physical presence

• Stores and inventories
• Sending salesmen or repairmen in the state
• Delivering goods with company vehicles
• Leasing storage space
• Bank account
• Listing in a phone directory
• Agency nexus - Click-through-nexus –Amazon sales fall by 9.5% (Baugh et al)
  • Affiliate nexus based on relationships between related companies
States are using several approaches to improve enforcement at destination

- The status quo is one option
- Nexus rules
- Require third party reporting – Colorado, Tennessee, Nebraska
  - Notion is that third party reporting enhances compliance and administration (Slemrod, 2007)
- Income tax filing – 25 states allow individuals to report use tax liability on income tax returns – is the use tax a surcharge on the income tax?
USE TAX RETURNS BY MONTH
Broader approaches in the U.S.

- Cooperation – Streamlined Sales Tax Governing Board (24 states)
- Federal legislation
  - Marketplace Fairness Act of 2017
  - Remote Transactions Parity Act of 2017
  - No Regulation without Representation Act of 2017 codifies physical presence
- Reconsideration of the Quill case – Several states have legislation to enforce collection on remote sales – Alabama, South Dakota, Tennessee. DMA v. Brohl
  - Likely general rather than precise rules
EU efforts to enforce destination taxes without border controls – top down

- Moved from a self assessment system
- Broader base than most states, so bigger problem for services and digitization
- Digital products are taxed on destination basis for EU firms using the Mini One-Stop Shop. Submit a quarterly return in country where supplier is located and revenue redistributed on a destination basis.
- Due on a destination basis if sold from outside the EU. Can this be enforced?
EU Efforts to enforce destination taxes without border controls

• Within the EU, destination for goods if sales exceed threshold, origination if below threshold. Approach balances destination and compliance costs.

• Use a reverse charging system in some cases – place remittance on buyer
Enforcement around the world

• Over 35 countries have introduced new rules for digitized products though many have not adopted
• Brazil – collects at origin and share with destination, but only on e-commerce. How does this get enforced?
• China – new requirement of collection at border by customs