

An Analysis of Internet Sales Taxation and the Small Seller Exemption

by

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Executive Summary

Sales taxes are a critical component of state and local government revenue systems in the United States, accounting for nearly one-third of all state taxes and nearly one-quarter of all state and local taxes. Sales tax systems are facing significant pressure for a number of reasons, including the recent growth in online and other remote transactions that take place between in-state buyers and out-of-state sellers. The Courts have ruled that businesses must have nexus—typically physical presence—in a state before they can be taxed by a state or required to collect and remit the state’s taxes. The Courts have also determined that only Congress has the authority to redefine nexus.

As the internet has grown along with online shopping, the impact of the tax wedge between local and remote commerce has become even more important for state and local governments. Bruce, Fox, and Luna (2009) estimated a 2012 state and local revenue loss of \$11.4 billion as a result of online transactions. In response, and in the absence of federal action to redefine nexus, state and local governments have gone to great lengths to pursue legal and policy options to restore their shrinking tax base in order to maintain the level of public services. States have tried working together, broadening nexus definitions, imposing reporting requirements, and seeking to collect use taxes directly. None of these approaches is likely to be very effective, though they may generate some revenues and are ways of increasing pressure for federal legislation. As things currently stand, federal legislation is the only effective means of significantly altering states’ ability to collect taxes that are due on remote sales.

Federal policy developments have important implications for America’s small businesses. On one hand, the current tax environment favors online sellers *vis-à-vis* local sellers. Jordan (2012) and Hall (2013) are among those that have provided anecdotal evidence suggesting that some local sellers have actually gone out of business as a result of being unable to compete with their tax-advantaged remote counterparts. On the other hand, the majority of online sellers are themselves small businesses, so the tax environment has afforded them a significant competitive advantage. These online companies are concerned about the potential for a policy change at the federal level requiring them to collect and remit sales taxes on all taxable purchases; this would require them to keep track of state and local tax rules and rates and reduce their competitive advantage *vis-à-vis* local merchants.

In recognition of this, all of the serious federal policy proposals have included some form of small seller exception (SSE) in order to protect the smallest sellers from

being driven out of business by a new tax collection responsibility. Virtually every major federal, state, and local regulation involves some form of small firm exception in recognition of the disproportionate compliance burden that is borne by smaller companies. States generally do not include SSEs in their sales taxes; the more common manner of offsetting the collection burden on smaller sellers in existing state sales tax policy is to provide a system of vendor discounts as partial compensation (although such systems have been reduced over time) and to allow less frequent tax filing. Decisions both on whether to allow a small seller exception and on its size threshold require full consideration of the implications for state and local sales tax revenues, the possible distortions of economic activity, and administrative and compliance costs.

The Marketplace Fairness Act of 2013 would permit states to require online and other remote vendors to collect the sales tax for the destination state in the same manner done by brick-and-mortar firms today. The bill requires states to simplify their tax structure before they can require firms to comply, and it applies only to firms with gross annual U.S. online sales during the preceding year of at least \$1 million. This report examines the potential impacts of the various SSE levels on small businesses. It uses data from *Internet Retailer's* Top 500 and Second 500 Guides, which provide a wealth of information for the top 1,000 online sellers by sales volume each year. The sales among these companies represent the majority of all American online business-to-consumer commerce. These and other data sources are used to examine the following seven questions:

1. *How many and what share of online retailers are small?*

Estimates of the number of online sellers vary widely. On the high end, Bailey *et al.* (2008) estimate that 5 million online sellers exist, and more than 99.9 percent of these are small. With an SSE of \$1 million, only a very small number of companies would actually be required to collect and remit sales taxes with an SSE at \$1 million. Within the *Internet Retailer* Top 1,000, 974 companies have sales exceeding \$1 million. Adding in firms that are not included in the *Internet Retailer* data, a more realistic estimate is on the order of 1,817, or less than 0.1 percent of all online sellers.

2. *What share of online sales occurs among retailers above the SSE?*

Retailers above any of the reasonable SSE levels being discussed probably account for more than half of total U.S. online retail sales. Approximately 57.3 percent of total U.S. retail e-commerce takes place among the largest 974 companies with total online sales of at least \$1 million each.

3. *What are the impacts of various SSE levels?*

A higher SSE threshold exempts a slightly larger number of retailers but still captures the majority of online retail activity. Conversely, a lower SSE threshold includes more companies but does not add measurably to the covered share of total online retail.

4. To what extent are larger online retailers already collecting sales taxes?

Many of the larger online retailers are already collecting sales taxes for many states in which they currently have nexus. A sample analyzed for this study shows the average large online retailer collects sales taxes in about 18 states, representing about 47.2 percent of total national, state, and local sales tax collections. This suggests that slightly more than half of the universal tax collection obligation would represent a potential new burden for the average retailer in our data.

5. How would federal legislation affect the number of retailers below the SSE?

While the pursuit of increased profits would likely outweigh the marginal benefits from tax planning efforts to remain below the SSE threshold and avoid triggering the sales tax obligation, the theoretical effect on size distribution was examined. The number of online sellers with sales within \$100,000 of a \$1 million SSE threshold is estimated at 365. This suggests that any efforts to downsize or remain under the SSE would have little to no impact on the number or share of companies below the threshold.

6. How are sales tax compliance costs related to firm size?

To the extent that compliance costs are fixed, they represent a larger share of profits for smaller-scale enterprises. Some mechanisms are in place to alleviate much of the compliance burden, even for smaller retailers. First, the Marketplace Fairness Act calls for states to provide free software to online retailers to calculate the tax. Additionally, the sales tax computation, collection, and submission functions can generally be outsourced to third-party service providers for a fee, and the Marketplace Fairness Act relieves firms from penalties as long as approved software and vendors are used.

7. How do small online retailers differ from larger ones?

Online sales grew more quickly for smaller online retailers than for larger firms between 2010 and 2011. This suggests that retailers below the SSE threshold in one year may find themselves at or above it by the following year. The smallest size class of

online sellers is dominated by web-only retailers. Their share declines quickly as size increases; correspondingly larger shares of the larger size classes are increasingly made up of Retail Chains. Larger retailers have more unique product codes on their web sites, significantly more visits and unique visitors per month, and their response times are shorter. The share of retailers with a store locator feature on their web site, a store pick-up option, or catalog quick-order availability increases with retailer size. Larger online retailers are more likely to be in the Apparel/Accessories, Computers/Electronics and Mass Merchant categories. Conversely, the share of retailers in the Automotive Parts/Accessories, Flowers/Gifts, Food/Drug, Housewares/Home Furnishings, Pet Care, Sporting Goods, and Toys/Hobbies categories declines with retailer size. This suggests that an SSE policy would represent a more significant burden to retailers in particular sales categories if the potentially exempt retailers that are not in our data reflect the characteristics of our smallest category of included companies.

To summarize, an SSE provision would reduce administration and compliance costs for small online merchants, but it would also increase the possibility of behavioral responses by both retailers and their customers (thus reducing economic efficiency and overall welfare). It would also reduce the potential revenue gains to state and local governments by exempting a portion of online sales from taxation. Small firms would not necessarily be harmed or helped by legislation such as the Marketplace Fairness Act. The uneven sales tax collection playing field in the current policy environment has helped many small online retailers at the expense of many small Main Street vendors. Existing Main Street vendors—small and large alike—would continue to be disadvantaged relative to many online and mail-order vendors that would be protected by an SSE. At the same time, while small out-of-state firms would continue to benefit from the differential treatment made possible by the SSE, some of those firms might be discouraged from growing above the SSE threshold. Main Street vendors and online firms that crossed the threshold would have to bear the compliance costs associated with collecting the tax as well as the potential loss in sales that could be expected among firms that have to collect the tax. As a result, firm growth rates could be expected to slow significantly after they crossed the SSE threshold. The end result is that the economy would likely be composed of a larger-than-efficient number of small e-commerce firms.

Introduction

Sales taxes are a critical component of government revenue systems at the state and local levels in the United States. They account for nearly one-third of all state-level tax revenue and nearly one-quarter of all state and local tax revenue. Despite these high percentages, state and local sales tax systems are facing significant pressure for a number of reasons, including the recent growth in online and other remote transactions that take place between buyers in one state and sellers in a different state (or country). In many cases, the out-of-state seller has what is called *nexus* in the buyer's state—often some form of physical presence, such as a store or warehouse—and collects the appropriate sales tax and remits it to the buyer's state tax authorities. In other cases, however, the out-of-state seller is not connected to the buyer's state and no tax is collected.

All states with general sales taxes have companion “use tax” systems that are intended to capture the tax revenue that would have been collected had the out-of-state sale taken place in the buyer's state of residence. In other words, if a buyer purchases something from an out-of-state seller, and if that item would have been taxable in the buyer's state, then the buyer technically owes use tax if the seller does not collect and remit the equivalent sales tax on his or her behalf. Compliance with state use taxes has historically been low, creating a tax haven for online and other out-of-state sellers.

As the internet has grown along with online shopping, the impact of this tax wedge has become even more important for state and local governments. Buyers have responded to the tax difference between local and remote sales by shopping more from online sellers, and this pattern has contributed to a long-term erosion of the state and local sales tax base. Bruce, Fox, and Luna (2009) forecast a 2012 state and local revenue loss of \$11.4 billion as a result of online transactions. E-commerce has continued to grow rapidly since the Bruce, Fox, and Luna report, suggesting that state and local revenue losses have also grown. In response, state and local governments have gone to great lengths to pursue legal and policy options to restore their shrinking sales tax base in order to maintain the level of public services. A few states have successfully pursued so-called “Amazon laws” and other changes to assert that remote sellers in fact have nexus in their state. Others have gotten together to push for federal law changes that redefine the concept of nexus for sales tax purposes. At least among state and local (and some

federal) policy makers, the question has turned from one of *whether* online sales should be taxed in an equivalent manner to local sales to *how* they should be taxed.¹

These developments have important implications for America's small businesses. On one hand, the current tax environment favors remote online sellers *vis-à-vis* local sellers. Jordan (2012) and Hall (2013) are among those providing anecdotal evidence suggesting that some local sellers have actually gone out of business as a result of being unable to compete with their tax-advantaged remote counterparts. On the other hand, many online sellers are themselves small businesses, so the tax environment has afforded them a significant competitive advantage. These online companies are concerned about the potential for a policy change at the federal level that might require them to collect and remit sales taxes on all taxable purchases, which would require them to keep track of state and local tax rules and rates and reduce their price advantage.

In recognition of this, all of the serious federal policy proposals have included some form of small seller exception (SSE) in order to protect the smallest sellers from being driven out of business by a new tax collection responsibility. The discussion that follows examines the potential impacts of the various SSE policies on American small businesses, focusing on the impact on online companies. It makes use of available data from *Internet Retailer's* Top 500 and Second 500 Guides, which provide a wealth of information—including internet sales volumes—for the top 1,000 online sellers by sales volume each year. The sales among these companies represent the majority of all American online business-to-consumer e-commerce. This resource is supplemented with data from the U.S. Census Bureau's E-Stats and Annual Retail Trade Survey programs and Dun & Bradstreet's Million Dollar Database in order to gain a broader perspective on the importance of small online sellers. These data are used to estimate the number, total sales volume, and other important characteristics of small firms that would benefit from a series of potential SSE policies.

The report begins with a brief overview of sales and use taxes in the U.S. then turns to a survey of the legal environment surrounding online transactions. A discussion follows of the current pressures on sales and use taxes, with a focus on effects of e-commerce on sales tax structures. Congress has the authority to regulate interstate commerce and to enact legislation to allow states to require remote firms to collect the tax; legislation is currently being considered which includes an SSE. While no prior empirical analysis has been conducted on the impact of SSEs on small businesses, the relevant literature and the expected effects on business activity are examined. After providing a primer on the economics of small seller exceptions, seven research questions are presented, along with a discussion of our empirical methodology and data. These

¹For an early discussion of the economic arguments surrounding the taxation of online commerce, see Bruce, Fox and Murray (2003). For a more recent treatment of the relative taxation of online and local sales, see Zodrow (2006).

questions include how many firms will have a collection responsibility if current legislation passes, and how much e-commerce is likely to be affected.

A Brief History of Sales and Use Taxes in the U.S.

Forty-five states currently impose a general sales tax. (Alaska, Delaware, Montana, New Hampshire, and Oregon do not.²) In 2012, state sales tax receipts amounted to \$242.7 billion, or 1.58 percent of state gross domestic product (GDP). The sales tax receipts are down slightly from 2011 when the tax raised \$234.5 billion or 1.59 percent of state GDP. State sales taxes accounted for 30.5 percent of total state tax revenues in 2012, second only to the personal income tax (35.3 percent).³ The sales tax share of tax revenues, however, is somewhat below the 33.6 percent peak share of revenues generated in 2003. In addition, local governments in 35 states impose a sales tax, with local governments in the average state raising 11.2 percent of revenues with the sales tax in 2009. The sales tax share amounts to only 22.5 percent of combined state and local revenues because the property tax is such a dominant local revenue source (2011 data).⁴ State reliance on the sales tax differs dramatically across the U.S., as illustrated in Figure 1. Washington generates the largest share of its tax revenue from sales taxes, at 60.2 percent. Florida, South Dakota, Tennessee, Nevada, and Texas also raise more than one-half of their revenues with a sales tax. Not surprisingly, none of these states has a broad-based personal income tax.

Sales tax rates and bases vary widely for those states employing the tax. The median state levies a 6 percent rate. Only one state, Colorado, is below 4 percent (at 2.9 percent), and six states, led by California at 7.5 percent, impose levies at 7 percent or above.⁵ State rates have consistently risen over time. For example, the median rate was 3.25 percent in 1970 and 4 percent in 1980. Rate increases have tended to concentrate in the years during or immediately after a recession. Local sales tax rates can add significantly to the state rate. Tennessee levies the highest average combined state and local tax, at 9.45 percent.⁶ Individual local governments in 11 states impose rates

² A number of Alaska municipalities levy sales taxes.

³ These statistics are drawn from data provided by the U.S. Bureau of the Census, available at <http://www.census.gov/govs/statetax/index.html>.

⁴ The property tax generated 33.1 percent of combined state and local tax revenues, easily the largest share of any tax. States only generated about 3 percent of total property tax revenues. The most recent local tax data are only available for 2011.

⁵ State sales tax rates are compiled by the Federation of Tax Administrators and can be found at <http://www.taxadmin.org/fta/rate/sales.pdf>.

⁶ State and average local sales tax rates are compiled by the Sales Tax Clearinghouse and can be found at <https://thestc.com/STRates.stm>.

sufficient to cause the combined state and local rate to exceed 10 percent in some places, with Arizona having the highest maximum rate.

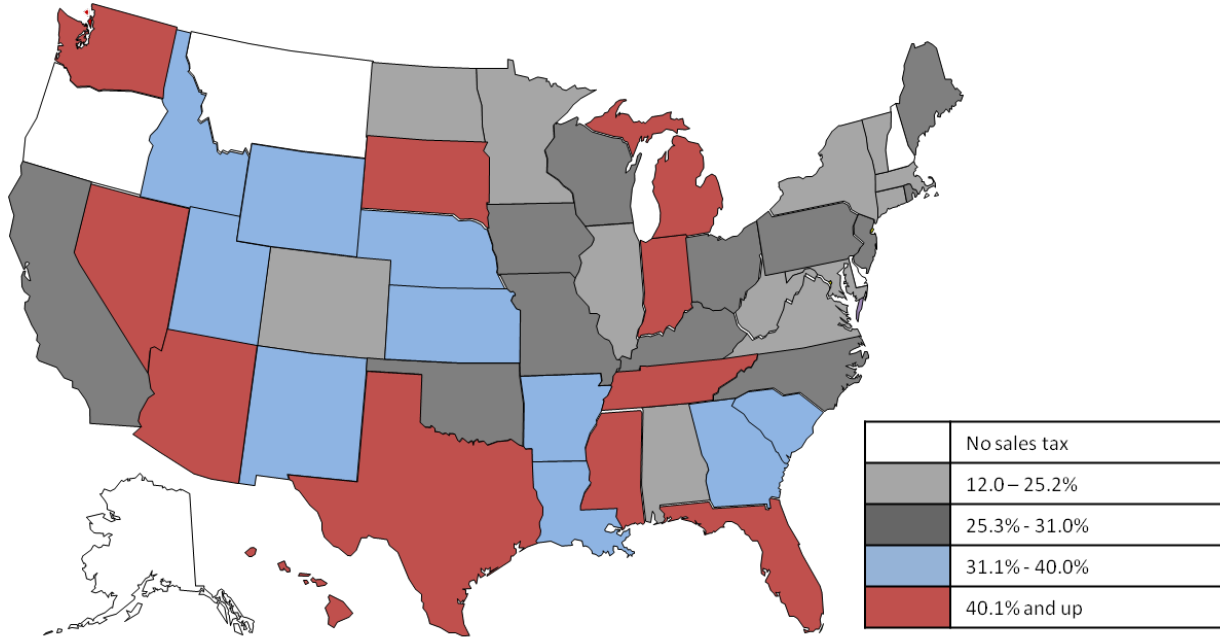
The character of every tax is determined by its taxable base. Economists evaluate sales taxes as levies on consumption, but the taxes generally fall far short of broad taxes on consumption.⁷ Governments must use a combination of exemptions and additions to achieve the consumption base with a tax that is levied on transactions.

State and local sales taxes are generally imposed on a narrow set of transactions (referred to as the tax base). The sales tax base as a share of personal income is a standard measure of the relative breadth of state sales tax bases. The average state's base was 32.8 percent of personal income in 2010. The sales tax base has been narrowing for decades, having fallen from 53 percent of personal income in 1979. Three main factors have driven the decline. First, states have tended to narrow the base by exempting items such as food for consumption at home and more recently states have begun to exempt certain items of clothing. Some of the exemptions may represent good policy, such as when additional business purchases are exempted, but they all serve to narrow the base and reduce revenue. Second, consumers have made relative shifts away from the purchase of goods and towards the purchase of services. For example, durable and non-durable goods comprised 52.6 percent of consumption in 1979, but represented only 34 percent in 2011. This is important because services are much less likely to be included in the base, so the relative shift away from goods and toward services tends to reduce the taxable share of consumption. Further, much of the shift has been to health care, which is particularly unlikely to be part of the sales tax base. Third, rising remote purchases have narrowed the base because the sales tax is often more difficult to collect if the seller does not have taxable presence in the state. For example, the Census Bureau reported \$4.1 trillion in e-commerce sales in 2011 (including sales by manufacturers, wholesalers, service providers, and retailers), up from essentially no e-commerce sales in 1998.⁸

⁷ Cline, Phillips, and Neubig (2013) estimate that only 24 percent of consumption is taxed. Sales tax bases are generally larger shares of personal income because many business inputs are also taxed.

⁸ Complete Census e-commerce data can be found at <http://www.census.gov/econ/estats/2011/all2011tables.html>.

Figure 1. State Sales Tax Collections as a Share of Total State Tax Revenues, 2011



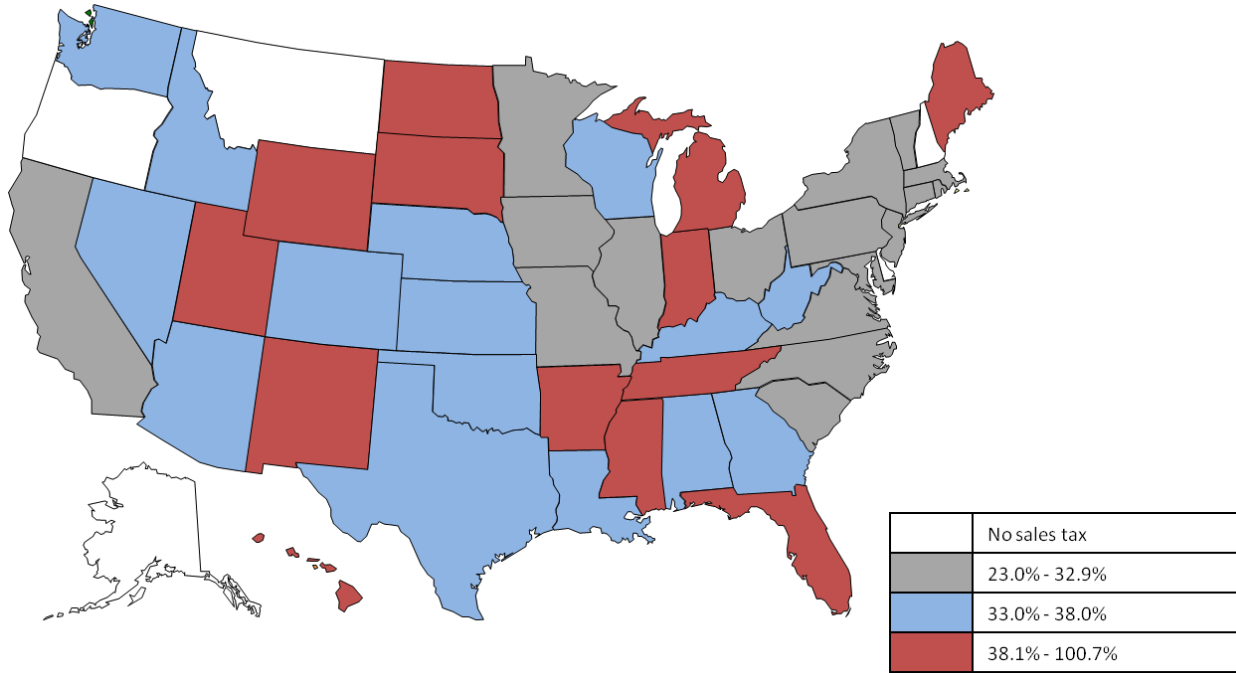
Source: Authors' calculations using data from the U.S. Bureau of the Census as tabulated by the Federation of Tax Administrators (<http://www.taxadmin.org/fta/rate/11taxdis.html>).

As with every aspect of the sales tax, states differ widely in the set of items they tax. As displayed in Figure 2, the tax base varies from over 100 percent of personal income in Hawaii, to less than 30 percent in New York and Illinois.⁹ Most states began with sales taxation of tangible personal property and allowed exemptions for business purchases for resale or for business inputs that become component parts of final manufactured products. Most states have slowly expanded the base to include a narrow set of services but have also expanded the set of exemptions for items such as food for consumption at home.¹⁰ The Federation of Tax Administrators identifies 168 services that could be considered for taxation and the median state taxes about 50 of these. At the upper end of states, Hawaii taxes 160 services and Washington State 158 and at the lower end Colorado taxes only 15 services and Illinois 17 services. States also include many business input purchases in the sales tax base, though this is inconsistent with a sales tax on consumption purchases. One recent study by Cline, Phillips, and Neubig (2013) has shown that 44 percent of the sales tax base is estimated to be levied on business inputs (business-to-business transactions).

⁹ Hawaii's tax base exceeds personal income because the state has relatively few exemptions and many items may be subject to tax more than once.

¹⁰ The Federation of Tax Administrators maintains an online listing of services taxed in each state at <http://www.taxadmin.org/fta/pub/services/services.html>.

Figure 2. Sales Tax Bases as a Percent of Personal Income, 2010



Source: Authors' calculations using data from the U.S. Bureau of the Census State Government Tax Collections (<http://www.census.gov/govs/statetax/>) and adjustments based on calculations by Mikesell (2011).

The Legal Framework Surrounding Remote Commerce, and State Responses

The Due Process and Commerce Clauses of the U.S. Constitution can in principle limit state and local government taxation. The Due Process Clause requires that taxation meet basic tenets of fundamental fairness, but as it is not currently a limitation on the taxation of e-commerce, it is not considered further here. The Commerce Clause limits state and local governments from distorting interstate commerce. These limitations are imposed both by federal court constraints and by congressional legislation. The U.S. Constitution gives Congress control over interstate commerce, which means that congressional legislation can define when state or local governments inhibit interstate commerce.

The Courts have ruled that businesses must have presence in a state before they can be taxed by a state or can be required to collect and remit the state's taxes. *Nexus* is the minimum presence necessary to meet Constitutional standards for taxation. Congress can define nexus when the Commerce Clause is involved (but not when Due Process is involved), and has chosen to do so in some cases. In other cases Congress has left it to the Courts to determine whether taxpayers have nexus.

Building upon an earlier decision in *National Bellas Hess v. Illinois Department of Revenue* (386 U.S. 753, 1967), the U.S. Supreme Court in *Quill v. North Dakota* (504 U.S. 298, 1992) determined that firms must have physical presence before they can be required to collect the state sales tax. However, the Court did not define physical presence and some states continue to push the envelope regarding what constitutes physical presence. The Court emphasized that the *Quill* ruling applies only to the sales tax and encouraged Congress to enact a nexus standard. Congress has failed to establish a standard to date, but three bills seeking to define a nexus standard for e-commerce were introduced in 2011 and the Marketplace Fairness Act was introduced in 2013.

States have taken four broad approaches to enhance the collection of sales tax on remote sales: broadening nexus definitions, working together, seeking to collect use taxes, and imposing reporting requirements. Nexus definitions have been expanded to claim "affiliate" nexus through ownership of related parties, affiliate nexus by relationship with a contractor, and "click-through" nexus. The definition of physical presence continues to be considered by states, though the courts could always disallow a state definition. Nexus clearly is established through any form of owning or leasing real or personal property but a number of states have legislated more expansive definitions of

physical presence. Nexus has been asserted based on having company-owned vehicles in a state or relying on third party distributors to ship or deliver goods in the state. Some states have also asserted that having a local phone number, being listed in the phone book or having a bank account or a P.O. box in the state is sufficient presence. Some states also argue that nexus is established by having employees in a state, including to make sales calls or provide repair services.

Nexus through ownership of related companies is asserted when the state argues that one component of an overall firm has nexus because another firm under the same corporate umbrella has nexus. Affiliate nexus generally ignores corporate structures and focuses on the relationships between in-state retailers and remote vendors, such as shared ownership or trademarks. Affiliate nexus has been argued in cases where the in-state seller provides any services for the remote firm. For example, Arkansas asserts nexus over a remote firm if a related business using the same name has physical presence in the same state (such as could be true with Walmart and Walmart.com). Nexus has also been asserted in some states for a firm that is represented by a contractor that does activities in the state on the firm's behalf, such as repairing and maintaining equipment. A statute being considered in Florida offers another example. According to CCH (2013), nexus would be established if a person, other than a common carrier:

- Sells a similar line under a different name;
- Maintains an office, warehouse, etc. to facilitate delivery or services sold by the dealer;
- Uses trademarks that are the same or substantially the same as the dealer;
- Delivers, installs, assembles, or maintains for the dealer;
- Facilitates the dealer's delivery of property; or
- Conducts any other activities that are significantly associated with the dealer's ability to maintain a market in Florida.¹¹

Click-through nexus provisions assert nexus in a state to a remote firm when affiliated internet-based firms with physical presence in the state direct sales to the remote firm. The legislation generally requires in-state buyers to click through from the affiliated firm's website to the remote firm's website to make purchases. The affiliate is normally paid a commission for the sale. A small seller exception of some type might exist for the requirement to come into effect. Arkansas, Connecticut, Illinois, New York, North Carolina, Pennsylvania, Rhode Island, and Vermont are among the states that assert some version of click-through nexus. Kansas' Governor signed legislation on April 16, 2013 enacting the latest click-through nexus statute, which includes a \$10,000 *de minimis* rule. The West Virginia legislature also approved click-through nexus on April 1, 2013. Most of these states, such as New York, have passed legislation to enact click-

¹¹ CCH was formerly known as Commerce Clearing House.

through nexus legislation, but the Pennsylvania Department of Revenue presumes that click-through nexus is present under its existing sales tax statutes. New York law presumes the seller is doing business in the state if the seller “contracts with New York residents and pays them a commission for referring customers to its website” (Humphrey, 2013). Amazon challenged the New York law arguing that the law violated the Commerce Clause because it requires firms without physical presence to collect and remit sales taxes. The New York court denied the claim and said that physical presence did not need to be substantial and can be met by economic activities performed on behalf of the seller. Effectively, the court ruled that the relationship between Amazon and the affiliates was sufficient to establish substantial nexus. The Illinois courts are still considering the issue.

The Streamlined Sales Tax Governing Board is a cooperative effort by states to simplify the sales tax so that Congress is more likely to enact legislation allowing states to require collection by remote vendors. The Streamlined Sales Tax Project has been underway for more than a decade and 24 states are currently in full compliance with the Streamlined Sales and Use Tax Agreement (SSUTA). Alternatively, states may seek to return to the courts arguing that the simplifications implicit in the SSUTA plus other changes in technology and retailing have resulted in a sales tax that is no longer an impediment to interstate commerce. States and the District of Columbia can expect two benefits from becoming a full member of SSUTA: additional revenue and simplification of the sales tax. According to Vock (2013), more than 1,900 firms are voluntarily complying with the SSUTA, which has resulted in an additional \$1.2 billion in collections since 2005. Significant revenues can only be expected from the SSUTA if Congress enables members of SSUTA to require remote vendors to collect the sales tax.

Buyers are required to remit the use tax in circumstances where the sales tax has not been collected. Use tax compliance is generally regarded as the weakest of any state tax. At least 25 states seek to enhance compliance by including a line on the individual income tax return requiring tax filers to report use tax due. According to Manzi (2012), New York receives the greatest amount of revenue from this provision at \$34.6 million. California is the only other state to collect more than \$5 million. Nine of the states obtain less than \$1 million. Further, in at least one-half of the states with the line on their income tax return, one percent or less of income tax returns report any liability. Still, states like Louisiana, Massachusetts and Michigan have seen significant growth in use tax revenues after the line was added to returns. State provisions differ to some extent. For example, Manzi (2012) finds that slightly more returns include sales tax liability and the amount is slightly higher in states requiring taxpayers to clearly indicate no liability if they have none.

Tennessee established an agreement with Amazon, which has two distribution facilities in the state, to not require Amazon to collect the sales tax on Tennessee sales until January 1, 2014. The agreement required Amazon to email all Tennessee buyers and

alert them of a potential use tax liability. Amazon sent out separate email blasts for 2011 purchases and 2012 purchases. Tennessee experienced a significant increase in use tax returns following each email, but the combined revenue appears to be less than \$1 million. Several states, including Oklahoma, South Dakota, Vermont and most recently Kentucky, have enacted legislation that requires remote vendors without physical presence to report certain broad information about sales into the state and to alert buyers that they may be responsible for use taxes. South Dakota and Vermont's legislation appears to have no penalties for vendors who fail to comply. The Direct Marketing Association (DMA) sued Colorado arguing that the statute is unconstitutional. The DMA position was upheld in federal court, but Colorado is appealing the ruling.

None of these approaches is likely to be very effective, though they may generate some revenues and are ways of increasing pressure for federal legislation. As things currently stand, federal legislation (or a reversal of *Quill v. North Dakota*) is the only effective means of significantly altering states' ability to collect taxes that are due on remote sales, and the impact of federal legislation will depend on the details of the legislation and specifically the size of the small seller exception.

The Federal Policy Response

Three bills requiring remote vendors to collect state sales taxes were introduced in the U.S. Congress during 2011: the Main Street Fairness Act,¹² the Marketplace Equity Act,¹³ and the Marketplace Fairness Act.¹⁴ The Marketplace Fairness Act of 2013 was introduced in February 2013 and has received much more legislative attention. All of the bills provide states that simplify and harmonize their sales with the ability to require certain remote vendors to collect their sales tax. Differences between the bills arise mainly in the simplification and harmonization criteria and the small seller exception that determines the sales (or employment) that a firm must make before it can be required to collect the tax. A brief summary of each is provided here.

Main Street Fairness Act. Under the Main Street Fairness Act, simplification and harmonization would have occurred when states became full members of the Streamlined Sales and Use Tax Agreement (SSUTA). Thus, states would have to comply with provisions of the SSUTA in order to be able to require remote vendors to collect their sales tax. *The small seller exception in the Main Street Fairness Act was unspecified.*

Marketplace Equity Act. The Marketplace Equity Act developed a unique set of criteria that would have to be satisfied before states could require remote firms to collect the sales tax. The criteria had some similarities to the SSUTA, but were not precisely the same. Specifically, states would have to:

- develop a *small seller exception*, which would exempt firms with \$1 million or less in national sales or \$100,000 or less in sales to the state which would require the collection responsibility;
- have a remote seller tax return and a single tax authority for remote sellers;
- have a single set of definitions for taxable items across the state;
- impose either a blended state and local tax rate, a maximum state rate, or an applicable destination tax rate for each local jurisdiction into which sales are made (the first and second of these alternative rates are not permitted to exceed the average state and local rate applicable to non-remote sellers); and

¹² S. 1452, 112th Cong., 1st Sess. (2011); H.R. 2701, 112th Cong., 1st Sess. (2011).

¹³ S. 1832, 112th Cong., 1st Sess. (2011).

¹⁴ H.R. 3179, 112th Cong., 1st Sess. (2011).

- publish detailed information about the collection requirements about six months before the collection requirements can be imposed on remote sellers.

Marketplace Fairness Act of 2011. The original Marketplace Fairness Act of 2011 mixed the approaches of the other two bills by allowing states to either be in compliance with the SSUTA or to comply with a set of other criteria. *The small seller exception under the original Marketplace Fairness Act was set at \$500,000.* Under the alternative criteria that would allow states to require remote vendors to collect the tax, states would have had to:

- provide a single state agency to administer all sales and use tax legislation, a single audit for all state and local taxing jurisdictions, and a single sales tax return for remote sellers;
- develop a uniform sales tax base for state and local governments;
- require remote vendors to collect a “destination tax” (based on the buyer’s residence) for every jurisdiction;
- provide software and services to facilitate collection by remote sellers;
- relieve sellers from liability for tax collection error resulting from information provided by the state; and
- provide at least 30 days notice for local tax rate changes.

Marketplace Fairness Act of 2013. The Marketplace Fairness Act of 2013 was introduced earlier in 2013 with 23 sponsors in the Senate and 48 in the House of Representatives. *The legislation applies only to firms with gross annual online sales during the preceding year of at least \$1 million.* The bill requires that firms be aggregated if “(1) such persons are related to the remote seller within the meaning of subsections (b) and (c) of section 267 or section 707(b)(1) of the Internal Revenue Code of 1986; or (2) such persons have one or more ownership relationships and such relationships were designed with a principal purpose of avoiding the application of these rules.” The bill would permit states to require online and other remote vendors to collect the sales tax for the destination state in the same manner done by bricks and mortar firms today. Where applicable, the bill transfers responsibility for remitting the tax from buyers to sellers. Compliance costs for businesses would rise as they collect the tax, but compliance costs for buyers, to the extent they comply with current use tax laws, would fall accordingly. States must agree to simplify their tax structure using one of two options before they can require firms to comply. States can either join the SSUTA or undertake simplifications including the following:

- provide firms with advance notification of sales tax rate changes;
- use a single tax collection agency for both state and local sales taxes;

- create a uniform sales tax base for the entire state;
- use destination sourcing;
- provide free sales tax compliance software; and
- relieve remote sellers of any liability associated with incorrect compliance because of errors made by a certified software provider.

An advisory vote on this legislation taken in the Senate passed 75 to 24, and several procedural measures passed by strong margins. The Senate passed the legislation 69 to 27 on May 6, 2013. The House has yet to begin considering the bill. Interestingly, Maryland, Missouri and Virginia have already enacted budget legislation that would use the revenues generated from federal passage of the legislation.

Small Seller Exceptions in Practice

The Marketplace Fairness Act of 2013 and the predecessor bills all contained small seller exceptions, though with some differences in definition. Virtually every major federal, state, and local regulation involves some form of small firm exception in recognition of the disproportionate compliance burden that is borne by smaller companies.¹⁵ Most of these are employment size thresholds, whereby firms with less than a certain number of employees are exempt from the regulation in question.¹⁶ States generally do not include SSEs in their sales taxes, so there is relatively little experience with the imposition of SSEs in the U.S. While no state exempts small sellers from the sales tax, some states allow them to file quarterly or semi-annually rather than monthly in an attempt to reduce the compliance burden. States also often allow special treatment under the sales tax for some types of businesses, such as those making occasional sales. The more common manner of recognizing the collection burden on smaller sellers in existing state sales tax policy, however, is to provide a system of vendor discounts as partial compensation, although such systems have been reduced over time.

SSEs may be components of other state taxes. For example, Ohio provides a \$1 million SSE for its commercial activity tax (CAT) that was first imposed in 2006. The tax is levied on all businesses (not only those having sales subject to the sales tax). The CAT levies a 0.26 percent tax on total gross receipts, with many fewer exemptions than exist with the sales tax. Firms with sales below \$1 million remit an annual \$150 minimum tax, and the combination of the low rate and the minimum tax reduce the revenue impact from exempting small firm receipts.

The SSE has similarities to the minimum dollar thresholds that are components of value added taxes (VAT) around the world. The threshold sets the minimum sales volume that creates a requirement for complying with the tax (becoming a registered trader). From a revenue perspective, a key advantage of the VAT relative to the sales tax is that the treasuries receive VAT on supplier sales to firms not required to comply with the VAT (since the tax is collected at every stage of the supply chain). Also, the minimum thresholds do not normally apply specifically to cross-border sales. VAT thresholds differ dramatically in size, but are generally low in developed countries. As one example, Canada has a \$30,000 (Canadian) threshold. VAT thresholds, which have been very

¹⁵For an exhaustive treatment of compliance costs by firm size, see Crain and Crain (2010); Crain (2005); Crain and Hopkins (2001); and Hopkins (1995).

¹⁶For a critical evaluation of employment-based exemption standards, see Bruce (2010).

contentious in the European Union, range from zero in some countries such as Italy and Spain, to the United Kingdom where firms must register and remit VAT if their gross revenues exceed £79,000.¹⁷ Further, sellers into the UK from other European Union countries must only file VAT returns in the UK once their inward sales exceed £70,000. Ireland requires firms making distance inward sales of €35,000 or more to comply with the VAT, while other minimum thresholds apply for different types of vendors.

¹⁷ Firms are permitted to remit a lower percentage tax if their receipts are below £230,000. Additional details regarding the UK VAT can be found at <https://www.gov.uk/vat-registration-thresholds>.

Evaluating Small Seller Exception Policies

Decisions both on whether to allow a small seller exception (SSE) and on its size threshold should take into account the implications for state and local sales tax revenues, the possible distortions of economic activity, and the magnitude of administrative and compliance costs. Generally, firms should be required to collect the sales tax if the social value of the revenue in the public sector (in support of public services) exceeds the administrative and compliance costs plus any economic distortions associated with behavioral responses to the SSE.¹⁸

Administration and Compliance

The case for an SSE lies in the potential for lowering both administrative costs for state tax departments and compliance costs for businesses that remit the tax. Specifically, the concern is that compliance costs can be relatively high compared with sales or profits for small firms that must file returns in up to 45 states (plus local governments in 34 of these states plus Alaska). In principle, large fixed costs of complying with many state tax structures can make it more expensive for smaller firms to enter the market or to sell in multiple states. A higher SSE threshold reduces the number of firms required to comply with state sales taxes, which essentially eliminates compliance costs for firms below the threshold and reduces the number of taxpayers that states must monitor.¹⁹ We estimate the number of firms that would be affected by various SSE thresholds in our results section below.

The SSE does not fully eliminate the administrative costs associated with firms below the threshold since states still must do some audit of whether firms meet the minimum threshold for compliance. The possibility exists that firms will intermittently comply as they exceed the threshold in some years but not in others. For these firms, compliance costs could be relatively large in non-exempt years since they must relearn some of the requirements. It should be noted that SSEs apply only to sellers, while buyers would still be legally obligated to remit the equivalent use tax if the seller does not collect and remit the sales tax. This use tax obligation carries other administration and

¹⁸ See Keen and Mintz (2004) for a formal conceptual development of such a rule with VATs.

¹⁹ Firms will need to keep accurate bookkeeping and accounting records for business purposes, but these should not be viewed as compliance costs.

compliance costs that surely exceed those from sellers remitting sales tax in most cases, at least to the extent that compliance occurs.

Economic Effects

Taxing all transactions in a similar fashion lessens distortions in business practices and consumer purchases. Conversely, imposing special rules can create unintended consequences. The SSE places a kink in the tax system where no vendor compliance is necessary below the legislated amount and full vendor compliance is necessary above the amount. Behavioral responses are possible when certain taxpayers are omitted from the tax, and the potential for distortions rises with the size of the SSE. Of course, many of these are hard to actually measure given existing research and available data. Consequently, we approach these issues by exploring the theoretical possibilities regarding the direction of any influence.

Consumers will be encouraged to buy from firms below the SSE not only because sales tax is not collected but also because of other potential savings that might be passed forward to the consumer as a result of the seller not having to collect the tax or bear other compliance costs. Consumers are likely to quickly become aware of which firms are not collecting the tax, perhaps through social media interactions or statements on firms' websites. Stambor (2013) demonstrates that Pinterest already provides similar price information, so it is not a stretch to imagine that sales tax collection practices for individual firms would be available on social media. The recent empirical literature provides evidence to support the notion that online shoppers are indeed tax-sensitive. For example, the findings of Ellison and Ellison (2009), Einav et al. (2013), and Goolsbee (2000), all of which explore the impact of sales taxation on the extent to which consumers shop and buy online, would lead us to predict that shoppers could be expected to move their purchases from non-exempt to exempt online retailers in response to a broader sales tax collection obligation.

On the retailer side, the range of possible responses is wide. While most retailers will likely continue to conduct business as usual, some might have an incentive to become or remain small in order to obtain or maintain a small seller exception. First, some firms might choose to locate just below the SSE threshold in order to avoid a compliance responsibility and to sell with a tax advantage. No firm would want to operate at a sales revenue level that is in the range between the SSE threshold and that amount plus the sales tax on the SSE amount (and likely for some additional higher level of sales) because their after-tax revenue would be lower than if they were operating just below the SSE.

Second, firms that are already above the SSE may not try to cut their size, or may exceed the limit one year, but then try to structure their activities to stay below the limit in future years. Vendors in certain industries, and particularly those characterized by

relatively low productivity, will be most likely to operate below the threshold.²⁰ As one example, companies could seek to avoid having to collect the tax by splitting into multiple businesses, each operating just below the SSE. A company selling both clothing and books, for example, could create separate entities for each product category. It is difficult to estimate the potential for this type of behavioral response to occur, but it is most likely to occur for smaller online retailers that are not already collecting sales taxes in a large number of states. We would also surmise that this type of impact would be reduced at lower SSE thresholds.

To be sure, the Marketplace Fairness Act calls for commonly owned firms to be aggregated when calculating the SSE, but companies could potentially side-step this provision by having other family members own companies or by forming different partnerships, among other options. The degree to which families are willing to engage in such behavior may differ widely, of course, but theory tells us that this type of behavior will at least be considered. In much the same way as states are currently grappling with matters of affiliate nexus, the federal legislation might need to consider additional provisions to attempt to stave off this type of response. Effects on firms can also result and can vary by firm size. Research has generally concluded that sales taxes are shifted forward to buyers, but the ability to shift the tax rests in part on a large share of firms complying with the tax.²¹ The likelihood is that firms complying with the tax, including both Main Street stores and online vendors, have lower sales and profits if many other firms are exempt from the tax, and those losses in sales and profits rise with the level of the SSE. On the other hand, the SSE may make it possible for firms that cannot distribute relatively fixed compliance costs across a large volume of sales to compete with larger firms.

Revenue Consequences

An SSE provision would necessarily reduce the revenues that could be realized by state and local governments following the enactment of a broader tax collection obligation. Additionally, a higher SSE threshold would mean lower potential revenue gains. Bruce, Fox and Luna (2009) concluded that a \$1 million SSE would reduce potential state revenues by at least 30 percent compared to a system without an SSE.

²⁰ Noncompliance tends to be high for businesses with high labor inputs and construction businesses.

²¹ For example, see Besley and Rosen (1999).

Research Questions and Data

The following sections provide detailed analyses for a series of key questions related to the size of firms undertaking online sales and the implications of an SSE. Several components of the impact of requiring online firms to comply with the sales tax are examined. Additionally, we examine what size of online retailer, if any, would most benefit from being exempted under an associated SSE. The seven research questions are as follows:

1. How many and what share of online retailers are small?
2. What share of online sales occurs among retailers above the SSE?
3. What are the impacts of various SSE levels?
4. To what extent are larger online retailers already collecting sales taxes?
5. How would federal legislation affect the number of retailers below the SSE?
6. How are sales tax compliance costs related to firm size?
7. How do small online retailers differ from larger ones?

Several data sources are used to explore these questions. The primary ones are *Internet Retailer's* Top 500 and Second 500 Guides, which include a wealth of firm-level information for the top 1,000 online sellers by online sales volume in each year.²² Second is *Internet Retailer's* Top 400 Europe report on the largest online firms in Europe. These resources, which are available in print format and via an online database, are the best available compendia of firm-level data for online retailers. No other resource provides a similar level of detail for such a large sample of large online retailers. The *Internet Retailer* data are used in conjunction with data from the U.S. Bureau of the Census Annual Retail Trade Survey, Dun & Bradstreet's Million Dollar Database, and the work of Bailey, et al. (2008) and Malowane and Siwek (2012) to estimate the overall size distribution of online retailers. Specific empirical methods are described in detail in each sub-section below. In cases where data are not available to answer some aspects of these questions, various theoretical possibilities are discussed.

²² *Internet Retailer's* reports analyze firms that primarily operate as retailers and serve the consumer market. Thus, our analysis is focused on business-to-consumer online transactions. We recognize that federal legislation such as the Marketplace Fairness Act of 2013 could also have important implications for business-to-business sales.

Results

Question 1: How Many and What Share of Online Retailers are Small?

Estimating the number of firms that would lie above an SSE threshold of \$1 million is not a trivial task. First, there is no single data source that includes information for all online retailers. Second, existing data often include worldwide sales rather than just American sales. The SSE within the Marketplace Fairness Act (as well as other legislation) is based on American sales only. Fortunately, the Top 500 and Second 500 Guides (henceforth referred to as the Top 1,000), include a wealth of information for the largest online retailers which can be used to approximate the broader distribution of online retailers.

The sales data provided for the Top 1,000 companies represent total worldwide online retail sales, and American online sales must be approximated from this information. This is done in two steps. First, the data are adjusted to remove European sales where possible. For some of the Top 1,000 companies, *Internet Retailer's* Top 400 Europe data include European online sales. European data for 30 of the Top 500 companies were matched. (None of the Second 500 could be matched.) Among those 30 companies, European web sales represented 26.6 percent of total web sales (ranging from 0.5 to 73 percent). Given this wide range, we chose to subtract actual European web sales for matched companies only. The remainder represents non-European sales for matched companies and global sales for all others.

Second, we adjust for the foreign share of the Top 1,000 companies' total sales. Estimating this share is difficult because data are not available, except for selected reports in the popular press. As one example, *Internet Retailer* reported in January 2012 that North American sales were only 55.5 percent of Amazon's global sales in 2011 (Brohan, 2012). With this in mind, we assume that *American* sales are 50 percent of Amazon's global sales for the purposes of our analysis. To adjust for other companies' non-American sales, we subtract 10 percent from total or non-European web sales.²³

This baseline approach yields a total of 974 companies within the Top 1,000 with estimated total American web sales above \$1 million. Interestingly, web sales fall quickly after the \$1 million mark, such that the company ranked 991 is the first one with less than \$500,000 in web sales. In other words, the difference in the number of companies captured by an SSE of \$1 million and \$500,000, is very small. Importantly, if

²³ Note that these assumptions have little to no bearing on our estimates of the number of companies that would be above an SSE sales threshold; they only affect our estimates of the share of e-commerce sales that would be included among those companies.

foreign sales are ignored and all non-European sales are included, only add six retailers would be added to the list of companies with online sales of at least \$1 million.

Regardless of the specific assumptions, the end result is a very small share of companies. The U.S. Bureau of the Census's 2010 County Business Patterns show a total of 664,058 firms in NAICS 44-45, Retail Trade. Thus, these 974 companies with online sales above \$1 million represent slightly less than 0.15 percent of all retailers.

What share of all *online* retailers would this represent? An estimate of the total number of online retailers is needed to answer this question. There is considerable debate about this number. Paul Misener, vice president of global policy with Amazon, recently testified that 2 million firms operate over the Amazon platform.²⁴ Bailey, *et al.*, (2008) provide an estimate of 5 million online sellers, based primarily on data from eBay. Both numbers suggest that the universe of online retailers (including the smallest sellers) is very large. While many of these firms may be non-American and others may be occasional sellers, the overall number suggests that the true number of online retailers is much larger than figures provided by available sources.

We approach this broader question in two different ways. First, we compare the above estimates from the Top 1,000 data to published figures from the Census and other sources. Second, we use the Top 1,000 data to statistically approximate the underlying size distribution of all online retailers as has been done in two prior studies.

Census's 2010 County Business Patterns show a total of 48,769 firms in NAICS 454 (Nonstore Retailers), of which 21,493 are in NAICS subcategory 4541 (Electronic Shopping and Mail-Order Houses).²⁵ The County Business Patterns data show that most (15,618) of these firms are in NAICS subcategory 454111 (Electronic Shopping).²⁶ Even if all of the largest 974 online retailers were in NAICS 454111, they would only represent about 6.2 percent of the total number of firms in that category. (All 974 of the top online retailers are not included, given that many of the largest online retailers also maintain vibrant bricks-and-mortar retail establishments). These 974 companies would represent only 4.5 percent of the total number of firms in NAICS 4541 and less than 2 percent of all Nonstore Retailers in NAICS 454.

Are these NAICS groupings good indicators of online retail? It is useful to compare these numbers to the distribution of e-commerce sales across NAICS groupings. Census' Annual Retail Trade Survey data indicate that about \$163.8 billion or just over 84 percent of the 2011 total of \$193.9 billion in retail e-commerce was among Nonstore Retailers (NAICS 454). The vast majority of this—about \$163.2 billion—was among

²⁴ A full transcript of the Congressional hearing in which this testimony took place is available at http://judiciary.house.gov/hearings/printers/112th/112-89_71403.PDF.

²⁵ Other Nonstore Retailer subcategories are Vending Machine Operators (4542) and Direct Selling Establishments (4543).

²⁶ Other subcategories within Electronic Shopping and Mail-Order Houses are Electronic Auctions (454112) and Mail-Order Houses (454113).

companies in the Electronic Shopping and Mail-Order Houses subcategory (NAICS 4541).

A related question remains as to how inclusive the Top 1,000 data are relative to the underlying distribution of online retailers. It is certainly possible that the probability of inclusion in the data is a declining function of online sales activity, such that some retailers near typical SSE thresholds are not listed. To the extent that online retailers with American online sales above \$1 million are not identified for inclusion in the Top 1,000, the number of online retailers above that particular SSE level could be somewhat higher than 974.

To place our estimate in a broader context, we first turn to another database of public and private companies in the U.S. and Canada, Dun & Bradstreet's *Million Dollar Database* (MDD), which is limited to companies with at least 20 employees or \$1 million in total sales. When we queried the MDD in May 2013, we found a much larger total of 149,744 companies in NAICS 454. A total of 28,992 of these companies were in NAICS 4541, but only 522 companies were in NAICS 454111. Interestingly, only 19,111 of the 149,744 companies in NAICS 454 and only 4,909 of the 28,992 companies in NAICS 4541 had annual sales of at least \$1 million. Even though these numbers include some Canadian companies, they suggest that our estimate might be on the low side. That said, we find that only 27 of the 522 companies in the MDD in NAICS 454111 had annual sales of at least \$1 million. This suggests that NAICS codes might not be the best indicator of industry group for companies in the MDD. As a check on this, we searched for companies that listed "Online Retailer" as their line of business. We found only 440 such companies that also had annual sales of at least \$1 million. This would suggest that our estimate is slightly overstates the number.

A recent report from Malowane and Siwek (2012) provides an estimate of the size distribution of online retailers. Their method, essentially a refinement of Bailey, *et al.*, (2008), uses a regression of cumulative retail sales on the log rank of firms ranked 251 through 500 in the Top 500 data to project cumulative retail sales for the remainder of the distribution of online retailers.²⁷ We use the same method but instead estimate the regression on firms ranked 501 through 1,000 in order to better fit the data for firms just outside the Top 1,000. The regression results can then be used to estimate online sales for companies of any rank.²⁸ We compare our results to those from Malowane and Siwek (2012) in Table 1 below, where we follow their assumption, based on Bailey, *et al.*, (2008) of 5 million American online retailers.

For comparison, Bailey *et al.*, (2008) estimate a total of 28,628 companies with total online sales of at least \$1 million, but their sales data are worldwide sales and their regression is estimated over the entire Top 500 data. Regardless, their estimate is still

²⁷ Bailey, *et al.*, (2008) estimate their model for the entire Top 500 companies.

²⁸ Our estimated equation is [Cumulative Sales] = \$110.1647 billion + [\$4.184131 billion*ln(rank)], while that estimated by Malowane and Siwek (2012) is [Cumulative Sales] = \$75.8437 billion + [\$8.2928 billion*ln(rank)].

only 0.6 percent of the total of 5 million online sellers. These data show that fitting the estimating regression on a set of companies that is more representative of (and closer in sales volume to) the firms not included in the available data results in smaller estimates of the number of omitted large online retailers.

To summarize, for any of the reasonable SSE levels being discussed, only a very small number of companies would actually be required to collect and remit sales taxes. We find 974 companies within the Internet Retailer Top 1,000, but the actual number could be nearly twice that—on the order of 1,817—given that smaller firms might not be included in the Internet Retailer data, as reflected in Table 1. These companies would be less than 0.1 percent of all online sellers.

Table 1: Estimated Number and Share of Retailers with Sales above Various SSE Thresholds

SSE Threshold	Sellers Above the SSE Threshold			
	Authors		Malowane and Siwek (2012)	
	Number	Share (percent)	Number	Share (percent)
\$150,000	12,114	0.24	50,000	1.0
\$250,000	7,269	0.15	30,000	0.6
\$500,000	3,634	0.07	15,000	0.3
\$750,000	2,423	0.05	10,000	0.2
\$1 million	1,817	0.04	7,500	0.15

Source: Authors' calculations using data from the 2012 *Internet Retailer* Top 500 and Second 500 Guides, and Malowane and Siwek (2012).

Two caveats are in order. First, the number of companies that would be subject to a tax collection obligation may be slightly over- or underestimated since we are not able to perfectly identify and remove foreign sales from total online sales. Second, we are not able to differentiate other remote sales, such as via telephone/catalog, in our analysis. This is important, as a new collection obligation could apply to all remote sales, not just e-commerce. This will cause us to underestimate the number of companies that could be subject to a collection obligation.

We anticipate that other foreign sales are a relatively small component of total e-commerce among the largest firms, and e-commerce is a significant and growing percentage of total remote commerce.²⁹ We expect that a full accounting of these issues

²⁹ Census data provide evidence that e-commerce has grown much more rapidly than catalog sales. For example, among non-store retailers, e-commerce firms had \$21.2 billion or 19.2 percent of total non-store retail business-to-consumer sales in 2000. Most other remote sales are catalog sales. By 2011, e-commerce had risen to \$163 billion or 56 percent of total non-store retail sales. In other words, non-store retailer e-

would have only modest impacts on the number of firms above the SSE. *Our basic conclusion remains that an SSE of \$1 million would exempt the vast majority of online retailers.*

Question 2: What Share of Online Sales Occurs among Retailers Above the SSE?

Our baseline approach yields a total of \$138.7 billion in American web sales in 2011 among the top 974 online retailers with sales of at least \$1 million. We can compare these estimates to published e-commerce data from the U.S. Bureau of the Census, based on the *Annual Retail Trade Survey*. The latest Census E-Commerce Report, released in May 2013, shows that total U.S. retail e-commerce was \$193.9 billion in 2011.³⁰ That said, Bailey, *et al.*, (2008) conclude that these numbers underestimate total e-commerce by about 20 percent. Using their finding to inflate total underlying online retail yields an estimated total of \$242.1 billion. Thus, approximately 57.3 percent of total U.S. retail e-commerce takes place among the largest 974 companies with total online sales of at least \$1 million each.³¹ For comparison, Bailey, *et al.*, (2008) estimate that the top 28,628 firms with sales of at least \$1 million represented approximately 56.7 percent of total online sales. Additional data are provided in Table 2 below.

Table 2: Share of Total Estimated American Online Retail among the Top Retailers

Online Retailers	Firm Sales Range Greater Than	Total Sales Volume	Share of National Online Sales (percent)
Top 10	\$2.7 billion	\$58.4 billion	24.1
Top 25	\$1.2 billion	\$84.4 billion	34.9
Top 50	\$440.0 million	\$100.6 billion	41.6
Top 100	\$189.0 million	\$115.0 billion	47.5
Top 250	\$49.9 million	\$129.1 billion	53.3
Top 500	\$13.3 million	\$135.8 billion	56.1
Top 750	\$5.0 million	\$138.0 billion	57.0
Top 974	\$1.0 million	\$138.7 billion	57.3

Source: Authors' calculations using data from the 2012 *Internet Retailer* Top 500 and Second 500 Guides, the U.S. Bureau of the Census, and Bailey, *et al.* (2008).

commerce grew 20.4 percent annually from 2000 to 2011 while other non-store retailer sales rose only 3.4 percent annually.

³⁰ Complete Census Retail Trade data are maintained at <http://www.census.gov/retail/>.

³¹ To be sure, this percentage is overstated to the degree that the Census data do not adequately capture the sales of the smallest online retailers.

Two other sources provide anecdotal data on the distribution of e-commerce sales by size of vendor, as measured by e-commerce sales. Separate surveys conducted by the States of Washington and Tennessee each found that about 50 percent of sales are made by firms with receipts below \$5 million, though the surveys likely only included firms that are registered traders for tax purposes in the respective states.³²

Taken together, these numbers indicate that for any of the reasonable SSE levels being discussed, while only a small number of companies would actually be required to collect and remit sales taxes, these companies would probably represent more than half of total U.S. online retail sales.

Question 3: What are the Impacts of Various SSE Levels?

The preceding analysis suggests that *a higher SSE threshold would exempt a slightly larger number of retailers but would still capture the majority of online retail activity.* For example, an SSE of \$5 million would only include about 750 of the Top 1,000 companies, but those companies would still represent about 57 percent of online retail sales (see Table 2).³³ Conversely, *a lower SSE threshold of \$500,000 would include nearly twice as many companies as an SSE of \$1 million, but it would not add measurably to the covered share of total online retail.*

Question 4: To What Extent Are Larger Online Retailers Already Collecting Sales Taxes?

The above analysis suggests that at least 974 and as many as 1,817 online retailers could be required to collect and remit sales taxes in the event the Marketplace Fairness Act passes with an SSE threshold of \$1 million in U.S. remote sales. It is important to note, however, that many of these firms are already collecting sales taxes for a large number of states in which they currently have nexus. To get a more accurate sense of the extent to which a tax collection obligation would result in a new requirement for these companies, we now turn to an exploration of some detailed nexus data hand-collected by researchers at the University of Tennessee's Center for Business and Economic Research.³⁴

To build the detailed nexus data, researchers selected a sample of current or former Top 500 companies and visited their web sites, attempting to place orders from every sales-taxing state without actually completing any orders. If sales taxes were added

³² The Tennessee and Washington surveys were done as part of larger projects and neither has been published. The authors thank Lorrie Brown of Washington State Government for providing the Washington study results. William Fox was the project director for the Tennessee study.

³³ The actual number would be larger given our preceding discussion.

³⁴ We thank our colleague LeAnn Luna for making these data available for the purposes of this report.

to the order, then that company was determined to have sales tax nexus in that state. This exercise has been replicated on numerous occasions over the years for a variety of different research projects. The most recent iteration of this exercise yielded a matrix of data that includes information for 231 of the Top 1,000 companies in our data. The extent to which these companies are already collecting sales taxes was estimated by adding up the number of states in which taxes were collected in 2012 as well as the state-specific shares of the national total of state and local sales tax receipts in the states in which each company has nexus. A company with nexus in all sales-taxing states (plus Alaska and the District of Columbia) would have a value of 100 for this index.³⁵ A company with nexus in only one state and which generates 2 percent of the national total of state and local sales tax collections would have a value of 2 for this index.

Table 3 shows the distribution of the number of states for which the 231 online retailers collect sales taxes in 2012. The table shows that 38 of these companies collect sales taxes for all 45 sales-taxing states. Only eight companies do not collect taxes for any taxing state, and 57 collect in only one state.

The average online retailer among the 231 in our data collects sales taxes in about 18 states representing about 47.2 percent of total national state and local sales tax collections. This suggests that *slightly more than half of the universal tax collection obligation would represent a potential new burden for the average retailer in our data.* Table 4 provides an overview of the averages by ranking group and reveals that both nexus variables are highest for the largest online retailers. Note that the 65 online retailers within the *Internet Retailer's* top 99 companies for which we have nexus information collected sales taxes for an average of 29.4 states representing about 69.6 percent of total national, state, and local sales tax collections. For these companies, a universal tax collection obligation would represent the addition of some 15 to 16 states. The impact gets gradually larger as the firm's ranking falls into the lower sales categories.

³⁵ Tax collection information for the District of Columbia and Alaska were not included in any of the prior nexus data projects, so the maximum value of the index for our purposes is just over 99.6.

Table 3: Distribution of Nexus States among Online Retailers (Sample Size = 231)

Number of States for which Sales Taxes Are Collected	Number of Online Retailers
0	8
1	57
2	22
3	12
4-10	25
11-24	17
25-44	52
45	38

Source: Authors' calculations.

Table 4: Sales Tax Nexus among Top 1,000 Online Retailers (Sample Size = 231)

Top 1,000 Ranking Group	Number of Retailers in the Nexus Data	Average Number of Nexus States	Average Share of the National Total of State and Local Sales Taxes among Nexus States (percent)
1-99	65	29.4	69.6
100-199	36	19.1	48.0
200-299	39	18.9	52.7
300-399	37	16.2	46.2
400-499	41	6.0	18.2
500-1,000	13	2.8	10.9

Source: Authors' calculations using data from the 2012 *Internet Retailer Top 500 and Second 500 Guides* and the U.S. Bureau of the Census.

Question 5: How Would Federal Legislation Affect the Number of Retailers Below the SSE?

While the pursuit of increased profits would likely outweigh the marginal benefits from tax planning efforts to remain below the SSE threshold, a new sales tax collection obligation could provide an incentive for a small number of companies near the SSE to restructure their operations such that they might become or remain eligible for the exception. Companies will evaluate the benefits of growing versus staying below the SSE and make the decision that is believed best for the firms and their owners. They will only want to become or stay small if the costs of the reduced business activity are more than offset by the benefits of the foregone tax collection obligation. While it is possible to

estimate how many companies are in the range of an SSE threshold, there is no way of estimating how many would actually choose to downsize or remain small.

A closer look at the *Internet Retailer* Top 1,000 data shows only ten online retailers with estimated American online sales within \$100,000 of the \$1 million SSE threshold (six between \$900,000 and \$1 million and another four between \$1 million and \$1.1 million). Using the prior methodology for estimating the underlying distribution of all online retailers, we estimate that there are only about 200 retailers with sales between \$900,000 and \$1 million and another 165 retailers with sales between \$1 million and \$1.1 million. While other companies outside this range could potentially be affected by the SSE, these estimates suggest that *any efforts to downsize or remain under the SSE would have little to no impact on the number or share of companies below the threshold.*

Question 6: How Are Sales Tax Compliance Costs Related to Firm Size?

The extent to which policy makers should be concerned about the impact of a sales tax collection obligation on online retailers depends on the costliness of compliance. If collecting and remitting sales taxes requires a significant investment of time and money, and if that investment is inversely related to the size of the enterprise (i.e., if it is proportionally larger for smaller businesses), then provisions like SSEs can be considered as a way to alleviate the compliance burden. Consistent evidence shows that regulatory compliance costs fall as the employment size of the firm grows (Hopkins, 1995; Crain and Hopkins, 2001; Crain, 2005; and Crain and Crain, 2010). The question remains as to whether one specific component of compliance costs—that related to the collection of sales taxes—is also inversely related to firm size as measured by sales activity.

Fortunately, the sales tax compliance burden has received a fair amount of attention among researchers. Most notably, PricewaterhouseCoopers LLP conducted a study on behalf of a consortium of public and private organizations to examine the costs to retailers of collecting sales taxes. Their findings, documented in a 2006 report, indicated that compliance costs as a share of taxable sales or sales taxes collected declined with the level of retail sales activity. Specifically, while compliance costs were about 0.19 percent of taxable sales and 3.09 percent of sales taxes collected on average, the actual percentages were higher for smaller firms and lower for the largest firms.³⁶ The PricewaterhouseCoopers report also indicates that compliance costs (as a share of tax collections) did not rise dramatically with the number of nexus states.

These findings indicate that there may be some economies of scale in terms of compliance costs, echoing Bradford's (2004) survey of the literature. As Bradford notes, however, the apparent economies of scale may be based on the relatively fixed nature of

³⁶ This echoes an earlier estimate based on a 1993 review of available studies published in *Tax Administrator News* that sales tax compliance costs were about 3.18 percent of taxes collected (Federation of Tax Administrators, 1993).

compliance costs. *To the extent that compliance costs are fixed, they will represent a larger share of profits for smaller-scale enterprises. Thus, the compliance burden will not necessarily be fairly distributed across firms of varying sizes.*

It is important to recognize that mechanisms are in place to alleviate much of the compliance burden, even for smaller retailers. First, software for the purposes of calculating the tax is to be provided by the states free of charge to online retailers as part of the Marketplace Fairness Act. Additionally, the sales tax computation, collection, and remission functions can generally be outsourced for a fee to third-party service providers (such as Vertex, Inc.) and the Marketplace Fairness Act relieves firms from any penalties in cases where approved software and vendors are used. Amazon currently provides this service to its Marketplace affiliates through a relationship with Vertex, Inc., for a fee of 2.9 percent of taxes collected.³⁷ Presumably Amazon is not providing this function at a loss, so this suggests that compliance can be handled, at least at a large-enough scale, for 2.9 percent. For the smallest retailers, this fee may be well below the alternative costs to the firms of handling compliance themselves.

Question 7: How Do Small Online Retailers Differ from Larger Ones?

An important consideration in the determination of an SSE threshold is the extent to which exempt retailers differ from non-exempt retailers. While no data source exists to allow a meaningful and suitably detailed comparison, the *Internet Retailer* data provide some basic characteristics broken down by the sales size class. The size variable in this section is based on our estimate of American online retail sales volume. Given the very small number of Top 1,000 companies with sales below \$1 million, we set our smallest size category to include the 247 retailers with sales below \$5 million. As shown in Table 5, the larger size categories show 334 retailers with sales of \$5 to \$20 million, 264 with sales of \$20 to \$100 million, 113 with sales of \$100 to \$500 million, and 42 with sales at or above \$500 million. While the average age of online retailers increases as sales increase across the size categories, the average age for all groups exceeds eight years.

Perhaps unsurprisingly, the rate of total online sales growth between 2010 and 2011 was much higher for the smallest size category (nearly 33 percent) and centered on 20 percent for the four larger categories. This is an important finding, as it suggests that retailers near \$750,000 in one year could find themselves at the \$1 million SSE threshold by the following year. That said, there is no way of knowing whether the average online retailer in the \$750,000 sales range experienced sales growth rates like those in our smallest size category among the Top 1,000 (below \$5 million in sales).

³⁷ This fee does not include other fees charged by Amazon for participation in its affiliate program. For more details, see Amazon's online help files at http://www.amazon.com/gp/help/customer/display.html/ref=hp_left_cn?ie=UTF8&nodeId=200787680 and <http://www.amazon.com/gp/help/customer/display.html?nodeId=200787200>.

Many of the observed differences in retailer characteristics across sales categories are consistent with expectations. As one example, nearly 64 percent of the firms in our smallest category are web-only retailers. The web-only share declines quickly as size increases, with correspondingly larger percentages of the larger size categories in the Retail Chain group. While the number of unique product codes (SKUs) on a retailer's web site increases as expected with firm size, the average ticket size is more uniform. Larger retailers have significantly more visits and unique visitors per month, and their response times are shorter. The percentages of retailers with a store locator feature on their web site, a store pick-up option, or catalog quick-order availability increase with retailer size.

Table 5: Characteristics of the Top 1,000 Online Retailers by Size Category

	Online Sales Size Category				
	Less than \$5 million	\$5 million- \$20million	\$20 million- \$100 million	\$100 million- \$500 million	Over \$500 million
Number of Top 1,000 Retailers	247	334	264	113	42
Age of Retailer (years)	8.4	10.5	12.3	13.2	14.4
Average Online Sales (millions)	\$2.76	\$10.8	\$46.3	\$222	\$2,313
2010-11 Online Sales Growth	32.8%	21.3%	19.8%	20.0%	20.5%
Type of Retailer (Col. %)					
<i>Catalog/Call Center</i>	5.3	9.3	13.6	23.0	21.4
<i>Consumer Brand Manuf.</i>	15.8	13.8	15.2	10.6	9.5
<i>Retail Chain</i>	15.4	17.7	33.7	34.5	52.4
<i>Web Only</i>	63.6	59.3	37.5	31.9	16.7
Number of Unique Product Codes (SKUs) Online (1,000s)	110	453	332	6,589	722
Average Ticket Size	\$180	\$211	\$198	\$158	\$268
Conversion Rate	2.82%	2.85%	2.89%	4.29%	3.95%
Monthly Unique Visitors (1,000s)	86.9	298.5	954.5	2,546.8	14,056.2
Monthly Total Visits (1,000s)	121.4	493.7	1,921.8	5,582.6	45,318.0
Response Time (seconds)	3.5	3.1	2.6	2.2	1.9
Amazon Checkout Available	2.8%	8.4%	6.8%	1.8%	4.8%
Store Locator Available	25.9%	30.2%	53.4%	54.9%	69.0%
Store Pick-up Available	9.3%	5.7%	8.3%	12.4%	26.2%
Catalog Quick-Order Available	21.9%	24.6%	29.9%	36.3%	52.4%

Source: Authors' calculations using data from the 2012 *Internet Retailer* Top 500 and Second 500 Guides.

The differences in primary sales category by size are shown in Table 6. The share of retailers in Apparel/Accessories increases with retailer sales volume until the largest category. Larger online retailers are also more likely to be in the Computers/Electronics and Mass Merchant categories. Conversely, the shares of retailers in the Automotive

Parts/Accessories, Flowers/Gifts, Food/Drug, Housewares/Home Furnishings, Pet Care, Sporting Goods, and Toys/Hobbies categories appear to decline with retailer size. *This suggests that an SSE policy could represent a more significant burden to retailers in particular sales categories if the potentially exempt retailers that are not in our data reflect the characteristics of our smallest category of included companies.* Small firms may be disadvantaged as firms move increasingly towards same day or rapid delivery, given the much greater propensity for larger firms to offer store pick-up or catalog quick-order.

Table 6: Primary Sales Categories of the Top 1,000 Online Retailers by Size Category

	Online Sales Category				
	Over \$5 million	\$5 million-\$20million	\$20 million-\$100 million	\$100 million-\$500 million	\$500 million or more
Primary Sales Category (Col. %)					
Apparel/Accessories	16.6	22.2	28.4	35.4	16.7
Automotive Parts/Acc.	3.6	2.1	1.5	2.7	0.0
Books/Music/Video	4.5	3.3	5.3	5.3	4.8
Computers/Electronics	6.9	7.5	9.9	5.3	21.4
Flowers/Gifts	5.3	5.4	1.9	2.7	0.0
Food/Drug	5.3	4.2	1.9	10.6	2.4
Hardware/Home Imp.	5.7	6.9	3.8	2.7	4.8
Health/Beauty	6.5	5.4	5.7	6.2	2.4
Housewares/Home Furn.	17.0	11.1	12.1	3.5	2.4
Jewelry	4.1	4.8	3.4	1.8	0.0
Mass Merchant	0.8	3.0	4.2	7.1	28.6
Office Supplies	6.5	4.8	3.0	3.5	9.5
Pet Care	2.8	1.2	0.0	0.0	0.0
Specialty/Non-Apparel	0.0	3.3	10.2	6.2	2.4
Sporting Goods	8.9	11.4	7.2	2.7	2.4
Toys/Hobbies	5.7	3.6	1.5	4.4	2.4

Source: Authors' calculations using data from the 2012 *Internet Retailer* Top 500 and Second 500 Guides.

Discussion and Conclusion

A general sales tax is levied by 45 states and by local governments in 35 of those states plus Alaska. The tax is the second-largest revenue source on average for both state governments (behind the personal income tax) and combined state and local governments (behind the property tax). For decades, state sales tax bases have been declining relative to state GDP because of a combination of state policy changes, movements of consumption towards nontaxed services, and inability to collect tax on remote sales. The extremely rapid rise in e-commerce sales has heightened attention on the inability to collect tax effectively on remote sales. States are limited in enforcing their tax on remote sales by the Supreme Court ruling in *Quill v. North Dakota* which only lets them require firms with physical presence to collect their sales tax. In recent years many states have worked together, increased efforts to collect use taxes, expanded their definition of nexus, and imposed reporting requirements in efforts to collect taxes on remote sales.

These endeavors have been insufficient in terms of helping states restore shrinking sales tax bases and improve the fairness of their sales tax systems. Federal legislation is the only effective means for slowing the relative decline in states' sales tax bases. Only Congress has the power to enact legislation that would allow states to require remote firms to collect the tax. The Marketplace Fairness Act of 2013 is the most recent bill introduced in Congress that would allow states under certain conditions to require remote firms to collect their sales taxes. Like most previous proposals, the Act includes a small seller exception (SSE) that would exempt firms with American e-commerce sales below a certain threshold from complying with the legislation. The SSE would exempt the vast majority of firms given the structure of e-commerce, which is dominated by a very large number—possibly millions—of very small firms. We estimate that only slightly over 12,000, or one quarter of one percent of firms engaged in e-commerce, have annual sales that exceed \$150,000.

We estimate that the \$1 million SSE in the Marketplace Fairness Act would only apply to 974 of the 1,000 largest firms as identified by *Internet Retailer* and to about 850 more firms not represented in the Top 1,000 report. Thus, the legislation only applies to 0.04 percent of firms selling via e-commerce. Raising the SSE to \$5 million would not dramatically alter the number of affected firms, with about 750 of the Top 1,000 firms still being affected. Similarly, reducing the SSE to \$500,000 would only double the number of affected firms, exempting all but the top 0.07 percent of all e-commerce firms. While slightly more than 1,800 retailers have online sales in excess of \$1 million, they

represent the majority of e-commerce sales in dollar volume. The SSE would need to be well over \$100 million before the majority of e-commerce sales would be made by exempted firms.

Some differences are apparent between relatively smaller and larger e-commerce firms (using \$5 million as a separator). Smaller e-commerce firms have grown much more rapidly than large ones. Smaller firms are more likely to be web-only while larger firms are more likely to operate through multiple channels. Smaller firms differ in the types of products that they retail. Larger firms are more likely to retail Apparel/Accessories and Computers/Electronics; smaller firms are more likely to retail a wide range of other categories. All of these characteristics can affect how the Marketplace Fairness Act would influence revenues received by states as well as consumer behavior.

An SSE certainly reduces administration and compliance costs, but it also increases the possibility of behavioral responses by both retailers and their customers (reducing economic efficiency and overall welfare). It also reduces the potential revenue gains to state and local governments by exempting a portion of online sales from the tax collection obligation. The final decisions on whether and how to implement an SSE therefore require careful consideration of whether the reduced administration and compliance costs are worth the loss in economic efficiency and state and local revenue. We briefly summarize each of these three primary components here.

The increase in sales tax revenue may be less than expected given that most large online retailers are already collecting sales taxes for a number of states. The Marketplace Fairness Act would only expand a collection responsibility in those states where affected firms do not currently have nexus (or choose to voluntarily comply). A survey of 231 firms from the Top 1000 found that 223 firms collect for at least one state and the average firm collects for 18 states. Small firms are more likely to be collecting for a single (or perhaps no) state, both because they are more likely to be web-only and because they have few locations. Thus, the Marketplace Fairness Act with its \$1 million SSE would likely eliminate less than one-half of the losses associated with inability to collect tax on remote sales. As most online retailers would still have no tax collection responsibility, the remaining revenue losses would continue to grow.

Turning to economic efficiency considerations, behavioral responses by both consumers and businesses to differential enforcement of the tax would continue to be a concern in the presence of an SSE. The SSE could affect business decisions about where to locate and how to structure their operations, as well as how large to allow their sales to grow. Despite provisions in the Act that would require the aggregation of commonly-owned firms for SSE purposes, a small number of firms might have an incentive to engage in careful planning (e.g., separating into multiple businesses) to avoid triggering a collection responsibility. An SSE would also drive consumers away from non-exempt firms and towards exempt retailers in much the same way that current policy drives

consumers away from retailers with nexus to those without nexus. Social media can help purchasers identify these firms, or vendors can advertise on their website the states for which they collect (or do not collect) the tax. The Marketplace Fairness Act would reduce the number of options for tax-free purchases, but many opportunities would remain as a result of the SSE. More specifically, consumers would have tax incentives to purchase from smaller, out-of-state firms and to purchase the types of goods retailed by smaller vendors. Generally speaking, business operations would be more efficient (and thus less costly) and consumer welfare would be greater in the presence of more uniform taxation. Unfortunately, the magnitude of these effects cannot be quantified at this point, and their relative importance is a matter of speculation.

Finally, sales tax compliance costs would be mitigated under the Marketplace Fairness Act because it requires states to provide compliance software to retailers at no charge. An SSE further reduces compliance costs by removing the vast majority of firms from the collection obligation. It reduces administration costs as well, although states would still need to monitor whether firms are eligible for exception. The fear is that a lower SSE threshold would place undue burden on small online retailers, since compliance costs are relatively fixed and thus represent a larger share of revenues or profits for smaller firms. However, evidence suggests that compliance costs are about 3 percent of taxes collected on average, and third-party companies are available to provide sales tax compliance software and assistance.

The specific choice of an SSE threshold must also take these issues into account. For example, while a higher SSE threshold further reduces administration and compliance costs, it decreases economic efficiency and further reduces revenue gains. A lower SSE would have the opposite effects—increasing revenue and economic efficiency gains while simultaneously increasing administration and compliance costs. One option for consideration would be a relatively high initial SSE followed by a gradual phase-in to a lower threshold. This would allow certified providers time to accommodate a large number of new taxpayers.

It is important to recognize that small firms would not necessarily be harmed or helped by legislation such as the Marketplace Fairness Act. Indeed, the non-neutral sales tax collection playing field made possible by the current state and local policy environment has helped many small online retailers at the expense of many small Main Street vendors. Existing Main Street vendors—small and large alike—would continue to be disadvantaged relative to many online and mail-order vendors that would be protected by an SSE. At the same time, while small out-of-state firms would continue to benefit from the differential treatment made possible by the SSE, those firms would be discouraged from growing above the SSE threshold. Main Street vendors and online firms that crossed the threshold would have to bear the compliance costs associated with collecting the tax as well as the potential loss in sales that could be expected among firms that have to collect the tax. As a result, firm growth rates could be expected to slow

significantly after they crossed the SSE threshold. The end result is that the economy would likely be composed of a larger-than-efficient number of small e-commerce firms. Effectively, the economy would become composed of many small firms that are essentially operating in the largely untaxed informal sector, much as is often seen in developing countries. These incentives could actually help explain why there are so many very small e-commerce retailers today, and why small firms are experiencing much faster e-commerce sales growth.

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