

A Policymaker's Guide to Internet Tax

BY SCOTT ANDES AND ROBERT D. ATKINSON | MARCH 2013

Too often Internet tax issues are confused, or even worse, lumped together by the bumper-sticker debate between “Don’t Tax the Net” and “Level the Tax Playing Field,” but in fact these issues are distinct and deserve distinct policy responses.

Within the first two months of 2013, identical bills in the U.S. House and Senate have been introduced that would provide a federal framework in which states could opt to require remote sellers to collect state sales taxes. A bill has been introduced in the U.S. Senate to permanently extend the moratorium on taxation of Internet access, the Florida legislature passed a law to tax Internet sales from out-of-state sellers, and the online retail giant, Amazon, has agreed to collect a 6.35 percent sales tax from consumers in Connecticut.¹ Are these decisions inconsistent or unrelated to one another? Why should Amazon pay taxes in Connecticut and not in, say, Oklahoma? There is no shortage of interest among states and localities in new or better-enforced sources of revenue from the Internet, yet in the current legal environment of Internet taxes, there is confusion over the most appropriate policy options moving forward.

This guide explains the state of current law and how policymakers should approach taxing online, digital activity. It focuses on four particular areas: the Internet tax moratorium, multiple and discriminatory taxes of digital goods, discriminatory taxes on wireless services, and the collection of sales taxes for online purchases of products. Too often these issues are confused, or even worse, lumped together by the bumper-sticker debate between “Don’t Tax the Net” and “Level the Tax Playing Field,” but in fact these issues are distinct and deserve distinct policy responses.² ITIF believes Congress should address each of these four areas through proposed legislation.

Legislation	Description	Recommendation
Internet Tax Freedom Act (ITFA)	Prohibits taxing Internet access, multiple taxes on Internet transactions, and discriminatory taxes on online transactions.	Congress should make the current moratorium permanent and eliminate the grandfather clause.
The Digital Goods and Services Tax Fairness Act	Prohibits state and local governments from creating multiple or discriminatory taxes on digital goods and services.	Congress should reintroduce and pass the Act.
Wireless Tax Fairness Act	Impose a five-year moratorium on all new discriminatory taxes on mobile phone services or providers.	Congress should reintroduce and pass the Act, make the moratorium permanent, and require states to eliminate discriminatory taxes in this area.
The Marketplace Fairness Act of 2013	Authorizes states to require collection of sales and use taxes on goods sold online, provided states meet minimum requirements for simplification.	Congress should pass the Act to create a cross-channel tax parity.

PRINCIPLES OF INTERNET TAX POLICY

Regardless of whether taxes are collected at the local, state or federal level, Internet tax policy, as with all tax policy, should seek to follow four principles of optimal taxation. The first three principles, as suggested by tax economists, are that an efficient commodity tax: 1) induces little change in consumer behavior (unless the explicit purpose is to change behavior, as is the case with emission taxes, for example); 2) is not borne disproportionately by low-income individuals and households; and 3) is not placed disproportionately on activities with strong positive externalities.³ In addition, a fourth principle should be included: a commodity tax should reflect what is sold and not how it is sold.

The first principle is important because the Internet introduces the possibilities of new business models with online, remote sales of goods and services. Tax policy should not advertently or inadvertently change consumer behavior either toward or away from online, remote sales. Economic growth is maximized when these decisions are made solely on the basis of consumer choice—not consumer choice influenced by unfair tax systems, imposed on one business model but exempting another.

The third principle is also important, as there is clear evidence that information and communications technologies are strong drivers of growth, productivity and innovation.⁴ As such, taxes on Information and Communications Technology (ICT) generally have a larger negative impact on growth than taxes in other areas. Economists have long recognized that certain economic activities have positive externalities where the benefits to the broader economy extend beyond what purchasers of such goods and services pay for. Excessive taxation on these activities reduces economic welfare more than taxes on other activities.

*Tax policy should not
advertently or
inadvertently change
consumer behavior either
toward or away from
online, remote sales.*

There are a number of positive externalities associated with Internet connectivity and digital goods and services. For example, dematerialization—using bits instead of atoms—allows digital activities to be much less energy-intensive and have a smaller impact on the environment than creating, moving, and storing physical goods. CO₂ emissions associated with purchasing a CD from a retail store are approximately 3,200g, compared to only 400g for an album purchased and downloaded online.⁵ ICT use also leads to network externalities, since the benefits of a network are higher with more users. The classic example is telephone service, which becomes more valuable to a user if more people are connected. Indeed, telephone network externalities have long been recognized and have been a major rationale behind universal service policies. Broadband has network effects in part because the decision to purchase broadband is dependent in part on having sufficient knowledge about it. Unlike a service like haircuts or a product like TVs that most people are familiar with and can accurately value, fewer people are familiar with wireless data and Internet services and cannot always value their benefits.

Empirical evidence suggests that this is a factor that affects subscribership. Economists Austan Goolsbee and Peter Klenow found that people are more likely to buy their first computer if they live in areas where a high proportion of households own computers, or if a high fraction of their friends and family members own computers—even controlling for other factors affecting computer ownership. If ownership rates are 10 percent higher in one city than another in a given year, the gap will be 11 percent the following year, assuming all else stays constant.⁶ Goolsbee and Klenow explain this effect by suggesting that the number of experienced and intensive computer users creates a “spillover” effect for non-users. They conclude that the effect is most probably related to the use of e-mail and the Internet—consistent with the view of computers as the hubs of information and communications networks. But the effect is also likely to be related to the fact that people who have friends and neighbors with broadband are more likely to be able to better understand its value. Moreover, these externalities are likely to be higher in lower-income neighborhoods where individuals may have less familiarity with these technologies.

Tax policies that reduce demand for Internet services have an oversized negative impact on the U.S. economy. Just as every additional Internet user increases the network and thus benefits all those within the network, each consumer that is discouraged from the digital economy due to excessive taxation reduces the value of the digital economy for everyone. Of particular concern are local and state tax authorities that view Internet services as an opportunity for revenue. When jurisdictions tax digital goods or services, they receive all of the financial benefit of the tax, but the net social cost of lower rates of access extends beyond the jurisdictions’ borders to affect residents and businesses across the entire nation. In order to avoid such a collective action problem there is a strong case that the federal government should dictate national Internet tax policies.

These principles of optimal taxation are discussed throughout the paper in relation to each major area of Internet taxation.

THE INTERNET TAX MORATORIUM

As more and more consumers began to subscribe to the Internet in the mid-1990s—initially through services like AOL, but increasingly through their broadband providers—state and local governments began to look to Internet service as a source of tax revenues. During the late 1990s, legislators proposed everything from an extension of the sales tax, to so-called “bit taxes” that would tax users based on the amount of data they consumed.⁷ In 1998, Congress recognized that unnecessary and excessive taxation could slow the growth of the Internet and reduce the benefits from the digital economy. It passed the Internet Tax Freedom Act (ITFA) to prohibit states from imposing new taxes on Internet access.

The Act prohibits taxes on Internet service itself, whether the Internet Service Provider (ISP) is supplying dial-up, cable, digital subscriber line (DSL), fiber, satellite, or wireless Internet. It also ensures that taxes cannot be imposed on incidental services such as e-mail or instant messaging, and it prohibits multiple taxes from being imposed on online transactions from multiple jurisdictions. For example, the law prohibits two states from charging sales tax on a single online purchase unless credit is given for taxes paid in the other jurisdiction. It also prohibits discriminatory taxes on online transactions that treat electronic commerce differently from other types of commerce. The Act bars taxes that would only apply when a product is sold online, and prohibits states from imposing a higher tax rate when a product is sold online.

The original ITFA expired in 2001 and was renewed in 2001, 2004, and 2007 with the most recent legislation set to expire in 2014. In 2004, Congress passed a slightly revised version of the Act, called the Internet Tax Nondiscrimination Act.⁸ The Act included a number of changes. First, Congress attempted to close the loophole that allowed states to classify DSL broadband service as a telecommunication service so that they could impose state taxes. While the original law stated that the term “Internet access” excluded telecommunication services, Congress redefined the term to exclude telecommunication services “except to the extent such services are purchased, used, or sold by a provider of Internet access to provide Internet access.”⁹ In other words, the Internet Tax Moratorium was extended to include broadband service—including the ISP component and data transfer component. Under the new definition, states could no longer classify DSL as a telecommunication service and then claim the Internet tax moratorium did not apply. The 2007 extension further codified that Internet transport services could not be taxed under the ITFA. According to the more detailed definition of Internet access, access includes “the purchase, use or sale of telecommunications by a provider of a service.”¹⁰ Despite this, some states still attempt to impose taxes on the underlying broadband transport service.

All three versions of the Act contain a grandfather clause to allow those states and local jurisdictions that had implemented taxes on Internet access before 1998 to continue to tax Internet access. Eight “first mover” states are allowed to tax Internet access under the grandfather clause: Hawaii, New Mexico, North Dakota, Ohio, South Dakota, Texas, Washington and Wisconsin. The original intent of the grandfather clause was to give states with existing laws some time to adjust their tax codes to reflect the federal mandate. These states have still not done so, however.

What the ITFA Does Not Address

There is widespread misunderstanding over the scope of the ITFA. The Internet tax moratorium does not address the much-debated topic of state taxation of out-of-state Internet sales (which is discussed later in this guide). Second, the Act does not prohibit states from taxing Internet telephony services, such as voice over IP (VoIP). The law only bars taxes on Internet access and services incidental to Internet access, such as e-mail and instant messaging. In 2004, Congress clarified the law specifically to exclude VoIP services from this ban.

The Internet Tax Freedom Act

Is the Internet tax moratorium still necessary? Detractors say that the Internet is no longer a nascent technology in need of government support.¹¹ The argument goes that temporary public support can be needed to help an infant industry become competitive, but at some point that industry must compete without government support. The premise of this argument is true, but the conclusion is false. The reason to encourage Internet adoption is not to protect a nascent industry, but rather to promote affordable access to this technology for all consumers and to promote investment in a key enabler of our digital economy. Because Internet access is a prerequisite for participating in our digital society, a robust broadband network creates economic opportunity that benefits the whole country. Internet access provides a number of benefits, including access to government services, healthcare services, online learning, and participation in e-commerce.

Opponents also argue that the Internet is a consumer good and thus should have a comparable sales tax. However, Internet access is not merely a consumer good, but rather a tool used by producers to increase economic efficiency and lower the cost of production. Similarly, investment in machinery has been strongly associated with economic growth and increased productivity.¹² That is why most states offer some form of a sales tax exemption on the purchase of new machinery for companies, and approximately half also include telecom and/or broadband equipment in the definition of machinery.¹³ In addition, 40 percent of states provide a general, statewide tax credit for companies to invest in machinery and buildings.¹⁴ Treating the purchase of Internet services by “pro-sumers” (i.e., consumers who are also producers) as tax-exempt is no different.

Finally, taxing access to the Internet is a national issue that should be resolved at the federal level. While states also benefit from higher levels of Internet adoption, there is an asymmetrical distribution between the costs and benefits of taxes on Internet access. States that tax Internet access get all the benefit (i.e., higher tax revenues), but the costs from marginally lower Internet use are borne by the entire nation because overall Internet use is less.

In short, the Internet has taken on an important role in the digital economy and a federal policy should spur, not hinder, adoption of broadband. For this reason, it is good policy to make the Internet tax moratorium permanent. In addition, the ITFA can and should be improved by eliminating the grandfather clause, which allows certain states and local jurisdictions to impose taxes on Internet access. The prohibition on taxes on Internet access should be consistent across all states and not reward states that were first to impose taxes on

States that tax Internet access get all the benefit (i.e., higher tax revenues), but the costs from marginally lower Internet use are borne by the entire nation because overall Internet use is less.

Internet access. States that continue to tax Internet access under the grandfather clause are essentially free riders that happened to get “lucky” by imposing a tax on Internet access before the 1998 Act. Those states with laws on the books prior to 1998 have had more than sufficient time to adjust their tax codes to reflect this national policy.

DISCRIMINATORY TAXES ON DIGITAL GOODS AND SERVICES

The second important issue relating to Internet taxation is multiple and discriminatory taxes on digital goods and services. Digital goods and services are content that is downloaded over the Internet with no physical component, such as ring-tones, Netflix movies, or iTunes music. Most tax economists agree that taxes should be levied based on what is being sold, not how it is being sold.¹⁵ Online goods and services should be taxed at the same rate as their physical counterparts. There is no sound economic argument for a CD purchased in a local mall to be taxed at a lower (or higher) rate than the same music purchased and downloaded online.

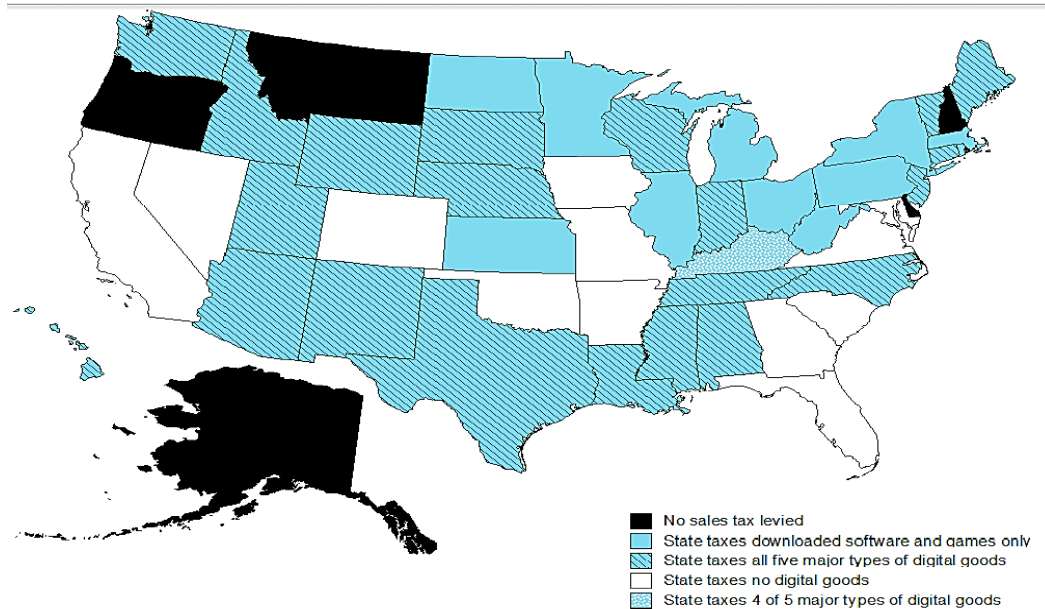


Figure 1: States That Tax Digital Goods, 2012¹⁶

Nonetheless, across the nation, some state and local governments have imposed discriminatory taxes on the sale of digital goods and services. More than 21 states collect taxes on digital goods. These states have created these taxes either by statute or administrative changes to the tax code, and there are significant differences in what types of digital goods are taxed. According to the Center for Budget and Policy Priorities, there are five taxable categories of digital goods and services: software, games, e-books, music, and video.¹⁷ As of 2012, of the 45 states that levy sales tax, 21 states tax all five categories, 11 states tax only software, 1 state (Kentucky) taxes all categories but music, and 12 states tax no digital goods.¹⁸

In addition to discriminatory online taxes, in some cases digital goods and services could be subject to multiple taxes. Without clear guidelines, multiple tax authorities can impose taxes on a single transaction. Imagine the following scenario: a traveler from Houston downloads a movie in the Denver airport from Amazon.com, a company headquartered in Seattle. In this example, at least three states—Texas, Colorado, and Washington—all could claim that they have the right to tax this transaction. Resolving this dilemma fairly and consistently requires a national framework for “sourcing” the sale of digital goods and services (i.e., determining where the sale is taxable).

Imposing higher taxes on digital goods—which are often consumed from out-of-state sellers—distorts the market by encouraging consumers to purchase physical goods (which are often consumed from in-state sellers and normally cost more than digital goods) instead of digital goods. This fear is not unwarranted. All states at one point or another have given in to pressure from brick-and-mortar businesses and have passed legislative or regulatory provisions that limit the right of consumers to purchase certain products and services online. For example, until Congress passed the Fairness to Contact Lens Consumers Act, many states had responded to pressures from optometrists and imposed restrictions on the ability of consumers to purchase contact lenses online. The goal of public policy should not be to protect or insulate any business or industry from changes in the marketplace. Public policy should certainly focus on ensuring that individuals who lose their jobs have access to skills training and other assistance to transition into new jobs, but it should not try to erect barriers to protect existing businesses that may lose out to digital competition

The Digital Goods and Services Tax Fairness Act

The Digital Goods and Services Tax Fairness Act, introduced in 2011 and again in 2012 by Representative Lamar Smith (R-TX) and Senators John Thune (R-SD) and Ron Wyden (D-OR), would prohibit state and local governments from creating multiple or discriminatory taxes on digital goods and services. The Digital Goods Act would create a national framework to ensure fair and equitable taxation of digital content by creating consistent rules for determining which jurisdiction has taxation authority. It would disallow multiple and discriminatory taxes, create consistent definitions, and ensure that other taxes, such as those applied to telecommunications services, cannot be inappropriately extended to cover digital goods and services. Such legislation would recognize the importance of digital goods and services to the national economy and would help ensure a fair, consistent, and non-discriminatory tax system.¹⁹

DISCRIMINATORY WIRELESS TAXATION

A third major digital tax issue concerns taxes on wireless communications services. In 2012, the average U.S. state and local tax rate on wireless services was 17.18 percent—a rate more than twice as high as the average state and local retail sales tax rate.²⁰ In fact, 47 states subject wireless services to tax rates that are higher than the regular sales tax rate.²¹



Figure 2: Average Wireless Tax Rates vs. Sales Tax Rate, 2003-2012²²

For example, in Nebraska (the state with the highest rate), consumers pay a wireless tax rate of 24.49 percent. Moreover, between 2007 and 2012, state and local tax rates on wireless services increased three times faster than overall retail sales taxes, from 16.26 percent to 17.18 percent.

Wireless service does not fall under the protection of the Internet tax moratorium in part because mobile broadband didn't exist in 1998. When the Internet Tax Freedom Act was being written, wireless services were synonymous with telephone services; today, wireless services are better associated with next generation broadband. In fact, just over half of all Americans own a smart phone.²³ As more and more Americans have access to advanced 3G and 4G broadband services through their phone, wireless service has essentially opened the doorway for a third broadband "pipe" to the home (to compete with cable modem and DSL/fiber service). This new "pipe" promises not only to bring additional competition and consumer benefits to all Americans, but also to provide broadband services in some rural areas that cannot yet access wired broadband services.²⁴ In short, wireless services promise to be a growing and more important part of the IT ecosystem in the United States. Disproportionately high taxes on wireless services are an impediment to a stronger digital economy.

Economic Costs of Discriminatory Taxes

Discriminatory taxes on wireless service adversely impact the digital economy in two ways. First, wireless services are highly elastic and therefore additional tax burden reduces their consumption. Second, to the extent that wireless services are purchased more by low-income households than other services, the taxes are generally regressive.

Discriminatory Taxes Shift Consumer Behavior

Opponents of banning discriminatory taxes on wireless services argue that the rapid growth in mobile adoption purchases suggests that the higher taxes have no negative impact. But the major impact of discriminatory taxes is not on the decision to buy or not buy a cell phone (although for some individuals this may be the case). Rather, it is on the consumption of wireless services, with individuals facing higher taxes possibly purchasing

Congress should go even further and eliminate the de facto grandfather system that has let so many states and localities impose higher discriminatory taxes on wireless.

plans with fewer minutes and fewer services. And for a whole host of digital goods which are not as necessary, as of yet, to daily life, discriminatory taxes reduce adoption of these services.

Scholarly studies find that the impact of price (of which taxes are a component) on wireless expenditures is quite high. Rappoport, Alleman, and Taylor found that for the average monthly U.S. consumer expenditure on cell phone service (\$52 per month), every dollar of additional tax reduces expenditures by more than \$1.60.²⁵ Because wireless data services—including broadband Internet access—are an even more discretionary purchase for most consumers, the impact of taxes on wireless data and broadband are likely even higher. Indeed, Goolsbee finds the elasticity for broadband to be between 2.15 and 3.50, with an average of 2.75. In other words, increasing taxes on wireless data and Internet services by \$1.00 reduces consumption of these services by an average of \$2.75.²⁶

This very high impact of taxes on consumer demand also affects producer decisions on where to deploy services. As the Government Accountability Office (GAO) reported, one of the most important factors for companies considering deploying broadband to an area was the expected demand for broadband service.²⁷ Since adoption rates drive demand, not only do wireless taxes affect the ability of citizens to afford wireless Internet access, but they could also discourage some companies from deploying wireless systems. This conclusion is supported by research by Goolsbee, who found that “applying a tax on broadband would also reduce the potential producer surplus enough that suppliers would not be able to cover their fixed costs and would choose to delay the diffusion of broadband in those markets.”²⁸

Discriminatory Taxes are Regressive

It might be one thing if discriminatory wireless taxes affected mostly demand from higher-income consumers. But of all advanced information technology and communications services, wireless is one of the most widely adopted, and wireless services are much more evenly distributed among income groups than fixed broadband. Rappoport, Alleman, and Taylor find that while the highest-income Americans (\$100,000 or more in annual income) adopted fixed broadband at 125 percent the rate of average-income Americans, mobile phone adoption was only 40 percent higher, and mobile Internet use was just 44 percent higher.²⁹ In other words, low-income households were almost as likely to adopt wireless services as higher-income households. Moreover, when examining just adoption of Internet-enabled cellular services (as opposed to all the listed services and products), low-income households (less than \$15,000 per year) adopted the service at about the same rates as high-income households.

Because low-income households are almost as likely to purchase wireless service as higher-income households, discriminatory taxes on wireless services are more regressive than many other kinds of taxes. And because of the structure of many of these taxes, the distributional impacts are even worse. Some jurisdictions (Baltimore, MD, for example) impose surcharges on service that are not proportional to use. Instead, the tax is the same for all users, regardless of income or use. Raising the price of wireless broadband service through discriminatory taxes will slow adoption of broadband, particularly as it's likely that for

(e.g., a physical presence) in their state.³³ The Court reasoned that with over 6,000 different U.S. tax jurisdictions, requiring out-of-state businesses to collect state sales tax “might unduly burden inter-state commerce,” and violated the commerce clause.³⁴ Third, there is a misconception that in order to revise *Quill Corp v. North Dakota*, the Supreme Court needs to overturn its decision. Actually, within the *Quill* decision, the Court allowed Congress to override the ruling and change the definition or requirement of nexus.

States do have the power to require their residents to pay use taxes on sales, even when the seller is located outside of the state and has no real connection with the state. But states do not have the ability to require an out-of-state seller to collect the use tax. While in most states the purchaser is generally responsible for paying the use tax, the rate of purchaser compliance is extremely low. Requiring sellers to collect and remit the tax is the only realistic way for states to collect the tax that is already owed.

Some have argued that remote e-commerce sales already suffer from a disadvantage because they have to pay for shipping and that eliminating the requirement to collect sales tax on their product just “levels the playing field.”³⁵ But e-commerce sellers also have the advantage of not having to pay for retail store space, the property taxes associated therewith, and the personnel associated with face-to-face sales. This is not really the point, however. The role of the government is not to play some kind of Solomonic leveling role to ensure that competitive business models are equalized in the marketplace. Instead, the role of government is to ensure that government obligations (including tax policy and regulation) don’t unfairly burden one business model over the other. After that, it’s up to consumers to decide which business model they like best.

In essence, while there are clearly advantages to e-commerce, we do not believe these advantages are sufficient to justify not taxing online sales at the same rate as sales from “bricks and mortar” stores. In fact, most traditional “brick and mortar” stores have long ago evolved into multichannel retailers with significant e-commerce. Those multichannel retailers are required to collect sales tax for all purchases, regardless of whether they were made in the physical stores or online.

Not requiring collection of sales tax for online purchases gives out-of-state online retailers an unfair advantage over brick-and-mortar retailers on “Main Street” and distorts the playing field of the marketplace. Over the past decade, retail e-commerce sales have increased approximately 24 times faster than non-e-commerce retail sales.³⁶ The lion’s share of this increase is due to the greater selection of goods and services at lower costs online. These cost and selection advantages should make e-commerce more than able to compete with brick-and-mortar firms. There is no reason to continue to favor online retailers through the tax code, and doing so likely violates a principle of optimal taxation by shifting consumer behavior away from what they view as the economically rational choice.

State and Federal Efforts

In an effort to gain congressional approval to grant states the authority to require collection of tax for out-of-state e-commerce sales, states have made a concerted effort to develop a streamlined taxing system. In 1998, the National Governors Association adopted a policy

Congress should pass legislation that gives states the authority to require collection and remittance of sales and use taxes.

that expresses the willingness of states to simplify their sales taxes with the expectation that, in exchange, the federal government would provide these states with the authority to require larger out-of-state sellers (including Internet vendors) to collect sales taxes for the states. In November 2002, 44 states and the District of Columbia approved the Streamlined Sales and Use Tax Agreement (SSUTA), a framework for a simplified state sales and use tax system. The SSUTA includes uniform tax definitions, uniform and simpler exemption administration, rate simplification, state-level administration of all sales taxes, and uniform sourcing (to determine where the sale is taxable).³⁷ As of 2011, 24 states and Washington D.C., comprising 33 percent of the country's population, had passed SSUTA legislation, and legislation was pending in at least 10 other states.³⁸

In response to the success of the SSUTA, legislation has been introduced in Congress for the past ten or so years which would have granted authority to SSUTA member states to require remote sellers to collect taxes. However, that legislation was merely a partial solution since states that had not passed SSUTA legislation would not be eligible.

The Marketplace Fairness Act of 2013 (S. 336 and H.R. 684), which was introduced in the Senate and the House earlier this year, will provide all states, SSUTA and non-SSUTA, with the ability to require remote sellers to collect and remit taxes on the sales of goods.

The Act authorizes SSUTA member states to require remote sellers (not qualifying for a robust small seller exemption) to collect sales tax from in-state customers to remit to state governments—provided they include minimum simplification requirements and certain liability provisions in the Act. In addition, the legislation provides states that are not members of SSUTA with taxing authority, but only if they enact legislation implementing simplification requirements. The requirements must include, among other items: establishing one central place to file and remit the taxes; setting forth a uniform set of product definitions for what is and what is not taxable; providing one rate within the state; and providing free software for remote sellers that calculates taxes due and files the returns.

Since not requiring the collection of taxes on e-commerce sales unfairly discriminates against sales from traditional, brick-and-mortar companies (even when they are selling online), Congress should pass legislation that gives states the authority to require collection and remittance of sales and use taxes. States clearly should have the authority to tax the sales of products purchased over the Internet (or by phone or mail), if for no other reason than as a matter of fairness. Just as ITIF has argued strongly that brick-and-mortar stores should not be favored, the converse is also true.³⁹ Why should sales conducted over the Internet be exempt from taxes levied at the corner store? That would be the functional equivalent of subsidizing e-commerce companies at the expense of traditional brick-and-mortar companies.

CONCLUSION

It's been over a decade since state, local, and federal tax authorities began considering how the burgeoning digital economy fits within the U.S. tax system. In some areas, such as the Internet tax moratorium, Congress moved quickly to adopt a somewhat unified national approach to Internet taxes. In other domains—such as restricting discriminative taxes on

digital goods and wireless service and allowing states to tax e-commerce sales at the same rate as sales from brick-and-mortar stores—the federal government has been largely inactive. In the Internet era, relying on states alone to set policy on digital activities—tax or otherwise—is a recipe for balkanization, unfairness, and slower national growth. This is one of these cases where a clear and smart federal role is critical.

ENDNOTES

1. Brendan Sasso, "Senators look to extend ban on Internet Taxes," *The Hill*, January 30, 2013, <http://thehill.com/blogs/hillicon-valley/technology/280225-senators-look-to-extend-ban-on-internet-taxes>; Michael Peltier, "Sales-tax bill for online shopping moves in Senate," *Orlando Sentinel*, February 5, 2013, http://articles.orlandosentinel.com/2013-02-05/business/os-legislature-internet-sales-tax-20130205_1_internet-sales-sales-tax-bill-internet-purchases; Brian Dowling, "Amazon to Collect Sales Tax on Connecticut Customers as Part of a Deal With the State," *Harford Courant*, February 4, 2013, http://articles.courant.com/2013-02-04/business/hc-amazon-tax-agreement-20130204_1_sales-tax-amazon-tax-issue.
2. Adam Thierer and Veronique de Rugy, "The Internet Tax Solution: Tax Competition, Not Tax Collusion," *Policy Analysis*, no. 949, (October 23, 2003).
3. *Wireless Taxation, Economic Growth and Economic Opportunity, Before the Committee on the Judiciary and Subcommittee on Commercial and Administrative Law*, 111th Cong. (June 9, 2009) (statement of Robert D. Atkinson, President and Founder, Information Technology and Innovation Foundation), http://www.itif.org/files/Wireless_testimony.pdf.
4. Robert D. Atkinson and Andrew McKay, *Digital Prosperity: Understanding the Economic Benefits of the Information Technology Revolution* (Washington, D.C.: ITIF, 2007), http://www.itif.org/files/digital_prosperity.pdf.
5. Christopher L. Weber, Jonathan G. Koomey, and H. Scott Matthews, "The Energy and Climate Change Impacts of Different Music Delivery Methods" (final report to Microsoft Corporation and Intel Corporation, August 17, 2009), <http://download.intel.com/pressroom/pdf/cdsvsdownloadrelease.pdf>.
6. Austan Goolsbee, "The Value of Broadband and the Deadweight Loss of Taxing New Technology," *Contributions to Economic Analysis & Policy* 5, no.1 (2006), www.bepress.com/bejeap/contributions/vol5/iss1/art8.
7. *Internet Access Tax Moratorium: Revenue Impacts Will Vary by State* (Washington, D.C.: United States Government Accountability Office, January 2006), <http://www.gao.gov/highlights/d06273high.pdf>.
8. The Act was passed on December 3, 2004 but established a moratorium for the period between November 1, 2003 and November 1, 2007.
9. Daniel Castro, "The Case for Tax-Free Internet Access," (technical report, ITIF, June 2007), <http://www.itif.org/files/ITFA.pdf>.
10. *Internet Tax Freedom Act Amendments Act of 2007*, H.R. 3678, 110th Cong. (2007), <http://www.govtrack.us/congress/bills/110/hr3678>.
11. *Internet Tax Freedom Act: Internet Tax Moratorium, Oversight Hearing Before the Subcommittee on Commercial and Administrative Law of the House Committee on the Judiciary*, 110th Cong. (May 22, 2007) (testimony of Jerry Johnson, Vice Chairman, Oklahoma Tax Commission), <http://www.gpo.gov/fdsys/pkg/CHRG-110hhrg37009/html/CHRG-110hhrg37009.htm>.
12. Bradford J. DeLong and Lawrence H. Summers, "Equipment Investment and Economic Growth," *Quarterly Journal of Economics* 106, no. 2 (1991): 445-502.
13. "State Incentive Programs," *Site Selection*, (November 2006), www.siteselection.com/issues/2006/nov/incentives/Nov06_Incentives.pdf.
14. See Robert S. Chirinko and Daniel J. Wilson, "State Investment Tax Incentives: A Zero-Sum Game?" *CESifo Working Paper Series*, no. 1895 (January 2007). Available at SSRN: ssrn.com/abstract=960019.
15. *Wireless Taxation, Economic Growth and Economic Opportunity, Before the Committee on the Judiciary and Subcommittee on Commercial and Administrative Law* (statement of Robert D. Atkinson).
16. Ibid.
17. Michael Mazerov, "Taxing Digital Goods and Services: Issues and Options" (presentation, MSATA Annual Conference, Center for Budget and Policy Priorities, August 27, 2012), <http://www.taxadmin.org/fta/meet/12msata/pres/mazerov.pdf>.
18. Ibid.
19. *Digital Goods and Services Tax Fairness Act of 2011: Hearing on H.R. 1860 Before the Subcommittee on Courts, Commercial and Administrative Law of the House Committee on the Judiciary*, 112th Cong. (May 23, 2011) (statement of Robert D. Atkinson, President and Founder, Information Technology and Innovation Foundation), <http://judiciary.house.gov/hearings/pdf/Atkinson05232011.pdf>.

-
20. Seth Cooper, "Calling for a Moratorium on New Discriminatory Wireless Taxes," Free State Foundation Blog, August 8, 2011, <http://freestatefoundation.blogspot.com/2011/08/calling-for-moratorium-on-new.html>.
 21. Scott Mackey, "Wireless Taxes and Fees Continue Growth Trend" (technical report, Tax Analyst, 2012), <http://www.ksefocus.com/wordpress-content/uploads/2012/11/mackey-state-tax-notes.pdf>.
 22. Ibid.
 23. Ibid.
 24. Richard Bennett, "Rural Broadband: Are We There Yet?," (technical report, ITIF, May 2011), <http://www.itif.org/files/2011-rural-broadband.pdf>.
 25. Paul Rappoport, James Alleman, and Lester Taylor, "Household Demand for Wireless Telephony: An Empirical Analysis," *Presentation to the 31st Annual Telecommunications Policy Research Conference*, Sept. 19, (2003).
 26. Austan Goolsbee, "The Value of Broadband and the Deadweight Loss of Taxing New Technology," *Contributions to Economic Analysis & Policy* 5, no. 1 (2006), www.bepress.com/bejeap/contributions/vol5/iss1/art8.
 27. Ibid.
 28. Ibid.
 29. Rappoport, Alleman, and Taylor, "Household Demand for Wireless Telephony: An Empirical Analysis."
 30. "Wireless Tax Freedom Act," 2011, GovTrack, <http://www.govtrack.us/congress/bills/112/hr1002>.
 31. "Average Monthly Taxes and Fees on Wireless Service," MyWireless.org, (2012), <http://www.mywireless.org/state-issues/>.
 32. Donald Bruce, William F. Fox, and LeAnn Luna, "State and Local Government Sales Tax Revenue Losses from Electronic Commerce" (technical report, University of Tennessee, April 13, 2009), <http://cber.utk.edu/ecom/ecom0409.pdf>.
 33. Quill Corp. v. North Dakota, (U.S. 298 1992).
 34. Ibid.
 35. For example, according to an op-ed in a local Florida paper, "taxing online retailers is a spectacularly bad idea...because well-run, in-town businesses have competitive advantages all their own such as they don't charge for shipping as most online retailers do." Nancy Smith, "Counterpoint...Internet Sales Tax Wrongly Punishes Consumers, E-Commerce," *Sunshine State News*, January 9, 2012, <http://www.sunshinestatenews.com/story/counterpoint-internet-sales-tax-wrongly-punishes-consumers-e-commerce>.
 36. "2009 Quarterly E-Commerce Report," U.S. Census Bureau, last updated February 16, 2010, <http://www.census.gov/retail/mrts/www/data/html/09Q4table4.html>.
 37. "Frequently Asked Questions," website of the Streamlined Sales Tax Governing Board, 2011, <http://www.streamlinedsalestax.org/index.php?page=faqs>.
 38. Ibid.
 39. See for example, James H. Johnston and Robert D. Atkinson, "Power of Attorneys: Will the Organized Bar Thwart the Emergence of Online Law?" (technical report, ITIF, July 10, 2006), <http://www.itif.org/files/powerofattorneys.pdf>; and Robert D. Atkinson, "Public versus Private Restraints on the Online Distribution of Contact Lenses: A Distinction without a Difference," (technical report, ITIF, July 20, 2006), <http://www.itif.org/files/contactlens.pdf>.

ACKNOWLEDGEMENTS

Any errors or omissions are the authors' alone.

ABOUT THE AUTHOR

Scott Andes is a senior policy analyst at the Metropolitan Policy Program at the Brookings Institution. His work focuses on advanced industries, innovation and technology, and economic development. Prior to joining Brookings, he was a research analyst at the Information Technology and Innovation Foundation where he authored and co-authored reports on innovation and domestic economic policy. He was also Special Assistant to Senator Chuck Schumer at the Democratic Senate Campaign Committee and has worked on a number of state and national political campaigns. Andes received his B.A. in Government from the London School of Economics and a master's in public policy and management from Carnegie Mellon University.

Dr. Robert Atkinson is the President of the Information Technology and Innovation Foundation. He is also the author of the books *Innovation Economics: The Race for Global Advantage* (Yale University Press, 2012) and *The Past and Future of America's Economy: Long Waves of Innovation that Power Cycles of Growth* (Edward Elgar, 2005). Dr. Atkinson received his Ph.D. in City and Regional Planning from the University of North Carolina at Chapel Hill in 1989.

ABOUT ITIF

The Information Technology and Innovation Foundation (ITIF) is a Washington, D.C.-based think tank at the cutting edge of designing innovation strategies and technology policies to create economic opportunities and improve quality of life in the United States and around the world. Founded in 2006, ITIF is a 501(c) 3 nonprofit, non-partisan organization that documents the beneficial role technology plays in our lives and provides pragmatic ideas for improving technology-driven productivity, boosting competitiveness, and meeting today's global challenges through innovation.

FOR MORE INFORMATION, CONTACT ITIF BY PHONE AT 202.449.1351, BY EMAIL AT MAIL@ITIF.ORG, ONLINE AT WWW.ITIF.ORG, JOIN ITIF ON LINKEDIN OR FOLLOW ITIF ON TWITTER @ITIFDC AND ON FACEBOOK.COM/INNOVATIONPOLICY.