

Modernizing State Sales Taxes: A Policymakers' Guide

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Key Findings

- The sales tax is the second-largest source of state tax revenue and an important source of local tax revenue, but decades of base erosion threaten the tax's share of overall revenue and have prompted years of countervailing rate increases.
- A well-designed sales tax is more stable and economically efficient than most potential tax alternatives, except taxes on real property.
- The taxation of intermediate transactions (business inputs) can turn that portion of the sales tax into a tax on production, driving up consumer prices through tax pyramiding and discouraging in-state capital investment.
- Economic analysis supports employing a broad definition of business inputs for the purposes of excluding them from the base.
- Policymakers should explore sales tax base broadening to certain excluded goods and services (including newly arising digital products), particularly as an offset for tax relief elsewhere, but should be careful about overly broad inclusions that fall largely on intermediate transactions, as these changes can prove significantly more harmful than the taxes they were intended to offset.
- States have significant room to reduce compliance costs for remote sales.
- The United States is an outlier in the distortions within state-level consumption taxes, and simplifying, pro-growth reforms are overdue.

Introduction

By any measure, sales taxes matter. Sales taxes account for 30.4 percent of all state tax revenue, second only to individual income taxes (37.7 percent),¹ and are a meaningful source of local tax revenue as well, albeit a distant second behind property taxes. They win high marks for their stability and economic efficiency, but are often criticized for their complexity for remote sellers and potential regressivity, both real and perceived.

Nearly a century into the history of state sales taxes, moreover, interest in them is coming full circle. The first state sales taxes were adopted during the Great Depression to augment state revenues as property values, and hence property tax collections, plummeted. (At the time, property taxes were the predominant source of state, not just local, tax collections.)² Today, an emerging focus on raising sales tax rates, broadening sales tax bases, or both is increasingly being driven by a desire to fund property tax relief in the face of rapidly appreciating assessments.

This impetus—which has its apotheosis in a series of proposals in Nebraska, North Dakota, and Wyoming throughout 2024 but is playing out throughout the country³—is not, of course, the only reason policymakers have taken a renewed interest in the sales tax.

Because well-designed sales taxes are more pro-growth than taxes on income, some tax reformers have sought additional sales tax revenue to pay down income tax rate reductions. Because today's economy looks vastly different from the economy of a decade ago, to say nothing of nearly a century ago, other reformers have sought to modernize sales tax codes to capture new modes of consumption, reversing years of base erosion. And because an ever-growing number of transactions take place online, and many of them involve digital rather than tangible (physical) products, still others are exploring reforms to reduce compliance costs, or—moving in a different direction—to broaden the base to additional *non*-consumption categories.

This publication is intended as a guide for policymakers looking at the sales tax anew, addressing:

- Key principles of sales taxation on which public finance experts widely agree
- The possible scope of taxable personal consumption
- The economic literature on the effects of taxing business inputs
- Appropriate definitions of business inputs
- Approaches and cautions on the taxation of digital products
- The sales taxation of products separately taxed under an existing excise tax regime
- The policy implications of current sales tax exemptions
- The economic effects of sales taxes compared to other tax revenue options
- Important design considerations for a well-functioning sales tax

1 Jared Walczak, "State Sales Tax Breadth and Reliance, Fiscal Year 2022," Tax Foundation, Jul. 23, 2024, <https://taxfoundation.org/data/all/state/sales-tax-revenue-reliance-breadth/>.

2 Ronald Snell, "State Finance in the Great Depression," National Conference of State Legislatures, March 2009, <http://www.ncsl.org/print/fiscal/statefinancegreat-depression.pdf>.

3 Regarding Nebraska, see, e.g., Jared Walczak, "Proposed Nebraska Property Tax Relief Plan Would Make Things Worse," Tax Foundation, Jul. 23, 2024, <https://taxfoundation.org/blog/nebraska-property-tax-relief-plan/>, on Gov. Pillen's tax plan, and Jared Walczak & Manish Bhatt, "The Shortcomings of Nebraska's EPIC Option," Tax Foundation, Mar. 14, 2024, <https://taxfoundation.org/research/all/state/nebraska-epic-option-consumption-tax/>, on an earlier proposed ballot measure.

General Principles of Sales Taxation

The sales tax is, for the most part, a good tax. Taxes on consumption are more economically efficient than taxes on income (though less efficient than taxes on real property), meaning they do less to distort economic decision-making; do less to reduce investment levels and labor force participation; and are less likely to adversely affect interstate migration. This holds true not just in the realm of an ideal consumption tax, but more importantly in the real-world case of the sales tax as it exists in US states, even though these taxes substantially depart from what public finance scholars would consider an “ideal” sales tax.⁴

In the real world in which policymakers operate, few taxes will ever achieve their “ideal” form. Nevertheless, reforms that move the sales tax *closer* to those ideals will improve tax competitiveness and create opportunities for economic growth, while shifts in the other direction can render the sales tax more economically harmful than taxes to which it is commonly held to be economically superior.

In particular, the ideal sales tax is a tax on final consumption. Yet, to varying degrees, a substantial portion of the sales tax in each state falls on the factors of production instead. A tax on consumption is more pro-growth than an income tax, but a tax on production is *worse* than an income tax. In the real-world case of sales taxes that fall on both consumption and production, the analysis is dependent upon the preponderance of those burdens.

Public finance scholars disagree on many things, including some of the finer points of sales taxation, but the following seven principles and observations capture the broad consensus of public finance scholars who study sales taxation.⁵ Key elements of this consensus will be explained further later, and are supported by the academic literature cited throughout. In short:

1. An ideal sales tax is imposed on all final (personal) consumption, both goods and services.
2. An ideal sales tax exempts all intermediate transactions (business inputs) to avoid tax pyramiding and to avoid transforming it from a consumption tax to a tax on production or investment.
3. Sales taxes should be destination-based, meaning the tax is owed in the state and jurisdiction where the good or service is consumed.
4. The sales tax is more economically efficient than many competing forms of taxation, including the income tax, because it only falls on present consumption, not savings or investment.
5. Because lower-income individuals have lower saving rates and consume a greater share of their income, the sales tax can be regressive, though broader bases that include consumer services (much more heavily consumed by higher-income individuals) push in a progressive direction.
6. The sales tax scales well with the ability-to-pay principle because it grows with consumption and is therefore more discretionary than many other forms of taxation.
7. Consumption is a more stable tax base than income, though the failure to tax most consumer services in many states is leading to a gradual erosion of sales tax revenues as services become an ever-larger share of consumption.

⁴ This section, and several that follow, are particularized from our analysis in Jared Walczak, Katherine Loughead, and Andrey Yushkov, “Kentucky Sales Tax Modernization: Keeping the Sales Tax on Sales, Not Production,” <https://taxfoundation.org/research/all/state/kentucky-sales-tax-reform/>.

⁵ See, e.g., John Mikesell, “A Quality Index for State Sales Tax Structure – Measuring the States Against an Ideal Standard,” *Tax Notes State*, Jan. 26, 2005; Charles E. McLure Jr., “Rethinking State and Local Reliance on the Retail Sales Tax: Should We Fix the Sales Tax or Discard It?,” *BYU Law Review* 2000:1 (Mar. 1, 2000): 77; and Peter A. Diamond and James A. Mirrlees, “Optimal Taxation and Public Production I: Production Efficiency,” *The American Economic Review* 61:1 (March 1971): 8-27.

Unfortunately, real-world sale taxes not only fall short of these ideals, but are, in some ways, getting worse. Sales tax breadth has narrowed in recent years as personal services (largely exempted) have grown as a share of final consumption and lawmakers have continued to carve out existing tax bases. In response to this base erosion, many state lawmakers have not modernized their codes to include a wider range of consumer goods, as might be hoped, but have rather focused on categories that overwhelmingly consist of intermediate transactions, like business digital goods and services—a particularly attractive target, but one that threatens to harm states’ economic competitiveness. And where lawmakers have not been able to arrest base erosion, they have instead turned to rate increases on ever-narrower bases, the inverse of the well-known maxim of broad bases and low rates.

The following table shows states’ weighted average sales tax rates, reliance (share of all tax revenue raised from the general sales tax), and breadth measured as a percentage of state personal income, for both fiscal years 2000 and 2022. Clearly, rate increases have offset the erosion of sales tax bases.

Table 1. Sales Taxes, 2000 vs. 2022

	FY 2000			FY 2022		
	Rate	Reliance	Breadth	Rate	Reliance	Breadth
Mean	5.16%	35.29%	49.98%	6.01%	31.18%	34.78%
Median	5.00%	33.54%	48.18%	6.00%	31.77%	37.20%

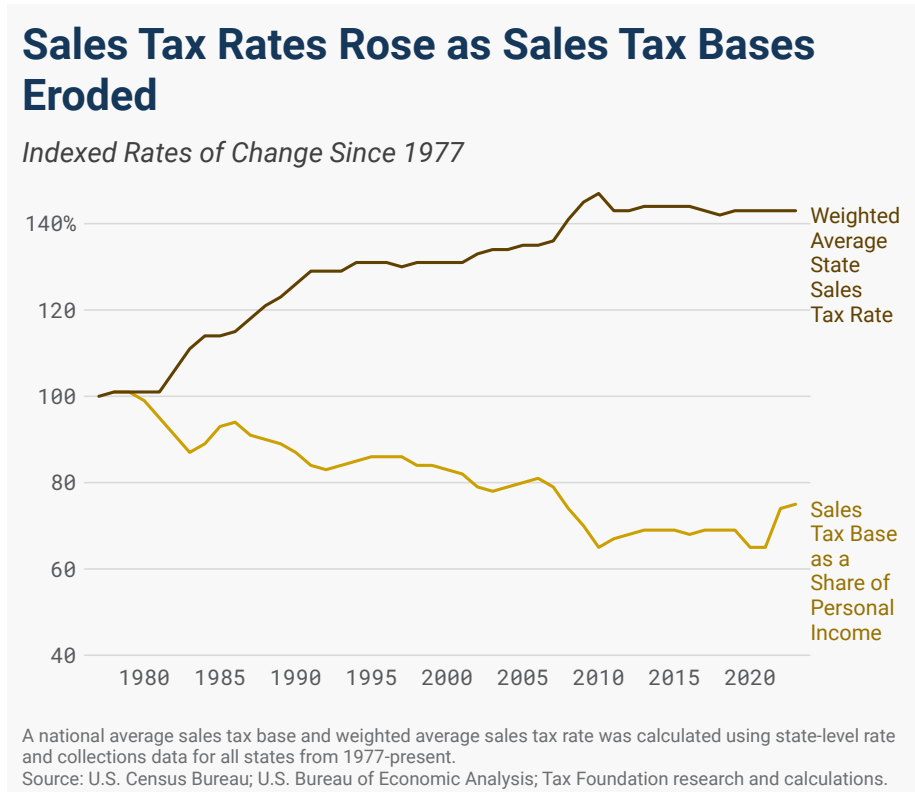
Sources: Prof. John Mikesell (2000 calculations); Tax Foundation analysis (2022 calculations).

Under a different set of calculations that defines sales taxes more narrowly,⁶ we find that in the late 1970s, sales tax bases captured 45 percent of personal income. By the 2010s, this figure had been reduced by more than a third, with bases hovering between 29 and 31 percent of personal income for 13 years before experiencing a slight uptick in 2022, the dual consequence of pandemic-induced shifts in consumption patterns and greater compliance from remote sellers as more states implemented and ramped up enforcement of remote seller and marketplace facilitator laws in the aftermath of the Supreme Court’s decision in *South Dakota v. Wayfair, Inc.* (2018), discussed later.

In the absence of base-broadening reforms, states have instead resorted to rate increases to maintain the sales tax’s share within the tax base, as indicated earlier, with the weighted average state-level sales tax rate rising from 4.19 percent in 1977 to 6.0 percent in 2023, peaking at 6.16 percent in 2010.

⁶ Our analysis above, following Mikesell, accounts for certain sales tax-like collections outside the general sales tax base, but such data are not readily available for earlier years. In what follows, our calculations rely on unadjusted US Census data on general sales tax collections, paired with Tax Foundation-collected data on states’ historic sales tax rates and the US Bureau of Economic Analysis data series on personal income.

Figure 1.



Economic Implications of Sales Taxation

All taxes are not created equal. Any tax creates a certain amount of economic drag; this is unavoidable. There is truth to the adage that “whatever you tax, you get less of”—so it makes sense for policymakers to think carefully about what they choose to tax, and how. Individual income taxes fall on labor; on the margin, they lower the payoff to work, decreasing the supply of labor while increasing its cost.

An income tax can be conceptualized as a tax on consumption plus the change in savings, while a well-structured sales tax is a tax on income less the change in savings. An income tax reduces the capacity for future consumption; economically, it acts like a sales tax that increases the cost of future consumption, with each additional hour of labor producing fewer goods in the future. Consumption taxes are much more economically neutral by comparison, and the economic literature consistently finds that sales taxes are less of an impediment to economic growth or location decisions than income taxes.⁷

One major study, involving data from 21 OECD countries from 1971 to 2004, found that a 1 percent shift of tax revenues from income taxes (both individual and corporate) to consumption taxes would increase gross domestic product (GDP) per capita by 0.74 percent in the long run.⁸ (Property taxes are even more economically efficient, with a shift from income to real property taxes increasing GDP by 1.45 percent, indicating that policymakers should be wary of replacing property tax revenues with other taxes, including sales taxes.)⁹

7 See Joseph Bankman and David A. Weisbach, “The Superiority of an Ideal Consumption Tax over an Ideal Income Tax,” *Stanford Law Review* 58:5 (April 2010), 1413; and Jens Matthias Arnold, Bert Brys, Christopher Heady, Åsa Johansson, Cyrille Schwellnus, and Laura Vartia, “Tax Policy for Economic Recovery and Growth,” *Economic Journal* 121 (2011): 59-80.

8 Jens Matthias Arnold et al., “Tax Policy for Economic Recovery and Growth.”

9 Id.

And while studies frequently find that reduced rates of income taxation increase GDP,¹⁰ upward mobility,¹¹ employment,¹² investment rates,¹³ and innovation,¹⁴ they generally fail to identify similarly salient effects for consumption tax rates,¹⁵ or, in the case of at least one international study, even found the opposite effect. A study of Canadian provinces found that raising the sales tax rate increased growth, evidently because the rate increases undercut the impetus for economically inferior taxes on investment.¹⁶

Sales taxes are typically destination-sourced, meaning that they are taxed where a good or service is consumed, not where it is produced. Thus, unlike income taxes, they do not inherently discourage investment or job creation.¹⁷ This is, however, only true insofar as the tax falls on final consumption; when the tax falls on business inputs, it increases the cost of investing in-state. Business input taxation reduces capital investment and gross state product,¹⁸ and may make the economic incidence of the sales tax more regressive because tax pyramiding is more concentrated within tangible goods that comprise a greater share of low earners' consumption.¹⁹ These effects are given more consideration in the pages that follow.

One further feature of the sales tax is its stability compared to many other revenue sources—particularly income taxes, which exhibit far greater volatility. During a recession, wage, salary, and investment income decline, but consumption is less affected, both out of necessity and due to the benefit of (mostly untaxable) governmental assistance, providing a smoothing effect. Income that is potentially taxable, however, falls sharply.

This phenomenon can be seen clearly during the Great Recession, when incomes fell sharply, with a concomitant decline in income taxes, but sales taxes experienced considerably less of a decline. More recently, neither income nor sales tax revenues suffered during the coronavirus pandemic due to the intensity of federal government-driven financial intervention, but in an “ordinary” recession where incomes decline, sales taxes would prove a more stable source of revenue yet again.

10 Christina D. Romer and David H. Romer, “The Macroeconomic Effects of Tax Changes: Estimates Based on a New Measure of Fiscal Shocks,” *American Economic Review* 100:3 (2010): 763-801; Tae-hwan Rhee, “Macroeconomic Effects of Progressive Taxation,” Working Paper, Samsung Economic Research Institute, <https://www.aeaweb.org/conference/2013/retrieve.php?pdfid=394>; James Cloyne, “Discretionary Tax Changes and the Macroeconomy: New Narrative Evidence from the United Kingdom,” *American Economic Review* 103:4 (2013): 1507-28; Karel Mertens and Morten O. Ravn, “The Dynamic Effects of Personal and Corporate Income Tax Changes in the United States,” *American Economic Review* 103:4 (2013): 1212-47; and Anh D. M. Nguyen, Luisanna Onnis, and Raffaele Rossi, “The Macroeconomic Effects of Income and Consumption Tax Changes,” *American Economic Journal: Economic Policy* 13:2 (2021): 439-66. For a summary of these findings, see Timothy Vermeer, “The Impact of Individual Income Tax Changes on Economic Growth,” Tax Foundation, Jun. 14, 2022, <https://taxfoundation.org/research/all/state/income-taxes-affect-economy/>. For a review of older literature, see William McBride, “What is the Evidence on Taxes and Growth?,” Tax Foundation, Dec. 18, 2012, <https://taxfoundation.org/research/all/federal/what-evidence-taxes-and-growth/>.

11 William M. Gentry and R. Glenn Hubbard, “The Effects of Progressive Income Taxation on Job Turnover,” *Journal of Public Economics* 88:9 (2002): 2301-2322.

12 Karel Mertens and Morten O. Ravn, “The Dynamic Effects of Personal and Corporate Income Tax Changes in the United States.”

13 Karel Mertens and Jose L. Montiel Olea, “Marginal Tax Rates and Income: New Time Series Evidence,” *Quarterly Journal of Economics* 133:4 (2018): 1803–1884.

14 Ufuk Akcigit, John R. Grigsby, Tom Nicholas, and Stefanie Stantcheva, “Taxation and Innovation in the 20th Century,” NBER Working Paper 24982 (2018), <https://scholar.harvard.edu/stantcheva/publications/taxation-and-innovation-20th-century>.

15 Anh D. M. Nguyen, Luisanna Onnis, and Raffaele Rossi, “The Macroeconomic Effects of Income and Consumption Tax Changes.”

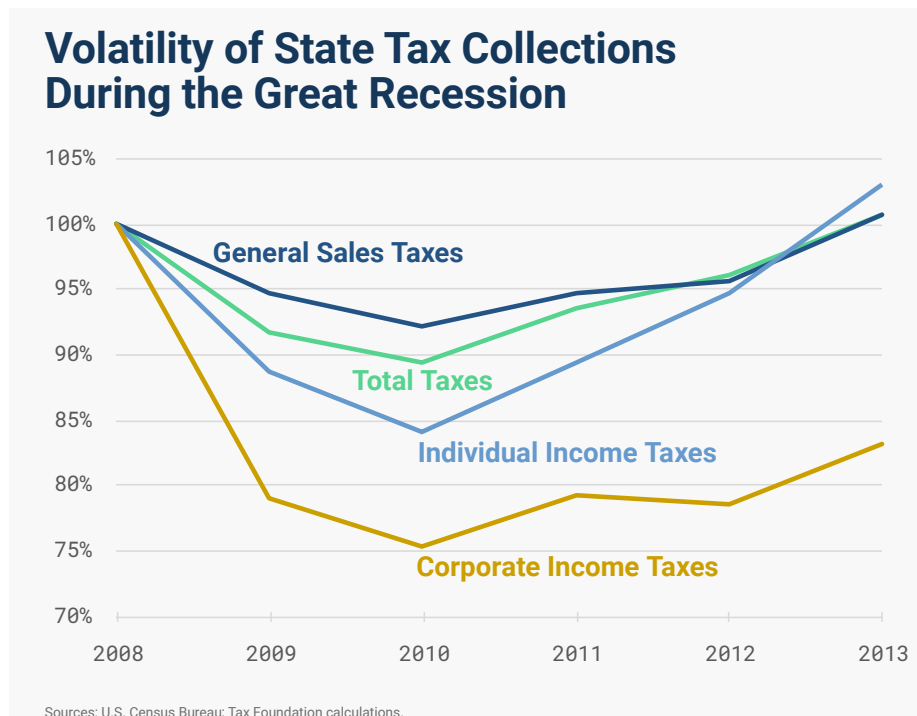
16 Ergete Ferede and Bev Dahlby, “The Impact of Tax Cuts on Economic Growth: Evidence from the Canadian Provinces,” *National Tax Journal* 65 (2012): 563-594.

17 Douglas L. Lindholm and Karl A. Frieden, “After Wayfair: Modernizing State Sales Tax Systems,” *State Tax Notes*, May 14, 2018, 667, <https://cost.org/globalassets/cost/state-tax-resources-pdf-pages/cost-studies-articles-reports/after-wayfair-modernizing-state-sales-tax-systems.pdf>.

18 Benjamin Russo, “An Efficiency Analysis of Proposed State and Local Sales Tax Reforms,” *Southern Economic Journal* 72:2 (2005): 443-462.

19 Frederick W. Derrick and Charles E. Scott, “Businesses and the Incidence of Sales and Use Taxes,” *Public Finance Quarterly* 21:2 (1993): 210-226.

Figure 2.



Defining the Potential Consumption Base

It is one thing to say that economists and public finance scholars broadly agree that an ideal sales tax base would include most or all personal consumption, while excluding intermediate transactions (business inputs). It is another thing altogether to put this knowledge into practice.

In the real world, state sales taxes in the United States fall well short of this goal, and are markedly worse at it than consumption taxes in most other countries.²⁰ Of the \$444.5 billion that states raised in sales tax revenue in 2022,²¹ an estimated \$185.4 billion came from business inputs, leaving \$259.1 billion generated from personal consumption—far less than would be generated if the base extended to all personal consumption transactions.

Unfortunately, defining the potential base of personal consumption is not straightforward, and sometimes policymakers have erred by simply using a measure known as personal consumption expenditures (PCE) as if it represents potentially taxable personal consumption.²²

²⁰ Outside the US, most broad-based consumption taxes are value-added taxes (VATs). These taxes are imposed on all stages of consumption, but, unlike a gross receipts tax or a sales tax with a base inclusive of many business inputs, only the incremental added value is taxed at each stage. Upon final sale, the result is that the entirety of the value of most consumption goods has been taxed one time—even though it has been remitted in increments along the production chain. And while VATs in Europe and elsewhere contain a variety of exemptions, they still tend to include a far broader scope of personal consumption than do state sales taxes in the United States, while avoiding the taxation of business inputs.

²¹ This figure differs from US Census data because it “normalizes” sales tax reporting across states. Most states, for instance, include collections from the sale of automobiles in their general sales tax revenue figures, but several break this out into a separate line that is not included in the Census Bureau’s “general sales tax revenue” figures. For a more detailed explanation of our adjustments, see Jared Walczak, “State Sales Tax Breadth and Reliance, Fiscal Year 2022.”

²² Following Mikesell, we and others measure comparative sales tax breadth as a percentage of income, since, in the long run, all income is consumed. When defining present revenue availability, however, we turn to measures of present consumption, as do others, some of whom misunderstand and consequently misapply the personal consumption data. Personal consumption is an appropriate denominator, but the total of personal consumption expenditures as supplied by the US Bureau of Economic Analysis is not the correct figure.

This measure, however, includes consumption that does not involve a transaction—including, crucially, what is known as “imputed rental” of housing, essentially the value of living in one’s home. This involves no transaction and could not be subject to sales tax.²³ On occasion, policymakers have missed this in estimating the revenue available to them with sales tax base broadening. This was one of several critical errors made in calculations for the so-called EPIC proposal in Nebraska, which sought to replace virtually all of Nebraska’s existing state taxes with one putatively broad-based consumption tax.²⁴

The PCE measure also includes consumption that at least potentially involves a transaction, but which is legally beyond states’ reach. For instance, while a state could theoretically choose to broadly tax health care services, the sales tax is not permitted to extend to federal Medicare and Medicaid expenditures. And while states can, and some states do, tax groceries, they cannot tax groceries purchased using federal benefits like the Supplemental Nutrition Assistance Program (SNAP) or the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC). Internet access is likewise excluded from state taxation by federal law.

Accordingly, while 2022 saw \$17.5 trillion in personal consumption expenditures nationwide, only an estimated \$13.3 trillion of those involved a transaction, and, after accounting for federal law restrictions, the broadest possible personal consumption sales tax base was \$11.1 trillion. If all health care and education expenditures are excluded (there are valid economic arguments for taxing both, but politically this has tended to be a non-starter), then the remaining potential base runs \$10.1 trillion.

But while \$10.1 trillion is significantly lower than the headline \$17.5 trillion PCE figure, it remains dramatically larger than the base of personal consumption actually included in states’ 2022 sales tax bases, which we estimate at \$5.2 trillion.

Table 2. Calculating the Potential Nationwide Sales Tax Base

Breadth	Taxable Base
\$17.5 trillion	All Personal Consumption Expenditures
\$13.4 trillion	... <i>and Involving a Transaction</i>
\$11.1 trillion	... <i>and Legally Taxable (not constrained by federal law)</i>
\$10.1 trillion	... <i>and Excluding Legally Taxable Health and Education</i>
\$5.2 trillion	Actual Nationwide Consumption Sales Tax Base

Sources: US Bureau of Economic Analysis; Tax Foundation research and calculations.

23 For purposes of economic analysis, it is helpful to understand all housing as having a “rental price,” whether someone rents or owns. Even if a person doesn’t have a mortgage, they have equity in a home that, if it weren’t for their “consumption” of housing, could be invested elsewhere. But this useful economic concept is not very useful in estimating what a broad-based sales tax could raise: there’s no taxable transaction involving the consumption value of living in your home, and while renting could theoretically be a taxable transaction, virtually no one is clamoring for this. Counting housing in the potential base is an error with a magnitude of \$2.6 billion in annual consumption in Nebraska.

24 Jared Walczak and Manish Bhatt, “The Shortcomings of Nebraska’s EPIC Option.”

If states broadened their sales tax base to include all legally taxable transactions except those in the health care, education, and grocery categories, the weighted average state-level sales tax rate could drop from a current 6.01 percent to 3.99 percent. Alternatively, if bases were broadened under current rates, states would generate an additional \$225 billion in revenue. If groceries were added to the base, the revenue-neutral rate would be 3.63 percent, or, alternatively, an additional \$290 billion in revenue.²⁵

The Basic Case for Excluding Business Inputs

Excluding business inputs gives rise to an obvious objection of favoring businesses over consumers. This, however, is a misconception, based on a misunderstanding of the very nature of the sales tax, which is intended as a tax on consumption. The upshot of taxing business inputs is not to shift tax burdens away from consumers and onto businesses, but rather to create a tax base that is dramatically broader than actual consumption—in other words, to tax final consumption (or at least some share of it) multiple times over.

This is why it can be helpful to conceptualize these purchases not just as business inputs, which they are, but as intermediate transactions, which is equally true. Taxing inputs means taxing the constituent elements of consumption, sometimes in Russian nesting doll fashion, before taxing the final good yet again.

Consequently, taxing business inputs results in nonneutral effective tax rates on consumers and disguises the true costs of government, while also, in many cases, increasing the costs of production and putting states with greater taxation of business inputs at a competitive disadvantage in attracting and retaining businesses.

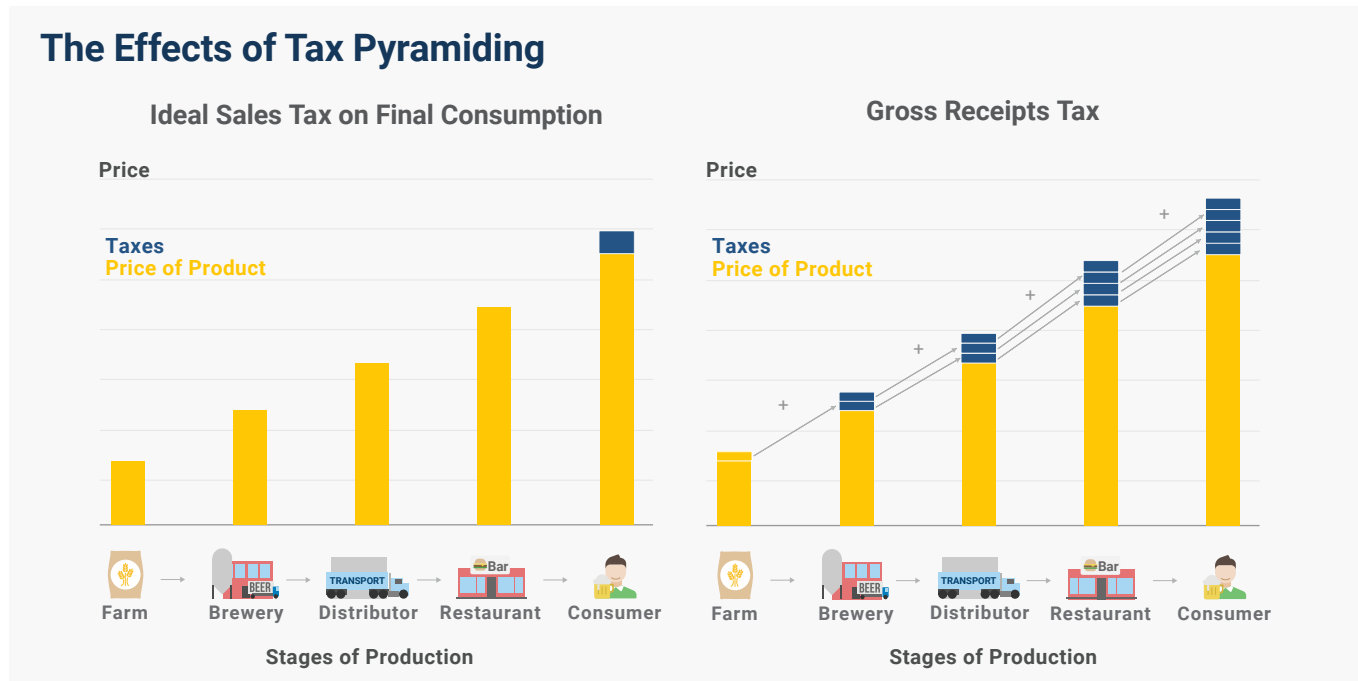
When intermediate goods or services are included in the sales tax base, this may influence the choice of production method. For example, a firm might decide to purchase a cheaper but less effective technology or product, hindering efficiency and productivity, or avoid the taxable transaction altogether, favoring labor-intensive production methods over capital-intensive ones. As a result, rates of investment decline, negatively affecting future economic growth. Firms that are large or profitable enough to do so may choose to bring the production of otherwise taxable services and goods in-house to avoid exposure to a taxable transaction, which is known as vertical integration and can create its own inefficiencies if the choice would not be prudent except to reduce tax liability. Worse still, smaller or less profitable firms usually have far less capability to vertically integrate to avoid such taxes.

On the consumer side, when business inputs are included in the base, the sales tax essentially stops being a single-stage tax. When a tax applies at multiple stages of the production process as well as at the final point of sale, this results in an effective tax rate (what the final consumer actually pays in taxes in proportion to the pre-tax price of a given good or service) that significantly exceeds the statutory sales tax rate, a phenomenon known as tax pyramiding. As a result, taxing business inputs leads to nonneutral tax burdens for consumers due to the application of non-uniform effective tax rates across different categories of goods and services.

²⁵ All figures assume an 85 percent compliance rate on consumption newly added to the base, consistent with the rough consensus on compliance under existing sales tax systems.

When tax is imposed on the transaction price at most or all levels of production, it is typically called a gross receipts tax. Few states still impose gross receipts taxes, but the typical state's sales tax is far from a pure tax on final sales, with US sales taxes largely existing on a continuum between an ideal sales tax and a true gross receipts tax.

Figure 3.



Significantly, tax pyramiding is likely to be regressive, as it is concentrated in goods and services consumed disproportionately (as a percentage of income) by lower-income households. The literature on this question is somewhat limited, but one older study found that effective sales tax rates on items like apparel, furniture, appliances, and alcohol were two percentage points higher than the statutory rate, and even groceries, when statutorily exempt, bore an effective rate of 2.3 percent due to pyramiding.²⁶

In addition to its more concrete harms, tax pyramiding disguises the true costs of government. Final consumers, when buying goods at retail, only see the statutory rate reflected on their receipt and not the sales taxes applied and collected during the production process that get passed along to them in the form of higher prices. The degree of double taxation will vary greatly across different goods and services without regard to value, profits, or price level, creating further distortions.

Unsurprisingly, scholars have found that removing business inputs from the sales tax base would promote economic growth even if the sales tax rate increases commensurately to maintain revenue neutrality. Research shows that even a partial rollback of business input taxation, offset by higher rates on the remaining sales tax base, would be highly capital- and growth-enhancing because it would lead to an increase in physical capital stock and gross state product that would more than offset the reductions in physical capital stock and gross state product attributable to a commensurate increase in the sales tax rate.²⁷

²⁶ Frederick W. Derrick and Charles E. Scott, "Businesses and the Incidence of Sales and Use Taxes," *Public Finance Quarterly* 21:2 (1993): 210-226.

²⁷ Benjamin Russo, "An Efficiency Analysis of Proposed State and Local Sales Tax Reforms," *Southern Economic Journal* 72:2 (2005): 443-462. See also Alan D. Viard, "Sales Taxation of Business Purchases: A Tax Policy Distortion," *State Tax Notes*, Jun. 21, 2010, <https://www.aei.org/articles/sales-taxation-of-business-purchases-a-tax-policy-distortion/>.

How Business Input Taxation Turns the Sales Tax into a Production Tax

It is widely recognized that taxing business inputs leads to tax pyramiding. Less commonly understood is how it transforms the sales tax from a tax on consumption to, at least in part, a tax on capital investment.²⁸ It takes a tax that is neutral with regard to in-state investment and turns it into a discriminatory tax on a state's own businesses, disproportionately affecting smaller firms with less capacity to vertically integrate services.

Even when a sales tax is destination-sourced (meaning it is imposed where the product is purchased or used, rather than at the location of the producer or seller), as is almost invariably the case, and when the base is limited to final consumer transactions (which, unfortunately, tends not to be the case), the rate in a particular jurisdiction can induce cross-border shopping. While cross-border shopping can be detrimental to in-state, brick-and-mortar retailers that lose business to retailers in other states, it does not otherwise impede a business's ability to compete with out-of-state competitors, since out-of-state customers are taxed at their own local rate, or are legally required to remit use taxes at their own local rate, not at the rate in the business's jurisdiction.²⁹ As soon as taxes are imposed on a business's *own* purchases, however, businesses in that jurisdiction are placed at a disadvantage against competitors not subject to such taxes in their own states. These taxes represent an additional cost of production that is not borne by their competitors based elsewhere, even if they sell into the same markets.

The consequence is that a putative tax on consumption is transformed into a production tax. Prior analysis has shown that the taxation of business inputs imposes a penalty on saving and investment that is akin to corporate income taxes,³⁰ but in some ways, the sales tax on business inputs is likely to be more harmful for states, since corporate income taxes are mostly apportioned based on sales (not the place of production), whereas a tax on business inputs makes the taxing state less competitive as a location for business activity.

Depending on the market for a given product, the result of taxes on business inputs is either to (1) increase consumer prices or (2) reduce the profitability of the taxed business activity—or both. Estimates vary, in the latter case, on how much of the cost will be borne by labor in the form of lower wages and by capital in the form of lower investment returns, though both effects are real and of importance to public policy.³¹ Firms in states that tax an inordinate amount of business inputs are at a disadvantage with out-of-state competitors.

28 See, e.g., Peter A. Diamond and James A. Mirrlees, "Optimal Taxation and Public Production I: Production Efficiency."

29 For most goods purchased in person, sales tax is imposed at the point of sale. A Kentucky resident making a purchase in Ohio will pay Ohio sales tax on that good and not pay a separate tax to Kentucky, though if that good was shipped to them in Kentucky, or a service supplied to them was used in Kentucky, it would be subject to Kentucky's sales tax, not Ohio's. Similarly, if no sales tax was applied at the point of sale, a Kentucky resident would be obligated to remit use tax to Kentucky. For certain goods, most notably automobiles, states have special provisions ensuring that sales tax is paid to the destination state (where the vehicle will be titled and registered) even if it is physically purchased elsewhere.

30 Alan D. Viard, "Sales Taxation of Business Purchases: A Tax Policy Distortion," *State Tax Notes*, Jun. 21, 2010, <https://www.aei.org/articles/sales-taxation-of-business-purchases-a-tax-policy-distortion/>.

31 Much of the literature on the sales taxation of business inputs focuses on the first possibility, where the economic incidence is borne by consumers in the form of higher prices. But under many circumstances, as described below, businesses will be unable to pass these tax costs along to consumers, partly due to price elasticities but mostly because they are competing with other businesses from across the country (or world) that may not be subject to the same taxes. To the extent that the additional burden falls on businesses as a tax on capital accumulation, the literature on corporate taxation can provide relevant estimates on the shares borne by investors, in the form of lower returns, and workers, in the form of lower wages. Tax Foundation analysis, supported by a survey of the literature, suggests that labor typically bears about 70 percent of the burden of capital taxes. See Stephen J. Entin, "Labor Bears Much of the Cost of the Corporate Tax," Tax Foundation, Oct. 24, 2017, <https://taxfoundation.org/research/all/federal/labor-bears-corporate-tax/>.

It is mostly correct to state that tax pyramiding means that the tax is embedded in the final price several times over. Tax represents a disproportionate amount of the final price of the good because it is imposed at multiple levels of production.³² But whether, and how much, this raises the final price of the product—rather than cutting into profitability, reducing wages, or eliminating the production activity entirely or moving it across state lines—will depend on whether regionality is integral to the product.

Milk, for instance, is almost always sourced within a few hundred miles of the grocery stores in which it is sold to consumers, due to the costs of transporting it and the rate of spoilage, whereas cereal crops can be sourced from and processed anywhere in the country, and it is often cheaper to ship produce across oceans than across a few hundred miles of road. If multiple layers of sales tax were imposed on the dairy industry by applying the tax to milking machines, the services of milk processing plants, and the services of milk distributors, then most of the additional tax would likely be borne by consumers, as milk from Iowa is not a competitive economic substitute for milk from California for a family living in Los Angeles.³³

If, however, a state were to levy multiple layers of tax on the processing of grains into breakfast cereal or granola, then over the long run, we might expect the tax to be borne in greater proportion by producers (both investors and employees), because these producers sell in a competitive national marketplace with other enterprises that are not similarly taxed. Either they will be forced to accept lower wages and lower investment returns (which may affect future business decisions), they will move some of their operations to another state (which has economic costs), or they will find themselves increasingly boxed out of the market by firms located elsewhere, which will take over their market share.

When the effects of pyramiding are absorbed by businesses, moreover, the impact is far from uniform—and the most economically rational response may be to adjust business decisions in ways that would otherwise be inefficient. For instance, a company may choose to vertically integrate more of its processes, bringing the production of machinery or component parts in-house, or building out its own distribution operations, even if it might otherwise be more efficient to contract with other firms with greater expertise and economies of scale in these areas, all to avoid the additional layer of tax imposed if these activities constitute a taxable transaction rather than an internal process.

Alternatively, businesses may move some or all of their operations to states with better treatment of costly inputs. This can mean physically relocating a facility, but it might also mean expanding elsewhere, or purchasing from suppliers that have more consolidated processes or operate in states where their intermediate transactions are untaxed.

And businesses lacking the capacity to make these adjustments—particularly smaller operations—can find themselves at a competitive disadvantage. A small business can be very good at one particular thing and may choose to outsource many processes that are not at the core of what it does. But its larger rivals, which may be better positioned to vertically integrate (or may have already found it economically advantageous to do so independent of sales tax considerations), receive more favorable tax treatment.

³² Although value-added taxes are also imposed at multiple levels of production, they allow credits for expenditures earlier in the value chain and are only on the added value at each stage, avoiding tax pyramiding.

³³ It is not that milk *cannot* be shipped that far (there's milk on grocery shelves in Alaska, which only has one remaining commercial dairy operation and largely imports its dairy), but that it is typically cost-prohibitive (milk in Alaska costs about a dollar more per gallon than the national average), likely well over the costs imposed even by several layers of sales tax.

Finally, pyramiding causes consumption taxes to discriminate across not only firms but also industries and types of products. It favors some manufacturing processes over others, regardless of whether those processes are consistent with other goals (durability, aesthetics, sustainability, local market conditions, etc.), and it favors *kinds* of products that either have shorter production chains or have intermediate transactions that are better shielded from sales taxation. This shifts both investor and consumer behavior toward inferior options: inferior as a matter of revealed preference, since consumers and investors favored another option until tax differentials nudged them in a different direction.

This is not what a consumption tax is for, and it works to the detriment of producers, consumers, and the overall competitiveness of states imposing these taxes. States must raise tax revenue, and all taxes affect economic behavior at some level, but the goal should be to interfere with the market as little as possible. Occasionally, states may wish to promote specific goals, but it is doubtful that policymakers taxing business inputs believe that anyone is better off if the tax code influences the size of businesses, or how specialized they are. And certainly, no state legislator ever thinks that the tax code would be better if only it encouraged jobs and production to take place in other states, or if it put in-state businesses at a disadvantage against regional or national rivals, or if it drove up consumer costs in highly nonneutral ways. Yet this is what the sales tax does whenever it is levied on business inputs.

Research shows that taxing business inputs does precisely what economists would predict. One study described earlier finds that if states were able to reduce their taxation of business inputs by even 25 percent—that is, to go from about 41.7 percent of their base falling on intermediate transactions to about 31.3 percent³⁴—while making up the revenue with a commensurately higher rate applied to the rest of the sales tax base, they would boost capital accumulation (the amount of machinery, equipment, and overall capital investment in the state) by 1.2 percent and increase gross state product by 0.4 percent.³⁵ Nationwide, that would represent an additional \$115 billion a year in economic output.

These findings should be compelling enough, but they substantially understate the economic benefit because they are only focused on the direct effects of reducing the tax burden on production. The calculation is based on what is known as a closed system, which assumes no competition and no ability to shift activity—production or consumption—to other states.

In reality, states that do a better job of exempting business inputs not only increase the productivity of their own firms but also make themselves more attractive for investment compared to their peers and give in-state companies an edge against out-of-state competition faced with additional levels of taxation. Conversely, states that expand to new categories of business inputs make themselves less attractive for affected businesses that may otherwise wish to operate in the state and make it harder for in-state firms to compete with their less-taxed interstate rivals.

34 For estimates, see Andrew Phillips and Muath Ibad, "The Impact of Imposing Sales Taxes on Business Inputs," Ernst & Young, 2019; and Andrew Phillips and Caroline Sallee, "Total State and Local Business Taxes: State-by-State Estimates for FY 2022," EY/Council on State Taxation, December 2023, <https://www.cost.org/globalassets/cost/state-tax-resources-pdf-pages/cost-studies-articles-reports/ey-50-state-tax-burden-study-fy22.pdf>. These figures agree with older analyses, which found a range of 40-43 percent. See, e.g., Timothy J. Besley and Harvey S. Rosen, "Sales Taxes and Prices: An Empirical Analysis," *National Tax Journal* 52:2 (1999): 157-178; Raymond J. Ring, "Consumers' Share and Producers' Share of the General Sales Tax," *National Tax Journal* 52:1 (1999): 71-90; and Robert Cline, John Mikesell, Tom Neubig, and Andrew Phillips, "Sales Taxation of Business Inputs," Council on State Taxation, Jan. 25, 2005, <https://documents.ncsl.org/wwwncsl/Task-Forces/SALT/Business-Inputs-Study.pdf>.

35 Benjamin Russo, "An Efficiency Analysis of Proposed State and Local Sales Tax Reforms," *Southern Economic Journal* 72:2 (2005): 443-462.

Defining Business Inputs

The broad theoretical agreement that an ideal sales tax base would exclude business inputs tends to break down on the seemingly simple question of what constitutes a business input. Imagine, for instance, a company manufacturing kitchen utensils. Which of these business purchases constitute business inputs that should, ideally, be exempt from taxation?

- The metal and other raw materials used in the utensils themselves
- The machinery and equipment used to cast, mold, or cut the utensils
- The electricity and fuel used to power that machinery
- The packaging for the utensils
- The contract for shipping and distributing the utensils
- The marketing contracts to advertise the products
- The legal, accounting, and other services necessary to operate the business
- The landscaping and janitorial services for plants, warehouses, and corporate offices
- The electronics and furnishings in the corporate office
- The subscription for a sales database
- The cloud services and data processing used for manufacturing, distribution, and logistics
- The purchase of their utensils by a home goods store for resale to consumers

Nearly everyone would agree that the raw materials and the sale for resale should be exempt, and states are largely uniform in exempting these transactions. States are more inconsistent in exempting machinery and equipment and business fuels, and sometimes only do so for select businesses or industries through targeted incentives. Increasingly, data services—cloud storage, data processing, client databases, software (including software as a service), and machine learning—are subject to tax, as are many goods “consumed” by businesses that are not a component of the final product.

Because most services have historically been exempt from sales taxation, legal, accounting, human resources, advertising, and similar services are frequently exempt, but proposals to expand to services, or to a broad array of digital products, could imperil this treatment and capture a wide new range of intermediate transactions. Few states have a consistent approach to the tax treatment of business inputs, and it is often difficult to identify any governing philosophy.

Across the country, some defenders of the *status quo* often endorse a narrow definition of business inputs, focused largely on physical identities. Distinctions are often made between goods and services consumed “by” the business rather than embedded in the final consumer product, or between things that are “integral” rather than ancillary to production. A set of kitchen knives contains the metal and other raw materials used in its manufacturing but does not contain the machinery that made it, nor the fuels that powered them. And whereas the machinery and fuels are necessary for the creation of the final product, strictly speaking, the marketing budget, the shipping contract, the legal team on retainer, and the contracted services that keep the manufacturer’s office up and running are not. This lends itself to the drawing of several possible lines in defining business inputs for exemption purposes:

1. Just the raw materials and the sale for resale, to avoid double taxing the actual components of the product
2. Everything directly used for or consumed in production, like machinery and equipment (which depreciates and is ultimately consumed by the production process) and fuels, in addition to raw materials and sale for resale
3. Virtually everything purchased by a business as part of its business activity, with narrow exceptions for purchases that function as final consumption

Lawmakers sometimes balk at the third definition, as it is the most expansive. It may also come across as *too simple*, as if it elides the hard work of providing a more robust definition. Yet it is, in fact, the most appropriate definition of business inputs, because it conforms to the economic realities of business purchases, and the exemption of these purchases aligns the sales tax with its intended function as a tax on consumer purchases.

This becomes apparent both by interrogating the rationale for business purchases regardless of category as well as through an appreciation of the purpose of business input exemptions.

With limited exceptions, businesses make purchases in service of their bottom line. This does not guarantee that their transactions are prudent or turn a profit: businesses make poor investments all the time and are punished by the markets when they do so. But a business purchases advertising time, cloud computing, packaging products, shipping contracts, and facility maintenance services for the same reason it purchases raw materials. They are all means to the end of the (hopefully) profitable production and sale of some valuable good or service. Not all of these purchases will be resold or physically embedded in final products, but they are only purchased because they are part of the business model, and thus part of the economic identity of their product.³⁶

The purposes of a business input exemption, moreover, are consistent with a broad definition. Those purposes, simply stated, are to:

1. Tax final consumption uniformly, avoiding tax pyramiding where a final product is taxed on its value several times over, and where some products are taxed more aggressively than others
2. Avoid distorting economic decisions on capital investment, location, vertical integration, or production processes
3. Prevent the sales tax from disadvantaging in-state production or putting particular (often smaller) companies at a competitive disadvantage

The nature of the business input subject to tax can affect the intensity of the distortion—some inputs pyramid more than others—but all are, by definition, distortionary.

³⁶ It is possible to conceive of limited exceptions, where businesses do engage in final consumption, though most of these are trivial, and those that aren't have been rendered uncommon due to long-ago changes to the federal tax code. For instance, while a commercial fleet for salespeople is properly understood as a business input, a company car for the private use of the CEO has the character of final consumption, because it is an alternative to compensating her more so that she could purchase the car herself. Employee perks like free meals, gym memberships, private (non-business) counseling, or will-drafting services can also be argued to be final consumption, even though a business may rationalize them as necessary for attracting a qualified workforce, as some or all of these goods and services could be taxed under a retail sales tax if purchased by the employees themselves under increased financial compensation from their employer. Efforts to ensure that such purchases are taxable to the extent that they are in the retail sale tax base are reasonable, though these transactions represent a vanishingly small proportion of business inputs and cannot justify broad-based taxation of intermediate transactions.

Navigating the Digital Frontier

Our world has changed. Many formerly tangible products have been replaced by digital cousins: we download e-books, stream movies and music, store photographs in the cloud, and subscribe to services for our homes, cars, and even appliances. These are all forms of consumption, and it is reasonable for sales taxes to reflect this new reality, particularly where a digital product has taken the place of tangible property that is subject to tax.³⁷

Personal consumption of digital products, however, is dwarfed by the business applications, and most proposals to include digital products in the sales tax base would represent a vast expansion of business input taxation. The real money is not in Spotify accounts or Netflix subscriptions, but in digital controls, commercial cloud computing, inventory management, automated production lines, digital payments, machine learning, software (and platform and infrastructure) as a service, digital advertising, and data processing.

During the pandemic, the Multistate Tax Commission (MTC) began working on definitions of digital products for states to consider for the purposes of their own sales taxes. The Commission has taken pains to insist that they are merely seeking to define what constitutes a digital product, without taking a position on which digital products (if any) should be taxable, but there is a risk that policymakers will incorporate a broad definition into their sales tax base. That would be an egregious policy mistake.

An outline published by MTC offers extensive digital product exemplars within a variety of industries. Agriculture, manufacturing, health care, construction, education, energy, food, retail, office products, telecom and information technology, and travel all make the list. Examples of digital products in the agricultural industry include, just to cite a few examples, digital pasture management, digital seed technology, drones, farm management software, GPS guidance systems, machine learning (used to improve crops and identify pests), monitoring technology, robotic harvesting, sensors, smart irrigation, and data and artificial intelligence for assessing things like soil quality and plant yield.

Sometimes it can be difficult to categorize a particular good or service as a business input or a consumer transaction without knowing the identity of the purchaser, because businesses and individuals alike purchase some of the same products. It is not, however, terribly difficult to recognize that digital seed technology has limited consumer applicability, and that hobbyist gardeners are not using robotic harvesting or operating combines with GPS guidance systems.

Agriculture, moreover, has generally been treated fairly well by state sales taxes, with exemption certificates often eliminating the taxability of many of the intermediate transactions that are not definitionally excluded from the base. Were digital products broadly taxed, that would change overnight.

For manufacturing, digital goods could include modeling, simulations, automated production lines, data storage and processing, digital controls and machines, robots, software as a service, and digital advertising, along with categories also applicable to agriculture, like machine learning. The health-care industry's

³⁷ This section is loosely adapted from Jared Walczak, "The Perils of the Multistate Tax Commission's Digital Products Tax Push," *Tax Notes State*, Apr. 17, 2023. See article for further discussion.

digital products are ample, too, and might include storage of medical records, wearable devices, artificial intelligence and augmented reality used in medicine, cloud computing, robot-assisted surgery, virtual biopsies, and much more.

Notably, these are not just areas where most states exempt business inputs because they do not tax most digital products. Rather, they are areas where lawmakers have, through concerted efforts over years and decades, sought to limit the scope of sales taxation. An insufficiently cautious expansion of the base to digital products could indiscriminately wipe out the conscious policy choices of legislatures going back decades.

The digital world, meanwhile, is inherently more mobile than the production of tangible goods. If a state taxes intermediate digital transactions, businesses will adapt by moving as many of those processes as possible out-of-state, depriving the taxing state of economic activity (and tax revenue) it would have otherwise enjoyed. And taxing digital products is not just—or even primarily—about taxing the tech industry. As the exemplars above suggest, virtually all companies rely on digital products to do business. Applying the sales tax to digital products would impose additional layers of tax on virtually every business in the Commonwealth.

The broad reach of digital products taxation is an important reason to reject the taxation of digital business inputs on equity grounds as well. It is occasionally argued that, while business inputs would not be taxed under an ideal tax system, the fact that many intermediate transactions involving tangible goods are already taxed makes it necessary to impose similar burdens on digital intermediate transactions for the sake of fairness. Even setting aside the question of whether new economically damaging policies should be adopted to parallel existing flaws, and neglecting the differences in relative scope (taxing most or all digital business inputs because a subset of tangible ones are taxed), it is a mistake to see physical and digital products as occupying independent spaces. Every business consumes digital products, even if it sells tangible goods.

Approaches to Exempting Business Inputs

Business inputs currently included in the base, or potentially included based on new categorical expansions of the tax base, can be exempted in one of two ways: based on the nature of the product or the identity of the purchaser. Either approach can suffice, or they can be used in tandem.

Most states exempt manufacturing machinery from their sales taxes, since such machinery is clearly part of the production process and its consumption is almost exclusively by businesses. (Very few of us acquire sheet metal bending machines for personal use.) The same approach works for a variety of business services, like marketing, engineering, logistics management, and human resources, which are almost exclusively the province of businesses. For such categories, it is administratively simplest to grant an outright exemption.

Some professional services, however, can be consumed by both businesses and individuals. For instance, a consumer might retain the services of an accountant or a tax preparer, and a business might also contract with an accountant. Many tangible goods can be purchased by both businesses and individuals as well—desk chairs, for instance.

In such cases, an exemption could be granted based on the identity of the purchaser. Many states already have experience with this approach, exempting any purchase by a nonprofit entity and select purchases by farms and certain types of businesses, based on the identity of the purchaser. It would be relatively easy to extend these provisions to businesses more broadly to apply to the purchase of certain professional services, or to any other goods and services that are commonly purchased both for personal and business use.

If, however, a sales tax fails to distinguish the ultimate purchaser for goods that are *consumed* by the business rather than used in the course of production and sale (equipment, machinery, raw materials, packaging, advertising, etc.),³⁸ the consequent tax pyramiding may be less extreme than with the inclusion of more direct production inputs. The problem still exists, and should be avoided wherever possible, but the resulting pyramiding is at least less dire.

Under an ideal sales tax, exemptions based on the identity of the purchaser could do away with the entire patchwork quilt of business input exemptions. Anything in the sales tax base would be taxable if purchased by a final consumer and exempt if purchased by a business. That said, applying this broadly would wipe out all inputs currently included in the sales tax base—good policy, to be sure, but a significant hit to state revenue.

It is, however, a responsible way to approach *expansion* of the sales tax base into new areas, like digital products. Iowa, for instance, adopted a commercial enterprise exemption that exempts business purchasers from sales tax on purchases of specified digital products, prewritten computer software, data storage, information services, software as a service (SaaS), and certain other digital services, provided the products are purchased and exclusively used by a commercial enterprise.³⁹

A policy of regularly reviewing and reducing reliance on the taxation of business inputs is important as well, and can be paired with other reforms.

Reconsidering Existing Consumption Exemptions

Most states impose their sales taxes on bases that consist of many goods—with economically significant policy carveouts—and relatively few services. Historically, most state sales taxes have been imposed on transactions involving tangible property: appliances but not apps, light fixtures but not landscaping. This was less a conscious choice than an accident of history, a relic of the fact that so many sales taxes were first imposed during the Great Depression, when services comprised a far smaller share of the economy.

³⁸ Some inputs, particularly raw materials, are consumed in production. In this case, we do not mean products consumed in the production process, but consumption that is made by the business.

³⁹ Iowa Code § 423.3(104).

Back then, it was administratively simpler to focus almost exclusively on later retail sales. Subsequently, even more recently adopted sales taxes have often been modeled on sales taxes of an earlier origin.

Exemptions for Services

Fortunately for the nation's economy but unfortunately for the reliability of state sales taxes, today's economy has little in common with that of the 1930s or even the 1990s. Higher incomes and changing consumer tastes have shifted a greater share of consumption to services, while a digital economy is upending traditional categories.

We subscribe to streaming services rather than buying DVDs, VHS tapes, CDs, or records (all of which were taxable); we purchase e-books (sometimes untaxed) rather than paperbacks (invariably taxable); we obtain programs and games through digital downloads rather than physical media (disks or cartridges). Increasingly, younger generations purchase "experiences" more than tangible goods—and most of those experiences involve services, whether it's fitness classes or cooking lessons or excursions.

But it's not just new services; it's also a matter of older services taking on greater importance in the modern economy. Domestic help has all but vanished, but increasingly, there's an app for that, or at least a number to call: house cleaning services, dog walking and pet sitting, ridesharing as an alternative to car ownership, or landscaping services in lieu of buying a lawn mower, to name just a few. The mower was taxed; its replacement (the lawn care service) is not. It is a story that can be told many times over. It is the story of a sales tax code built around an economy that no longer exists.

Slowly and fitfully, states are modernizing their tax codes, with the greatest progress coming in areas of nearly one-for-one replacements: streaming services, e-books, and select other digital goods that are clear substitutes for already-taxable tangible goods. Other personal services remain outside sales tax bases in most states, even as consumption patterns shift.

The resulting base erosion is undesirable along three axes: stability, economic efficiency, and equity. Base erosion undercuts state revenues and, to the extent that it shifts the balance of the tax system toward other, more distortionary revenue streams (particularly income taxes), can reduce overall economic competitiveness.

At the same time, broadly exempting services is regressive. Consumption of personal services tends to be more discretionary than consumption of goods. Consequently, higher-income individuals tend to spend a greater share of income on services, which are frequently untaxed. Expanding the sales tax base to additional services rights an accidental wrong in the sales tax as currently formulated, one that presently favors wealthier individuals.

In broad terms, services can be conceptualized as falling into five categories:

1. **Business services** (e.g., advertising, employment services, consulting, and public relations)
2. **Personal services** (e.g., dry cleaning, fitness classes, haircuts, lawn care, and personal storage)
3. **Professional services** (e.g., legal, accounting, medical, engineering, and other services generally associated with specific licensing or educational requirements)
4. **Services to real property** (e.g., repairs, maintenance, construction, and installation of fixtures)
5. **Services to tangible personal property** (e.g., delivery, installation, and repairs of furnishings and appliances)

In a well-structured sales tax, business services would be exempt, but all other categories could be taxable, though in some cases—particularly professional services—with exemptions for intermediate purchasers. These exemptions can be provided for using broad industry categories (e.g., exempting engineering as predominantly a business-to-business transaction), based on the purchaser being a business, or some combination of the two.

Policymakers can and should explore ways to tax consumer services that are currently exempt. Potential examples include automobile maintenance and repair services, home appliance installation, personal storage services, utility services, barber shops and salon services, dating services, guided tours, cleaning and upholstery services, counseling services, gym and health club memberships, dry cleaning, tax return preparation, personal instruction (e.g., tennis lessons, dance lessons), personal cloud hosting services, streaming audio and video services, car washes, amusements, landscaping, and event admissions, to name a few.

Including these and other consumer services is a good start in right-sizing the sales tax and addressing ongoing base erosion, but such inclusions are not a silver bullet. Policymakers are often led to believe that taxing services will unleash a torrent of new revenue, only to find that the real money is in business-to-business services (which should not be taxed), not haircuts.

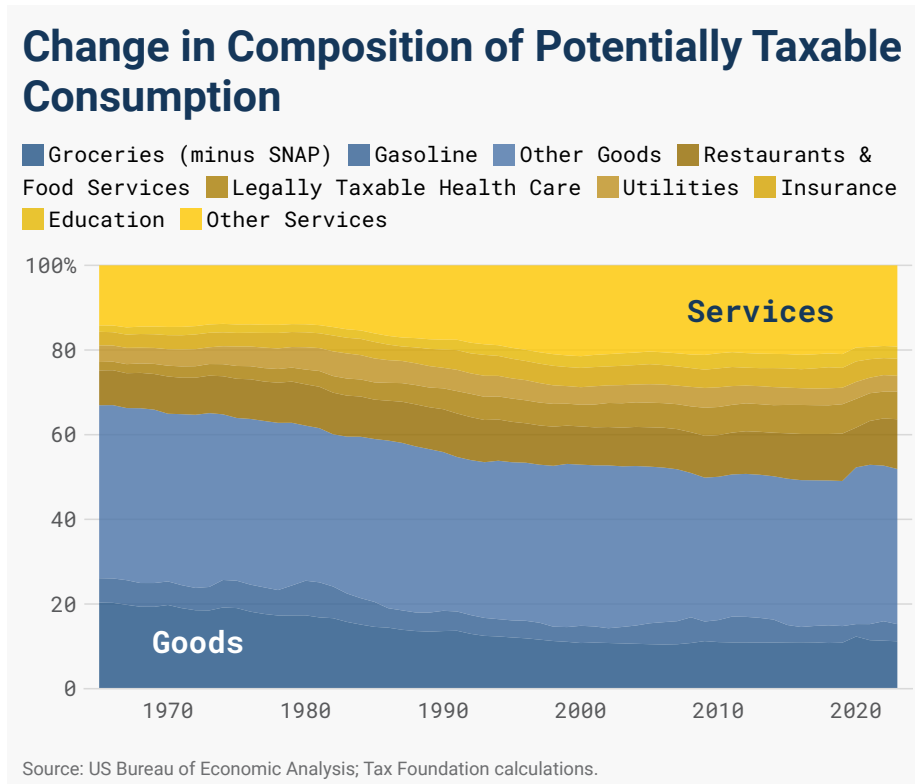
Exemptions for Goods

Goods are declining as a share of taxable consumption as the US evolves into an increasingly service-oriented economy, but they still constitute 33 percent of all personal consumption, while potentially taxable goods (those involving a transaction and where taxation is not restricted by federal law) comprise 51 of legally taxable retail transactions and 57 percent of non-health care and education taxable consumption.⁴⁰

Moreover, restaurants account for a sizeable share of services, even though restaurant meals are often colloquially understood as goods—and they are one of the few services already universally taxed by states with a sales tax. While the categorization of a restaurant meal as a service is correct, it may be instructive to briefly imagine all purchased food, from whatever source, as goods. In that case, 70 percent of taxable consumption would constitute goods.

⁴⁰ US Bureau of Economic Analysis, “Table 2.4.5. Personal Consumption Expenditures by Type of Product”; Tax Foundation calculations. A legally taxable transaction is understood as one that is not exempt from taxation under federal law (e.g., Medicaid spending) and which is provided for consideration (not, e.g., imputed rents from home ownership, or financial services furnished without payment).

Figure 4.



Policymakers run headlong into this reality when they seek to tax more services as a revenue-raiser, or as a revenue offset for tax reductions elsewhere. This counsels a degree of modesty in what base broadening can accomplish, but may also suggest a hard look at existing exemptions for tangible goods.

Groceries, clothing, medication, utilities, and gasoline are among the most common economically significant carveouts from states' sales tax bases, often justified on the grounds that they are necessities or that taxing them makes the sales tax more regressive. Those reasons are worth taking seriously, but there are good reasons—even for the most progressive legislators—to reconsider whether their states' sales tax treatment of these goods is achieving their intended policy objectives.

The conventional wisdom overstates the degree to which sales taxes are regressive, with economic research demonstrating that over a lifetime, the sales tax is much closer to distributionally neutral than is commonly believed, and that a fair amount of the regressivity that remains is the product of state tinkering with sales tax bases.⁴¹

Low-income individuals consume a greater share of their income than higher earners, who have a greater capacity for saving, so sales taxes apply to a higher share of low earners' income. This pattern substantially dissipates over time, however, because people earn in order to spend, and saving today is simply deferred spending. Over a lifetime, cumulative income and cumulative spending largely converge, even if spending is higher at different stages of life.

Moreover, income levels are not necessarily a good measure of ability to pay. A superficially surprising but

41 Laird Graeser and Allen Murray, "Sales Tax on Services: State Trends," in *Sales Taxation: Critical Issues in Tax Policy and Administration* (Westport, CT: Praeger Publishers, 1992), 101.

well-known quirk in large consumer datasets is that the households that own the most cars are concentrated in the highest *and* lowest income strata. This is not, of course, because cash-strapped households somehow find a way to stockpile vehicles. Rather, it's because a working mom earning minimum wage, a full-time medical student from a wealthy family, a fixed income retiree, and a wealthy couple spending down their retirement nest egg all show up in the data as having low income streams, even though their economic conditions vary wildly.

Some of these differences will endure throughout a lifetime, and others are simply stages of life. Most people start out with modest incomes and consume the majority of it, then advance in their careers and save a greater proportion of income, and then retire and begin spending it down. Within a single person's lifetime, sales tax liability as a share of income will resemble a bell curve, reflecting different stages of life more than differences across people.

Of course, this does not render the distributional differences irrelevant. Some people live on limited incomes their entire lives, and even those who are only temporarily resource-constrained will have less capacity, at that stage, to bear additional costs. But understanding the way sales taxes apply across a lifetime should at least temper the view that broadly taxing consumption—including essential goods—is objectionably regressive. The wider lens permits an evaluation of the trade-offs between greater progressivity, on the one hand, and the revenue stability and comparatively pro-growth profile of sales taxation compared to other potential revenue streams.

More to the point, some efforts to combat regressivity fail to do so, sacrificing the benefits of a broad sales tax base without providing a benefit to lower-income households. Virtually any exemption, of course, will be poorly calibrated: even if clothing represents a greater share of consumption for low-income households, for instance, most of the foregone revenue from a clothing exemption will benefit middle- and higher-income households, which spend far more on clothing (and on most things) in nominal terms.

Some exemptions, moreover, are particularly ill-considered, the grocery exemption foremost among them. Perhaps counterintuitively, if states are inclined to forgo a given amount of sales tax revenue, a sales tax rate reduction benefits lower-income households more than a grocery exemption. At the lowest decile, our research finds that households experience nine percent more sales tax liability under a sales tax with a grocery exemption than one with groceries in the base, assuming that rates are adjusted to generate the same amount of revenue from each tax base.⁴²

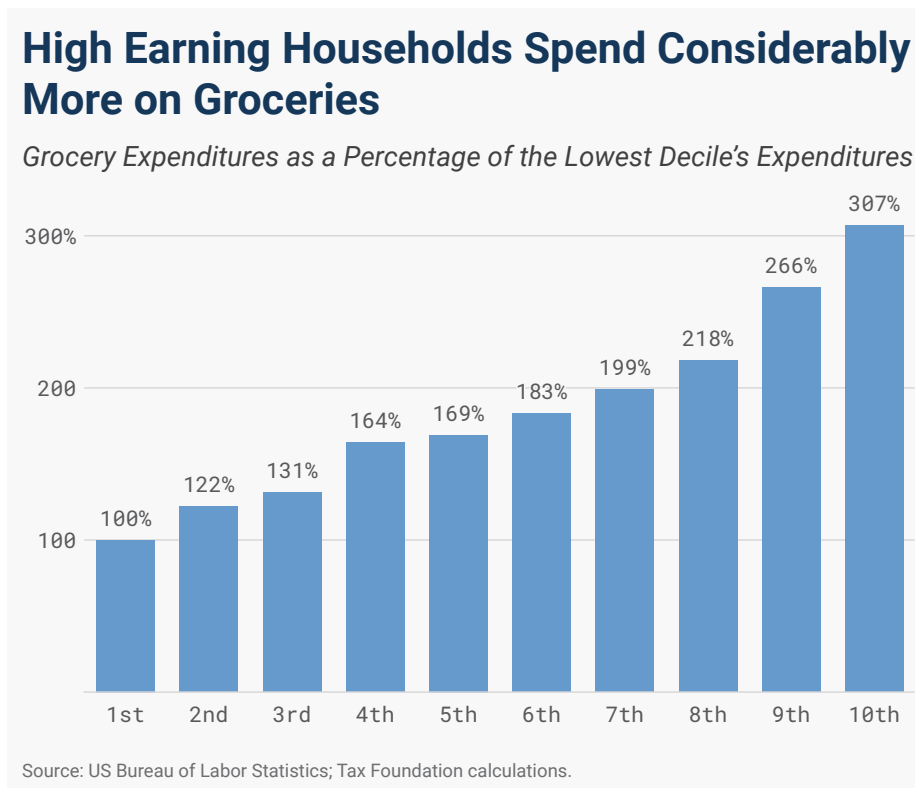
It is easy to construct the basic narrative by which policymakers have assumed that a grocery tax exemption is highly progressive. As previously observed, lower-income earners, by necessity, consume a greater share of their income, and thus their sales tax liability is higher as a percentage of personal income. This is particularly salient with groceries, both because they are a necessity of life and because demand for groceries cannot fully scale with income. Try as he might, a billionaire cannot consume orders of magnitude more groceries than a minimum wage employee. Consequently, the logic runs, exempting groceries disproportionately benefits lower-income earners by reducing their taxable consumption by a greater share than it is reduced for higher earners.

⁴² What follows is adapted from Jared Walczak, "The Surprising Regressivity of Grocery Tax Exemptions," Tax Foundation, Apr. 13, 2022, <https://taxfoundation.org/research/all/state/sales-tax-grocery-tax-exemptions/>, which can be consulted for calculations and further analysis. These findings are consistent with prior analyses, including Anna L. Johnson and Steven M. Sheffrin, "Rethinking the Sales Tax Food Exclusion with SNAP Benefits," *State Tax Notes*, Jan. 11, 2016, <https://pdfs.semanticscholar.org/6f18/cca38dfaa9591be264e4bff539573dae6d7c.pdf>.

This narrative, however superficially compelling, is marred by several flaws. Most importantly, it either neglects or fails to appreciate the full impact of the universal policy of exempting from sales tax any purchases made using federal food-purchasing assistance programs, primarily the Supplemental Nutrition Assistance Program (SNAP), but also the more narrowly targeted Special Supplemental Nutrition Program for Women, Infants, and Children (WIC). States' receipt of federal grants to administer these Food and Nutrition Service-funded benefits is contingent upon exempting these purchases from sales tax, and all states do so—even if groceries are otherwise in the sales tax base. This policy alone dramatically reduces taxable consumption for the lowest income deciles.

Additionally, the conventional wisdom underestimates the degree to which higher consumption of groceries does scale with income. Higher earning households purchase not only more, but higher qualities of, groceries. Low-income households, in fact, are more likely to purchase taxable substitutes to what states classify as groceries, a category that traditionally only covers unprepared foods. For lower-income working families, prepared foods—roisserie chickens, deli items, fast food, and more—are often more economically efficient than buying raw ingredients and making home-cooked meals, but prepared foods are taxed, whereas ingredients are exempt when states adopt a grocery tax exemption. The result is that a household in the fifth decile spends almost 70 percent more than a household in the first decile, and a household in the top decile spends over three times as much as a household in the lowest.

Figure 5.



Finally, while low-income households spend more on groceries as a share of income than the highest-income households, they do not necessarily spend more on groceries relative to other necessities. Compositional effects matter. If lower-income families spend moderately more on groceries as a share of income but substantially more on other household goods, then they will be worse off under a tax code that

exempts groceries but with a higher rate than would be necessary were groceries included in the base. Given not only substitution effects—prepared foods for unprepared—but also, crucially, the exemption of SNAP and WIC purchases for many low-income households, this is not just a hypothetical but the reality for many families.

These programs do not, of course, cover *all* grocery purchases by low-income households. The crucial point is that they cover a substantial portion of them, whereas these households typically bear the full burden of the cost of other goods subject to sales tax, so the benefit of rate relief is greater than the benefit of exempting a category of goods for which they already enjoy a partial, but highly targeted, exemption.

The result is that a policy designed to inject progressivity into the sales tax has the opposite effect, increasing tax liability on the lowest-income households, with most savings concentrated on middle-income households that can be best helped in other ways. And once it becomes apparent that the grocery tax exemption fails to achieve its stated objective, the trade-offs associated with the policy come into sharper relief. Grocery purchases are a sizable and stable share of personal consumption and exempting them from consumption taxation not only erodes the sales tax base, necessitating higher rates than would otherwise be necessary, but also increases revenue volatility.

Further common exemptions include gasoline and household utilities, often justified as an attempt to avoid double taxation. This too is an argument worth addressing.

The Interaction of Sales and Excise Taxes

Whereas the general sales tax is intended as a broad tax on consumption, certain products are also subject to excise taxes, sometimes termed “special sales taxes,” raising the question of whether it is appropriate to include these products in the general sales tax base as well.

Alcohol and tobacco are almost invariably subject to sales tax despite also being exposed to product-specific excise taxes, whereas only six states subject gasoline to the sales tax, with motor fuel taxes evidently regarded as replacements for, rather than supplements to, sales taxation.⁴³ Insurance, which is subject to state-level premium taxes, tends to be excluded from sales tax bases, while cellular phone service, which is exposed to multiple wireless taxes, remains in the sales tax base in all but three states and the District of Columbia.⁴⁴ Residential energy, typically taxed under state utility taxes, rarely shows up in sales tax bases. States lack any real consistency on the issue.

At a conceptual level, a strong case can be made for including a product in the sales tax base even if an excise tax is also levied on its purchase or utilization. Whether this is defensible in practice depends on the rate of, and justifications for, its excise taxation.

43 Jared Walczak, Andrey Yushkov, and Katherine Loughead, *2024 State Business Tax Climate Index*, Tax Foundation, Oct. 24, 2023, <https://taxfoundation.org/research/all/state/2024-state-business-tax-climate-index/>. For combined rates on motor fuel, see Adam Hoffer and Jacob Macumber-Rosen, “Gas Tax Rates by State, 2024,” Tax Foundation, Aug. 6, 2024, <https://taxfoundation.org/data/all/state/state-gas-tax-rates-2024/>.

44 Scott Mackey and Adam Hoffer, “Excise Taxes and Fees on Wireless Services Drop Slightly in 2023,” Tax Foundation, Nov. 2, 2023, <https://taxfoundation.org/data/all/state/wireless-taxes-cell-phone-tax-rates-by-state-2023/>.

Consider, for instance, taxes on motor fuels. Transportation is undeniably consumption, so it seems appropriate that the purchase of gasoline would be taxable, just like purchasing the vehicle itself or (in many states) automobile maintenance and repair. But driving is not just personal consumption. It also consumes public resources by putting wear and tear on roads and contributing to congestion, and it creates other negative externalities, like pollution. A well-calibrated gas tax is essentially a user fee, with drivers paying for their road usage. To the extent that this is the case, it makes sense for this tax to be *in addition* to the general tax on consumption. Currently, however, few states do this.

Similarly, to the extent that excise taxes on alcohol or tobacco are designed to internalize some of the negative externalities associated with their use, or to cover government costs directly attributable to them, there is a strong case for levying them on top of the existing sales tax. Sales of alcohol and tobacco require specific enforcement regimes that sales of, say, breakfast cereal, do not,⁴⁵ and their use or misuse can also give rise to costs disproportionate to those created by other goods. Similarly, utilities fall under a specific regulatory regime that must be funded. To the extent that excise taxes on such products are aligned with these costs, and revenues are earmarked for such purposes, “stacking” excise and sales taxes is not double taxation.

The case is dramatically weakened, however, when the additional excise taxes are designed primarily as a revenue-raising measure above and beyond costs associated with the product’s sale or use. This is particularly true when excise tax revenues are deposited into the general fund or designated for unrelated expenditures.

Ultimately, this yields a better case for constraining excise taxes than it does for excluding such products from the general sales tax. Nevertheless, policymakers determining whether to include a currently exempt, but excised, product from the sales tax base will inevitably have to take into account the resulting overall tax burden. In some circumstances, it may be possible—and desirable—to pair inclusion in the sales tax base with a reduction of existing excise tax rates.

Remote Sales Tax Considerations

The Supreme Court’s 2018 decision in *South Dakota v. Wayfair* eliminated the old physical presence standard for sales tax nexus, allowing states to require out-of-state retailers to collect and remit tax on sales to in-state customers, provided that these requirements do not unduly burden interstate commerce. (States have also adopted sets of rules for marketplace facilitators, requiring them to collect and remit tax on behalf of businesses selling on their platforms.) The Court did not expressly spell out the minimum standards necessary to avoid imposing an undue burden, but some dicta regarding the challenged South Dakota law has generally been taken as a guide to the Court’s thinking, and—even beyond bare constitutionality—helps constitute a framework for an efficient remote sales tax regime.⁴⁶

⁴⁵ This is not to say that other products do not involve inspections or regulatory oversight, some of which *is* paid for directly by the producers while other portions are financed through general government revenues, but certain products are inherently more associated with specific regulatory and enforcement regimes.

⁴⁶ For a more comprehensive analysis of issues surrounding remote seller and marketplace facilitator laws, see Jared Walczak and Janelle Fritts, “State Sales Taxes in the Post-*Wayfair* Era,” Tax Foundation, Dec. 19, 2019, <https://taxfoundation.org/research/all/state/state-remote-sales-tax-collection-wayfair>.

Safe Harbors for Small Sellers

All sales taxing states have created a safe harbor for small remote sellers to avoid burdening out-of-state retailers with only minimal sales into the state.⁴⁷ These so-called *de minimis* exemptions reduce compliance and administrative costs and help ensure that the cost of collecting and remitting the tax will not exceed a company's net revenue from transactions within the state. They also help insulate states from potential legal challenges, since the lack of a safe harbor—or a poorly designed one—can impose unconstitutional burdens on companies and throw a state's entire remote sales tax regime into doubt.

Existing *de minimis* exemptions consider the number of transactions in a state, gross sales revenue, or both—under both “and” and “or” systems. Increasingly, states that included a transactions threshold are abandoning it in favor of a gross sales threshold, a welcome development. A well-designed safe harbor should:

1. Take the size of the state's economy into consideration, with higher *de minimis* thresholds in larger states
2. Be denominated in gross sales, not transactions, to avoid the possibility of imposing burdens in excess of profits
3. Be calculated using retail sales, or potentially taxable sales under the state's own sales tax base
4. Avoid “notch effects,” where exceeding the safe harbor imposes a retroactive obligation on already-completed transactions

A transactions threshold introduces complications that are absent from a gross sales standard. Statutes are silent on what constitutes a transaction—an order, a shipment, or an individual item—and even if guidance is provided (as is typically the case), the definition of an “item” is no easy matter, particularly if certain items constitute part of a larger whole. A dollar-denominated gross sales threshold better comports with the purpose of the safe harbor and is easier to quantify. Moreover, a small business might have more than 200 sales into a state worth \$5 apiece, in which case compliance costs can easily outstrip the amount of sales tax collected and remitted, and more importantly, could exceed the company's profits on those sales, giving rise to claims of undue burden.

States should ideally define sales volume with reference to retail sales, not all transactions. If, for instance, a business sells manufacturing machinery (generally exempt as a business input), but also has a few branded tchotchkes as retail items, it makes very little sense for hundreds of thousands of dollars of untaxed business-to-business purchases to put a company over the threshold for collecting sales tax on a few hundred dollars of taxable retail sales. Or imagine a small business that sells replacement parts to manufacturers in a tri-state area. Perhaps a very small number of consumers also own equipment for personal use, and occasionally place an order directly with this provider, which otherwise almost exclusively trades in untaxed wholesale transactions. If these untaxed wholesale transactions are enough to exceed the safe harbor, then even a single sale to a consumer is enough to require full compliance with the state's remote sales tax regime—an outcome that makes little sense.

⁴⁷ Kansas originally implemented its remote sales tax system based on an interpretation of existing statutes in light of the Supreme Court ruling and did so without a safe harbor, but the legislature subsequently adopted a \$100,000 threshold.

In a world without transaction costs, a state's own sales tax base would be the ideal reference point, such that a transaction that is exempt from the sales tax should not count toward the gross sales threshold. In practice, however, using a threshold of retail sales is arguably superior, because it does not require a small business to learn the intricacies of a particular state's tax code before it reaches a threshold where compliance is necessary. If a business must track pre-threshold sales against every state's unique tax base, much of the cost of compliance will fall on businesses that lack nexus to collect and remit.

Finally, states should avoid creating "notch effects" where remote sellers are obligated to remit tax for transactions that occurred prior to attaining the state's threshold for compliance. This is a significant issue for remote sellers, as they never collected sales tax on those transactions in the first place and have no way to go back to the purchasers and collect it now, meaning that the financial burden for sales tax on prior transactions falls on the retailer, even though the incidence of the tax is normally on the consumer. Once a business exceeds the *de minimis* threshold, however, all future transactions—going into future years—should be subject to collection and remittance requirements unless and until there is a future full year in which the business falls below the threshold.⁴⁸

Embracing Unity and Uniformity

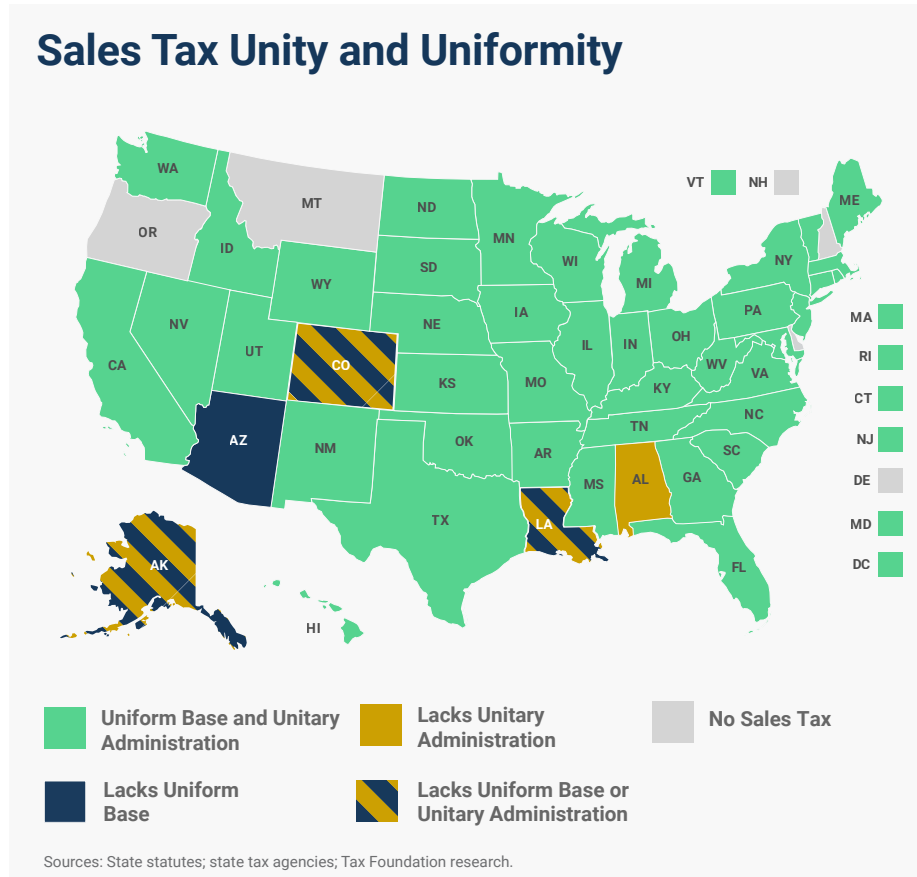
Four states—Alabama, Alaska, Colorado, and Louisiana—permit local sales tax administration.⁴⁹ In Alaska, this is an outgrowth of the state's decision to forgo its own sales tax but to grant the authority to localities; in the other three states, it stems from strong home rule traditions and constitutional grants of local taxing power. Alabama has a uniform tax base, meaning that localities cannot make their own choices about what to tax and what to exempt, but many local governments handle their own tax administration, which would obligate remote sellers to remit separately to each jurisdiction. Arizona, by contrast, has centralized collections (a relatively recent development) but not full base uniformity. And whereas Arizona's divergences are modest, Alaska, Colorado, and Louisiana allow broadly divergent tax bases, where different jurisdictions tax different baskets of goods and services. What is taxed in one jurisdiction may be exempt in another.

This lack of unity and uniformity has complicated efforts to tax remote sales at the local level, with Louisiana creating a special set of statewide rules for remote sellers and Colorado using a carrot-and-stick approach to nudge local governments into compliance. Alaska jurisdictions, meanwhile, have banded together to create a centralized point of administration for remote sellers. None of these solutions are perfect, and where there are gaps, many remote sales go untaxed—though the reforms represent significant progress.

⁴⁸ This reestablishes the threshold for the following year, but does not result in a refund of taxes remitted during the year in question.

⁴⁹ Jared Walczak and Janelle Fritts, "State Sales Taxes in the Post-Wayfair Era."

Figure 6.



Occasionally, as local option sales taxes are considered in states that do not yet authorize them, policymakers consider local administration. Very few policymakers in the handful of states that struggle under these systems would ever recommend them to others, and indeed have spent years—sometimes decades—attempting to unwind these patchwork systems, which yield low compliance and extraordinary administrative and compliance costs.

Establishing Sourcing Rules for Services

Under most circumstances, state sales taxes are destination-sourced, meaning that the relevant taxing authority is the one with jurisdiction over the location at which a customer receives a product. For these purposes, receipt is typically synonymous with taking possession, so a consumer who purchases an item in Philadelphia pays Pennsylvania and Philadelphia sales tax, even if she then takes her purchase home to New York City. If, however, she bought the product online and it was shipped to her New York City address, it is the New York state and local sales tax that applies.

For tangible property, sourcing is relatively easy. There tends to be a clearly defined physical location where a good is received. The same goes for some services, particularly those involving on-site labor. In many cases, however, services are performed in a different location than the one in which they are received. Hiring a home cleaning service poses few challenges—but how about a cloud computing service?

Sometimes the determination is complex. If a customer who lives in Chicago pays for a digital service offered by a company headquartered in San Francisco but served out of a data center in Phoenix, and that customer uses the service while on vacation in Honolulu, to which jurisdiction is the service sourced? Or if, for the sake of argument, business-to-business services are taxed (even though they should not be), if a company based in New York City pays for a customer relations database that is used by salespeople across the country, including sales teams based in Denver and Colorado Springs, is any portion of that transaction taxable in Colorado?

Within corporate taxation, some states have adopted a “look-through” approach for corporate apportionment, based on the location of the customer’s customer. Under this approach, if a service contracted in Colorado was ultimately consumed (either by the company or its customer) in another state, Colorado would not tax it, but if the customer’s customer was in Colorado, that transaction would be sourced—or partly sourced—to the state. This approach has relatively little appeal in sales taxation, because it is complex and requires an assessment of a service’s use over time, information that may not be available when the sale is transacted.

Therefore, states would do well to avoid look-through and source services consistent with their basic sales tax rules, with receipt of a service sourced to wherever first use is made of the service, or for digitally transferred services, taking possession or making first use.⁵⁰ This approach cuts down substantially on complexity for taxpayers and tax collectors alike, and squares with sourcing rules for tangible goods.

Sourcing, moreover, is chiefly relevant for business and professional services, and is most complex for those purchased by businesses. Exempting business inputs, consistent with good tax policy, clears most of the complexity of sourcing. While it would remain a relevant issue for professional services consumed by individuals, the determination is rarely complex. A resident individual using a service would pay the sales tax on their fees; an in-state company providing a service to an out-of-state customer would not collect sales tax on behalf of the state in which they are headquartered.

Learning from the Rest of the World

Sales taxes are so firmly entrenched in US state and local tax systems—levied in 46 states and the District of Columbia and generating over 30 percent of all state tax revenue⁵¹—that Americans can be forgiven for not realizing how *unusual* the American approach to consumption taxation is, and how beholden the US model is to the unique circumstances into which it was born, in the midst of the Great Depression.

Understanding these dynamics is especially important for states that are seeking to attract direct foreign investment and foreign companies into the state, but a greater appreciation for the world’s default mode of consumption taxation also helps make the case for reform in the US. Reducing the share of business inputs in the sales tax base, and broadening bases to include more final consumption, is far from radical: it is simply a step toward the norm virtually everywhere else.

⁵⁰ U.C.A. 1953 § 59-12-211.

⁵¹ Including Alaska, where sales taxes are exclusively imposed at the local level.

Consumption taxes are near-universal, imposed by 180 of the 193 UN member states.⁵² But sales taxes like those imposed in the United States are quite rare; excepting Canada, which has a mix of provincial sales and value-added taxes, the most populous country with a sales tax after the United States is Myanmar (Burma).⁵³ And while many Americans are understandably skeptical of European models of taxation, the rest of the world—including, but by no means limited to Europe—is onto something with the VAT model, which is frequently misunderstood. American critics often assume it contains egregious features that are instead redolent of the US sales tax. So, while states are unlikely to consider a VAT, efforts to improve state sales taxes can benefit from a better appreciation of what the VAT gets right and what the sales tax gets wrong.

While the design of value-added taxes varies, the most common version is what is known as a credit invoice method VAT, where tax is imposed at each stage of production, but a credit is provided against taxes paid at all prior levels. The legal incidence of the tax falls on businesses (at each stage of production) as well as consumers (at retail), but economically, this is identical to simply imposing a tax at retail on nearly all consumer transactions. Consider the following simple example of a VAT compared with a sales and use tax (SUT) that falls exclusively on final consumption, both contrasted with a gross receipts tax (GRT) that is imposed each time the product “turns over,” with all rates set to 10 percent.

Table 3. Sales Taxes and VATs Are Economically Identical if Designed Correctly, but GRTs Are Not

Production Stage	Price		VAT	SUT	GRT
	Incremental	Aggregate			
Raw Materials	\$50	\$50	\$5	\$0	\$5
Manufacturing	\$30	\$80	\$3	\$0	\$8
Distribution	\$10	\$90	\$1	\$0	\$9
Retail Markup	\$10	\$100	\$1	\$10	\$10
Total			\$10	\$10	\$32

Source: Tax Foundation calculations.

While tax is remitted at multiple stages under the VAT, only the added value (as the name implies) is subject to tax at any given stage. So if a manufactured good is sold to a distributor at \$80 and that distributor sells it to a retailer at \$90, the distributor only pays tax on the incremental amount (\$10), whereas if a sales tax were imposed on that intermediate stage, it would fall on the full \$90—even if some of that value had already been taxed, or if all of it would be again at the retail level.

A GRT, meanwhile, would fall on every stage of production. In practice, GRTs tend to have relatively low rates—no real-world GRT would be set at 10 percent, as shown in the above example—because of how much they pyramid.

52 Jacinta Caragher, “How Many Countries Have VAT or GST?,” Jun. 6, 2023, <https://www.vatcalc.com/global/how-many-countries-have-vat-or-gst-174/>; author’s analysis.

53 As of 2024, the UN member states with a sales tax are Cuba, the Democratic People’s Republic of Korea (North Korea), East Timor, Eritrea, Liberia, Malaysia, Myanmar (Burma), the Solomon Islands, Somalia, South Sudan, Tuvalu, and Yemen, in addition to the United States and (partially) Canada.

While an ideal sales tax is identical to an ideal VAT and differs sharply from a GRT, in the real world, state sales taxes feature a hybrid of the economic effects of these other two taxes. The VAT model is not realistic for states. (Even if desired, it would be difficult to implement one in a single state without the ability to piggyback on a federal system, and many policymakers fear that the ability of a VAT to raise substantial revenue at deceptively low rates would make it easier to raise taxes.) But it does serve as an important reminder that most of the world does far better at exempting intermediate transactions from consumption taxes. There is no reason US states should rank among the worst in the world on this score. Indeed, this may give foreign companies a strong argument for choosing not to invest in certain states, with states missing out on valuable job creation opportunities as a result.

State Experiences on Sales Tax Reform

All state sales taxes continue to depart from the ideal structure in that they expose some business purchases to taxation, but several states have taken intentional steps to reduce their taxation of business inputs over time.

For example, over many years, Utah legislators have taken a sequenced approach in removing business inputs from the base one industry at a time. In 1979, legislation was implemented that phased in a sales tax exemption for most types of farm equipment, and in the early 1980s, a few additional business inputs were selectively removed.⁵⁴ Starting in 1985, a major new sales and use tax exemption was implemented for purchases and leases of manufacturing machinery and equipment used in new or expanded manufacturing operations.⁵⁵ The following decade, that exemption was expanded to include replacement equipment. More recently, in 2017, a sales tax exemption was created for machinery, equipment, and repair and replacement parts used in automobile manufacturing, as well as an exemption for hydrogen gas manufacturing equipment and repair and replacement parts with a useful life of less than three years.

While Iowa exposes many *tangible* business-to-business transactions to taxation, state lawmakers recently adopted a substantial new exemption for digital products based on the identity of the purchaser (with business purchases being exempt while consumer purchases are taxable). Specifically, as referenced previously, Iowa exempts sales to commercial enterprises of specified digital products, prewritten computer software, and several services, including electronic or tangible file or document storage services, information services, services related to installing or maintaining certain digital products, and software as a service (SaaS).⁵⁶ Commercial enterprises are broadly defined and include all for-profit businesses, professions, and occupations, along with nonprofit insurance companies and financial institutions.⁵⁷ (Other nonprofits enjoy existing, broader exemptions from sales tax.) Iowa is currently the only state that offers a broad sales tax exemption for business purchases of digital products and services, and other states would do well to follow Iowa's example.

⁵⁴ "History of the Utah Tax Structure," Utah State Tax Commission, 2023, 19-21, <https://tax.utah.gov/esu/history/history.pdf>.

⁵⁵ *Id.*, 23, 33, 79-80.

⁵⁶ I.C.A. § 423.3(104).

⁵⁷ "Taxation of Specified Digital Products, Software, and Related Services," Iowa Department of Revenue, accessed Nov. 10, 2023, <https://tax.iowa.gov/taxation-digital-products>.

By contrast, lawmakers can also look to failed efforts to expand to a broad range of business inputs in states like Nebraska, Mississippi, Virginia, and West Virginia in recent years. Looking much further back, policymakers might also draw lessons from Florida's failed attempt at taxing broad new categories of business inputs nearly three decades ago.

In April 1987, Florida lawmakers enacted legislation extending the sales tax to numerous services purchased either exclusively or substantially by businesses, including advertising, construction, legal, and accounting services.⁵⁸ This change was met with swift backlash from businesses, including advertisers, the media, and homebuilders. It was quickly repealed, not even surviving into the next calendar year. Following this failed attempt to expand the taxation of major categories of business inputs, lawmakers instead raised the sales tax rate by one percentage point on the prior sales tax base.

But where these states failed when they sought an over-broad expansion to a wide range of intermediate transactions, several states have succeeded in implementing base broadening on a moderate scale in recent years, with a focus on capturing a broader range of final consumption. A few notable examples include Kentucky, North Carolina, and the District of Columbia.

In Kentucky, as part of a broader tax reform package, lawmakers expanded the sales tax base to include many (primarily) personal services, including landscaping, janitorial services, pet care and grooming, small animal veterinary services, fitness and recreational sports, laundry and dry cleaning, linen supply, nonmedical diet and weight loss centers, limousine services, bowling, overnight trailer campgrounds, extended warranties, and select other personal services.⁵⁹

In North Carolina, an emphasis was placed on taxing services delivered by providers with an existing sales tax collections obligation. Beginning in 2017, a range of installation, repair, maintenance, and service charges were added to the sales tax base. The rationale for inclusion of these services in particular was that the service providers were already sales tax collectors in some aspects of their business, charging tax, for instance, on the tangible property being installed, or on parts used for maintenance and repair. Accordingly, broadening the sales tax base to cover other transactions in their purview did not require new sellers to register and begin collections for the first time. It should be noted, though, that within the existing base, many very small sellers succeed in complying with the sales tax, and there is little reason to believe that new services providers could not as well.⁶⁰

Criteria cited by a tax commission in the District of Columbia in advance of the adoption of its tax reform package included (1) purchase by final consumers and (2) services linked to tangible goods or real property situated in the District, making them difficult to purchase online or in another state.⁶¹ And in recent years, many states have broadened their sales tax bases specifically to digital goods, like e-books, movie and music downloads, file storage, and cloud-based software. Ride-sharing services have also been added to many states' bases.

58 John J. Siegfried and Paul A. Smith, "The Distributional Effects of a Sales Tax on Services," *National Tax Journal* 44:1, 48-9.

59 Morgan Scarboro, "Kentucky Legislature Overrides Governor's Veto to Pass Tax Reform Package," Tax Foundation, Apr. 16, 2018, <https://taxfoundation.org/kentucky-tax-reform-package/>.

60 North Carolina Department of Revenue, "Repair, Maintenance, and Installation Service," SD-16-4, Nov. 15, 2016, <https://files.nc.gov/ncdor/documents/directives/SD-16-4.pdf>.

61 DC Tax Revision Commission, "Recommendations," May 2014, 22, http://docs.wixstatic.com/ugd/ddda66_b54af5563fa54a17af9b41fc06aa672f.pdf.

Conclusion

Sales taxes remain a critical component of state and local governments' revenue toolkit, but they have been buffeted by changing consumption patterns and complicated by the ongoing expansion of remote and digital purchases. When well-designed, they are among the more economically efficient taxes, doing less to harm economic growth or distort behavior than most alternative revenue sources, which makes them potentially attractive to tax reformers as a pay-for to enable reductions elsewhere and also gives rise to legitimate concern when ongoing base erosion reduces the sales tax's share of overall tax collections.

At the same time, policymakers sometimes misapprehend the degree to which additional revenue is available through expansion to new digital products or services, often relying on estimates predicated almost entirely on the taxation of additional business inputs. When the sales tax is imposed on these intermediate transactions, it tends to pyramid (raising consumer costs) and to function as a tax on in-state capital investment, to the detriment of the taxing state. Reforms that propose to pay down reductions to other taxes, funded by sales tax base broadening concentrated on business inputs, are likely to hinder, rather than promote, economic expansion.

The issues raised are sometimes complex. But the sales tax is too important a tax for policymakers to ignore.