

Digital-Business Input Exemptions: Lessons From Sales Tax History

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In this article, Frieden and Nicely discuss how to design a sales tax system that exempts digital business inputs by looking back to states' adoption of sales taxes in the 1930s and 1940s and the approaches to avoiding tax pyramiding in the manufacturing sector.

Introduction

Over the last few years, public dialogue has intensified over the sales taxation of digital products, largely because of the continued trend toward digitization of products previously sold in tangible form or services provided in person. One of the widely discussed topics is the extent to which the sales tax base on digital products should encompass business-to-consumer (B2C) transactions and not business-to-business (B2B) transactions to avoid the pyramiding of sales

tax.¹ Among many who believe, at least conceptually, that a fair and efficient sales (that is, consumption) tax should generally exclude production and intermediate B2B transactions, there remain policy questions about the design of digital-business input exemptions and practical concerns about trade-offs with sales tax revenue generation.

This article analyzes a path forward for designing a sales tax system for digital products by looking back to the states' adoption of sales taxes in the 1930s and 1940s and the approaches to avoiding tax pyramiding in the manufacturing sector. At that time, U.S. states were global leaders in applying anti-pyramiding principles, while most European nations were wedded to multistage turnover taxes (that is, gross receipts taxes). After a period of experimentation, the best practices adopted by most states focused on both the *means* (defining the categories of business inputs to exempt) and the *ends* (linking the exemptions to the protected

¹ See generally Multistate Tax Commission Uniformity Project on "Sales Tax of Digital Products," especially the content under the tab for "Research and Analysis." The MTC project's discussion of digital products and digital business inputs has received extensive coverage. Examples include Jared Walczak, "The Perils of the MTC's Digital Products Tax Push," *Tax Notes State*, Apr. 17, 2023, p. 227; Amy Hamilton, "MTC Hears First Reaction to Proposed Digital Tax Base Principles," *Tax Notes State*, Oct. 6, 2023; and Emily Hollingsworth, "MTC: Progress Continues on Digital Taxation, Sourcing Projects," *Tax Notes State*, Nov. 27, 2023, p. 669. While this article focuses on sales taxation of digital products, the same analysis also applies more broadly to sales taxation of services.

activities — both manufacturing and the subsequent resale before final consumption).²

There are many parallels between 21st century digital commerce and 20th century manufacturing. The digital products sector is the driving force of the modern services economy, much as the manufacturing sector was considered the foundation of the 20th century industrial economy. As with manufacturing, states vie to attract high-technology and data-intensive businesses to provide a boost to their economies. Given these similarities, the evolution of the anti-pyramiding approach as applied to the manufacturing sector provides some valuable lessons for the sales taxation of digital products.

The good news/bad news is that there is generally only an upside here. Few states exempt digital business inputs or provide anti-pyramiding protections for digital industry supply chains. The early adherence of states to the single-stage retail sales tax model and the anti-pyramiding principle when such tax principally fell on tangible personal property has long since dissipated. Outside the manufacturing sector (and related sale-for-resale exemptions for inventory), states have generally done a poor job of avoiding sales tax pyramiding in the retail, service, and now digital sectors. The reasons for this historical dichotomy and the potential means to reverse this trend become evident as we review the history of sales tax exemptions for business inputs used in the manufacturing process.

²The business input exemptions for the manufacturing sector typically encompassed both the inputs leading up to the production of tangible personal property and its resale before final consumption. While all “sales tax” states provide a broad tangible personal property resale provision (a key differentiator between a state imposing a sales tax and one imposing a gross receipts tax), considerable variation in the extent to which states exempt the intermediate inputs in the manufacturing supply chain continues to exist. See discussion *infra* parts 2 and 3.

Part 1: The Development of Single-Stage Taxes

The broad-based (general) consumption tax³ is of relatively recent historical origin, dating back only to the post-World War I era. The expansion of general consumption taxes during the 20th century — in response to revenue needs created by global wars, economic downturns, or rising government debt — represents possibly the fastest growth of any major tax type in history.⁴ Before World War I, only two advanced nations imposed general consumption taxes: Mexico and the Philippines.⁵ By the end of the 20th century, virtually every advanced nation levied a general consumption tax that contributed an average of 21 percent of all government revenue.⁶

The first wave of general consumption taxes was typically modeled after the taxes adopted in Germany, France, and other European countries in the aftermath of World War I — so-called turnover taxes. These multistage taxes were characterized by taxing transactions at all levels of production, distribution, and retail sales — whenever a good or service “turned over” and was sold for consideration. This type of tax is also known as a gross-receipts-based tax.

While the turnover tax, given its all-encompassing tax base, was effective at raising significant tax revenue through relatively low tax

³The OECD divides consumption taxes into two categories: “general taxes on goods and services,” which include value added taxes, sales taxes and turnover, and other general taxes on goods and services; and “taxes on specific goods and services,” consisting primarily of excise taxes, customs and import duties, and taxes on specific services. OECD iLibrary, “Consumption Tax Trends 2022: VAT/GST and Excise, Core Design Features and Trends,” at section 1.1.1 (2022).

⁴Robert Murray Haig and Carl Shoup, *The Sales Tax in the American States* (1934). According to Haig and Shoup:

When the World War was nearing its end in the middle of 1918, the sales tax as an important fiscal instrument was to be found only in a few small countries and in Germany, where the rate was but 0.1 percent. Today, fifteen years later, the tax has spread over four continents and is now an important element of national taxation in the larger part of Europe and South America, in Australia and Canada, and is rapidly assuming an important place as a state tax in the United States. In the history of public finance no other tax, save perhaps the one on gasoline, has spread so swiftly over the world.

Id. at 5.

⁵See Clinton V. Oster, *State Retail Sales Taxation* 10 (1957).

⁶For the historical growth of general consumption taxes and their current share of all taxes in the OECD countries, see OECD iLibrary, *supra* note 3, at section 1.2.5 and Annex A. The United States is unique among virtually all advanced nations as the primary general consumption tax is imposed at the state and local levels and not the national level.

rates, the unfairness and inefficiency of this first generation of broad-based sales taxes were immediately recognized.⁷ Turnover taxes caused extensive pyramiding of taxes, resulting in double or triple tax on the same related series of transactions. Among the most criticized negative effects of the turnover tax design were the bias for integrated businesses (with fewer taxable stages); the unequal burden on different types of business (depending on the number of steps in the supply chain); the disincentive for capital investment (capital goods are included in the tax base); the lack of transparency in the incidence of the tax (hidden taxes on intermediate transactions); and the unfavorable treatment of exports (in the absence of border adjustments).⁸

As a result, over the next several decades, a number of countries experimented with different approaches to limit the pyramiding of these taxes, typically through the adoption of single-stage sales taxes. Single-stage taxes attempt to avoid tax pyramiding by primarily taxing one stage of a series of related transactions — typically at the retail stage, but some are imposed at the manufacturing or wholesale stage. The rationale behind this tax structure was to avoid pyramiding by isolating the tax as much as possible to a single stage.

In 1929 the U.S.-based National Industrial Conference Board undertook one of the first comprehensive studies of emerging general consumption taxes around the world. The board categorized general consumption taxes as follows:

The primary basis of classification for turnover taxes is according to whether the tax is imposed on several or all transfers or stages in the economic progress of a commodity or service, or whether it is imposed once, and once only, on each individual commodity or service. General sales or turnover taxes in the first category

may be called *multiple-turnover taxes*.

Those in the second category are *single-turnover taxes*. . . . Single-turnover taxes are to be classified according to the transaction that gives rise to tax liability. If the tax is imposed primarily on the sales made by producers or manufacturers, it goes by the name of *production tax*. If that which gives rise to the tax liability is the sale to the ultimate consuming purchaser, the tax is called a *retail sales tax*.⁹

The U.S. states were among the first jurisdictions in the world to adopt single-stage general consumption taxes. This is surprising given the later history of states as laggards among national and subnational jurisdictions in eliminating business inputs from their sales tax bases. But the U.S. states in the 1930s were in the forefront of experimenting with single-stage taxes to reduce the impact of sales tax pyramiding and were the first to widely use the retail sales tax model.¹⁰

In adopting single-stage taxes, the U.S. states reacted to perceived deficiencies in foreign multistage turnover taxes and negative experiences in the 1920s with multistage sales taxes imposed by states such as Delaware, Pennsylvania, and West Virginia.¹¹ For instance, West Virginia enacted a gross sales tax in 1921, becoming the first state with a fiscally important sales tax. The tax was designed as a multistage turnover tax with a series of rates and bases that included mining, manufacturing, wholesaling, retailing, banking, public utilities, and other business transactions, and resulted in extensive sales tax pyramiding.¹²

For many U.S. states, the choice of the retail sales tax model was reinforced by unique concerns of subnational governments that compete economically with each other and are

⁷ National Industrial Conference Board Inc. (NICB), *General Sales or Turnover Taxation* (1929), especially Chapter 1; and Alfred D. Buehler, *General Sales Taxation: Its History and Development* (1932), especially Chapter XV.

⁸ John F. Due, *Sales Taxation* 354-356 (1957); Richard D. Pomp, "Resisting the Siren Song of Gross Receipts Taxes: From the Middle Ages to Maryland's Tax on Digital Advertising," State Tax Research Institute, at section 5 (July 2022).

⁹ NICB, *supra* note 7 (emphasis added). Wholesale sales taxes had not yet been enacted by any nations, so they were not included in the NICB study. See also Due, *supra* note 8, at 5.

¹⁰ Due, *supra* note 8, at chapters XII-XVI.

¹¹ NICB, *supra* note 7, Chapter I and Appendix II; Buehler, *supra* note 7, especially chapters IV, V, and XV.

¹² Oster, *supra* note 5, at 25. For an early critique of the West Virginia gross receipts tax, see NICB, *supra* note 7, at 194-200.

subject to U.S. constitutional limits on the taxation of interstate commerce. As sales tax scholar Neil Jacoby observed in a book written in 1938 during the first wave of state retail sales taxes:

Few of the foreign sales taxes are restricted to retail sales, but extend to transactions involving the transfer of merchandise at all stages . . . [t]he reverse tendency in the United States to concentrate sales taxes upon retailers has clearly resulted from a desire to avoid driving mobile manufacturing and wholesaling business outside state borders, and to the effect of the federal interstate commerce clause.¹³

Between 1932 and 1937, state adoption of general consumption taxes exploded, with 29 states enacting sales taxes, although six of those states subsequently allowed their taxes to expire. Over the next two decades, more states enacted sales taxes, leading to a total of 32 states (plus the District of Columbia) with sales taxes by 1957. Of these states, the vast majority adopted single-stage retail sales taxes. Only three states generally imposed levies on non-retail sales by manufacturers, wholesalers, or both.¹⁴

Part 2: The Evolution of Business Input Exemptions in the Manufacturing Sector

The retail sales tax, as with other single-stage taxes, has a goal of applying the sales tax at only one level, thus avoiding or minimizing tax pyramiding. As described by Clinton Oster, author of a major study on sales taxes in the 1950s:

the rationale of a single-stage tax on consumer outlay at retail requires the exclusion from the tax base of all sales for resale and sales to industrial consumers . . . the rationale of a

single-stage retail sales tax calls for generous exclusions of sales to industrial consumers, consistent with administrative feasibility, and the inclusion of consumer services.¹⁵

But imposing a retail sales tax at a single stage proved easier in theory than in practice. Difficult questions arose almost immediately about which sales to businesses should be exempt: all B2B sales or just those more closely aligned with the concept of “sale for resale.”¹⁶

All states that adopted retail sales taxes tried to avoid some level of pyramiding. All adopted sale-for-resale exemptions applicable when the same product is sold before its sale to an end-user purchaser by the business purchaser without a change in its form. Eventually, virtually all retail sales tax states extended the “resale” exemption to include purchases of tangible personal property in the manufacturing process that become ingredients or component parts of tangible personal property. Carl Shoup, an early American commentator on sales taxes, observed in 1934 that “if an article becomes a physically identifiable part of another article which is then sold, the first article has clearly not been sold for consumption or use, and has been sold for resale, and this sale is thus not taxable under the common formula noted above.”¹⁷

A sale-for-resale exemption is a fairly obvious tool to avoid excessive pyramiding in retail sales taxes. Still, this exemption was a radical departure from the prevalent multistage turnover taxes that had neither a resale exemption for goods that did not change form nor an exemption for tangible property that became an ingredient or component part of other goods.

¹⁵ Oster, *supra* note 5, at 137, 139.

¹⁶ The NICB study in 1929 described the design elements and conceptual challenges of a single-stage retail sales tax:

Like the production tax, the retail sales tax seeks to tax all commodities once, and once only. It has the advantage in that the transaction which gives rise to tax liability, the retail sale to the ultimate consumer, is easier of perception than the broader process of manufacture, which is the basis for the production tax. It nevertheless presents serious administrative problems. Chief among these are the problems of determining who should be retail sales taxpayers, the number of returns involved, and the question of retail sales made to business concerns.

NICB, *supra* note 7, at 92-93.

¹⁷ Shoup, “The Sales Tax,” 34 *Colum. L. Rev.* 816 (May 1934).

¹³ Neil H. Jacoby, *Retail Sales Taxation* 24 (1938). Due made a similar observation two decades later on the choice of state retail sales taxes over other types of single-stage taxes: “The states chose the retail level for their taxes for one primary reason — the desire to minimize interstate complications. Relatively few retail transactions are interstate in character, compared to the number of interstate sales by wholesalers and manufacturers, and retailers are much less likely to shift location to avoid tax than are wholesalers or even manufacturers.” Due, *supra* note 8, at 296.

¹⁴ Due, *supra* note 8, at 290-296.

The widespread agreement on these two elements of retail sales tax design did not extend to two other common manufacturing-business input exemptions: chemicals or materials consumed in the production process; and machinery, tools, and fuel used in the production process. Here, state statutory positions varied, although most states eventually allowed sales tax exemptions for these categories of business inputs.

Michigan is a good example of the evolution of business input exemptions for manufacturing that occurred after the adoption of its retail sales tax in 1933. The state ultimately enacted relatively robust manufacturing-business input exemptions, but not before a two-year legislative and administrative odyssey to determine the best way to address sales tax pyramiding in its manufacturing sector.

In its initial retail sales tax enactment, Michigan included a narrow business input exemption that defined “sale at retail” as a “transfer . . . for consumption or use or for any other purpose than for resale in the form of tangible personal property.”¹⁸ This definition clearly exempted a sale-for-resale but was ambiguous about other business input exemptions. In its initial regulation, the Michigan tax agency interpreted the language to include not just goods transferred without any physical alteration in form, but also goods that become a physical ingredient in products ultimately resold. This was in keeping with the common interpretation of goods that change form and are incorporated into the final product also qualifying as a sale for resale.¹⁹

After criticism by manufacturing groups that the business input exemption was still too narrow because significant portions of business inputs, including materials consumed and machinery used in the manufacturing process, were still subject to sales tax, the Michigan Legislature passed a resolution advising the tax agency to

liberally interpret the definition of sale at retail.²⁰ Subsequently, the Michigan tax agency and the state attorney general differed over the legislature’s intent.²¹ Finally, in 1935, two years after the original enactment of the Michigan retail sales tax, the legislature amended the act to more broadly exempt goods sold for consumption or used in industrial processing.²²

The amended act left open the question whether the more expansive business input exemptions should be interpreted with or without limits on the type of use. A Michigan commentator, in reviewing the early history of Michigan’s sales tax, concluded:

This provision may be interpreted in either of two ways: broadly, in the sense that all goods sold to such businesses are exempt; or narrowly, with the meaning that it is applicable only to goods used *directly* in industrial processing and agricultural producing. . . . In the absence of a specific directive from the legislature, the administrative officers adopted the narrow interpretation, which consequently has required a determination for every article purchased by industry and agriculture as to whether it is directly or indirectly used in production.²³

Thus, after a two-year process, Michigan finally ended up with manufacturing-business input exemptions for all four categories: sale for resale, ingredients and component parts, materials and fuel used and consumed in the process, and industrial machinery. As with most other states that eventually adopted similar provisions, the exemptions were limited to business inputs used directly in industrial

²⁰ In its resolution, the Legislature stated that its intent “was to exclude from the provisions of the act any sale of anything used exclusively in the manufacturing, assembling, producing, preparing, or wrapping, crating and/or otherwise preparing for delivery any tangible personal property to be sold.” House Concurrent Resolution No. 96, quoted in Taylor, *supra* note 19.

²¹ The Michigan tax agency at first ignored the resolution, and then reversed field and held that all sales to businesses were exempt without qualification. After the state attorney general overruled this too broad interpretation, the tax agency rescinded its regulation and went back to its original narrow interpretation. Taylor, *supra* note 19, at 82.

²² *Id.*

²³ *Id.*

¹⁸ Mich. P.A. No. 1678, at section 1 (b.1) (1933).

¹⁹ Milton C. Taylor, “Toward Rationality in a Retail Sales Tax,” *The National Journal*, at 81 (Mar. 1952).

processing or manufacturing; they did not extend to administrative or distribution functions. Finally, for administrative feasibility, the “use” restrictions were typically tied to the manufacture of tangible property “to be sold” without reference to whether the next stage was subject to sales tax.²⁴

In many states, the evolution of business input exemptions for the manufacturing sector was slower and less complete than in Michigan. But the general trend among states was to adhere partially or fully to the anti-pyramiding principle, and to take steps, incrementally or expansively, to avoid imposing the tax more than once on a related series of transactions.

Part 3: The Expansion of Business Input Exemptions for Manufacturers

In the first several decades of retail sales taxes, all states provided some level of business input exemptions for manufacturing.²⁵ A study by John Due in the mid-1950s of the 32 states with sales taxes provides a good barometer of the permeation and differentiation among states of business input exemptions for manufacturers. Reviewing state sales tax statutes enacted as of January 1, 1957, Due found that all 32 states provided sale-for-resale exemptions for tangible personal property. He also determined that all 32 states provided some form of business input exemption for materials and parts that become ingredients or component parts of tangible personal property.²⁶

Beyond these two universally adopted business input categories for manufacturers, Due found that state retail sales tax exemptions varied significantly. One-quarter of the 32 states provided exemptions for goods directly

consumed in the production process even if the goods did not become actual physical ingredients of the goods sold (consumables); about one-third of the states provided exemptions for machinery used in production; and over half the states provided exemptions for industrial fuel.²⁷

Since the 1950s, the number of states with retail sales taxes increased from 32 to 45 (plus the District of Columbia and many of Alaska’s cities). Over the next six decades, the principle of avoiding sales tax pyramiding, at least in the manufacturing sector, also expanded, with many states providing more expansive business input exemptions.²⁸

In 2022 the Council On State Taxation conducted a study of all 45 sales tax states (plus the District of Columbia and Alaska’s cities).²⁹ The COST study found that all 45 states, except for Hawaii, and the District of Columbia provide some form of a business input exemption for ingredients and component parts that are incorporated into tangible personal property. However, only about half those jurisdictions also exempt energy (fuel or electricity) used in manufacturing.³⁰ Those results are similar to the Due study in the 1950s.

In terms of sales tax exemptions for consumables and machinery used in the manufacturing process, the 2022 COST study found that adoption of the relevant business input exemptions has significantly expanded. According to the COST study, about two-thirds of the states grant business input exemptions for some or all consumables used in manufacturing (up from one-quarter of the states in the earlier Due study); and about four-fifths of the states allow a business input exemption for some or all machinery or equipment used in manufacturing (up from one-third of the states in the Due study).³¹

²⁴ Unlike the VAT, the sales tax depends on a “suspension” of tax and not a “default” method (tax is paid, but refunded back if the next stage is subject to tax) to avoid pyramiding. The sales tax exemption for intermediate business inputs is essentially a proxy for avoiding pyramiding, since it is administratively impractical to require a business claiming an exemption to know if the sales tax is ultimately charged in a related series of transactions. For an analysis of how states link manufacturing input exemptions to “machinery directly used in manufacturing or processing,” with no mention of whether the end product is taxable, see generally Jerome R. Hellerstein, Walter Hellerstein, and John A. Swain, *State Taxation*, ch. 12, para. 12.02, table 12.10 (2016).

²⁵ For similar but less complete state efforts to avoid pyramiding in the important agricultural sector, see Due and John L. Mikesell, *Sales Taxation: State and Local Structure and Administration* 66-69 (1994).

²⁶ See Due, *supra* note 8, at 293-300.

²⁷ *Id.*

²⁸ On the acceleration after World War II of sales tax exemptions for consumables, fuel, and machinery used in manufacturing, see Due and Mikesell, *supra* note 25, at Chapter 3.

²⁹ See Karl Frieden, Fred Nicely, and Priya D. Nair, “The Best and Worst of State Sales Tax Systems,” Council On State Taxation (Dec. 2022).

³⁰ *Id.*

³¹ *Id.*

State implementation of single-stage retail sales taxes to avoid sales tax pyramiding in the manufacturing sector evolved over decades and reflects widespread experimentation with different types and levels of business input exemptions. As states compete to retain and expand manufacturing operations in their state, this has generally resulted in the expansion, not contraction, of manufacturing business input exemptions. As states enter the 10th decade of using retail sales taxes, all states provide exemptions for sales for resale and for ingredients and component parts for manufacturing, and most states provide some level of business input exemptions for consumables and machinery used in the production of tangible personal property.

Part 4: The Business Input Exemption Gap Outside the Manufacturing Sector

The relative success of state sales tax systems in providing business input exemptions for the manufacturing sector was not replicated in other key sectors of the economy. Other than resale exemptions for the transfer of goods or services in the same form, there are generally either no or only modest levels of business input exemptions in the retail, wholesale, service, and digital sectors.³²

The multistage sales taxes imposed on non-manufacturing industries conflict with the nearly universal belief among sales tax experts that a well-designed retail sales tax should exempt all or most production and intermediate B2B transactions for fairness and economic efficiency reasons. Academic support for the anti-pyramiding principle embedded in single-stage retail sales taxes dates back to the earliest decades of general sales tax enactments (Shoup, Oster, Due, and John Mikesell) and continues

uninterrupted in more recent decades (Charles McLure Jr., Walter Hellerstein, and Richard Pomp).³³

There are many explanations for the divergence of state approaches to sales tax design in the manufacturing (and related sale-for-resale of tangible property) and other business sectors. From a historical perspective, in the early decades of state sales taxes, most states included only tangible goods in the sales tax base, with no or few categories of taxable services.³⁴ Thus, there was no initial need to extend anti-pyramiding protections and business input exemptions to the service sector because the output was generally not taxable.³⁵ The same historical “lag” factor applies to digital products that did not exist and were not included in sales tax bases until the 1990s and 2000s — over half a century after the enactment of the first wave of state sales taxes.

There is also a structural explanation, originating from the differences between the retail sales tax used by U.S. states and the value added tax adopted by virtually all other nations to implement the anti-pyramiding principle. A VAT uses a “default” mechanism, with a business input exemption built into the design of the tax. Under the VAT, all business inputs are taxed, but a refund or credit is allowed if the next stage of the supply chain is subject to VAT. This method generally ensures that the tax is applied at only one level. By contrast, there is no automatic “default” built into the retail sales tax that precludes multiple levels of taxation in the same related stream of transactions. A retail sales tax

³² See Andrew Phillips and Muath Ibaid, “The Impact of Imposing Sales Taxes on Business Inputs,” prepared for the State Tax Research Institute and COST, EY (May 2019), especially Table 5.

³³ Shoup, *supra* note 17, at 815-818; Oster, *supra* note 5, at 137-139; Due, *supra* note 8, at 312, 369-370; Due and Mikesell, *supra* note 25, especially at 15-16; Charles E. McLure Jr., “Rethinking State and Local Reliance on the Retail Sales Tax: Should We Fix the Sales Tax or Discard It?” 2000 *BYU L. Rev.* 82-83, 92-93 (2000); Hellerstein, Hellerstein, and Swain, *supra* note 24, at ch. 12, paras. 12.01 and 12.06; Walter Hellerstein and McLure, “John Due’s Wisdom Only Ripens With Age,” *Tax Notes State*, Mar. 15, 2021, p. 1159; Pomp, *supra* note 8, at 11, 27; Alan D. Viard, “Sales Taxation of Business Purchases: A Tax Policy Distortion,” *State Tax Notes*, June 21, 2010, p. 967; and Annette Nellen, “Now Is a Good Time to Start Fixing the Sales Tax Base,” *Tax Notes State*, Sept. 7, 2020, p. 987.

³⁴ Frieden and Douglas L. Lindholm, “A Global Perspective on U.S. State Sales Tax Systems as a Revenue Source: Inefficient, Ineffective, and Obsolete,” State Tax Research Institute, at Appendix, section C (Nov. 2022).

³⁵ This factor was reinforced by the special status of the manufacturing sector in the 20th century, given its impact on related supply chain businesses and high-paying blue-collar jobs. Much more attention was paid initially to exempting manufacturing business inputs because industrial production was considered the central foundation of economic growth.

uses a “suspension” method for business input exemptions. Under this method, governments must proactively enact legislation to “suspend” the sales tax for a category of business inputs, a much less efficient way to avoid tax pyramiding.

Finally, there is a financial explanation. For most non-manufacturing sectors, in the absence of preexisting business input exemptions, sales tax base expansion typically includes both B2C and B2B purchases. Once state sales tax collections become heavily dependent on sales tax revenue from business inputs, it is much more difficult (and expensive) to reverse course and adopt anti-pyramiding sales tax exemptions. The enormity of this constraint is evident from the \$225 billion in sales tax revenue collected from taxing business inputs in fiscal 2022, accounting for 21 percent of all tax revenue derived from businesses at the state and local levels.³⁶

Whatever the reason, there can be little question that the concerted efforts made to implement single-stage sales taxes in the manufacturing sector were generally not replicated in the retail, services, and digital sectors. For instance, the COST 2022 study looked at business input exemptions enacted by states relating to the retail sector. It reviewed purchases by businesses of fixtures, point-of-sale equipment, and electricity used in retail operations. The study found that none of the 45 states (and the District and Alaska cities) provide business input exemptions for fixtures or point-of-sale equipment purchased by retailers. Only nine of the states (about one-quarter) provide business input exemptions for electricity purchased by retailers.³⁷

The COST 2022 study also reviewed business input exemptions enacted by states in the digital sector. The study reviewed sales tax rules in six software and digital product categories:

- (1) pre-written (canned) software, including by electronic delivery;
- (2) custom software;

- (3) digital software accessed remotely (software as a service (SaaS));
- (4) digital information services;
- (5) data processing services; and
- (6) specified digital products.

The study found that only one state (kudos to Iowa) offers an exemption that covers all digital purchases by businesses. A small minority of other states allow a more limited exemption or reduced rates for business purchases, typically of only one software or digital product category.³⁸

While service industries are similarly granted few extensive business input exemptions akin to those provided to the manufacturing sector, there are some partial exceptions. About one-third of the states provide exemptions for machinery used in the provision of electricity and gas, telecommunications, and cable television. And about half the states provide a sales tax exemption for either the business inputs or consumer outputs of these three industries, thus avoiding sales tax pyramiding.³⁹ These large service industries share common features with the manufacturing sector, including significant levels of capital investment and the potential for widespread double taxation if production/transmission/distribution equipment and end-user purchases are all subject to a state’s sales tax. However, even here, these exemptions apply to far fewer states and generally encompass narrower categories of business inputs than do the manufacturing input exemptions.⁴⁰

The final indication of the inadequacy of anti-pyramiding outside the manufacturing sector is the pervasiveness of sales taxation of B2B purchases across all states, even those with lower reliance on business inputs in their sales tax base. The national average of sales tax revenue attributable to business inputs is 42 percent, but the lowest 10 states still average a taxable business inputs share of 35 percent of all sales tax revenue.⁴¹

³⁶ State Tax Research Institute, COST, and EY, “Total State and Local Business Taxes: State-by-State Estimates for Fiscal Year 2022,” at 3 (Dec. 2023). The sales tax revenue collected from taxing business inputs does not include the sales tax collections by businesses relating to B2C sales.

³⁷ Frieden, Nicely, and Nair, *supra* note 29, at 9.

³⁸ Frieden, Nicely, and Nair, “Down the Rabbit Hole: Sales Taxation of Digital Business Inputs,” *Tax Notes State*, July 18, 2022, p. 265; Frieden, Nicely, and Nair, *supra* note 29. See *infra* Part 5 for a discussion of the approaches taken in the small number of states that exempt only some digital business inputs.

³⁹ Frieden, Nicely, and Nair, *supra* note 29, at 8-9.

⁴⁰ *Id.*

⁴¹ Phillips and Ibaid, *supra* note 32, at 8.

Moreover, the business input share has been consistent for decades at slightly above 40 percent of state sales tax revenue.⁴² While not all taxable B2B purchases represent pyramiding (for example, if the subsequent B2C purchases are exempt from sales tax), the enormous scale of taxable business inputs validates the conclusion that sales tax pyramiding is pervasive.

Part 5: Lessons From Sales Tax History

Broad Acceptance of the Anti-Pyramiding Principle

What can we learn from the early history of state adoption of business input exemptions in the manufacturing sector that is relevant to the sales taxation of digital products? The first and perhaps overriding lesson is the need for acceptance of the anti-pyramiding principle as the starting point for consideration of whether and how to exempt digital business inputs. During the first few decades of extensive adoption of state sales taxes, there was widespread support for using a single-stage retail sales tax approach and rejecting the multistage turnover tax model favored in European countries. The retail sales tax model, as initially applied to the manufacturing sector and related resale of tangible property, prioritized the avoidance of tax pyramiding by primarily imposing the sales tax at only one level — the retail stage.

The evolution of state sales tax systems shows clearly what happens once the original impetus for a single-stage tax design dissipates. After the largely successful state effort to avoid extensive tax pyramiding in the manufacturing sector, the states lost their focus on tax pyramiding when expanding their sales tax bases to services, digital products, and other non-manufacturing sectors. Without a consensus for the fairness and efficiency of imposing the sales tax only once during the production, distribution, and retail stages, sales tax policy has tilted too far in the direction of revenue generation through the imposition of multistage sales taxes.⁴³

All is not lost, however, because the digital economy clearly presents an opportunity unlike any other over the last quarter century to reinvigorate the anti-pyramiding principle in state sales tax systems. The debate over best practices in the sales taxation of digital products includes a reexamination of the importance of exempting business inputs in a retail sales tax.⁴⁴ The digital sector is the driving force of 21st century market growth, much as the manufacturing sector was the foundation of the 20th century economic system. As with the manufacturing sector, states vie to attract high-tech, knowledge, and data-intensive businesses that produce or are large consumers of digital products.

Given these circumstances, state legislators may be more receptive to implementing a single-stage sales tax structure, at least for purposes of avoiding tax pyramiding in the critical digital sector. An additional incentive exists — for states that have not yet expanded their sales tax bases to some or any digital products — to minimize business opposition to base expansion by taxing only B2C and not B2B digital products. Finally, the federal mandate through the Internet Tax Freedom Act to avoid discriminating against digital products may help to rationalize exemptions for digital business inputs when similar tangible business inputs are excluded from the sales tax base.⁴⁵

State Experimentation With Business Input Exemptions

A second valuable lesson from state sales tax history is that designing a sales tax to avoid tax pyramiding often requires experimentation. There was and is no one-size-fits-all solution as states chose from a range of business input exemption categories and protected manufacturing sector activities. The original commitment to the single-stage retail sales tax model was just the starting point. At the narrow end of this commitment, states enacted exemptions for sales for resale and for ingredients and component parts. On the broader end, states adopted exemptions for all

⁴² Frieden and Lindholm, *supra* note 34, at 47 (Figure 16).

⁴³ See generally Phillips and Ibaid, *supra* note 32.

⁴⁴ See MTC Uniformity Project, *supra* note 1, especially MTC Uniformity Committee, Business Inputs Panel (July 25, 2023).

⁴⁵ P.L. 110-108, 121 Stat. 1024 (2007) (47 U.S.C. section 151, edits, notes.).

tangible property (and some services) consumed in the manufacturing process, and for machinery used in assembling or manufacturing tangible personal property.

Also, states varied in how they defined the acceptable uses of manufacturing business inputs that qualified for the exemption. State approaches ran the gamut from exemptions for business inputs used exclusively in the production phase of manufacturing, to broader use exemptions encompassing administration, warehousing, production, distribution, and shipping.⁴⁶ Virtually none of the states determined that the exemptions were valid *only* if the next stage of the transaction were subject to sales tax, since this position is typically impractical in a retail sales tax structure (compared with a VAT).⁴⁷

State sales tax exemptions for digital business inputs are still in the nascent stage, limited to a minority of the states that tax digital products. The statutory approaches in these states, however, show some signs of experimentation similar to the early stages of state anti-pyramiding efforts in the manufacturing sector.

On one end of the spectrum, Iowa is the only state that offers an expansive exemption for digital business inputs that broadly defines both the categories of exempt inputs and the type of exempt output (use).⁴⁸ Iowa provides a business input exemption that encompasses specified digital products, pre-written computer software, SaaS, custom software, information services, and any services relating to installing, maintaining, servicing, operating, or upgrading the above categories.⁴⁹ Significantly, Iowa's digital-business input exemption is also broadly applied to cover

any digital products or services furnished to a "commercial enterprise" for use exclusively by the enterprise.⁵⁰

On the other end of the spectrum, Washington provides a limited digital-business input exemption. Washington has enacted one of the most comprehensive and detailed statutes for the sales taxation of digital commerce.⁵¹ The state taxes three digital product categories: digital goods, digital automated services, and SaaS.⁵² Unfortunately, the state allows an exemption for business purchases in only one of the three categories — digital goods.⁵³ And this category consists almost entirely of B2C purchases of video, audio, or books streamed by residential households.⁵⁴ The inadequacy of this business exemption is clear from state revenue estimates that indicate that this exemption costs Washington about \$1.4 million over a two-year period, compared with the revenue generated by the absence of business input exemptions for the broader category of digital automated services (about \$182 million over a two-year period).⁵⁵

The remaining minority of states with digital-business input exemptions offer a range of different types of exemptions, often limited in scope either by the categories of business inputs included or the type of exempt uses covered. For instance, several states have enacted digital-business input exemptions limited to a single category of business inputs. New Jersey has enacted a sales tax exemption for "prewritten software delivered electronically . . . in the

⁴⁶ Georgia and Oklahoma both have broad manufacturing input exemptions that cover the entire integrated plant. Frieden, Nicely, and Nair, *supra* note 29, at 9.

⁴⁷ See discussion in *supra* note 24. The practical difficulty of exempting only business inputs that result in tax pyramiding is reflected in the sales tax experts' recommendations for exempting all business inputs in an optimal retail sales tax. See *supra* note 33.

⁴⁸ See Iowa Code section 423.3. For more information, see Iowa DOR bulletin on "Taxation of Specified Digital Products, Software, and Related Services."

⁴⁹ *Id.*

⁵⁰ "Commercial enterprise" is broadly defined to include (1) businesses and manufacturers operating for profit; (2) insurance companies (for-profit and nonprofit); (3) financial institutions (for-profit and nonprofit); (4) professions and occupations; and (5) public utilities. See Iowa Code section 423.3(104)(b)(1); S.F. 2367 (Laws 2022); Iowa DOR, *supra* note 48.

⁵¹ Washington DOR, "Digital Products Including Digital Goods."

⁵² *Id.*

⁵³ *Id.* Wash. Rev. Code section 82.08.020. See also Wash. Rev. Code section 82.12.020 (use tax); Washington DOR, "Digital Products and Remote Access Software Exemption Certificate" (rev. Oct. 11, 2021).

⁵⁴ Wash. Rev. Code section 82.04.257.

⁵⁵ MTC Uniformity Project, *supra* notes 1 and 44, at Business Inputs Panel by Gilbert Brewer, senior assistant director for tax policy at the Washington DOR.

conduct of the purchaser's business, trade or occupation."⁵⁶ Similarly, Maryland grants a sales tax exemption for "computer software or software as a service purchased or licensed solely for commercial purposes in an enterprise computer system."⁵⁷

Other states allow digital-business input exemptions that more closely resemble digital versions of manufacturing exemptions for ingredients and component parts of manufactured products. Connecticut offers an exemption for digital goods that "are subsequently sold, licensed, leased, broadcast, transmitted, or distributed, in whole or in part, as an integral, inseparable component part of a digital good or service."⁵⁸ Maryland has enacted an exemption for "tangible personal property, a digital code, or digital product if the buyer intends to . . . use or incorporate the tangible personal property, digital code, or digital product in a production activity as a material or part of other tangible personal property or another digital product to be produced for sale."⁵⁹

Wisconsin takes a different approach designed to avoid discrimination between digital products and tangible personal property. Wisconsin provides a sales tax exemption for any category of digital products "if the sales of and the storage, use or other consumption of such goods sold in tangible form is exempt from, or not subject to, taxation under this subchapter."⁶⁰ The Wisconsin exemption is not focused solely on digital business

inputs, but also on avoidance of any "discrimination" against B2B or B2C digital products that would likely violate the ITFA, discussed above. The Wisconsin Department of Revenue publication on digital goods provides several examples of how the exemption could apply to digital business inputs used in manufacturing or farming in circumstances in which the purchase of equivalent tangible personal property inputs used exclusively and directly in manufacturing or farming are exempt.⁶¹

Practical Considerations: Anti-Pyramiding vs. Revenue Generation

A third lesson from sales tax history relates to the competing pulls between optimal sales tax design and sales tax revenue generation. It is always easier to enact a business input exemption before the B2B purchase category is included in the sales tax base. Unfortunately, once a state starts taxing a business input, the revenue loss considerations take on a heightened importance with any post-enactment exemption scored as a revenue loss.

The trade-off between optimal tax design and maximum revenue generation has always existed, but it was less a factor in the first few decades when states predominately imposed their sales taxes on tangible products, and business input exemptions for manufacturing and resale were adopted by states. At the time, sales tax bases were narrower and sales tax rates much lower. The focus was primarily on how to expand the sales tax within the context of a single-stage design, and not on the potential lost revenue from a sales tax designed to tax household, and not business, consumption. Initially, there was also a greater appreciation of the design flaws of turnover taxes that maximized revenue but resulted in significant unfairness and

⁵⁶ N.J. Rev. Stat. section 54:32B-8.56. See also New Jersey Division of Taxation, "Taxability of Software," TB-51(R) (July 2011).

⁵⁷ See Md. Code Tax-Gen. Article section 11-101(c-4)(c)(vi); guidance provided by the Comptroller of Maryland, "Business Tax Tip #29." North Carolina also has an exemption for computer software "purchased to run on an enterprise server operating system." See N.C. Gen. Stat. 105-164.13(43a); guidance provided by the North Carolina DOR, "Important Notice, Computer Software."

⁵⁸ See Conn. Gen. Stat. section 12-410(e). Connecticut also takes an approach to partially exempting digital business inputs by imposing a reduced sales tax rate on those purchases. In Connecticut, there is a reduced sales tax rate of 1 percent (rather than the standard 6.35 percent rate) for business purchases of computer and data processing services. Conn. Gen. Stat. section 12-407(a)(13). See also Conn. Special Notice 2019(8), "Sales and Use Taxes on Digital Goods and Canned or Prewritten Software." This reduced rate applies only to electronically accessed or transferred canned or pre-written software (that is, software sold on tangible media, such as a CD, is excluded).

⁵⁹ See Md. Code Tax-Gen. section 11-101(h).

⁶⁰ Wis. Stat. section 77.54(50). The full exemption language is: "The sales price from the sale of and the storage, use or the consumption of specified digital goods or additional digital goods if the sales of and the storage, use or other consumption of such goods sold in a tangible form is exempt from, or not subject to, taxation under this subchapter."

⁶¹ Wisconsin DOR, "Digital Goods: How Do Wisconsin Sales and Use Taxes Apply to Sales and Purchases of Digital Goods?" Publication 240 (11/21), section 13. For instance, the purchase by a business of digital artwork consumed in the process of manufacturing is exempt because the purchase of artwork in tangible form for the same purpose is exempt. Similarly, the purchase by a business of a digital repair manual for use in a farming business is exempt because the purchase of a repair manual in tangible form for the same purpose is exempt. *Id.*, section 13 (2) and (4). Wisconsin's DOR, however, has aggressively sought to impose its tax on certain digital products, e.g., SaaS, using its telecommunications provisions. See Streamlined Sales and Use Tax Agreement's Compliance Review and Interpretation Committee, interpretation 2021-1 (June 10, 2021) (adopted by the SSUTA Governing Board).

discrimination between different types of commerce, depending on issues such as the number of taxable stages and the bias for vertically integrated businesses.

The erosion of the anti-pyramiding principle outside the manufacturing sector (and related sale-for-resale exemptions for inventory) led to widespread inclusion of B2B purchases in the sales tax base in the other economic sectors. This created a self-reinforcing cycle, with significant sales tax revenue generated from business inputs, making it increasingly problematic (and costly) to choose an optimal single-stage sales tax over a multistage turnover tax.

The difficulty of adopting business input exemptions after B2B purchases are included in the tax base is readily apparent in the policy discussions about the sales taxation of digital products. For instance, Texas imposes sales tax on business purchases of digital software and data processing. During an MTC special session on digital-business input exemptions in July 2023, Shannon Brandt, a tax policy counsel at the Texas Comptroller of Public Accounts, provided the agency's estimate for the 2023 sales tax revenue from business purchases of digital software (\$1.37 billion) and data processing (\$392 million).⁶² Brandt commented: "It's hard to take that out of your tax base once it's there. This would be hard to replace."⁶³

Similarly, Gilbert Brewer, senior assistant director for tax policy at the Washington DOR, commented at the same MTC session: "There is an opportunity window and it's shrinking rapidly when it comes to digital products. So if people

want to consider business input exemptions — sooner is better. Once the state starts getting that money, it gets that much harder to get rid of it."⁶⁴

Despite the revenue trade-off considerations, there is some cause for cautious optimism in state sales tax design as applied to digital commerce. More than in previous decades, the importance of avoiding sales tax pyramiding is not just an academic issue, but is front and center in discussions with states considering a broadening of their digital sales tax bases. And unlike the retail, wholesale, and large segments of the service industry, most states still have a limited to modest sales tax base for digital products. Consequently, there is still ample opportunity to exempt digital business inputs with little or no tax revenue loss.

In 2023 the MTC conducted a survey of state taxation of digital products. The MTC divided the states into five categories of sales tax base breadth: narrow, narrow to middle, middle, middle to broad, and broad. The MTC determined that about one-third of the states have a narrow digital sales tax base and another one-third have a narrow-to-middle or middle sales tax base. By comparison, only one-third of the states were found to have a middle-to-broad or broad sales tax base.⁶⁵

A 2022 COST study found similar outcomes for the five major digital sales tax base categories that have significant B2B purchases. The COST study determined that about one-quarter of the states do not tax any type of digital software; about half do not tax SaaS; about three-fifths do not tax digital information services; about two-thirds do not tax custom software; and about four-fifths do not tax data processing.⁶⁶

⁶²MTC Business Inputs Panel, *supra* note 44, at presentation by Brandt. See also MTC Uniformity Committee, "B2B and Digital Products (in Texas)," at 10, 11 (July 25, 2023). The Texas comptroller has recently gone further with its tax on data processing to state that it also includes the "commissions" marketplace facilitators receive from their marketplace sellers, which is in addition to the requirement that the facilitators collect the state's sales/use tax on their marketplace sellers' taxable sales. Joe Crosby et al., "The Texas Rope-a-Dope Tax on Marketplace Commissions," *Tax Notes State*, Oct. 30, 2023, p. 377-380 (noting that legislation introduced in 2023 (H.B. 5070 — not enacted) to not tax marketplace facilitator commissions was scored by the comptroller to reduce revenue to the state by \$140 million over five years).

⁶³MTC Business Inputs Panel, *supra* note 44, at presentation by Brandt.

⁶⁴*Id.*, at presentation by Brewer.

⁶⁵MTC, Sales Tax on Digital Products Project Materials, spreadsheet on Digital Products State Research. The MTC survey determined that the narrow digital sales tax base states were Arkansas, California, Colorado, Florida, Georgia, Idaho, Illinois, Kansas, Michigan, Missouri, Nevada, North Dakota, Oklahoma, South Carolina, and Virginia; the narrow-to-middle base states were Alabama, Indiana, Louisiana, Maine, Massachusetts, Minnesota, Nebraska, New Jersey, North Carolina, and Vermont; the middle base states were Iowa, Kentucky, New York, Rhode Island, West Virginia, Wisconsin, and Wyoming; the middle-to-broad base states were Connecticut, Mississippi, Ohio, Pennsylvania, Tennessee, and Utah; and the broad base states were Arizona, the District of Columbia, Hawaii, Maryland, New Mexico, South Dakota, Texas, and Washington.

⁶⁶Frieden, Nicely, and Nair, *supra* note 38, "Down the Rabbit Hole: Sales Taxation of Digital Business Inputs," at 269-275.

California is a good example of a state that has not yet expanded its sales tax base to include digital products (unless sold in tangible form such as a compact disc or similar media). California is one of 11 states that do not tax any of COST's digital product categories.⁶⁷ Consequently, if California's Legislature decides to expand the state's sales tax base to include some or all digital products, the state can exempt digital business inputs without losing any of its current tax revenues.

Part 6: How Should States Approach Exempting Digital Business Inputs?

How should a state that wants to adhere to the anti-pyramiding principle, at least for the digital sector, design sales tax exemptions for digital business inputs? There are a variety of approaches to exempting digital business inputs, and the one chosen by a state will likely be shaped by the current breadth and future expansion of the state's sales tax base inclusion of B2C purchases of digital products. While this article focuses on digital products, the same approach can (and should) be used with any state expanding its tax base to include services.

Broad Digital-Business Input Exemptions

To begin with, if a state wants to enact a significant expansion of its sales tax base on digital products, it should follow the Iowa precedent and adopt broad B2B exemptions that match the B2C sales tax base inclusion. In 2018 Iowa's legislature added digital software (including SaaS), digital information, and specified digital products to the sales tax base (effective for 2019). At the same time, Iowa enacted its broad statutory digital-business input exemption for digital products purchased by businesses for commercial purposes, before any such revenue was relied upon as part of the state's tax base.⁶⁸

The Iowa digital-business input exemption is comprehensive both in terms of the categories of business input exemptions covered (virtually all

digital products taxable in the state) and the allowable uses of the business inputs (all "commercial enterprise" activity). The broad-use provision in Iowa is justifiable given the unique characteristics of digital commerce. Unlike manufacturing-business input exemptions that are generally limited to one sector, digital-business input exemptions apply to most B2B transactions across almost all business sectors. Computer software, data mining, artificial intelligence, data processing, and digital content are not used by just digital industries, but also most other industries, including service providers, retailers, wholesalers, and manufacturers. No corner of the modern economic system is untouched by digital commerce. Accordingly, the most effective digital inputs exemption is one that applies to all commercial activity, and not just to a specific business sector. Clearly, from an anti-pyramiding perspective, a broader business input exemption model is preferable and achievable.⁶⁹

The Iowa digital-business input exemption is not only all-encompassing, but relatively easy to administer. Iowa uses the same purchaser exemption form for digital business inputs that it does for other key sales tax exemptions. On the multipurpose form, businesses are asked to check one box if the "purchaser is doing business as a commercial enterprise." A second box is available to check among the list of allowable input exemptions for "qualifying computer software, specified digital products and digital services." That's it — the checking of two boxes is all it takes to claim the exemption. Of course, as with other exemptions, the digital-business input exemption is rightly subject to audit.⁷⁰

Narrow Digital-Business Input Exemptions

In many other states, the broad expansion of the digital sales tax base may not be necessary or immediately politically feasible (for example, if

⁶⁷ *Id.*

⁶⁸ 2018 Iowa Acts, Senate File 2417, section 188. See Iowa DOR, ARC 4679. From 1985 to the end of 2023, Iowa also had a robust exemption for computers and computer peripherals for businesses (excluding professions and occupations); however, in 2022, Iowa enacted S.F. 2367, which, except for manufacturers, ends that exemption.

⁶⁹ A broad exemption for business inputs does not align precisely with the portion of business inputs that results in tax pyramiding. However, any gap between the two is minimized by synchronizing the exemption for B2B purchases with the tax base inclusion of the correlating B2C digital products.

⁷⁰ The Iowa statute deals with the problem of overlapping business and personal use of a digital product by requiring that noncommercial use must not be more than de minimis. Again, this is a straightforward provision, subject to DOR audits and enforcement.

the sales tax base already includes a medium or broad spectrum of digital products). In that case, if a state chooses to incrementally add one or many digital products to its sales tax base, a similarly narrow digital-business input exemption corresponding to the digital base expansion suffices to avoid tax pyramiding.

Several states discussed above — New Jersey for software delivered electronically⁷¹ and Maryland for SaaS⁷² — took this approach and enacted limited-scope business input exemptions. Both states adopted the B2B exemptions simultaneously with the expansion of the digital sales tax base to the same B2C category. The incremental expansion of a state's digital sales tax base is common, but as evidenced by the COST study on digital products, it is typically not accompanied by corresponding B2B exemptions. In the future, states should view an incremental expansion of a state's digital sales tax base as a prime opportunity to match B2B exemptions with B2C tax base inclusion.

Extending the Manufacturing Sector Approach To Digital Production

Virtually all states allow business input exemptions for manufacturing, although significant variation exists in the scope of anti-pyramiding provisions. Conversely, few states grant exemptions for the tangible and digital business inputs used in digital production. Both

Connecticut⁷³ and Maryland⁷⁴ provide models of states that enacted quasi-manufacturing exemptions for digital production, doing so at the same time they broadened their sales tax bases to include the related digital products.

All states with manufacturing exemptions limited to the production of tangible property should consider expanding exemptions or enacting new ones that cover the production of digital products. This could encompass exemptions for sale for resale, ingredients and component parts, materials consumed in the production process, and machinery used for digital production. Extending the business input exemption approach used in manufacturing to digital production not only is good tax policy, but also helps mitigate the risk of challenges to a state's law for violating the anti-discrimination provisions of the ITFA.

Approaches to Digital Business Inputs Already In the Sales Tax Base

While it is more difficult to exempt digital B2B purchases that are already included in a state's sales tax base, particularly because of the negative revenue impact, states should not give up on reducing sales tax pyramiding that exists in the digital sales tax base. It is abundantly clear that a fair and efficient sales tax design incorporates business input exemptions to avoid sales tax pyramiding. Given the revenue trade-off, however, any initiative to eliminate B2B purchases currently in the sales tax base is more likely as part of a broader state tax reform initiative whereby some taxes are increased and some decreased so as to not drain revenue.

⁷¹New Jersey expanded its sales tax to software transmitted electronically in 2006 (N.J. Stat. Ann. section 54:32B-2(g)), and at the same time provided an exemption for such software used directly and exclusively in the conduct of the purchaser's business, trade, or occupation (N.J. Stat. Ann. section 54:32B-8.56). See also TB-51(R), issued July 2011.

⁷²Maryland started taxing digital products in March 2021 (H.B. 791) with corrective legislation passed in June 2021 (S.B. 723), and the state provides a limited exemption for SaaS used for commercial purposes in an enterprise computer system. See Business Tax Tip #29, *supra* note 57.

⁷³Connecticut imposes a 1 percent tax rate, instead of 6.35 percent, on canned or pre-written software used for business. Also, Connecticut provides a fairly broad resale provision for digital goods sold, licensed, leased, broadcast, transmitted, or distributed, in whole or in part, as an integral inseparable component part of a digital good or specified service. See Connecticut Department of Revenue Services, Special Notice 2019(8) (Sept. 2019).

⁷⁴In addition to Maryland's enterprise computer system exemption, *supra* note 72, the state excludes as a taxable retail sale (or end user) a person (1) intending to resell the product; (2) using or incorporating the product as part of another product produced for sale; or (3) receiving a digital code or digital product for further commercial broadcast, rebroadcast, transmission, retransmission, licensing, relicensing, distribution, redistribution, or exhibition of the digital product. Md. Code Tax-Gen. section 11-101.

Conclusion

The silver lining from state sales tax history is the historical precedent for state adherence to a single-stage retail sales tax model incorporating the anti-pyramiding principle. Almost all states have extensive experience with the adoption of business input exemptions to avoid sales tax pyramiding in the manufacturing sector, with many able to trace back to the roots of state retail sales taxes 90 years ago. Unfortunately, all states have since deviated significantly from the single-stage retail sales tax, lapsing into more of a multistage turnover tax for the retail, service, and now emerging digital sectors.

State sales tax systems likely will never rid themselves completely of sales tax pyramiding, given the significant revenue generation from taxing business inputs. However, if states return to the single-stage sales tax model for digital commerce, there remains an opportunity to make things somewhat better or at least not worse.

There are also economic and political benefits associated with adopting a more fair and efficient sales tax design for digital commerce. From an economic perspective, states are clearly desirous of attracting businesses that produce or are large consumers of digital products — so differentiation based on avoiding tax pyramiding helps with this objective. The elimination of digital business inputs from the sales tax base could provide a state with a competitive tax advantage over similarly situated states that tax multiple levels of digital commerce.⁷⁵ It mitigates the bias for integrated businesses, the inequal burden on different types of business (depending on the number of steps in the supply chain), the disincentive for capital investment, and the unfavorable treatment of exports.

From a political perspective, states may need business support or at least neutralized business opposition to expand the digital sales tax base to B2C purchases. Fifteen years ago, a state like Washington could enact sweeping legislation imposing the sales tax on most digital products purchased by both households and businesses. But that outcome is much less likely in the future, with both states and businesses focused on the impact of expanding the digital sales tax base on business inputs. States have an understandable interest in taxing digital products, particularly those that are substitutes for tangible products or services already included in the sales tax base; however, businesses also have a valid self-interest in avoiding sales tax pyramiding by insisting that any sales tax base expansion is limited to B2C purchases and exempts business inputs.⁷⁶

Finally, larger state tax policy issues are at stake here. The U.S. states were once global leaders in enacting single-stage retail sales taxes to minimize or eliminate tax pyramiding, at least in the manufacturing sector. Their ascendancy was eclipsed, however, as nearly every industrialized nation with a sales tax turned to the VAT, with its more efficient anti-pyramiding design. The U.S. states are now global laggards, with a sales tax base that broadly includes business inputs and is modeled more like the multistage turnover tax they once strove to eliminate. Reducing B2B taxation on digital products (and services) represents perhaps the last and best chance for state sales tax systems to reinvigorate the anti-pyramiding principle and return at least partially to their roots as a single-stage sales tax. ■

⁷⁵The potential competitive advantage a state could gain by minimizing or eliminating digital business inputs applies both to the removal of existing digital business inputs and the avoidance of future digital business inputs.

⁷⁶The closest parallel to this situation is the negative experience of states over the last five decades that attempted significant one-time expansions of their sales tax bases to include a wide range of services. Every single one of the 15 states trying to expand their sales tax bases to include services, beginning with Florida in 1987, has failed even with high-level support from governors. The legislative proposals generally failed because of business opposition based on a recognition that most of the base expansion would fall not on household purchases, but on business inputs, exacerbating the inefficiency of an already badly designed sales tax. See generally, Frieden and Lindholm, *supra* note 34, at 49-51. This history may repeat itself if states attempt to enact digital services taxes or other sales taxes solely on digital business inputs such as digital advertising or data mining. See Frieden and Lindholm, "State Digital Services Taxes: A Bad Idea Under Any Theory," *Tax Notes State*, Apr. 10, 2023, p. 89.