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December 13, 2012

States Should Embrace 21st Century Economy by Extending Sales Taxes to Digital Goods and Services

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Summary

States are losing more and more revenue each year from a failure to require the payment of sales taxes when goods and services are sold and delivered online. The tax-exempt status in many states of "digital goods and services" — a fast-growing sector of the economy that ranges from movie downloads to online dating services to computer software — costs states well over $300 million per year, and the price tag is rising. Such implicit tax breaks are inequitable and completely unnecessary, and should be brought to an end.

There is no good reason to exempt digital goods and services whose tangible counterparts are taxed. Sales taxes do apply to *in-store sales* of computer software, books, movies, music, and games sold on physical media (paper, CDs, and DVDs) in all 45 states that have sales taxes; many states also tax sales of newspapers, magazines, greeting cards, stock photographs, cable TV, pay-per-view movies, and similar types of information- and entertainment-related goods and services. Only a minority of states, however, have extended the sales tax to all of these products when they are delivered over the Internet.

In most cases, these tax exemptions exist not for any policy reason but rather because sales tax laws and regulations have not been updated to reflect the Internet age — an oversight that is growing costlier every year. The failure to tax sales of digital goods and services is particularly problematic when many states are still struggling to bolster their finances after the deepest recession in 75 years slashed state sales and income tax receipts and led to major cuts in education, health care, and other critical services.

The case for extending state sales taxes to digital goods and many closely related online services is compelling. Taxing digital goods and services:

- **Would make sales taxes fairer.** The sales tax is intended to be a broad-based tax on household consumption. People buying digital goods and services are consuming economic resources just as people buying physical goods are, so fairness dictates that they should pay the same amount of tax on each dollar of such spending. The unfairness of exempting digital products is particularly evident when someone is buying the exact same book or movie and avoids sales tax only because of the technology they use to read or watch it.

Notes on Terms in This Report

This report discusses state and local sales taxation of "digital goods and services." By this we mean goods and services that are both purchased *and delivered* over the Internet in digital form. Of course, computer software, music, and similar items sold on physical disks also exist as 1s and 0s and therefore can reasonably be considered digital goods. Nonetheless, common parlance in tax policy circles typically uses the term "digital goods" to refer to items that are delivered electronically rather than in physical form, and this report adopts that convention.

In the interest of readability, this report refers only to *state* sales taxes. However, most of the analysis applies equally to local governments' sales taxes. If, consistent with the recommendation of this report, states authorize their localities to extend *their* sales taxes to digital goods and services, states should, to the maximum extent permitted by law, require local tax treatment to mirror the state tax treatment. This will minimize confusion for consumers and sales tax compliance burdens for sellers.

Finally — and also in the interest of readability — the report refers only to sales taxes, not to "sales and use taxes." Use taxes are the analog of sales taxes that are due on the interstate sale of a taxable good or service. They are collected by the seller if the seller has a facility and/or employees in the purchaser's state, but if they are not collected by the seller they must be self-remitted by the purchaser directly to the state revenue department. References in this report to sales taxes should be understood to encompass complementary use taxes as well. Most taxable sales of digital goods and services are likely to be interstate sales and therefore subject to use taxes rather than sales taxes.

Moreover, those avoiding sales tax by buying digital goods are disproportionately upper-income households, since many lower-income households do not have home Internet access (a precondition for consuming information and entertainment in digital form) or, even if they do have Internet access, are less likely to make online purchases. Sales taxes already consume a larger share of the incomes of lower-income people than those who are better off; exempting digital goods and services forces lower-income households to shoulder an even larger share of sales tax collections.

- **Is necessary to prevent long-term erosion of the sales tax base.** More and more information- and entertainment-oriented products will be delivered over the Internet in digital form as time goes on. If states do not incorporate these items into their sales tax bases, the tax will be unable to continue financing the share of public services it currently supports. States will either have to scale back services like education and health care or raise other taxes to compensate.

- **Helps ensure a level playing field for all retailers.** Consumers are shifting from tangible goods and services to their digital equivalents primarily because the latter are more convenient and offer more features. Still, some of this shift is attributable to the artificial price advantage that the sales tax exemption provides. States should stop picking winners and losers in this way and let the market determine the relative costs of competing tangible and digital products.

- **Generates needed revenue.** Broadening existing sales taxes to include digital goods and services could make a modest but meaningful contribution to state treasuries, perhaps financing the restoration of some recent service cuts or mitigating additional ones that may still be in the offing in harder-hit states. The states that are not yet taxing the five major types of digital goods — computer software, movies, music, books, and games — could raise approximately $300 million annually in the aggregate by extending their sales taxes to these items alone. (This estimate relies on conservative assumptions about how much of the potential revenue sellers would actually collect.) Tens or hundreds of millions of dollars more could be generated by taxing downloaded goods and services more broadly.

Taxing digital downloads is not a radical move. A significant number of state policymakers have accepted the arguments in favor of including at least some digital goods and services in the sales tax base:

- 33 of the 45 states levying sales taxes, plus the District of Columbia, tax downloaded computer software;

- 22 of the sales tax states plus the District tax downloaded movies, music, and/or books;

- Hawaii, New Mexico, and South Dakota tax virtually all digital goods and services, just as they tax most other types of services, while Idaho, Utah, and Washington also have very broad coverage of digital goods and services (extending well beyond software, movies, music, books, and games); and

- a number of states tax smaller categories of digital goods and services, such as online information databases and electronic greeting cards.

Most of the states that tax digital goods and services do so by listing in statute the types of these products to which the sales tax applies, an approach that most states that begin to tax these items in the future are likely to follow. The Streamlined Sales and Use Tax Agreement, which more than 20 states have adopted to simplify and harmonize their sales tax codes, provides detailed model language governing taxation of the five major types of digital goods; states that wish to extend their sales taxes to these products should take advantage of this language.

As states extend their sales taxes to digital goods and services, they should give careful consideration to whether and how to tax these products when one business sells them to another. Business-to-business sales of digitized movies, books, music, and computer games will almost always be for resale to final consumers, and states need to write their sales tax laws to ensure that such sales are tax exempt in the same way that sales of tangible goods for resale are. On the other hand, businesses do widely purchase computer software for their own use and states widely tax this software when it is purchased in physical form, so a good argument can be made that it should be taxed when purchased and delivered online. That said, taxing online computer software raises certain complex administrative and definitional issues — particularly when the software is received as a "cloud computing" service rather than a final purchase of an intact software package. These issues are currently in flux, and are the subject of state-industry discussions that could lead to model state legislation; for now, states would be well-advised to forgo extending their sales taxes to cloud computing services unilaterally.

Cloud computing issues aside, extending state sales taxes to digital goods and services that households purchase is straightforward and long overdue. It's time for the states not yet taxing them to embrace the 21st century economy.

What Types of Digital Goods and Services Could States Tax?

In formulating appropriate sales tax policy for digital goods and services, it is useful to think of them as falling into four groups. These groups are defined by whether there are analogous physical goods and, if so, whether those physical goods are subject to tax — since a major argument for taxing digital goods and services is to maintain a level playing field.

The first group comprises five types of downloaded digital goods that unequivocally should be taxed because they are very close substitutes for physical goods that all states with sales taxes already tax:

- prewritten or "canned" computer software (including software "apps" for smartphones and tablet computers);
- movies and TV shows;
- music;
- electronic books; and
- games.

Purchasers buy (or sometimes rent) these kinds of digital goods for their information or entertainment content and, in the case of software, their functionality. The content and functionality of these products are nearly identical regardless of whether consumers purchase them on physical media or download them directly into devices that play them.[1] Given the almost complete interchangeability of the physical and electronic versions of these products, there is no sound justification for taxing them differently. Since all states tax them when sold on physical media, all states should tax them when they are downloaded.

The second group of digital goods comprises items that are also close substitutes for physical goods but for which some states have chosen not to tax the physical version. These products include, among other things:

- online newspapers and magazines;
- credit reports, mailing lists, and other kinds of information compilations that can be delivered online; and
- stock photographs and graphic artworks.

States should subject these items to sales taxes as well just as they tax other types of information and entertainment goods, but in order to do so they must simultaneously extend their sales taxes to the physical versions. Taxing them only when they are sold and delivered online would likely run

[1] Of course, digital versions of these items often have slightly different functionality than versions sold on physical media. For example, digital books can be keyword-searched and digital music files can be reordered into customized playlists without the need to re-record them. These relatively minor differences in functionality, however, hardly justify different tax treatment.

afoul of the federal Internet Tax Freedom Act, which mandates non-discriminatory state and local tax treatment of electronic commerce, including digital goods and services.

A third category of digital goods comprises goods that may not have a direct physical counterpart or whose physical counterpart has significantly different functionality than the digital version. These include:

- optional add-ons for use in computer games, such as virtual currencies, weapons, costumes, and "cheat" codes; and
- ringtones for mobile phones.

In most instances, there would be no *technological* obstacle to selling these products on tangible media, which would automatically subject them to existing sales taxes; it is simply cheaper and more convenient for consumers to purchase them in the form of direct downloads. The broader argument for taxing them, however, is that they fulfill consumer needs and wants in the same way that any other purchase does. In the absence of a compelling distributional or economic argument for exempting them, they therefore should be subjected to a general consumption tax like the sales tax.

Finally, a large and growing number of online *services* are potentially taxable. As in the case of digital goods, some of these are very close substitutes for services not provided on the Internet that are already subject to tax and should be taxed for that reason alone. There is little difference, for example, between paying a monthly subscription fee to HBO and paying a monthly fee to stream TV shows from Netflix over the Internet. Other services have no direct non-Internet counterpart, however, and in such cases the decision about whether to tax the service is likely to turn on how broadly the state taxes services generally. Nonetheless, the fundamental argument in favor of taxing these kinds of services is that the sales tax is a consumption tax and the services are a form of consumption.

Examples of fee-based online services to which states could extend their sales taxes include:

- video streaming services (both subscription and pay-per-view) like Netflix, Hulu Plus, and those operated by various national sports leagues;
- audio streaming services like Rhapsody and Spotify;
- online gaming networks like Xbox Live and the PlayStation Network;
- online information databases, such as compilations of information for genealogical research provided by companies like Ancestry.com;
- online dating services;
- online adult chat services;
- brokerage services, such as those that solicit dealer bids for new car purchases;
- online computer back-up services; and
- online home security monitoring.

Again, the argument for extending sales taxes to these types of services is compelling when their non-Internet counterparts are already subject to taxation. If their non-Internet counterparts are *not* subject to sales taxation, taxing the online version would likely violate the Internet Tax Freedom Act.

What About "Cloud Computing" Services?

There is considerable discussion among state tax policy experts and industry leaders on whether states should tax so-called "cloud computing" services, and, if so, how. These are services generally sold from one business to another that allow businesses to buy, and use, on an as-needed basis, computer processing capacity, data storage, and/or software applications owned by others.

As discussed in the body of this report, there are good reasons why states should *not* extend their sales taxes to services that are sold exclusively from one business to another, as most cloud computing services are. States that nonetheless move in this direction should proceed cautiously, with considerable input from affected businesses. Cloud computing services raise complex tax issues, particularly because users in the same corporation located in different states can access them simultaneously. Some cloud computing services are analogous to renting equipment, others are akin to licensing software, and others are true business-to-business services. The few states that tax some forms of cloud computing vary widely in defining what they tax and how multistate use should be apportioned among the states for tax purposes.

These issues could best be resolved in a joint state-industry forum like the Streamlined Sales Tax Agreement, and, indeed, discussions are getting underway there about whether to expand the Agreement to encompass cloud computing services. While these discussions are making progress, the best course of action for states arguably would be to participate actively in them rather than unilaterally extend their sales taxes to cloud computing.

The Case for Extending Sales Taxes to Digital Goods and Services

There are four key reasons why states should extend their sales taxes to the types of digital goods and services identified in the previous section:

- to make their tax systems fairer;
- to avoid long-term erosion of their ability to fund services;
- to eliminate an unjustified competitive advantage for sellers of digital goods and services over sellers of their tangible equivalents; and
- to raise additional revenue.

Enhancing Tax Fairness

Equalizing the tax treatment of similarly situated consumers — what economists refer to as "horizontal equity" — is the most compelling justification for extending sales taxes to digital goods and services. As discussed in the previous section, many tax-exempt digital goods and services accessed over the Internet are close substitutes for goods and services that are taxable when purchased on physical media or received through means other than the Internet. In these circumstances, it makes little sense to subject some but not all buyers of identical or very similar products to sales tax simply because of the means by which they consume them.

What about digital goods and services *without* close physical substitutes — say, ringtones for mobile phones or an online dating service? Even there, the horizontal equity principle generally

argues for taxation. Fundamentally, the sales tax is intended to be a broad-based tax on household consumption. Yet in most states, someone who spends her consumption dollars entirely on tangible goods likely pays much more sales tax each year than someone with the same income who spends a lot of money on digital goods and online services — even though both people consume equal amounts of society's output.[2] Of course, policymakers may choose not to tax particular digital goods and services to achieve other goals, such as minimizing administrative difficulties for sellers of those products. Nonetheless, the principle of horizontal equity generally supports the proposition that states should tax most digital goods and services that households purchase.

The beneficiaries of this favorable tax treatment tend to be people with higher incomes. So extending sales taxes to digital goods and services would also improve the "vertical equity" of sales taxes, that is, fair treatment of people in different income groups. Sales taxes are regressive to begin with; that is, they absorb a greater share of the incomes of low-income households than of high-income households, largely because higher-income households tend to save (rather than spend) larger shares of their incomes than lower-income households do. Failing to tax digital goods and services worsens the inherent regressivity of sales taxes because low-income households are much less likely than higher-income households to have Internet access (at home or via a mobile device like a smartphone), which is the essential precondition of buying such products:

- As of August 2011, only 49 percent of adults living in households with less than $30,000 in annual income had Internet access at home, compared to 93 percent of adults in households with incomes above $75,000, according to the Pew Internet and American Life Project.[3] The gap in *mobile* Internet access (via smartphones or laptops) between these income groups was virtually identical to the gap in in-home access.[4]

- Even if a low-income household has Internet access, it is much less likely to buy a product online (whether physical or digital) than is an upper-income household. Among adults in the minority of households with incomes below $30,000 who do have Internet access, just 51

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[2] Proponents of preserving sales tax exemptions for digital goods and services sometimes argue that these products have a less adverse impact on the environment than equivalent physical products. While it is true that downloaded digital goods do not require the production of packaging materials, a complete life-cycle analysis of the relative environmental impacts of physical and digital goods would likely not be as favorable toward the latter as one might think. For example, reading a physical book usually does not require the use of electricity (or at least use of an electric light that would not have been on anyway), but electronic reading devices have to be constantly recharged. The server farms that store digital content consume enormous quantities of electricity 24 hours per day, 365 days per year, as do the Internet servers that deliver it. See: James Glanz, "Power, Pollution, and the Internet: Industry Wastes Vast Amounts of Electricity, Belying Image," New York Times, September 23, 2012. Once someone owns a book or a music CD they do not usually "upgrade" it, but consumers are constantly damaging, losing, or upgrading their electronic gadgets, particularly mobile ones, and the production and disposal of these items have enormous environmental impacts.

In any case, if a physical good or physically delivered service consumes more real resources than an equivalent digital good or service, it is likely to be more expensive. Since the sales tax is imposed on the basis of selling price, a consumer of such an item will already be paying a higher tax that arguably compensates for her greater consumption of societal resources. Accordingly, there does not appear to be a compelling environmental case for *further* incentivizing the consumption of digital goods and services by exempting them from sales taxation.

[3] Author email communication with Pew Research Specialist Kathryn Zickuhr, April 20, 2012.

[4] Kathryn Zickuhr and Aaron Smith, "Digital Differences," Pew Internet and American Life Project, April 13, 2012, p. 15.

percent of shopped online as of May 2011, whereas 90 percent of adults with incomes above $75,000 did.[5] Moreover, it seems reasonable to assume that buying *digital* goods and services online would be even more skewed toward the relatively affluent.

In other words, low-income families are less likely to have Internet access and, even if they do, less likely to use that access to shop online than higher-income families. So exempting digital goods and services from sales taxes is unfair to lower-income households because they pay sales taxes when they buy physical goods in stores while upper-income households avoid those taxes by buying digital goods online.

Preserving Sales Tax Revenues over the Long Run

General sales taxes are a vital revenue source for state and local governments. In FY09 they supplied $291 billion and comprised 23 percent of combined state and local tax collections and 32 percent of state tax collections.[6] By broadening their sales taxes to include digital goods and services, states can mitigate long-term erosion of this critical revenue source and help preserve its ability to finance public services.[7]

Sales tax revenue falls when consumers shift from purchasing items that are subject to sales tax to items that are not. Consider, for example, a hypothetical state where sales taxes on physical books, computer software disks, DVDs, and cable television service generate $10 million annually and thereby finance 200 teachers' salaries. If half of those purchases shift to tax-exempt online equivalents, then it is reasonable to update the sales tax law to cover those items. Failure to do so would necessitate the elimination of half of those teaching jobs — 100 teachers — or the reduction of other services or increase of other taxes.

Even if some digital goods and services truly are original products satisfying new needs and wants rather than merely substituting for existing physical products, it is still necessary to add them to the sales tax base in order to maintain states' long-term ability to fund services. The costs of many state services tend to rise in real (inflation-adjusted) terms over time, for several reasons. For example, the technological progress that is driving the invention of new digital goods and services is also

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[5] "Digital Differences," p. 13.

[6] U.S. Census Bureau, Governments Division, State and Local Government Finances series, http://www2.census.gov/govs/estimate/09slsstab1a.xls.

[7] A number of tax practitioners who tend to represent firms in the electronic commerce industry have recognized this concern. For example:

> "Some states have enacted legislation imposing sales tax on specific digital transactions, such as music downloads, either through an expansion of the definition of tangible personal property, or through the creation of a new class of taxable transactions. The rationale behind this legislation has been to ensure that, as consumers substitute purchases of digital products for their tangible counterparts, state sales tax bases do not continue to erode." Michael A. Jacobs and Kelley C. Miller, "Pennies from Heaven: U.S. State Tax Implications within Cloud Computing," Reed Smith law firm, no date.

> "This [cloud computing] really is the next state in software delivery and consumption. . . . It's where the market is going; you can already see that happening. As everything moves in that direction, that potentially means an eroded tax base for many states." Reid Okimoto, senior manager in KPMG's State and Local Tax Practice, quoted in Alexei Alexis, "Cloud Transactions Receive Growing Scrutiny from State Tax Departments," *BNA Daily Tax Report*, June 13, 2011.

driving the development of new — and expensive — medical technologies. Medical care for employees, inmates, the elderly, and the disabled is a major expense for states, and sales tax receipts finance a share of that expense.

If states do not broaden their sales tax bases over time to include new goods and services that come on the market — including new digital goods and services — they will either have to increase rates on the *existing* sales tax base (thereby worsening the horizontal and vertical inequities discussed above) or scale back the services they provide such as education, health care, transportation and public safety.

In sum, expanding the sales tax base to include digital goods and services is needed to prevent its erosion relative to both the public services it now helps finance and the services it will be expected to help finance in the future.

Maintaining a Level Playing Field for Sellers

Exempting digital goods and services from tax gives them a price advantage of 5 percent to 10 percent over their taxable tangible equivalents. This is not only unfair to sellers of those tangible equivalents but can also distort consumer choices, interfering with the most efficient allocation of economic resources.

Admittedly, the trend toward consuming many entertainment- and information-oriented goods and services in digital rather than tangible form primarily reflects convenience and inherent cost advantages rather than the absence of sales taxes. For example, the ability to buy a single song of one's choosing from any record album is undoubtedly a much stronger selling point for buying it online than is the ability to avoid a few cents in sales tax that might otherwise be due in some states on the typical $1.29 charge.[8] Nonetheless, for some people who buy numerous books or graphics-intensive computer games, the absence of sales taxes on the downloadable versions may well be steering purchases in that direction. The same may be true with respect to decisions many consumers are making to drop their (often taxable) conventional cable TV services and subscribe instead to (usually tax-exempt) Internet-based streaming services.

Most tax experts agree that state tax policy should strive to establish a level playing field between competing providers of goods and services. Broadening the sales tax base to include digital goods and services is consistent with this objective.

Generating Additional Revenue

Extending sales taxes to digital goods and services could raise additional revenue (see below for estimates of how much). This is not necessarily the primary justification for starting to tax these products. Policymakers who do not believe that states and localities need additional revenue should still strongly support taxing these products in order to treat consumers and sellers of competing digital and non-digital goods and services fairly. States that would prefer not to have more revenue

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[8] Apple, the largest online seller of digital music, does, in fact, charge sales taxes on purchases of songs, electronic books, and software apps from its online stores in states in which they are taxable.

could easily avoid any undesired revenue gain from expanding the tax base to include digital goods and services by making an offsetting cut in the sales tax rate.[9]

Nonetheless, for policymakers who believe that states and localities should at least partially restore the cuts they have made in education, health care, libraries, and other services in recent years, taxing digital goods and services should be an attractive option. The revenues it would generate could also help address some major spending needs looming on the horizon, such as replenishing public pension plan trust funds, financing long-term care for the soon-retiring Baby Boomers, and rebuilding 1960s-era infrastructure reaching the end of its useful life. It is far preferable to generate additional revenue from transactions and sectors of the economy that have gotten a free ride up to now than to raise taxes on already-taxed transactions and sectors.

Current State Taxation of Digital Goods and Services

Of the 45 states with sales taxes, only a handful tax digital goods and services as broadly as they tax non-downloaded goods and services; most states could improve their sales taxes by adding digital goods and services to the base. Table 1 summarizes the current tax status of the five major categories of digital goods: prewritten or "canned" computer software (that is, software that is neither developed for a specific user nor customized to a specific user's needs), books, music, movies/TV shows, and games. It also notes the taxable status of miscellaneous types of digital goods and services, although this information was developed anecdotally rather than systematically. It shows that:

- Among the 45 sales tax states and the District of Columbia, 12 states tax none of the five categories, 12 tax some, and 22 tax all.
- All three states that tax nearly all goods and services provided in physical form — Hawaii, New Mexico, and South Dakota — carry this policy over into the virtual world and tax nearly all online goods and services.
- Two states, Idaho and Utah, have deliberately extended their sales taxes to essentially all forms of digital goods, while Washington has deliberately extended it sales tax to essentially all digital goods *and* digital services.

[9] As discussed below, it is very difficult to predict accurately the revenue gain from expanding the sales tax base to digital goods and services; reliable state-by-state data on sales of these products are not available. Therefore, governments that expand the sales tax base would be well advised to wait a year or two to see how much revenue this actually generates before instituting any offsetting rate reductions. If policymakers anticipate such rate reductions, they should accompany the base expansion with a requirement that sellers report how much of their sales tax remittances are specifically attributable to the newly taxable items to help ensure that they do not cut tax rates too much.

Table 1
Current State Taxation of Digital Goods and Services

State	Software	Books	Music	Film/TV	Games	Miscellaneous Taxable Goods and Services
Alabama	T	T	T	T	T	digital photos, blueprints, and similar goods
Arizona	T	T	T	T	T	
Arkansas	E	E	E	E	E	audio and video streaming services
California	E	E	E	E	E	
Colorado	E	E	E	E	E	
Connecticut*	T	T	T	T	T	online data processing
District of Columbia	T	T	T	T	T	online information services and data processing
Florida	E	E	E	E	E	video streaming services**
Georgia	E	E	E	E	E	
Hawaii	T	T	T	T	T	essentially all retail sales of digital goods and services are taxable
Idaho	T	T	T	T	T	essentially all forms of digital goods are taxable
Illinois	T	E	E	E	T	
Indiana	T	T	T	T	T	
Iowa	E	E	E	E	E	
Kansas	T	E	E	E	T	audio and video streaming services
Kentucky	T	T	T	E	T	downloaded artwork, photographs, magazines, newspapers, other periodicals, greeting cards, streaming audio
Louisiana	T	T	T	T	T	
Maine	T	T	T	T	T	
Maryland	E	E	E	E	E	
Massachusetts	T	E	E	E	T	
Michigan	T	E	E	E	T	
Minnesota	T	E	E	E	T	
Mississippi	T	T	T	T	T	audio and video streaming services
Missouri	E	E	E	E	E	
Nebraska	T	T	T	T	T	audio and video streaming services, mailing lists
Nevada	E	E	E	E	E	
New Jersey	T	T	T	T	T	
New Mexico	T	T	T	T	T	essentially all digital goods and online services are taxable
New York	T	E	E	E	T	wide array of online information services
North Carolina	T	T	T	T	T	online magazines, newspapers, newsletters, reports, publications, photos, greeting cards, audio and video streaming services
North Dakota	T	E	E	E	T	
Ohio	T	E	E	E	T	online data processing, information services, electronic publishing (business-to-business only)
Oklahoma	E	E	E	E	E	
Pennsylvania	T	E	E	E	T	
Rhode Island	T	E	E	E	T	
South Carolina	E	E	E	E	E	
South Dakota	T	T	T	T	T	almost all types of digital goods and most online services are taxable (exceptions include financial services)
Tennessee	T	T	T	T	T	audio and video streaming, digital advertising final artwork
Texas	T	T	T	T	T	video streaming, online information services, online data processing services
Utah	T	T	T	T	T	audio and video streaming; essentially all digital goods are subject to tax
Vermont	T	T	T	T	T	audio and video streaming
Virginia	E	E	E	E	E	
Washington	T	T	T	T	T	virtually all digital goods and online services for household use are taxable
West Virginia	T	E	E	E	T	
Wisconsin	T	T	T	T	T	audio and video streaming, online greeting cards, finished artwork, periodicals, newspapers, news and information products
Wyoming	T	T	T	T	T	

"T" is taxable, "E" is exempt. The table reports the tax status of these items when they are sold as digital downloads; all states with sales taxes tax these products when they are sold on physical media.

*Digital goods and services taxed at special 1 percent rate in Connecticut; regular sales tax rate is 6.0 percent.

** Taxable under Florida's communications services tax, not its general sales tax.

- Downloaded computer software and games are the most widely taxed digital goods, taxed by 33 of the 45 sales tax states plus the District of Columbia.[10]

- Twenty-two of the 45 sales tax states plus the District of Columbia tax some or all of the three other enumerated categories of digital goods (books, music, and movies).

- With one exception, states that tax some or all digital goods and services do so at their standard sales tax rate. The exception is Connecticut, which taxes all five categories of digital goods but at a sharply reduced 1.0 percent rate rather than its standard 6.0 percent rate.

- With one exception, states that tax digital music or books or movies tax all three of them. The exception is Kentucky, which taxes digital music and books but not movies.

- Many states that tax music and movies when they are sold as permanent downloads also tax them when they are sold as a "streamed service," either for one-time use or on a subscription basis.

- Several states tax a variety of miscellaneous online goods and services, including information services, online data processing, magazines and other periodicals, newspapers, online greeting cards, and digital photographs.

How Should States Go About Extending Their Sales Taxes to Digital Goods and Services?

Policymakers who recognize the merits of extending their states' sales taxes to digital goods and services confront several key choices regarding the means of achieving this. The choices include whether to implement the change administratively or legislatively, whether to enumerate specific types of digital goods and services to tax or tax these items comprehensively, whether to develop new statutory language or mirror language already developed by other states, and how broadly to tax business-to-business sales of digital goods and services.

Administrative Versus Statutory Change

A number of states that tax downloaded computer software do so because their revenue department has interpreted the existing sales tax law as encompassing this product. Most state sales tax laws say that all types of "tangible personal property" (physical goods) are subject to sales taxes unless explicitly exempted. Tangible personal property clearly encompasses software sold on a physical disk, and it was reasonable for state tax administrators to determine that otherwise identical software purchased in the form of an online download also qualified. The same could be argued

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[10] Most state laws and regulations are vague about the taxable status of downloaded computer games. The Streamlined Sales and Use Tax Agreement adopted by 22 states (see below) deems games to be a form of prewritten computer software, presumably because, like other software, games require input from the user and the output varies based on that input. The author informally surveyed a few revenue departments from states that are not members of the Agreement and these states, too, said they treat games as a form of software. Accordingly, Table 1 assumes that the tax treatment of downloaded games (taxable or exempt) is identical to that of downloaded software in all sales tax states. Since the survey was not comprehensive, this assumption may not be entirely accurate.

with respect to the downloaded version of a book, song, movie, or game, as well as an array of other digital goods and services that have close counterparts in the real world.

Accordingly, a governor who concludes that his or her state should start taxing some digital goods and services as a matter of policy *and* that the state's statutory definitions of taxable tangible personal property and taxable services encompass those products could direct the revenue department to develop a regulation or issue guidance prospectively extending the sales tax to them.

However, while such an action might be feasible and justified, it would need to be undertaken with a great deal of caution. Given how long these products have been on the market, one or more businesses selling the newly taxable items would likely challenge the action in court as lacking statutory authority. Even legislators supportive of the change on policy grounds may view it as a usurpation of their tax policy-making role and might support legislation to reverse it. Finally, federal legislation has recently been introduced that would retroactively ban the extension of sales taxes to digital goods and services by administrative action.[11] Were Congress to enact such legislation, a state taxing these items administratively would have to go back and obtain statutory authority for the policy. In short, any state policymaker who wishes to extend his state's sales tax to additional goods and services probably should do so, if possible, by explicitly amending the state sales tax law.

Specific Enumeration versus Comprehensive Taxation

The second major choice state policymakers need to make after deciding to expand their sales tax base to digital goods and services is whether to write the law to say that all digital goods and services will be taxable unless they are explicitly exempted or to enumerate the specific types of goods and services that will be taxed. There are advantages and disadvantages to both approaches.

The main advantage of the comprehensive approach is that it automatically includes new types of digital goods and services in the tax base as they are invented. All state sales tax codes assert that all physical goods are taxable unless they are explicitly exempted; given the rapid proliferation of new products in the marketplace, imagine the erosion of the sales tax base that would constantly be occurring if *physical* products were only subject to sales taxation when legislatures got around to specifically naming them as taxable. Yet that is the current state of affairs in nearly all states with respect to *digital* goods and services (and, unfortunately with respect to most non-digital services as well).

States can change this going forward by amending their sales tax laws to say that all digital goods and online services are taxable unless specifically exempted and by including a broad definition of such goods and services. Under this comprehensive approach, state treasuries will not suffer tax base erosion, sellers of competing products will not be put at a competitive disadvantage, and people who do *not* purchase the new products will not be forced to shoulder a disproportionate share of sales taxes while waiting for the legislature to update the tax code to encompass the new goods and services. Automatic inclusion is also consistent with the concept that the sales tax is intended to be a broad-based tax on all household purchases, regardless of their nature.

The main drawback of the comprehensive approach is that it will automatically sweep into the sales tax base some types of digital goods and services that policymakers might choose not to tax or,

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[11] See Michael Mazerov, "Proposed 'Digital Goods and Services Tax Fairness Act' Likely to Do More Harm than Good in Current Form," Center on Budget and Policy Priorities, August 11, 2011, www.cbpp.org/files/8-11-11sfp2.pdf.

at least, might prefer to give more deliberate attention to before deciding. In particular, the comprehensive approach is likely to subject to the sales tax a wide array of services primarily sold from one business to another, such as the "cloud computing" services discussed in the text box on p. 6. Some of these "business-to-business" services raise complex administrative issues, such as how to define which state (or states) has the right to tax them. Moreover (and as discussed below), there are some compelling economic arguments as to why states should shy away from taxing business-to-business services. States can best avoid these kinds of problems by enumerating the specific digital goods and services that are taxable rather than by defining digital goods and services broadly as taxable and then adding a large number of exemptions.

The pros and cons of the specific enumeration approach are the converse of those attaching to the comprehensive approach. Requiring explicit identification of specific digital goods and services as taxable maximizes the control that policymakers — principally legislators — have over the fine details of state sales tax policy. It ensures that if a majority of legislators do not wish to see certain products taxed, they won't be taxed. It also increases the likelihood that potential administrative issues and unintended consequences will come to light before the tax takes effect. On the other hand, most of these products have been on the market for a considerable period of time, the arguments in favor of subjecting them to sales tax are extremely compelling, and yet a default tax-exempt status prevails by simple inertia under a specific enumeration requirement.

While most states so far have favored specific enumeration, as Table 1 shows, Idaho and Utah have implemented the comprehensive approach for digital goods, and Washington has implemented it for both digital goods and services. Despite the potential issues noted above, those states have not experienced major challenges with implementation.

As more and more types of online services become available and state tax policies and laws struggle to keep up, policymakers may come to perceive the specific enumeration approach as burdensome and a source of serious erosion of their sales tax bases. For now, however, computer software, music, movies, books, and games appear to account for the vast majority of digital goods and services that households buy, and states can tax these items in a straightforward manner through specific enumeration (as explained below), so the potential drawbacks of this approach may be more of a long-term concern than a near-term one.

How Should States Write Their Sales Tax Laws to Tax Digital Goods and Services?

States that wish to begin taxing digital goods and services can take advantage of the statutory language that other states have already developed. In particular, states that wish to begin taxing downloaded software, music, movies, books, and games by specific enumeration should use the definitions of these items developed under the Streamlined Sales and Use Tax Agreement. They should also adopt the Agreement's "sourcing" provisions, which determine which state has the right to impose its tax on interstate sales of these items.

The Agreement is the work-product of a decade-old, multistate effort to harmonize state tax laws in order to make sales tax compliance easier for businesses that have to collect and remit these taxes in numerous states. Most states levying sales taxes have participated in this effort, and 22 states are

now considered full members because they have completely integrated the Agreement into their sales tax laws.[12]

The states participating in the initiative have devoted considerable attention to the proper definition and sourcing of digital goods and services. Should full member states that do not yet tax digital goods and services begin doing so, they must adopt all these provisions if they wish to retain full member status. Non-member states that wish to begin taxing digital goods and services also would be well-advised to use language from the Agreement. This language has been carefully thought through, for the most part, and if a non-member state chooses to implement the Agreement in the future, the fact that it has already adopted the provisions applicable to digital goods and services will mean that much less disruption to existing sales tax policy.

Numerous provisions of the Streamlined Agreement govern the taxation of digital goods and services, and a complete description of these is beyond the scope of this report. The following are the key definitions and requirements for taxing these items through specific enumeration:

- **Taxing "canned" computer software.** States that wish to start taxing canned (non-customized) computer software that is sold via an Internet download should adopt the Agreement's definitions of taxable "tangible personal property," "computer," "computer software," and "prewritten computer software." The definition of "tangible personal property" explicitly states that it includes "prewritten computer software." Since the latter definition does not distinguish between downloaded software and software sold on physical media, it subjects both to sales taxation. Although defining downloaded software as tangible property may seem odd, this choice was made to minimize the disruption of pre-Agreement sales tax policy in the significant number of states that had long considered computer software to be taxable regardless of the delivery method.

- **Taxing downloaded movies, music, and books.** States wishing to tax downloaded movies, music, and books should write their laws to say that they tax "specified digital products." "Specified digital products" is defined in the Agreement as "electronically transferred" "digital audio-visual works," "digital audio works," and "digital books." All four of these terms have their own definitions, which must also be adopted. A state wishing to tax some but not all of these three types of digital goods (movies, music, and books) would write its law to say directly (that is, without picking up the reference to "specified digital products") that it taxes "digital audio-visual works," "digital audio works," and/or "digital books" when they are "electronically transferred."[13]

- **Taxing computer games.** The Agreement contains no specific reference to computer games, but it appears that there is an understanding that games are a form of prewritten computer software because they require input from users to function — just as other software generally does. Nonetheless, it would be advisable to add to the definition of prewritten computer

[12] The text of the Streamlined Agreement in its current form is at http://www.streamlinedsalestax.org/uploads/downloads/Archive/SSUTA/SSUTA%20As%20Amended%205-24-12.pdf.

[13] If a full member state wishes to exempt downloaded movies, music, or books but not all three of them, it must also exempt the equivalent product when sold on physical media. A non-member state is not subject to such a constraint.

software an explicit statement that it includes interactive games, especially if the state adopting the Agreement definition is not a full member.

- **Taxing digital codes.** States should ensure that digital goods and services are also subject to tax when the retailer sells a code that provides online access to the product, rather than the product itself. They can accomplish this by incorporating into the sales tax code the Agreement's language that achieves this.[14]

- **Taxing streamed or temporarily rented movies, music, and books.** Under the Agreement, if a state wishes to tax movies, music, and books when they are accessed temporarily by streaming rather than downloaded and permanently purchased, its sales tax statute must say so explicitly. (This is true whether the stream is purchased for one-time use, time-limited use, or on an "all-you-can-eat" basis for a monthly or annual subscription fee.) There is no justification for treating "rented" content any differently than purchased content, and states should include such language in their sales tax laws.[15]

- **Taxing games played online.** Unfortunately, the language in the Agreement that covers streaming of movies and music does not apply to streaming games played against online opponents, a large and rapidly growing segment of the game industry.[16] To resolve the ambiguity, states should add explicit language adding streamed games to the definition of taxable goods and services.

- **Adopting the Agreement's "sourcing" rules**. States should adopt the Agreement's so-called "sourcing" provisions, which lay out a hierarchy of rules governing which state's sales tax applies to a specific sale of a good or service when the seller and purchaser are in different states. The rules are particularly relevant to digital products because consumers often take possession of them in states other than those in which they reside. Moreover, sellers of digital goods and services do not necessarily know the purchaser's location or even residence (for example, when the purchaser uses an anonymous online payment method like a gift card).

  The Agreement's sourcing rules give first right of taxation to the jurisdiction in which the purchaser is located when he/she takes possession of the digital good or service; if the seller does not have that information, the taxing authority goes next to the jurisdiction in the seller's records (such as a permanent residence address), then to any address supplied at the time of sale

[14] The relevant language is: "The tax treatment of a 'digital code" shall be the same as the tax treatment of the 'specified digital product' or product 'transferred electronically' to which the 'digital code' relates. The retail sale of the 'digital code' shall be considered the transaction for purposes of this [section of the statute]. For purposes of this section, 'digital code' means a code, which provides a purchaser with a right to obtain one or more such products having the same tax treatment. A 'digital code' may be obtained by any means, including email or tangible means, regardless of its designation as a 'song code,' 'video code,' or 'book code.' "

[15] The language should state that sales of "specified digital products," or "electronically transferred digital audio-visual works, [and/or] digital audio works, [and/or] digital books" are subject to tax "regardless of whether the seller has granted the purchaser a right of permanent use and regardless of whether the purchaser's right of use is conditioned upon continued payment."

[16] See, for example: Ian Sherr, "Apple Adds Online Gaming Option for Mac Owners," *Wall Street Journal*, June 12, 2012; Daisuke Wakabayashi, "Sony Shifts Toward Online Games," *Wall Street Journal*, July 2, 2012.

(such as a credit card billing address), and, finally, to the jurisdiction in which the seller is located.[17] The Streamlined states are developing more detailed rules governing the sourcing of digital products.[18]

- **Taxing other kinds of digital goods and services.** States that wish to tax other types of downloaded digital goods and services by specific enumeration should write their laws to say that a taxable retail sale also includes these (named) items when they are "electronically transferred" (picking up the Agreement's definition of that term). If the scope of the product is ambiguous, states will have to try to develop an expanded definition. (This would probably not be necessary with something straightforward like a digital photograph, but it might well be with respect to an online "magazine.") In developing definitions for other digital goods and services not addressed by the Agreement, states may be able to draw upon on definitions of online goods and services developed as part of the North American Product Classification System.[19]

States that wish to expand their sales taxes to digital goods and services comprehensively, rather than by enumeration, do not have many other states whose language they can model. Probably the best such state is Washington. Its sales tax law declares to be taxable — unless specifically exempted — all "digital goods" and "digital automated services." "Digital goods" are broadly defined as "sounds, images, data, facts, or information, or any combination thereof transferred electronically." "Digital automated services" are defined as "any service transferred electronically that uses one or more software applications." (Both definitions then list the products that the definition does *not* encompass.) Washington is developing a regulation providing more detail concerning the scope of these definitions.[20]

Washington is a full member of the Streamlined Agreement. Because it has drafted its law to say that it taxes all digital goods "transferred electronically" and also incorporates the Agreement definition of the latter term, it is not required to adopt the other relevant Agreement definitions, such as "specified digital products" or "digital audio-visual works." The same is true with respect to Utah, another full member of the Agreement. Utah imposes its sales tax on every sale of "a product transferred electronically," thereby taxing essentially all digital goods.[21]

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[17] See sections 310 and 311 of the Agreement.

[18] See: http://www.streamlinedsalestax.org/uploads/downloads/IP%20Issue%20Papers/2012/IP12003%20Digital%20Products%20Sourcing.pdf.

[19] NAPCS is a cooperative effort of the United States, Canada, and Mexico to develop uniform definitions of goods and services for a variety of economic research and measurement purposes. It complements the better-known North American Industry Classification System. All NAPCS definitions developed to date are available at: http://www.census.gov/eos/www/napcs/finalized/web_All%20Finalized%20NAPCS%20Products.xls.

[20] It is available at http://dor.wa.gov/Docs/Rules/draft/DRAFTDigitalProductsRule15503.pdf.

[21] Section 59-12-103(1)(m) of the Utah Code declares to be taxable:

> (m) amounts paid or charged for a sale:
> (i)(A) of a product transferred electronically; and
> (B) of a repair or renovation of a product transferred electronically; and
> (ii) regardless of whether the sale provides:
> (A)a right of permanent use of the product; or
> (B) a right to use the product that is less than a permanent use, including a right:
> (I) for a definite or specified length of time; and

Should States Tax Business-to-Business Sales of Digital Goods and Services?

The final significant policy issue confronting states contemplating extending their sales taxes to digital goods and services is whether, and to what extent, to impose them on sales from one business to another (as opposed to a sale from a business to a household). The question chiefly arises with respect to business-to-business sales of computer software, specialized information services (like Lexis-Nexis), online payroll processing, and similar online services. Although businesses rarely buy music, movies, and games for the benefit of their employees or customers, similar issues arise when a business licenses the right to resell these products to others — for example, when Netflix licenses movie streaming rights from the studios that made the movies.

Economists generally counsel states to forgo taxing business-to-business sales of goods and services for several reasons:[22]

- **Inconsistency with the goal of sales taxation.** The sales tax is intended to be a tax on consumption, and businesses do not consume; they produce. Taxing business inputs of any kind — whether goods or services, tangible or intangible — arguably is inconsistent with the underlying rationale for the sales tax.

- **Adverse effects of tax "pyramiding."** Taxing business inputs can lead to tax pyramiding, in which an input is taxed when a business purchases it and then is effectively taxed a second time when the business incorporates the input's cost into the selling price of a good or service that is also subject to sales tax. Tax pyramiding potentially has a number of negative consequences. For example, it increases the sales tax burden on consumers in a hidden manner. It can also create an artificial incentive for businesses to produce goods and services in-house (where they won't be taxed) rather than purchase them on the open market (where they will be), even if independent businesses can produce the product more economically.

- **Adverse effects on local economic development.** Taxing business inputs can lead to business decisions that impede local job creation and income growth. For example, it can create an artificial incentive for a firm to buy inputs from companies located in states that don't tax those products.[23] If the input is a major expense for the purchasing business, taxing inputs can in extreme cases even affect the business's decision of where to locate its own facilities — namely, in a state that doesn't tax the item.

- **May complicate tax administration.** Taxing business-to-business sales can complicate sales tax administration. For example, businesses often purchase services that various branches of the enterprise can use simultaneously in multiple states. This may necessitate the development of rules for apportioning the purchase price among those states for sales tax purposes.

(II) that terminates upon the occurrence of a condition.

[22] For a more extensive discussion of the pros and cons of taxing business-to-business sales of services, see Michael Mazerov, "Expanding Sales Taxation of Services: Options and Issues," Center on Budget and Policy Priorities, July 2009, pp. 25-29, http://www.cbpp.org/files/8-10-09sfp.pdf.

[23] Of course, the existence of a use tax on the purchased items is intended to eliminate this incentive. Because use taxes are difficult to enforce, however, the incentive still exists to some extent.

These considerations suggest that states generally should avoid extending their sales taxes to business-to-business sales of digital goods and services. However, there are some legitimate countervailing arguments. Perhaps the most important one is the desirability of maintaining a level playing field among businesses that sell competing products.

For better or worse, states already tax business-to-business sales of many goods (for example, computer software sold on tangible media) and services (for example, employee recruitment and screening services provided by local employment agencies) that are close substitutes for digital goods and online services. States depend on the sales tax revenue from these products to finance critical activities and cannot easily find politically feasible substitutes. In this situation, it arguably is preferable to extend the sales tax to the competing online versions of the products than to allow them to continue escaping taxation. For states that need the extra revenue, it is better to obtain it from online sales that have been receiving a free ride up to now than to tax offline sellers at an even higher rate, compounding their competitive disadvantage. (States that don't need the extra revenue can make an offsetting cut in the sales tax rate to reduce the tax liability of all taxpayers.)

Businesses buy a wide and rapidly growing array of online services, so it is difficult to generalize about the appropriate resolution of the arguments regarding taxation of business-to-business sales. Nonetheless, most public finance experts would probably agree on the following guidelines:

- States should only extend their sales taxes to business-to-business sales of digital goods and services that are quite close substitutes for tangible goods and services they already tax.
- States should generally avoid imposing their sales taxes on digital goods and services that typically comprise a significant share of the purchasing businesses' total expenses.
- States should enact broad "sale-for-resale" tax exemptions to purchases of digital goods and services that are direct inputs into the production of other digital goods and services to which sales taxes also apply. A good example would be providing a tax exemption for a movie studio's sale of streaming rights to a company like Netflix.[24]

How Much Revenue Could States Generate by Taxing Digital Goods and Services?

Revenue generated by taxing digital goods and services can be used to finance schools, health care and other state funded services, to reduce the sales tax rate, to reduce other state taxes, or a combination of all three. Table 2 shows estimated sales for the major categories of digital goods (and associated streaming services, in the case of games, music, and movies). Table 3 uses these

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[24] One way to achieve this with respect to digital goods would be to adopt the Streamlined Agreement's language providing that sales of digital goods are only taxable when purchased by an "end user," defined as "any person other than a person who receives by contract a product transferred electronically for further commercial broadcast, rebroadcast, transmission, retransmission, licensing, relicensing, distribution, redistribution or exhibition of the product, in whole or in part, to another person or persons."

Table 2 Estimated 2011 Sales of Major Categories of Digital Goods and Services		
	Sales ($millions)	Source of data
Electronic books	970	Association of American Publishers
Music downloads and subscriptions	3,138	Recording Industry Association of America
Mobile apps*	3,800	IHSiSuppli Corporation
Video downloads and subscriptions	3,416	Digital Entertainment Group
Online gaming*	7,240	NPD Group
TOTAL	**18,564**	

*Mobile apps and online gaming figures may reflect some double counting of gaming revenues from mobile apps. Sales shown are assumed to be worldwide, except for video sales (which are U.S. sales only).

estimates to develop rough state-by-state estimates of the revenue that states already taxing these items receive and as well as the revenue that non-taxing states could obtain by taxing them. Table 4 reports only the potential revenue gain for the states not yet taxing the items shown.

As Table 3 indicates, the total potential annual sales tax revenue associated with taxing the five major categories of digital goods and services is $837 million, both in the states that already tax some or all of these sales and those that do not. Under a more conservative assumption that this entire amount is not collectable (for reasons explained below), we estimate that if all states taxed these five types of digital goods and services, they would realize $557 million in annual sales tax revenues. These figures represent the combination of existing sales tax revenues from these five categories of purchases *plus* potential new revenues if more states taxed them.

As noted above, about three-fourths of the sales tax states are already taxing computer programs and games, and approximately half are taxing downloaded movies, music, and books. Table 4 isolates the states that are not taxing some or any of these products and shows how much revenue they could expect to receive by extending their sales taxes to them. It shows that the states are forgoing an estimated $419 million annually by not taxing some of these types of digital goods and services. Under more conservative assumptions about how much of the potential revenue sellers might collect, the forgone revenue is estimated to be $289 million annually.

In evaluating the revenue estimates in Tables 3 and 4, it is important to keep in mind the following underlying assumptions and caveats:

- **The reliability of the underlying data is uncertain.** No comprehensive or authoritative source of data on U.S. sales of digital goods and services exists. The estimates in Table 2 come from industry-based sources and their reliability cannot be determined, though these sources are widely cited in media reports on electronic commerce industries.

Table 3

Estimated Actual/Potential State Sales Tax Collections Attributable to Major Categories of Digital Goods and Services ($ Millions)

	Sales Tax from Product Assuming 100% Collection of Tax Due						Sales Tax From Product Assuming Seller Collection of Indicated Share of Tax Due					
							90%	75%	75%	75%	50%	
	Electronic Books	Online Music	Mobile Apps	Online Video	Online Games	All Five Categories	Electronic Books	Online Music	Mobile Apps	Online Video	Online Games	All Five Categories
United States	$41.2	$133.3	$161.4	$193.5	$307.6	$837.1	$37.1	$100.0	$121.1	$145.1	$153.8	$557.1
Alabama	$0.4	$1.2	$1.5	$1.8	$2.9	$7.8	$0.3	$0.9	$1.1	$1.3	$1.4	$5.2
Arizona	$0.9	$2.9	$3.5	$4.1	$6.6	$17.9	$0.8	$2.1	$2.6	$3.1	$3.3	$11.9
Arkansas	$0.3	$1.1	$1.3	$1.6	$2.6	$7.0	$0.3	$0.8	$1.0	$1.2	$1.3	$4.6
California	$6.7	$21.8	$26.4	$31.6	$50.2	$136.6	$6.1	$16.3	$19.8	$23.7	$25.1	$90.9
Colorado	$0.4	$1.2	$1.4	$1.7	$2.7	$7.4	$0.3	$0.9	$1.1	$1.3	$1.4	$5.0
Connecticut	$0.6	$2.1	$2.5	$3.0	$4.8	$13.2	$0.6	$1.6	$1.9	$2.3	$2.4	$8.8
District of Columbia	$0.1	$0.5	$0.6	$0.7	$1.1	$3.0	$0.1	$0.4	$0.4	$0.5	$0.6	$2.0
Florida	$2.6	$8.4	$10.2	$12.2	$19.4	$52.7	$2.3	$6.3	$7.6	$9.1	$9.7	$35.1
Georgia	$0.8	$2.6	$3.1	$3.8	$6.0	$16.3	$0.7	$1.9	$2.4	$2.8	$3.0	$10.8
Hawaii	$0.1	$0.4	$0.5	$0.6	$1.0	$2.7	$0.1	$0.3	$0.4	$0.5	$0.5	$1.8
Idaho	$0.2	$0.6	$0.7	$0.9	$1.4	$3.7	$0.2	$0.4	$0.5	$0.6	$0.7	$2.5
Illinois	$2.0	$6.4	$7.8	$9.3	$14.8	$40.2	$1.8	$4.8	$5.8	$7.0	$7.4	$26.8
Indiana	$0.9	$3.0	$3.6	$4.3	$6.8	$18.6	$0.8	$2.2	$2.7	$3.2	$3.4	$12.4
Iowa	$0.4	$1.4	$1.7	$2.0	$3.2	$8.6	$0.4	$1.0	$1.2	$1.5	$1.6	$5.7
Kansas	$0.4	$1.3	$1.6	$1.9	$3.1	$8.4	$0.4	$1.0	$1.2	$1.5	$1.5	$5.6
Kentucky	$0.5	$1.6	$2.0	$2.3	$3.7	$10.2	$0.5	$1.2	$1.5	$1.8	$1.9	$6.8
Louisiana	$0.4	$1.3	$1.6	$1.9	$3.0	$8.2	$0.4	$1.0	$1.2	$1.4	$1.5	$5.5
Maine	$0.1	$0.5	$0.6	$0.7	$1.1	$2.9	$0.1	$0.3	$0.4	$0.5	$0.5	$1.9
Maryland	$1.0	$3.2	$3.8	$4.6	$7.3	$19.9	$0.9	$2.4	$2.9	$3.5	$3.7	$13.3
Massachusetts	$1.2	$3.9	$4.7	$5.6	$8.9	$24.3	$1.1	$2.9	$3.5	$4.2	$4.5	$16.2
Michigan	$1.2	$4.0	$4.8	$5.8	$9.2	$24.9	$1.1	$3.0	$3.6	$4.3	$4.6	$16.6
Minnesota	$0.9	$2.9	$3.6	$4.3	$6.8	$18.5	$0.8	$2.2	$2.7	$3.2	$3.4	$12.3
Mississippi	$0.4	$1.3	$1.5	$1.8	$2.9	$7.9	$0.4	$0.9	$1.1	$1.4	$1.5	$5.3
Missouri	$0.6	$1.8	$2.2	$2.6	$4.1	$11.2	$0.5	$1.3	$1.6	$1.9	$2.1	$7.5
Nebraska	$0.2	$0.8	$0.9	$1.1	$1.8	$4.9	$0.2	$0.6	$0.7	$0.8	$0.9	$3.2
Nevada	$0.4	$1.3	$1.6	$1.9	$3.0	$8.3	$0.4	$1.0	$1.2	$1.4	$1.5	$5.5
New Jersey	$1.8	$5.8	$7.1	$8.5	$13.5	$36.7	$1.6	$4.4	$5.3	$6.4	$6.7	$24.4
New Mexico	$0.2	$0.7	$0.8	$1.0	$1.6	$4.3	$0.2	$0.5	$0.6	$0.7	$0.8	$2.9
New York	$2.1	$6.8	$8.2	$9.8	$15.6	$42.6	$1.9	$5.1	$6.2	$7.4	$7.8	$28.3
North Carolina	$0.9	$3.0	$3.7	$4.4	$7.0	$19.1	$0.8	$2.3	$2.8	$3.3	$3.5	$12.7
North Dakota	$0.1	$0.3	$0.3	$0.4	$0.7	$1.8	$0.1	$0.2	$0.3	$0.3	$0.3	$1.2

Table 3
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							90%	75%	75%	75%	50%	
	Electronic Books	Online Music	Mobile Apps	Online Video	Online Games	All Five Categories	Electronic Books	Online Music	Mobile Apps	Online Video	Online Games	All Five Categories
Ohio	$1.4	$4.4	$5.3	$6.3	$10.1	$27.4	$1.2	$3.3	$4.0	$4.8	$5.0	$18.3
Oklahoma	$0.4	$1.2	$1.4	$1.7	$2.7	$7.4	$0.3	$0.9	$1.1	$1.3	$1.4	$4.9
Pennsylvania	$1.8	$5.9	$7.1	$8.5	$13.5	$36.9	$1.6	$4.4	$5.3	$6.4	$6.8	$24.5
Rhode Island	$0.2	$0.6	$0.7	$0.9	$1.4	$3.7	$0.2	$0.4	$0.5	$0.6	$0.7	$2.5
South Carolina	$0.5	$1.8	$2.1	$2.5	$4.1	$11.0	$0.5	$1.3	$1.6	$1.9	$2.0	$7.3
South Dakota	$0.1	$0.3	$0.3	$0.4	$0.6	$1.6	$0.1	$0.2	$0.2	$0.3	$0.3	$1.1
Tennessee	$1.0	$3.1	$3.7	$4.5	$7.1	$19.4	$0.9	$2.3	$2.8	$3.4	$3.6	$12.9
Texas	$3.6	$11.8	$14.3	$17.1	$27.2	$74.0	$3.3	$8.8	$10.7	$12.8	$13.6	$49.2
Utah	$0.3	$0.8	$1.0	$1.2	$1.9	$5.2	$0.2	$0.6	$0.7	$0.9	$0.9	$3.4
Vermont	$0.1	$0.3	$0.4	$0.4	$0.7	$1.8	$0.1	$0.2	$0.3	$0.3	$0.3	$1.2
Virginia	$0.8	$2.7	$3.2	$3.9	$6.1	$16.7	$0.7	$2.0	$2.4	$2.9	$3.1	$11.1
Washington	$1.1	$3.6	$4.4	$5.3	$8.4	$22.9	$1.0	$2.7	$3.3	$4.0	$4.2	$15.2
West Virginia	$0.2	$0.7	$0.8	$1.0	$1.6	$4.3	$0.2	$0.5	$0.6	$0.7	$0.8	$2.9
Wisconsin	$0.6	$2.1	$2.5	$3.0	$4.8	$13.0	$0.6	$1.6	$1.9	$2.3	$2.4	$8.7
Wyoming	$0.1	$0.2	$0.2	$0.3	$0.5	$1.2		$0.1	$0.1	$0.2 $0.2	$0.2	$0.8

Table 4

Estimated Potential State Sales Tax Collections Attributable to Major Categories of Digital Goods and Services in States Not Yet Taxing Them ($ Millions)

	Sales Tax from Product Assuming 100% Collection of Tax Due						Sales Tax From Product Assuming Seller Collection of Indicated Share of Tax Due					
	Electronic Books	Online Music	Mobile Apps	Online Video	Online Games	All Five Categories	90% Electronic Books	75% Online Music	75% Mobile Apps	75% Online Video	50% Online Games	All Five Categories
United States	$26.9	$87.1	$60.6	$128.8	$115.4	$418.9	$24.2	$65.4	$45.4	$96.6	$57.7	$289.4
Arkansas	$0.3	$1.1	$1.3	$1.6	$2.6	$7.0	$0.3	$0.8	$1.0	$1.2	$1.3	$4.6
California	$6.7	$21.8	$26.4	$31.6	$50.2	$136.6	$6.1	$16.3	$19.8	$23.7	$25.1	$90.9
Colorado	$0.4	$1.2	$1.4	$1.7	$2.7	$7.4	$0.3	$0.9	$1.1	$1.3	$1.4	$5.0
Connecticut*	$0.5	$1.7	$2.1	$2.5	$4.0	$11.0	$0.5	$1.3	$1.6	$1.9	$2.0	$7.3
Florida	$2.6	$8.4	$10.2	$12.2	$19.4	$52.7	$2.3	$6.3	$7.6	$9.1	$9.7	$35.1
Georgia	$0.8	$2.6	$3.1	$3.8	$6.0	$16.3	$0.7	$1.9	$2.4	$2.8	$3.0	$10.8
Illinois	$2.0	$6.4		$9.3		$17.7	$1.8	$4.8		$7.0		$13.6
Iowa	$0.4	$1.4	$1.7	$2.0	$3.2	$8.6	$0.4	$1.0	$1.2	$1.5	$1.6	$5.7
Kansas	$0.4	$1.3		$1.9		$3.7	$0.4	$1.0		$1.5		$2.8
Kentucky				$2.3		$2.3				$1.8		$1.8
Maryland	$1.0	$3.2	$3.8	$4.6	$7.3	$19.9	$0.9	$2.4	$2.9	$3.5	$3.7	$13.3
Massachusetts	$1.2	$3.9		$5.6		$10.7	$1.1	$2.9		$4.2		$8.2
Michigan	$1.2	$4.0		$5.8		$11.0	$1.1	$3.0		$4.3		$8.4
Minnesota	$0.9	$2.9		$4.3		$8.1	$0.8	$2.2		$3.2		$6.2
Missouri	$0.6	$1.8	$2.2	$2.6	$4.1	$11.2	$0.5	$1.3	$1.6	$1.9	$2.1	$7.5
Nevada	$0.4	$1.3	$1.6	$1.9	$3.0	$8.3	$0.4	$1.0	$1.2	$1.4	$1.5	$5.5
New York	$2.1	$6.8		$9.8		$18.7	$1.9	$5.1		$7.4		$14.3
North Dakota	$0.1	$0.3		$0.4		$0.8	$0.1	$0.2		$0.3		$0.6
Ohio	$1.4	$4.4		$6.3		$12.1	$1.2	$3.3		$4.8		$9.3
Oklahoma	$0.4	$1.2	$1.4	$1.7	$2.7	$7.4	$0.3	$0.9	$1.1	$1.3	$1.4	$4.9
Pennsylvania	$1.8	$5.9		$8.5		$16.2	$1.6	$4.4		$6.4		$12.4
Rhode Island	$0.2	$0.6		$0.9		$1.6	$0.2	$0.4		$0.6		$1.2
South Carolina	$0.5	$1.8	$2.1	$2.5	$4.1	$11.0	$0.5	$1.3	$1.6	$1.9	$2.0	$7.3
Virginia	$0.8	$2.7	$3.2	$3.9	$6.1	$16.7	$0.7	$2.0	$2.4	$2.9	$3.1	$11.1
West Virginia	$0.2	$0.7		$1.0		$1.9	$0.2	$0.5		$0.7		$1.5

*Amounts shown for Connecticut are revenues that would be received by taxing these products at the full 6.0 percent sales tax rate rather than the special 1.0 percent rate that applies.

- **The U.S. share of worldwide sales of digital goods and services is unknown.** Some of the data in Table 2 report (or appear to report) worldwide sales, not U.S. sales. For purposes of Tables 3 and 4, we assumed that 75 percent of the amounts shown in Table 2 represent U.S. sales. (The figure shown in Table 2 for video downloads/streaming does represent U.S. sales only.)

- **Individual states' shares of total U.S. sales are also unknown.** Therefore, we estimated the *state-by-state* sales data underlying the revenue estimates in Tables 3 and 4 by taking the estimated U.S. nationwide sales and apportioning them to the states based on each state's share of national disposable personal income reported by the Bureau of Economic Analysis of the U.S. Department of Commerce. (The revenue amounts are calculated by multiplying the state-by-state sales estimates by the nominal state sales tax rate.)

- **No comprehensive sales data are available for downloaded software.** No data or estimates appear to be available from any source concerning what shares of total U.S. computer software sales consist of physical media versus digital downloads. Downloaded software likely comprises a non-trivial share of the $108 billion in estimated total U.S. computer software sales in 2011.[25] Accordingly, the estimates in Tables 3 and 4 understate the potential revenue gain in the 12 states that do not yet tax downloaded computer software. However, a sales estimate *is* available, and is included in the tables, for one of the fastest-growing categories of computer software sales: "apps" for smartphones and tablet computers. This type of software is almost always installed via an Internet download rather than from physical media; that is, it is a "digital good" for which sales data are available.

- **No comprehensive sales data are available for miscellaneous categories of digital goods and services.** Sales estimates are available for smartphone and tablet computer "apps," electronic books, and downloaded music, movies, and games. Aside from other types of downloaded computer software, these are likely the largest categories of potentially taxable digital goods and services at present. However, the estimates do not capture the numerous other smaller categories of digital goods and services, for example, online dating services and genealogy databases, and these are not captured at all in the estimates.

- **Some double-counting is likely.** There is some amount of double-counting of revenues associated with taxing downloaded games. Table 2 reports separate data for online gaming and mobile apps, and the latter category undoubtedly includes sales of some games. Many games are downloaded for free, however, and therefore would not be included in the mobile apps sales figure.

- **Need to estimate share of potentially available revenue sellers will actually collect**. Finally, it is necessary to make an assumption about how much of the potential sales tax revenue from taxing digital goods and services could actually be collected. The major limitation on collecting the tax due arises from the U.S. Supreme Court's 1992 *Quill* decision. The Court held in *Quill* that a state cannot require an out-of-state seller to collect sales tax on sales to the state's residents if the seller does not have a "physical presence" — facilities or employees —

[25] MarketLine, "Sofware in the United States: MarketLine Industry Profile," November 2011.

within the state.[26] By their very nature, most sales of digital goods and services can be delivered over the Internet without the seller's physical presence in the purchasers' states. While tax on the purchase is still legally due directly from the purchaser, there is no effective way to enforce payment by household purchasers.

Accordingly, Tables 3 and 4 include assumptions, shown in the appropriate column headings, about the proportion of U.S. sales that sellers collect taxes on or *would* collect taxes on if the state applied the tax to sales of these products. (The tables also estimate the total potential revenue if sellers collect tax on *all* sales.) While the share of potential revenue that is assumed to be collectable may seem overly optimistic, it should be noted that Apple, the largest seller of downloaded music and a major seller of software apps, e-books, and downloaded movies, collects tax in every state that taxes these items. Also, e-book sellers — including Amazon — appear to be collecting tax on the vast majority of e-book sales in states in which e-books are taxable. The largest seller of movies via streaming, Netflix, also charges tax in all states in which such services are taxable.

Conclusion

States that have not yet extended their sales taxes to downloaded computer software, movies, music, books, and games should do so at the earliest opportunity. These products are almost perfect substitutes for their tangible counterparts, and it is unfair to both the buyers and sellers of the latter products to only tax them. Moreover, because the sales tax is intended to be a broad tax on household consumption, states should also tax household purchases of other types of digital goods and services — such as online newspapers, databases, and dating services — when their real-world counterparts are taxable.

Given their still-weak finances, states could use the modest amount of revenue that such actions would generate, but even a revenue-neutral package pairing base-broadening with a small offsetting cut in the tax rate would make the sales tax fairer and help mitigate the long-term erosion of the sales tax base that will occur as more and more of these items are sold online. Model language aimed at taxing these products already exists, the result of a cooperative process between states in the Streamlined Sales and Use Tax Agreement and companies in the affected industries. Any state can easily adapt this language to its statutory structure.

Extending sales taxes to the digital versions of products states are already taxing is about as close to the proverbial "no brainer" as a tax policy choice can be. It's time for the remaining states to act.

[26] As discussed above, the tax that is due on an interstate sale technically is a use tax rather than a sales tax. Accordingly, the *Quill* decision addressed Quill Corporation's obligation to collect and remit use tax on behalf of a state in which it lacked a physical presence.