How Could We Improve the Federal Tax System?

VALUE-ADDED TAX (VAT)

What is a VAT?

Q. What is a VAT?

A. The value-added tax (VAT) is the world's most common form of consumption tax, in place in more than 160 countries, including every economically advanced nation except the United States.

"Value added" is the difference between business sales and purchase of goods and services from other businesses. It represents the sum of wages, other labor compensation (such as health insurance), interest payments, and the profits businesses earn.

For example, suppose a farmer grows wheat and sells it to a baker for $40. The baker turns the wheat into bread and sells it to consumers for $100. The baker's value added is $60—the difference between sales and purchases. Let's further assume that the farmer has no input costs so that his value added is $40. The sum of value added at each stage of production is equal to the retail sale price of the good, in this case, $100.

The VAT is popular because it raises significant revenue, is relatively easy to administer, and, unlike an income tax, does not impinge on household saving and business investment choices. In 2015, VAT revenues averaged 5.8 percent of gross domestic product in the Organisation for Economic Co-operation and Development, the third-largest revenue source after income and payroll taxes.

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Further Reading

Gale, William G. 2020. "Raising Revenue with a Progressive Value-Added Tax." In *Tackling the Tax Code: Efficient and Equitable Ways to Raise Revenue*, 43 – 88. Washington, DC: Brookings Hamilton Project.

Tax Analysts. 2011. *The VAT Reader: What a Federal Consumption Tax Would Mean for America.* Falls Church, VA: Tax Analysts.

Toder, Eric, and Joseph Rosenberg. 2010. "Effects of Imposing a Value-Added Tax to Replace Payroll Taxes or Corporate Taxes." Washington, DC: Urban-Brookings Tax Policy Center.

Toder, Eric, Jim Nunns, and Joseph Rosenberg. 2012. "Using a VAT to Reform the Income Tax." Washington, DC: Urban-Brookings Tax Policy Center.

How would a VAT be collected?

Q. How would a VAT be collected?

A. Most countries with a value-added tax employ the credit-invoice method. Under this method, businesses are taxed on their sales at each stage of production but obtain credits for the taxes they paid on inputs.

CREDIT-INVOICE METHOD

Most countries with a value-added tax (VAT) employ the credit-invoice method. All sales by businesses are taxable, but sellers pass invoices on to the VAT-registered business taxpayers who purchase the sellers' goods and services. These purchasers, in turn, claim a credit for taxes paid but then pay VAT on the full value of their sales. The result is that there are no net taxes on sales between registered VAT businesses, while the full value of the final sale to the consumer bears tax (table 1).

TABLE 1

Prices with Different Types of 10 Percent Sales Taxes

Taxes paid in parentheses

Production stage	No tax	Retail sales tax	Credit-invoice VAT	Subtraction method VAT
Farmer	$300	$300 ($0)	$330 ($30)	$330 ($30)
Miller	$700	$700 ($0)	$770 ($70–$30)	$770 ($40)
Baker	$1,000	$1,100 ($100)	$1,100 ($100-$70)	$1,100 ($30)
Total tax	**$0**	**$100**	**$100**	**$100**

Source: Toder and Rosenberg, 2010.

SUBTRACTION METHOD

Under a subtraction-method VAT, sometimes called a business transfer tax, businesses pay tax on the difference between the value of their sales and the value of their purchases from other businesses. As with the credit-invoice VAT, the sum of all the amounts subject to tax, without exemptions, is equal to the value of final sales. Japan uses a subtraction-method VAT, but it contains all the invoice requirements and rules of the

How would a VAT be collected?

credit-invoice method, so in practice it is not that different from the VATs used in other countries.

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Further Reading

Tax Analysts. 2011. *The VAT Reader: What a Federal Consumption Tax Would Mean for America.* Falls Church, VA: Tax Analysts.

Toder, Eric, and Joseph Rosenberg. 2010. "Effects of Imposing a Value-Added Tax to Replace Payroll Taxes or Corporate Taxes." Washington, DC: Urban-Brookings Tax Policy Center.

Toder, Eric, Jim Nunns, and Joseph Rosenberg. 2012. "Using a VAT to Reform the Income Tax." Washington, DC: Urban-Brookings Tax Policy Center.

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What would and would not be taxed under a VAT?

Q. What would and would not be taxed under a VAT?

A. Typically, a value-added tax covers all or most forms of consumption.

In principle, the tax base of a value-added tax (VAT) is all consumption. Most VAT systems, however, exclude certain items from taxation. Some items (e.g., food and prescription drugs) are excluded to reduce the impact of the tax on low-income households. Others are excluded because defining their "value added" is difficult (e.g., financial services).

BROAD VERSUS NARROW BASES

Eric Toder and Joseph Rosenberg (2010, 12) provide examples of broad- and narrow- based VATs. The broad-based VAT they examine includes "all domestic consumption, except for education, government-financed health care (Medicare and Medicaid), services of charitable organizations, and services performed by subnational governments," capturing about 80 percent of consumption. Their narrow-based VAT excludes (in addition to the exemptions in the broad-based VAT) "housing consumption, food consumed at home, and private medical expenses (out-of-pocket expenses and insurance premiums)," capturing about 50 percent of consumption.

REVENUE RATIOS

A revenue ratio is a formal measure of how broad a tax base is. For a VAT, the revenue ratio is calculated by dividing VAT revenue by the product of the standard VAT rate and all consumption. If the standard tax rate applied to all consumption and to nothing else, and if there were no evasion, the ratio would be one. Goods that are exempt, preferentially taxed, or zero rated (the inputs are eligible for credits though the goods are not taxed upon sale) reduce the revenue ratio, as does tax evasion.

The unweighted average VAT revenue ratio was 0.55 across all OECD countries in 2014, suggesting significant erosion in VAT revenues. The ratio ranged from 0.31 (Mexico) to 1.13 (Luxembourg). The combination of Luxembourg's status as a center of financial services and e-commerce and the current tax treatment of those services may explain why its VAT revenue ratio is greater than 1.00.

The older VATs, mainly in European Union countries, have narrow tax bases, with many goods or services receiving preferential treatment. Newer VATs, such as in New Zealand and Japan, tend to apply a lower standard rate to a broader base of goods and services.

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What would and would not be taxed under a VAT?

Further Reading

Organisation for Economic Co-operation and Development. 2014. "Measuring Performance of VAT." In *Consumption Tax Trends 2014: VAT/GST and Excise Rates, Trends and Policy Issues*, 101–18. Paris: OECD Publishing.

Tax Analysts. 2011. *The VAT Reader: What a Federal Consumption Tax Would Mean for America*. Falls Church, VA: Tax Analysts.

Toder, Eric, and Joseph Rosenberg. 2010. "Effects of Imposing a Value-Added Tax to Replace Payroll Taxes or Corporate Taxes." Washington, DC: Urban-Brookings Tax Policy Center.

What would the tax rate be under a VAT?

Q. What would the tax rate be under a VAT?

A. The rate of a value-added tax depends on how much revenue it is intended to raise and how broad the VAT base is. The lower the revenue target and the broader the base, the lower the tax rate will be.

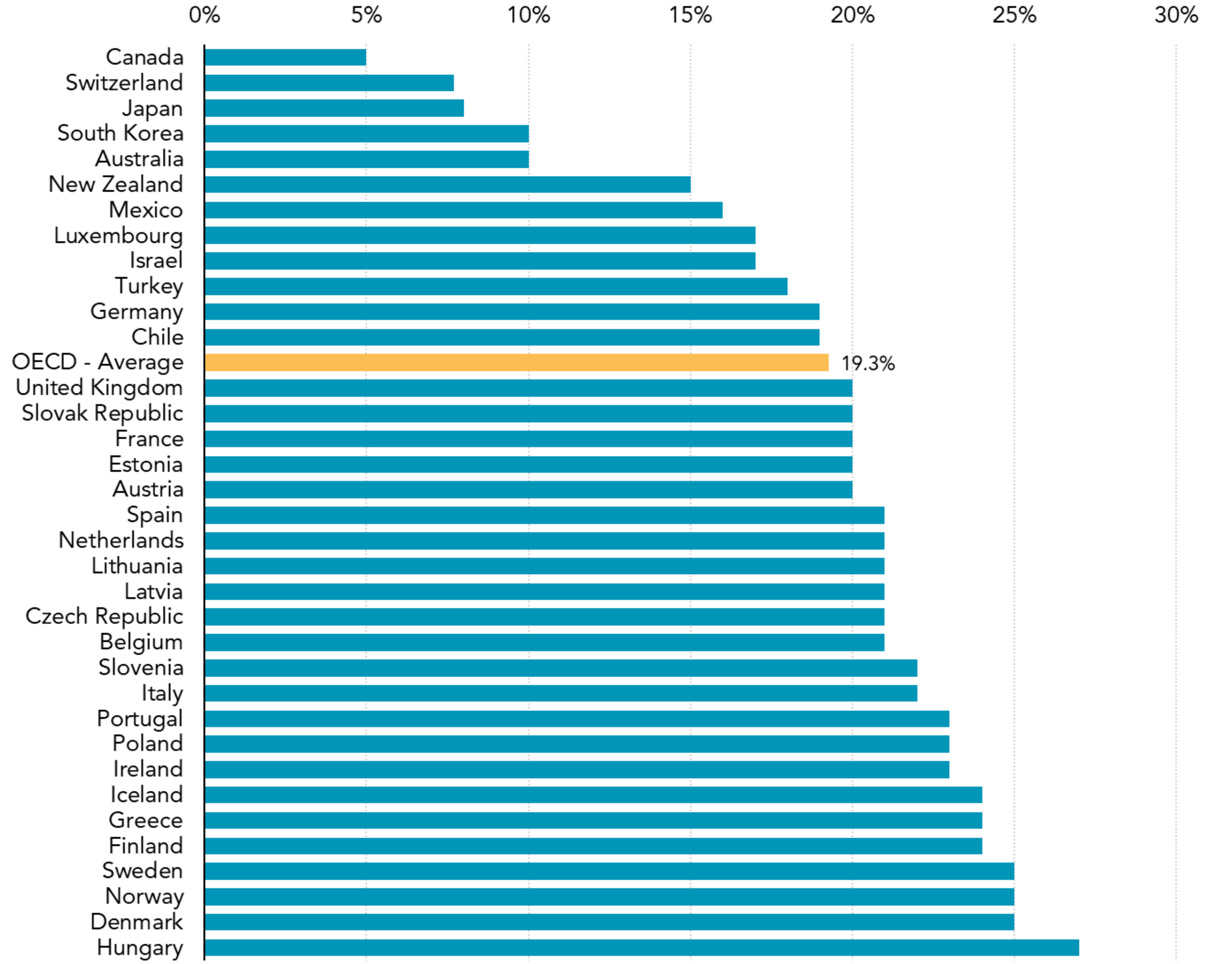
Value-added taxes (VATs) typically have a standard rate that applies to most goods and services. In 2019, the standard rate in the Organisation for Economic Co-operation and Development averaged about 19 percent (unweighted) but varied widely—27 percent, its highest, in Hungary, 20 percent in the United Kingdom, 15 percent in New Zealand, 10 percent in Australia, 8 percent in Japan, and 5 percent, its lowest, in Canada (figure 1).

How Could We Improve the Federal Tax System?

What would the tax rate be under a VAT?

Value-Added Tax (VAT) Rates

Organisation for Economic Co-operation and Development (OECD) countries, 2019



Source: OECD, Tax Database, Taxes on consumption, VAT/GST: standard and any reduced rates: 2019 (retrieved 02.18.2020).
Notes: Tax rates reported here are standard country-wide rates as of January 1, 2019. Countries may also have reduced or increased rates for certain goods or regions; notes on specific countries can be found here: https://www.oecd.org/tax/tax-policy/tax-database/. The "OECD - Average" is an unweighted average for all countries included here.

How Could We Improve the Federal Tax System?

What would the tax rate be under a VAT?

VATs typically provide preferential treatment for certain goods. Some goods are zero rated (the inputs are eligible for credits though the goods are not taxed upon sale), and some are exempt. Some are taxed at preferential rates. The VATs in European Union countries have narrow tax bases, with many goods or services receiving preferential treatment. Newer VATs, such as in New Zealand and Japan, tend to apply a lower standard rate to a broader base of goods and services. The broader the base, the lower the tax rate will be for a given revenue target.

Toder and Rosenberg (2010) estimated that the United States could have raised gross revenue of $356 billion in 2012 through a 5 percent VAT applied to a broad base that included all consumption except spending on education, Medicaid and Medicare, charitable organizations, and state and local government—capturing about 80 percent of consumption. That revenue would equal about 2.3 percent of GDP. If the same 5 percent rate applied to a narrow base that also excluded housing consumption, food consumed at home, and private medical expenses (out-of-pocket expenses and insurance premiums) —capturing about 50 percent of consumption—revenues would have been $221 billion, equal to about 1.4 percent of GDP.

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Data Sources

Organisation for Economic Co-operation and Development. 2019. *Taxes on Consumption*. "VAT/GST: Standard and Any Reduced Rates (2019)."

Further Reading

Gale, William G. 2020. "Raising Revenue with a Progressive Value-Added Tax." In *Tackling the Tax Code: Efficient and Equitable Ways to Raise Revenue*, 43 – 88. Washington, DC: Brookings Hamilton Project.

Organisation for Economic Co-operation and Development, 2016. *Consumption Tax Trends 2016*. Paris, France: Organisation for Economic Co-operation and Development.

Tax Analysts. 2011. *The VAT Reader: What a Federal Consumption Tax Would Mean for America*. Falls Church, VA: Tax Analysts.

Toder, Eric, and Joseph Rosenberg. 2010. "Effects of Imposing a Value-Added Tax to Replace Payroll Taxes or Corporate Taxes." Washington, DC: Urban-Brookings Tax Policy Center.

Toder, Eric, Jim Nunns, and Joseph Rosenberg. 2012. "Implications of Different Bases for a VAT." Washington, DC: Urban-Brookings Tax Policy Center.

What is the difference between zero rating and exempting a good in the VAT?

Q. What is the difference between zero rating and exempting a good in the VAT?

A. For a "zero-rated good," the government doesn't tax its sale but allows credits for the value-added tax paid on inputs. If a good or business is "exempt," the government doesn't tax the sale of the good, but producers cannot claim a credit for the VAT they pay on inputs to produce it.

ZERO RATING

Almost all countries apply preferential rates to some goods and services, making them either "zero rated" or "exempt." For a "zero-rated good," the government doesn't tax its retail sale but allows credits for the value-added tax (VAT) paid on inputs. This reduces the price of a good. Governments commonly lower the tax burden on low-income households by zero rating essential goods, such as food and utilities or prescription drugs.

EXEMPTING

If, by contrast, a good or business is "exempt," the government doesn't tax the sale of the good, but producers cannot claim a credit for the VAT they pay on inputs to produce it. Because exempting breaks the VAT's chain of credits on input purchases, it can sometimes raise prices and revenues. Hence, governments generally only use exemptions when value added is hard to define, such as with financial and insurance services.

IN PRACTICE

Of the 34 Organisation for Economic Co-operation and Development countries with a VAT in 2016, 18 "zero rated" certain goods and all but Chile and Japan had at least one reduced VAT rate.

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What is the difference between zero rating and exempting a good in the VAT?

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Further Reading

Gale, William G. 2020. "Raising Revenue with a Progressive Value-Added Tax." In *Tackling the Tax Code: Efficient and Equitable Ways to Raise Revenue*, 43 – 88. Washington, DC: Brookings Hamilton Project.

Tax Analysts. 2011. *The VAT Reader: What a Federal Consumption Tax Would Mean for America*. Falls Church, VA: Tax Analysts.

Toder, Eric, and Joseph Rosenberg. 2010. "Effects of Imposing a Value-Added Tax to Replace Payroll Taxes or Corporate Taxes." Washington, DC: Urban-Brookings Tax Policy Center.

Toder, Eric, Jim Nunns, and Joseph Rosenberg. 2012. "Implications of Different Bases for a VAT." Washington, DC: Urban-Brookings Tax Policy Center.

Who would bear the burden of a VAT?

Q. Who would bear the burden of a VAT?

A. A value-added tax (VAT) is a tax on consumption. Poorer households spend a larger proportion of their income. A VAT is therefore regressive if it is measured relative to current income and if it is introduced without other policy adjustments. A VAT is less regressive if measured relative to lifetime income.

Although a value-added tax (VAT) taxes goods and services at every stage of production and sale, the net economic burden is like that of a retail sales tax. Sales taxes create a wedge between the price paid by the final consumer and what the seller receives. Conceptually, the tax can either raise the total price (inclusive of the sales tax) paid by consumers or reduce the amount of business revenue available to compensate workers and investors. Theory and evidence suggest that the VAT is passed along to consumers via higher prices. Either way, the decline in real household income is the same regardless of whether prices rise (holding nominal incomes constant) or whether nominal incomes fall (holding the price level constant).

REGRESSIVITY

Because lower-income households spend a greater share of their income on consumption than higher-income households do, the burden of a VAT is regressive when measured as a share of current income: the tax burden as a share of income is highest for low-income households and falls sharply as household income rises. Because income saved today is generally spent in the future, the burden of a VAT is more proportional to income when measured as a share of income over a lifetime. Even by a lifetime income measure, however, the burden of the VAT as a share of income is lower for high-income households than for other households. A VAT (like any consumption tax) does not tax the returns (such as dividends and capital gains) from new capital investment, and income from capital makes up a larger portion of the total income of high-income households.

AVERAGE TAX BURDEN

Using a method more reflective of lifetime burdens, Eric Toder, Jim Nunns, and Joseph Rosenberg (2012) estimate that a 5 percent, broad-based VAT would be regressive at the bottom of the income distribution, roughly proportional in the middle, and then generally regressive at the top. The VAT would impose an average tax burden of 3.9 percent of after-tax income on households in the bottom quintile of the income distribution. (Each quintile contains 20 percent of the population ranked by income.) Yet, households in the top 1 percent of the income distribution would only have an average tax burden of 2.5 percent (table 1).

Who would bear the burden of a VAT?

TABLE 1

Distribution of a Fully Phased-In VAT at 2015 Income Levels

(percentage change in after-tax income)

Cash Income Percentile	VAT Options		
	Broad base	Narrow base	Broad base with rebate
Lowest quintile	-3.9	-3.8	-0.6
Second quintile	-3.6	-3.5	-1.8
Middle quintile	-3.6	-3.6	-2.9
Fourth quintile	-3.6	-3.6	-3.5
Top quintile	-2.9	-2.9	-3.7
All	-3.3	-3.3	-3.2
Addendum			
80–90	-3.4	-3.4	-3.8
90–95	-3.2	-3.2	-3.8
95–99	-2.8	-2.8	-3.6
Top 1 percent	-2.5	-2.5	-3.6
Top 0.1 percent	-2.5	-2.6	-3.7

Source: Urban-Brookings Tax Policy Center Microsimulation Model (version 0509-7).

DEMOGRANTS

Exempting, zero rating, or excluding certain essential consumption goods from the tax base (e.g., foodstuffs, medicine, health care) can reduce the regressivity of a VAT. Giving preferential treatment to particular goods, however, is an inefficient way to make the tax less regressive because high-income households consume more of the goods in question (though less as a share of income) than low-income households do. A better approach is to provide a limited cash payment—that is, a demogrant or a refundable tax credit. That way, everyone receives the same benefit, in dollars, which translates into a larger share of low-income households' income.

In the same study, Toder, Nunns, and Rosenberg simulate the effects of a 7.7 percent broad-based VAT with a refundable tax credit (the higher tax rate keeps the net revenues the same as the 5 percent, broad-based VAT with no tax credit). They find that the VAT in combination with the tax credit would impose an average tax burden of 0.6 percent on households in the bottom quintile of the income distribution. Households in the top 1 percent of the income distribution would face an average tax burden of 3.6 percent. Their results also show that the distribution of a narrow-based VAT that excludes spending on food, housing, and health care

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is much the same as the distribution of a broad-based tax (table 1).

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Further Reading

Benedek, Dora, Ruud A. de Mooji, and Philippe Wingender. 2015. "Estimating VAT Pass Through." Working Paper 1/214. Washington, DC: International Monetary Fund.

Tax Analysts. 2011. *The VAT Reader: What a Federal Consumption Tax Would Mean for America*. Falls Church, VA: Tax Analysts.

Toder, Eric, Jim Nunns, and Joseph Rosenberg. 2012. "Implications of Different Bases for a VAT." Washington, DC: Urban-Brookings Tax Policy Center.

Is the VAT a money machine?

Q. Is the VAT a money machine?

A. A common criticism of the value-added tax is that it is simply a "money machine" that will enlarge a federal government by supplying a steady source of revenue. The empirical evidence has largely shown that this has not been the case.

Critics provide various reasons a value-added tax (VAT) would enlarge government. First, they say that any increase in government revenues will lead to more spending. If we want to control government spending, they say, we should cut revenues and "starve the beast." Second, critics fear that because a VAT is a "hidden tax," buried in the price of a good, policymakers can raise the tax with minimal economic disruption and without people noticing.

VATs' accumulated track record, however, largely belies these concerns. For starters, VAT revenues and rates have not risen inexorably over time. In advanced countries, VATs were phased in during the 1960s and 1970s. But after that, as International Monetary Fund economist Michael Keen has shown, VAT revenues remained remarkably constant, hovering around 7 percent of gross domestic product (GDP) in the 1990s and 2000s (Keen 2013; Keen and Lockwood 2006). VAT revenue among high-income countries in 2015 was almost exactly the same share of GDP as in 1984.

Further, although revenues have risen significantly in European countries that have VATs, VATs don't seem to be the reason. A study of 16 Western European countries from 1965 to 2015 found that VAT revenue rose by 5.6 percent of GDP, but excise and other sales taxes' falling by 5.2 percent offset almost all of that change. Indeed policymakers in those countries often enacted a VAT with the explicit goal of replacing less efficient sales and other taxes. Total revenue in those countries rose substantially—by about 10 percent of GDP—so the 0.4 increase in revenue from VAT was a tiny fraction of the total tax increase. In addition, some evidence suggests that instead of a VAT fueling higher spending, the public's demand for higher spending fuels demand for a VAT (Lee, Kim, and Borcherding 2013).

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Further Reading

Keen, Michael. 2013. "The Anatomy of the VAT." *National Tax Journal* 66 (2): 423.

Keen, Michael, and Ben Lockwood. 2006. "Is the VAT a Money Machine?" *National Tax Journal* 54 (1): 157–73.

Lee, Dongwon, Dongil Kim, and Thomas E. Borcherding. 2013. "Tax Structure and Government Spending: Does the Value-Added Tax Increase the Size of Government?" *National Tax Journal* 66 (3): 541–70.

Sullivan, Martin A. 2012. "Was the VAT a Money Machine for Europe?" *Tax Analysts* (blog), April 9.

Tax Analysts. 2011. *The VAT Reader: What a Federal Consumption Tax Would Mean for America*. Falls Church, VA: Tax Analysts.

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VALUE-ADDED TAX (VAT)

How would small businesses be treated under a VAT?

Q. How would small businesses be treated under a VAT?

A. Most countries exempt small businesses from value-added tax, although many small businesses choose to voluntarily register for the VAT.

Most countries exempt small businesses from a value-added tax (VAT)—partly because small businesses are a powerful political constituency and partly because the administrative and compliance costs of taxing small businesses are high relative to the revenue raised.

The exemption is a mixed blessing, however. Many businesses prefer to buy their inputs from businesses in the VAT system so they can claim credits on the tax they pay. As a result, countries allow small businesses to register for the VAT even if they are not required to do so. For example, in Australia during the 2010–11 tax year, 37 percent of businesses had sales below the VAT threshold, yet 92 percent of all businesses registered for the VAT.

A higher exemption based on business sales saves on compliance costs but reduces revenue, with the revenue loss depending on the tax rate. A study by Treasury Department economists finds that if the United States had a 10 percent VAT, the optimal exemption based on sales would be about $200,000 and would cover about 43 million businesses (Brashares et al. 2014). That exemption would be higher than in most other countries, but the 10 percent rate would be lower than in most other countries. At a 20 percent rate, close to the average for Organisation for Economic Co-operation and Development countries, the optimal exemption would be $90,000, which is within the range of exemptions in other countries.

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Works Cited and Further Reading

Bain, Kathrin, Michael Walpole, Ann Hansford, and Chris Evans. 2015. "The Internal Costs of VAT Compliance: Evidence from Australia and the United Kingdom and Suggestions for Mitigation." *eJournal of Tax Research* 23 (1): 158–82.

Brashares, Edith, Matthew Knittel, Gerald Silverstein, and Alexander Yuskavage. 2014. "Calculating the Optimal Small Business Exemption Threshold for a US VAT." *National Tax Journal* 67 (2): 283–320.

Gale, William G., Hilary Gelfond, and Aaron Krupkin. 2016. "Entrepreneurship and Small Business under a Value-Added Tax." Washington, DC: Brookings Institution.

What is the Canadian experience with a VAT?

Q. What is the Canadian experience with a VAT?

A. Concerns about regressivity, transparency, coordination with state sales taxes, and money machines can be assuaged by observing the Canadian value-added tax experience.

In 1991, Canada implemented a 7 percent national value-added tax (VAT) to replace a tax on sales by manufacturers. The VAT was introduced by the Conservative party, which had concerns about industry competitiveness and the country's fiscal situation.

Canada addressed distributional concerns by applying a zero rate to certain necessities—including groceries, drugs, and rent—and adding a refundable credit to the income tax. Transfer payments had been indexed for inflation and were highly progressive, further insulating against regressivity.

The Canadian VAT is completely transparent: it is listed separately on receipts and invoices just like sales taxes in the United States.

The Canadian experience also shows that a federal VAT can successfully coexist with either a VAT or a retail sales tax levied by subnational governments.

And the VAT in Canada has not been anything like a "money machine." The standard VAT rate declined over time to 6 percent in 2006 and 5 percent in 2008. In both revenues and expenditures, the size of the Canadian federal government as a share of the economy has shrunk significantly since introduction of the VAT. General government tax revenue and spending in Canada has actually fallen as a share of the economy since 1991.

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Further Reading

Bird, Richard M., and Michael Smart. 2014. "VAT in a Federal System: Lessons from Canada." In *Public Budgeting and Finance* 34 (4): 38–60.

Sullivan, Martin A. 2011. "VAT Lessons from Canada." In *The VAT Reader*, 283–90. Falls Church, VA: Tax Analysts.

Tax Analysts. 2011. *The VAT Reader: What a Federal Consumption Tax Would Mean for America*. Falls Church, VA: Tax Analysts.

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What is the Canadian experience with a VAT?

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Why is the VAT administratively superior to a retail sales tax?

Q. Why is the VAT administratively superior to a retail sales tax?

A. Retail sales taxes suffer from several enforcement problems. Most notably, the government has no record of transactions with which to verify retailers' tax payments. In a value-added tax, the chain of crediting creates a natural audit trail, and the seller has more incentive to report the transaction and pay tax.

If the value-added tax (VAT) replicates the effect of a well-functioning sales tax, why not just enact a retail sales tax?

Retail sales taxes suffer from several enforcement problems. Most notably, there's no cross-reporting; the government has no record of the transaction and the retailer responsible for sending the check to the government for the tax it collects knows this. As a result, compliance rates can be low. Most countries have found that, as a practical matter, retail sales tax rates of 10 percent or higher aren't enforceable—buyers have greater incentive to avoid the tax and retailers have greater incentive to keep the revenues. Not coincidentally, all state sales tax rates are below 10 percent.

For any tax, cross-reporting is essential to compliance. In the income tax, evasion rates on wage income are low: firms withhold income and payroll taxes on workers' behalf and send the money to the government. (The exception is tips, which proves the point.) In the VAT, the chain of crediting creates a natural audit trail. In a transaction between two businesses, the seller knows the buyer is reporting the transaction to claim a credit, so the seller has more incentive to report the transaction and pay tax. There's no similar incentive under a retail sales tax.

Also with a sales tax, the retailer can't always tell whether the buyer is a consumer who should pay the tax or a business which should not—and has little incentive to find out. If the retailer doesn't impose a sales tax on consumer purchases, that's tax evasion. If the retailer does impose a tax on business purchases, the tax "cascades," building up over successive stages of production, which raises and distorts prices. By providing a credit for taxes paid, the VAT prevents cascading.

Last, when retailers evade sales taxes, revenues are lost entirely. With a VAT, revenue would only be lost at the "value-added" retail stage. All these differences help explain why numerous countries replaced their sales and turnover taxes with VATs.

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Further Reading

Gale, William G. 2020. "Raising Revenue with a Progressive Value-Added Tax." In *Tackling the Tax Code: Efficient and Equitable Ways to Raise Revenue*, 43 – 88. Washington, DC: Brookings Hamilton Project.

Pomeranz, Dina. 2015. "No Taxation without Information: Deterrence and Self-Enforcement in the Value Added Tax." *American Economic Review* 105 (8): 2539–69.

Tax Analysts. 2011. *The VAT Reader: What a Federal Consumption Tax Would Mean for America*. Falls Church, VA: Tax Analysts.

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VALUE-ADDED TAX (VAT)

What is the history of the VAT?

Q. What is the history of the VAT?

A. The value-added tax is a relatively new tax. It was designed by two people, independently, in the early 20th century. Many European countries enacted a VAT in the 1960s and 1970s. Other countries followed in the 1980s and thereafter.

The value-added tax (VAT) is a relatively new tax. It was designed by two people, independently, in the early 20th century. To Wilhelm Von Siemens, a German businessman, the VAT was a way to resolve the cascading problems that arose in implementing gross turnover taxes and sales taxes. To Thomas S. Adams, an American, the VAT was a better version of the corporate income tax.

In practice, governments have implemented the VAT largely as an improved sales tax. European countries, for example, have largely used the VAT to reduce or eliminate other sales taxes. The countries continue to maintain separate corporate income taxes.

Many European countries enacted a VAT in the 1960s and 1970s. Other countries followed in the 1980s and thereafter. Sijbren Cnossen, a leading VAT expert from Maastricht University in the Netherlands, called its spread "the most important event in the evolution of tax structure in the last half of the 20th century" (1998, 399).

US policymakers have found it tempting to consider the VAT, but no one seems to be able to muster the courage to call it by its real name. The "destination-based cash flow" tax that House Speaker Paul Ryan and Ways and Means Committee Chair Kevin Brady proposed in the 2016 Republican "blueprint" is just a VAT with a wage deduction. VATs are embedded in Ryan's "business consumption tax," libertarian Kentucky Senator Rand Paul's "Fair and Flat Tax," 2012 Republican presidential candidate Herman Cain's "9-9-9" proposal, and Republican Senator Ted Cruz's "Business Flat Tax." VATs have also been proposed (and renamed) in Senate Finance Committee Democrat Ben Cardin's "progressive consumption tax" and the Bipartisan Policy Center's 2010 Domenici-Rivlin commission report, which called it a "deficit reduction sales tax."

Although these leading policymakers proposed to use the resulting revenues differently, they all viewed the VAT favorably for three reasons: it raises lots of money, it creates few negative economic incentives, and it's administratively feasible.

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What is the history of the VAT?

Further Reading

Bipartisan Policy Center. 2012. "Domenici-Rivlin Debt Reduction Task Force Plan 2.0." Washington, DC: Bipartisan Policy Center.

Cnossen, Sijbren. 1998. "Global Trends and Issues in Value Added Taxation." *International Tax and Public Finance* 5 (3): 399–428.

———. 2011. "A VAT Primer for Lawyers, Economists, and Accountants." In *The VAT Reader*, 23–51. Falls Church, VA: Tax Analysts.

James, Kathryn. 2011. "Exploring the Origins and Global Rise of VAT." In *The VAT Reader*, 15–22. Falls Church, VA: Tax Analysts.

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How are different consumption taxes related?

Q. How are different consumption taxes related?

A. A retail sales tax, value-added tax, the flat tax, and the X-tax are closely related. These taxes are contrasted with wage taxes.

A retail sales tax is a flat-rate tax on all sales from businesses to households.

A value-added tax (VAT) is equivalent to a retail sales tax but it collects the tax in small pieces at each stage of production rather than entirely at the final sale.

The Hall-Rabushka flat tax is simply a two-part VAT, with all value added except wages taxed at the firm level and wages taxed at the individual level, after allowing for exemptions based on family size. Businesses and individuals face the same flat rate on all income.

The X-tax is simply a variant of the flat tax in which wages are taxed at graduated rates, and the business tax is set equal to the highest rate on wages.

A wage tax is quite different. It would tax wages directly, as would the flat tax or X-tax, but it would not contain the business component of such taxes.

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Further Reading

Aaron, Henry J., and William G. Gale. 1996. *Economic Effect of Fundamental Tax Reform*. Washington, DC: Brookings Institution Press

Bradford, David F. 1986. *Untangling the Income Tax*. Cambridge, MA: Harvard University Press.

———. 2003. "The X Tax in the World Economy." CEPS Working Paper 93. Princeton, NJ: Princeton University.

Domenici, Pete, and Alice Rivlin. 2010. "Restoring America's Future." Washington, DC: Bipartisan Policy Center.

Gale, William G. 2005. "Flat Tax." In *Encyclopedia of Taxation and Tax Policy*, 2nd ed., edited by Joseph J. Cordes, Robert D. Ebel, and Jane G. Gravelle, 149–51. Washington, DC: Urban Institute Press.

Graetz, Michael. 2008. *100 Million Unnecessary Returns: A Simple, Fair and Competitive Tax Plan for the United States.* New Haven, CT: Yale University Press.

———. 2013. "The 'Competitive Tax Plan' Updated for 2015." Presentation given at the National Tax Association, Tampa, FL, November 21.

How Could We Improve the Federal Tax System?

How are different consumption taxes related?

Hall, Robert E., and Alvin Rabushka. 1985. *The Flat Tax.* Stanford, CA: Hoover Institution Press.

National Commission on Fiscal Responsibility and Reform. 2010. "The Moment of Truth." Washington, DC: National Commission on Fiscal Responsibility and Reform.

President's Advisory Panel on Federal Tax Reform. 2005. *Simple, Fair, and Pro-Growth: Proposals to Fix America's Tax System*. Washington, DC: President's Advisory Council on Federal Tax Reform.

Tax Analysts. 2011. *The VAT Reader: What a Federal Consumption Tax Would Mean for America*. Falls Church, VA: Tax Analysts.

Toder, Eric, and Joseph Rosenberg. 2010. "Effects of Imposing a Value-Added Tax to Replace Payroll Taxes or Corporate Taxes." Washington, DC: Urban-Brookings Tax Policy Center.

Toder, Eric, Jim Nunns, and Joseph Rosenberg. 2012. *Using a VAT to Reform the Income Tax.* Washington, DC: Urban-Brookings Tax Policy Center

Viard, Alan D., and Robert Carroll. 2012. *Progressive Consumption Taxation: The X-Tax Revisited.* Washington, DC: AEI Press.
