

A Value-Added Tax for the United States: Part of the Solution

William G. Gale and Benjamin H. Harris¹
Brookings Institution and Tax Policy Center
July 2010

The U.S. faces a large medium-term federal budget deficit and an unsustainable long-term fiscal gap. Left unattended, these shortfalls will hobble and eventually cripple the economy. The only plausible way to close the gap is through a combination of spending cuts and/or tax increases. This paper discusses why a federal Value Added Tax (VAT) should be part of a constructive solution to the fiscal problem.

Under a VAT, businesses pay taxes on the difference between their total sales to other businesses and households and their purchases of inputs from other businesses. That difference represents the value-added by the firm to the product or service in question.² The sum of value-added at each stage of production is the retail sales price, so in theory the VAT simply replicates the tax patterns created by a retail sales tax and is therefore a tax on aggregate consumption. In practice, the key distinction is that VATs are collected at each stage of production, whereas retail sales taxes are collected only at point of final sale. As a result, the VAT is easier to enforce and is widely regarded as having a superior administrative structure to a retail sales tax.

Although it would be new to the United States, the VAT is in place in about 150 countries worldwide and in every OECD country other than the United States. Experience suggests that the VAT can raise substantial revenue, is administrable, and minimally harmful to economic growth. Additionally, the VAT has potential advantages worth highlighting: a properly-designed VAT might help the states deal with their own fiscal issues, and a pre-announced, phased-in VAT might be able to accelerate the pace of economic recovery.

Several concerns that have been raised about the VAT can be easily addressed. While the VAT is regressive relative to current income, the regressivity can be offset in several ways. While the VAT is not readily transparent in many countries, it would be easy to make the VAT completely transparent to businesses and households by reporting VAT payments on receipts just like sales taxes are reported today. While the VAT has

¹ Gale is the Arjay and Frances Fearing Miller Chair in Federal Economic Policy and co-director of the Urban-Brookings Tax Policy Center. Harris is a Senior Research Associate. Both authors are members of the Economic Studies Program at the Brookings Institution. For helpful comments on an earlier draft, we thank Henry Aaron, Alan Auerbach, Martin Baily, Tracy Gordon, Jane Gravelle, Donald Marron, Diane Lim Rogers, Isabel Sawhill, and Robertson Williams. We thank Ilana Fischer and David Logan for research assistance.

² The tax can be administered in different ways. For example, under the credit invoice method, firms receive tax credits for the taxes they have paid on their purchases from other firms. Alternatively, under the subtraction method, firms can fully deduct all of their payments to other firms. For discussion of these and other options, see Bickley (2006) and Cnossen (2009).

led to an increase in revenues and spending in some countries, higher revenues are precisely why the VAT is needed in the U.S., and efforts to limit spending should be part of an effort to enact a VAT. Making the VAT transparent should also reduce the extent to which a VAT would fuel an increase in government spending, a concern that is sometimes overstated by critics in the first place. While the VAT may lead to a one-time increase in prices, it is not the case empirically that VATs inevitably, or even usually, lead to continuing inflation.

None of this implies that the VAT would unilaterally solve the country's fiscal problems; nor would it be painless. Nevertheless, the VAT is a *relatively* attractive choice, given the need to close the fiscal gap and the other options for doing so.

The sections below address each of these issues. We also summarize the Canadian VAT experience, which shows how many of the concerns can be addressed in practice. The final section summarizes our specific recommendations regarding the VAT.

Revenue

In the current fiscal context, a key attraction of the VAT is its ability to generate significant amounts of revenue. Among non-U.S. OECD members in 2006, the VAT raised almost 7 percent of GDP in revenue, and accounted for almost 19 percent of revenue raised at all levels of government.

As with any tax, revenue from a VAT depends on the rate structure and the base. The standard VAT rate, the rate charged on most goods and services, has remained relatively steady in recent years in non-U.S. OECD countries. In 2007, it ranged from a low of 5 percent in Japan to a high of 25 percent in Denmark, Iceland, Norway, and Sweden. The average rate was 18 percent (OECD 2008).

The VAT "yield ratio" measures VAT revenues as a share of GDP divided by the standard VAT rate. A ratio of 0.3, for example, implies that a 10 percent VAT raises 3 percent of GDP in revenues.³ Note that the yield ratio does not include the net costs of policies intended to compensate low-income households for VAT payments, nor do they include the offsetting effects that the VAT may have on other revenue sources. The yield ratio simply measures how much revenue is actually gained from the VAT itself.

In 2006, in non-U.S. OECD countries, the yield ratio ranged from a low of 0.28 in Mexico to a high of 0.69 in New Zealand. Most countries fell within a range of 0.3 and 0.4 (OECD 2008). The yield ratio depends critically on the extent to which the VAT tax base is kept broad rather than eroded by preferential rates or exemptions on certain goods or services. In practice, most OECD countries apply preferential rates to some items. Of the 29 OECD countries with a VAT in 2007, 17 countries "zero rated" certain goods (meaning that VAT is not charged on the retail sale of the good, but credits are awarded

³ If the standard VAT rate applies to all items subject to VAT, the yield ratio provides an estimate of the share of GDP that is covered by the VAT.

on the VAT paid on the inputs) and 21 applied at least one non-zero reduced rate to a sub-sector of goods. Only Japan and the Slovak Republic have no preferential rates (OECD 2008).

Toder and Rosenberg (2010) estimate that the U.S. could raise gross revenue of \$355 billion in 2012 through a 5 percent VAT applied to a broad base that would include all consumption except for spending on education, Medicaid and Medicare, charitable organizations, and state and local government. This would represent about 2.3 percent of GDP and produce a yield ratio of 0.45 (Table 1).

However, as discussed further below, governments often provide either subsidies or exemptions in the VAT. One way to do so is to narrow the base, excluding some preferred items. For example, exempting rent, new home purchases, food consumed at home, and private health expenditures from the VAT in the U.S. would reduce revenue by 38 percent, cutting the yield ratio to 0.28.

A different way to provide subsidies is to give each household a cash payment. Using the broad base, the provision of a cash payment of \$437 per adult and \$218 per child would, according to Toder and Rosenberg (2010) cost \$97.7 billion. Note that, under this option, the official revenue collected by the VAT would remain at \$355.5 billion and the measure of the yield ratio – given by VAT revenues and the standard rate of 5 percent – would remain at 0.45. But what might be called the "effective" revenue – that is, the revenue gain from the VAT net of the costs of making the compensatory cash payments – would fall to \$257.8 billion, or 1.64 percent of GDP, giving an "effective" yield ratio of 0.33.

Imposing the VAT would reduce net business income, which would in turn reduce other revenues. Toder and Rosenberg estimate that declines in other tax receipts would offset about 27 percent of gross VAT revenues. This would reduce "effective" revenues – after netting out the costs of cash payments and the loss in other revenues – of 1.02 percent of GDP for either base, resulting in an "effective" yield ratio of 0.2.

These figures imply, after allowing for offsetting adjustments in other taxes and the costs of either cash payments or narrowing the base as described above, that a 10 percent VAT would raise just over 2 percent of GDP in revenues.

Revenue Effects in 2012 of a 5 Percent VAT
(Toder and Rosenberg 2010)

	<u>Broad Base</u>			<u>Narrow Base</u>		
	Billions of dollars	% of GDP	Yield Ratio	Billions of dollars	% of GDP	Yield Ratio
Gross Revenue	355.5	2.26	0.45	221.4	1.40	0.28
Cost of Demogrants	97.7	0.62	---			
Revenue Net of Demogrants*	257.8	1.64	0.33			
Adjustment of other taxes	96.9	0.62	----	60.5	0.38	---
Revenue net of other taxes	160.9	1.02	0.20	160.9	1.02	0.20

*The demogrants are set at \$437 per adult and \$218 per child. These levels were chosen so that the revenue net of other taxes was the same for the broad-based VAT with demogrants and the narrow-based VAT without demogrants.

Efficiency and Growth

A broad-based VAT that is levied uniformly on all goods and services would not distort relative prices among consumption goods. Similarly, a VAT with a constant tax rate over time would not distort household saving choices. Nor would it distort business's choices regarding new investments, financing instruments, or organizational form. Relative to higher income tax rates – which would distort all of the choices noted above – the VAT has much to offer in the way of incentives. Like the income or payroll tax, however, the VAT would distort household choices between work and leisure.

The VAT is border-adjustable; it would exempt exports and tax imports. While this is sometimes touted as providing economic benefits, it is actually a neutral treatment of these items.

A substantial literature, based on economic theory and simulation models, documents the potential efficiency gains from *substituting* a broad-based consumption tax

for an income tax (Altig et al. 2001, Auerbach 1996, Fullerton and Rogers 1996). These gains arise from a combination of broadening the tax base, eliminating distortions in saving behavior, and imposing a one-time tax on existing wealth.

The tax on existing wealth merits additional discussion. As a tax on consumption, the VAT can be regarded as a tax on the wealth and income that households use to finance current and future consumption: wealth that exists at the time of the transition to the VAT, future wages, and extra-normal returns to capital (Hubbard and Gentry 1997).⁴ The tax on existing wealth is a lump-sum tax, since the wealth has been already accumulated. Lump-sum taxes are preferable to other forms of taxation on efficiency grounds, since they do not distort economic choices. In fact, the lump sum tax on existing wealth is a major component of the efficiency gains due to the creation of a consumption tax.⁵

The efficiency and growth effects due to an *add-on* VAT would include: losses from the increased distortion of work/leisure choices; the substantial gains noted above from the one-time tax on existing wealth and substantial gains from deficit reduction. While short-term fiscal stimulus can boost an otherwise slack economy, as it has over the past year and a half, large and persistent deficits will have deleterious effects that can materialize gradually or suddenly. The sudden scenario has been emphasized in the past (Ball and Mankiw 1995, Rubin et al. 2004), under considerably more sanguine fiscal conditions than exist today, and has been highlighted recently by Burman et al (2010). Under this scenario, investors' fears about future deficits can reach a tipping point and trigger a financial crisis with potentially calamitous effects. Some analysts cite this potential sudden impact as the most important reason to avoid substantial ongoing budget deficits.

But even in the absence of a crisis, sustained deficits have deleterious effects, as they translate into lower national savings, higher interest rates, and increased indebtedness to foreign investors, all of which serve to reduce future national income. Gale and Orszag (2004a) estimate that a 1 percent of GDP increase in the deficit will raise interest rates by 25 to 35 basis points and reduce national saving by 0.5 to 0.8 percentage points of GDP. Engen and Hubbard (2004) obtain similar results with respect to interest rates. Thus, relative to a balanced budget, a deficit equal to 6 percent of GDP would raise interest rates by at least 150 basis points and reduce the national saving rate by at least 3 percent of GDP. The IMF (2010) estimates that, in advanced economies, an increase of 10 percentage

⁴ In a risk-free world, the normal return to capital is just the risk-free rate of return. Earning the risk-free rate of return on saving does not raise the present value of consumption a household can obtain; it simply affects the timing of the consumption. Allowing for risk changes the normal return to a risk-adjusted return, but also changes the rate at which consumption is discounted, so the result continues to hold that earning the normal return (adjusted for the risk) on capital does not affect the present value (adjusted for risk) of consumption available to the household. In contrast, returns due to rents do affect the present value of consumption available to households and therefore would be subject to a consumption tax.

⁵ Altig et al. (2001) show that in the conversion to a flat tax, the taxation of old capital accounts for more than 60 percent of the induced economic growth effect in the first 5 years, more than half of growth in the first decade, and about 40 percent of the induced growth even after 50 years.

points in the initial debt/GDP ratio reduces future GDP growth rates by 0.15 percentage points. Hence, the projected increase in the debt/GDP ratio from about 40 percent earlier in the decade to 90 percent by 2020 (Auerbach and Gale 2010) would be expected to reduce the growth rate by a whopping 0.75 percentage points. By cutting deficits, the VAT would help spur economic growth.

Distributional Effects and Offsetting Policies

In theory, the distributional burden of the VAT depends crucially on how household resources are measured. Typical distributional analyses are made with respect to current income. The VAT is regressive if households are classified by, and the tax burden is measured as a share of, current income. Because the VAT is a proportional tax on consumption, and because lower-income households tend to spend a larger proportion of their income than higher-income households, the VAT imposes higher burdens – as a share of current income – on lower-income households.

However, several other perspectives are possible. The VAT is a proportional tax if households are classified by current consumption since all households are taxed at the same rate on the amount they consume. Likewise, to the extent that current consumption mirrors average lifetime income, the VAT is also proportional with respect to lifetime income.

Empirical research broadly confirms these notions (Caspersen and Metcalf 1994, Metcalf 1994, Toder and Rosenberg 2010). However, empirical analysis is complicated by the fact that alternative methods of distributing the burden of a consumption tax — such as distributing the burden to consumption versus wages and capital less investment — can produce drastically different estimates of progressivity, even though they are equivalent in theory (Burman et al. 2005).

As mentioned earlier, the VAT imposes a one-time tax on existing wealth, a feature that is desirable on efficiency grounds but is more controversial with regard to fairness. We believe a one-time tax on wealth would be fair, and in fact would be quite progressive. There is concern that imposing a VAT would hurt the elderly, a group that has high consumption relative to its income. However, it is the case that Social Security and Medicare are the principal sources of income for a substantial proportion of low-income elderly households. Since those benefits are effectively indexed for inflation, low-income elderly households would be largely insulated from any VAT-induced increases in the price of consumer goods or health care services.⁶ High-income elderly households, who receive much lower shares of their income in the form of indexed government benefits, would need to pay more in taxes but could afford to do so.

Concerns about the regressivity of the VAT are complex, but they should not obstruct the creation of a VAT for two reasons. First, while we accept the validity of

⁶ Johnson et al. (2004) show that for households in the bottom quintile and second quintile of the income distribution for the elderly, 80 percent and 68 percent, respectively, of their financial (i.e., non-Medicare) income comes from Social Security.

distributional considerations, what matters is the progressivity of the overall tax and transfer system, not the distribution of any individual component of that system. Clearly, the VAT can be one component of a progressive system.

Second, it is straightforward to introduce policies that can offset the impact of the VAT on low-income households. The most efficient way to do this is simply to provide households either refundable income tax credits or outright payments. For example, if the VAT rate were 10 percent, a \$3,000 demogrant would equal VAT paid on the first \$30,000 of a household's consumption. Households that spent exactly \$30,000 on consumption would pay no net tax. Those that spent less on consumption would receive a net subsidy. Those that spent more on consumption would, on net, pay a 10 percent VAT only on their purchases above \$30,000. Toder and Rosenberg (2010) estimate that a VAT coupled with a fixed payment to families is generally progressive, even with respect to current income.

In contrast, many OECD governments and state government offer preferential or zero rates on certain items like health care or food to increase progressivity. This approach is largely ineffective because the products in question are consumed in greater quantities by middle-income and wealthy taxpayers than by low-income households.⁷ Furthermore, this approach creates complexity and invites tax avoidance as consumers try to substitute between tax-preferred and fully-taxable goods and policymakers struggle to characterize goods (for example, if clothing were exempt from the VAT, Halloween costumes classified as clothing would be exempt while costumes classified as toys would not).

Administrative Issues

A broad-based VAT would cost less to administer than the current income tax. For example, in the United Kingdom, administrative costs of the VAT were less than half of those of the income tax, measured as a share of revenue. Similarly, the New Zealand revenue department was required to intervene in just 3 percent of VAT returns, compared to 25 percent of income tax returns (GAO 2008).

The VAT has compliance advantages over a retail sales tax, which aims to collect all revenue at the point of sale from a business to a household. Since revenue collection for the VAT is spread across stages of production, with producers receiving a credit against taxes paid as an incentive for compliance, the VAT in practice is less likely to be evaded.⁸

⁷ Congressional Budget Office (1992, p. xv) finds that “excluding necessities such as food, housing, utilities, and health care would lessen the VAT's regressivity only slightly.” Toder and Rosenberg (2010) find that excluding housing, food consumed at home, and private health expenditures from the consumption tax base can somewhat increase progressivity, but not as much as a per-person payment would.

⁸ Gale (2005) discusses administrative complications with a retail sales tax and the changes in tax rate resulting from an erosion of the tax base due to evasion.

Theory and evidence suggest that the compliance burden would likely fall more heavily – as a percentage of sales – on smaller businesses. Most countries address these concerns by exempting small businesses from collecting the VAT. In 2007, 24 out of the 29 OECD countries with a VAT exempted businesses with gross receipts beneath specified thresholds, varying from \$2,159 to \$93,558 (OECD 2008).

Finally, it is worth noting that, to the extent that administrative costs are fixed with respect to the VAT standard rate, the presence of such costs suggest that the VAT should be set at a relatively higher rate rather than a lower one.

The States

Some analysts express concern that a national VAT would impinge on states' ability to administer their own sales taxes. In our view, a national VAT could help states significantly. State retail sales taxes are poorly designed – they exempt many goods and most services and collect more than 40 percent of their revenue from taxing business purchases, which should be exempt.⁹

Converting their sales taxes to VATs and piggybacking on a broad-based federal VAT would offer states several advantages. First, the states could raise substantial amounts of revenue in a less distortionary manner than current sales taxes. Second, administrative costs, which currently exceed 3 percent of state sales tax revenue (PriceWaterhouseCoopers 2006), would decline. Many states currently link their income tax to the federal income tax base, with obvious administrative and compliance advantages. Similar savings would accrue from linking federal and state VAT bases. Third, a national VAT would allow states and the federal government to tax previously difficult-to-tax transactions, such as interstate mail order and internet sales. If the U.S. experience followed that of Canada, the federal government could collect revenue on behalf of states and absolve states of the cost of administering consumption taxes altogether (Duncan and Sedon 2010).

In 2009, state and local sales tax revenue equaled 2.0 percent of GDP (authors' calculations based on U.S. Census Bureau 2010). If the federal VAT had the broad base and demogrants described in Table 1, and the states and localities piggy-backed on that structure, an average subnational VAT of about 6 percent would raise the same revenue as existing state and local sales taxes.¹⁰ Alternatively, states could maintain their sales taxes or create their own VAT bases. Following the implementation of a federal VAT in

⁹ See McLure (2002) for a description of the "nutty" world of state sales taxes. See Mazerov (2009) for an estimate that most states could increase sales tax revenue by 20 to 40 percent if "feasibly-taxed" services were added to the sales tax base. See Durner and Bui (2010) for the share of sales taxes paid by businesses.

¹⁰This estimate is based on the yield ratio of 0.33 listed in Table 1. An alert reader may question why a federal VAT would require a 10 percent rate to raise 2 percent of GDP, while a state and local VAT would only require a 6 percent rate to raise the same revenue. The answer is that the federal VAT would be an add-on tax with partially offsetting reductions in other revenue sources, as described above. In contrast, the state and local VAT discussed here would substitute for existing sales taxes and therefore would not create such offsets.

Canada, most provinces maintained their existing tax codes for several years. Some provinces have yet to fully harmonize with the federal VAT, while Quebec administers its own VAT (Duncan and Sedon 2010).

Anticipated VAT as Stimulus

While a major tax increase would not be a good idea while the economy is still recovering slowly from recession, it is worth noting that there is potential for the announcement of a future VAT to be stimulative in the current period. By raising the price of consumption goods in the future, or by doing so gradually over time via a phased-in VAT, the announcement would encourage people to spend more now and in the near future, when the economy needs the stimulus. This effect may not be very big – there is little evidence – but it goes in the right direction.

Will the VAT fuel expanding government?

The VAT has been called a "money machine" in honor of its ability to raise substantial amounts of revenue. That is a helpful feature if the revenues are used to close deficits, but poses a problem if the boost in revenue simply fuels further unsustainable growth in federal spending

Some analysts reject any source of extra revenue – including a VAT – on the grounds that less government revenue leads to smaller government. In general, this “starve the beast” theory does not apply to most taxes, nor does it reflect recent experience.¹¹ Romer and Romer (2009), for example, find that tax cuts designed to spur long-run growth do not in fact lead to lower government spending; if anything, they find that tax cuts lead to *higher* spending. This finding is consistent with Gale and Orszag (2004b), who argue that the experience of the last 30 years is more consistent with a "coordinated fiscal discipline" view, in which tax cuts were coupled with increased spending (as in the 1980s and 2000s) and tax increases were coupled with contemporaneous spending reductions (as in the 1990s). Given the widely recognized need for both spending cuts and revenue increases to balance the budget, it is likely that any new revenue stream would be accompanied by reductions in spending.

Some observers argue that the VAT is such an efficient and invisible tax that it has been and would be used to fuel government spending increases through a gradually increasing VAT rate. Bartlett (2010a, 2010b) addresses this claim by noting that increased VAT rates in OECD countries were common among early adopters, who operated a VAT in the high-inflation environments in the 1970s, but far less common among countries that adopted a VAT after 1975. Among the 17 countries that instituted a VAT during the post-1975 period of relative price stability, four have not changed their VAT rate and four have decreased the rate; the average rate increase across all late-adopters of the VAT is less than 1 percentage point. The average VAT in OECD

¹¹ Bartlett (2007) outlines the development of the “starve the beast” theory and shows how it failed to apply during the George W. Bush administration.

countries has been roughly constant since 1984 at or just below 18 percent.

Making the VAT transparent

A variant of the concern about spending growth is the notion that the VAT is "hidden" in overall prices. As a result, the argument goes, taxpayers won't notice the VAT the way they do income, sales, or payroll taxes, enabling Congress to increase the VAT rate without much taxpayer resistance.

This issue is easily addressed. The VAT doesn't have to be invisible: for example, Canada simply requires that businesses print the amount of VAT paid on a receipt with every consumer purchase. This is essentially identical to the standard U.S. practice of printing sales taxes paid on each receipt.¹²

Another way to make the VAT transparent is to link VAT rates and revenues with spending on particular goods. Aaron (1991) and Burman (2009) propose a VAT related to health spending. Under such a system, the additional health insurance coverage would help offset the regressivity of a VAT and make the costs of both the VAT and government spending more transparent.

Inflation

The creation of an *add-on* VAT will create pressure on prices. (If, instead, the VAT were replacing a sales tax, there would be no pressure or need to adjust the price level.) In our view, the Fed should accommodate the one-time price rise inherent in the creation of an add-on VAT. Not doing so would create significant and unnecessary adjustment costs in terms of lost jobs and wages.

But there is no theoretical or empirical reason to expect that the VAT would cause continuing inflation. Indeed, the presence of an additional revenue source would reduce the likelihood of the Fed having to monetize the debt. Research has found only a weak relationship between the VAT and continually increasing prices. In a survey of 35 countries that introduced the VAT, Tait (1991) finds that 63 percent exhibited no increase in the consumer price index (perhaps because they were replacing existing sales taxes) and 20 percent had a one-time price rise. In the remaining 17 percent of cases, the introduction of the VAT coincided with ongoing acceleration in consumer prices, but it is not likely – in Tait's view – that the VAT caused the acceleration.

The Canadian VAT

¹² The growing literature on tax visibility offers somewhat mixed results. Mulligan et al. (2010) find that the proportion of payroll taxes paid by employees does not have a significant effect on the size of the public pension program. Finkelstein (2009) finds that the adoption of electronic toll collection results in higher tax rates and reduced short-run elasticity of driving with respect to toll rates. Similarly, Chetty et al. (2010) find that posting tax-inclusive prices reduce demand for certain goods.

In 1991, Canada implemented a 7 percent VAT at the national level to replace a tax on sales by manufacturers. Many of the concerns associated with the VAT in the United States can be assuaged by observing the Canadian experience.¹³

Canada addressed distributional concerns by applying a zero rate to certain necessities and adding a refundable tax credit in the income tax. As noted above, we prefer the latter method. The Canadian VAT is completely transparent: it is listed separately on receipts just like sales taxes in the U.S. Perhaps because of the transparency, the VAT has not led to significant growth of government spending. Federal spending in Canada has in fact gradually *declined* from 22.6 percent of GDP in 1991—when the VAT was implemented—to 14.9 percent in 2009. The standard VAT rate has declined over time to 6 percent in 2006 and 5 percent in 2008. Federal tax revenue in Canada has fallen from 17.6 percent of GDP in 1991 to 16.3 percent of GDP in 2007 (and fell further to 14.6 percent during the 2009 recession). In terms of both revenues and expenditures, the size of the Canadian federal government has shrunk significantly since the introduction of the VAT. Since 1991, Canadian inflation and economic growth rates have been similar to those in the United States.

Coordinating provincial sales taxes with the VAT has proven to be challenging, but manageable. After the VAT was introduced, provinces over time began to coordinate their sales taxes with the federal VAT. By July 2010, five of the 10 provinces will have “harmonized” VATs, making their provincial tax bases essentially identical to the federal base. In these cases, the federal government administers the provincial tax on behalf of the province, and the provincial governments set their own VAT rate. Quebec administers its own VAT; three provinces will administer their own retail sales taxes. One province and the three territories have no consumption tax. The U.S. could accommodate a variety of state choices regarding consumption taxes in similar fashion.

An American VAT

The structure of an American VAT should include:

- a very broad base;
- rebates or income tax credits (rather than product exemptions) to achieve progressivity;
- efforts to raise transparency (for example, having VAT listed separately on receipts); and
- explicit links to spending discipline.

¹³ This section is based on Sullivan (2010), Bird and Gendron (2009) and Duncan and Sedon (2010) analyze the challenges of coordinating subnational consumption taxes with a national VAT.

While we are not wedded to a particular rate, we do note that a 10 percent VAT with a broad base could raise about 2 percent of GDP in revenues, even after netting out the offsetting adjustments in other taxes and the costs of compensating households for VAT payments on a reasonable level of consumption.

Other than the resources used to provide the rebate, VAT revenues should be used largely, if not completely, for deficit reduction. While tax and spending reform require continued attention from policymakers, closing the fiscal gap is a top priority. To the extent that VAT revenues are used for other purposes, there will be fewer options left for balancing the federal budget.

We believe the states would benefit from dropping their sales taxes and rapidly harmonizing with a federal VAT, but that is an issue they can decide for themselves. If all states did harmonize and if the federal VAT rate were 10 percent, the resulting combined VAT rate—including the state and federal rate—would be on the order of 15 to 17 percent. This would still be below the OECD average, but would be sufficient to significantly close the long-term gap and replace and improve upon state-level sales taxes. It would also send a strong signal to consumer that public policymakers are aiming to reduce consumption and raise saving.

Given current economic challenges, the timing of a VAT is important. Instituting a significant tax on consumption during a recession would be counterproductive. The optimal time to implement a VAT is after the economy has returned to full employment.

The VAT is not the only tax or spending policy that can constructively help solve the fiscal problem, nor will it solve the problem by itself. Nevertheless, to oppose the VAT is to argue either (a) there is no fiscal gap, (b) ignoring the fiscal gap is better than imposing a VAT, or (c) there are better ways than the VAT to make policy sustainable. No one disputes the existence of a fiscal gap, though, and the economic costs of fiscal unsustainability are enormous. As to the notion that there are better ways to put fiscal policy on a sustainable path, we would be excited to learn about them. In the meantime, policy makers should not let the hypothetical—and to date undiscovered—ideal policy get in the way of the time-tested, more-than-adequate VAT.

Reference List

Aaron, Henry J. 1991. *Serious and Unstable Condition*. Washington, D.C.: Brookings.

Altig, David, Alan J. Auerbach, Laurence J. Kotlikoff, Kent A. Smetters, and Jan Walliser. 2001. "Simulating Fundamental Tax Reform in the United States," *American Economic Review* 574–595. June.

Auerbach, Alan J.. 1996. "Tax Reform, Capital Allocation, Efficiency, and Growth." In *Economic Effects of Fundamental Tax Reform*, ed. Henry J. Aaron and William G. Gale, 321-354. Washington, D.C.: Brookings Institution Press.

Auerbach, Alan and William G. Gale. 2010. "Déjà vu All Over Again: On the Dismal Prospects for the Federal Budget." Urban-Brookings Tax Policy Center Publication. April 29. http://www.brookings.edu/papers/2010/0429_budget_outlook_gale.aspx

Ball, Laurence and N. Gregory Mankiw. 1995. "What Do Budget Deficits Do?" NBER Working Paper No. 5263. September.

Bartlett, Bruce. 2007. "Starve the Beast: Origins and Development of a Budgetary Metaphor." *The Independent Review*, 12(1): 5-26.

Bartlett, Bruce. 2010a. "The VAT and the Money-Machine Argument." *Capital Gains and Games* Blog. April 10. <http://www.capitalgainsandgames.com/blog/bruce-bartlett/1639/vat-and-money-machine-argument>

Bartlett, Bruce. 2010b. "The Case Against the VAT." *Capital Gains and Games* Blog. April 23. <http://www.capitalgainsandgames.com/blog/bruce-bartlett/1679/case-against-vat>

Bickley, James M. 2006. "Value-Added Tax: A New U.S. Revenue Source?" Congressional Research Service Report to Congress RL33619.

Bird, Richard M. and Pierre-Pascal Gendron. 2009. "Sales Taxes in Canada: The GST-HST-QST-RST "System"." <http://www.americantaxpolicyinstitute.org/pdf/VAT/Bird-Gendron.pdf>

Burman, Leonard E.. 2009. "A Blueprint for Tax Reform and Health Reform." *Virginia Tax Review*, v28. 287-323.

Burman, Leonard E., Jeffrey Rohaly, Joseph Rosenberg, and Katherine C. Lim. 2010. "Catastrophic Budget Failure." *National Tax Journal*. Forthcoming.

- Burman, Leonard E., Jane G. Gravelle, and Jeffrey Rohaly. 2005. "Towards a More Consistent Distributional Analysis." Prepared for National Tax Association Annual Conference on Taxation. November 18, 2005.
- Caspersen, Erik and Gilbert Metcalf. 1994. "Is a Value-Added Tax Regressive? Annual versus Lifetime Incidence Measures." *National Tax Journal*. 47:4 (731-46).
- Chetty, Raj, Adam Looney and Kory Kroft. 2009. "Salience and Taxation: Theory and Evidence." *American Economic Review*, Vol. 99, No. 4. September.
- Cnossen, Sijbren. 2009. "A VAT Primer for Lawyers, Economists, and Accountants." *Tax Notes* 124(7): 687-98. August 17.
- Congressional Budget Office. 1992. "Effects of Adopting a Value-Added Tax." February
- Duncan, Harley and Jon Sedon. 2010. "Coordinating a Federal VAT with State and Local Sales Taxes." *Tax Notes*. May31. 1029-1038.
- Durner, Leah and Bobby Bui. 2010. "Comparing Value Added and Retail Sales Taxes." *Tax Notes*. February 22. 983-987.
- Ebrill, Liam, Michael Keen, Jean Paul Bodin, and Victoria Summers. 2001. The Modern VAT. Washington, DC: International Monetary Fund.
- Engen, Eric M. and R. Glenn Hubbard. 2004. "Federal Government Debt and Interest Rates." *NBER Macroeconomics Annual*, 19: 83-138.
- Finkelstein, Amy. 2009. "EZ-Tax: Tax Salience and Tax Rates." *Quarterly Journal of Economics* 124 (3): 969-1010.
- Fullerton, Don and Diane Lim Rogers. 1996. "Lifetime Effects of Fundamental Tax Reform." In *Economic Effects of Fundamental Tax Reform*, ed. Henry J. Aaron and William G. Gale, 321-354. Washington, D.C.: Brookings Institution Press.
- Gale, William G. 2005. "The National Retail Sales Tax: What Would the Rate Have To Be?" *Tax Notes*. Tax Break, May 16: 889-911.
- Gale, William G. and Peter R. Orszag. 2004a. "Budget Deficits, National Saving, and Interest Rates." *Brookings Papers on Economic Activity*, 2:101-187.
- Gale, William G. and Peter R. Orszag. 2004b. "Bush Administration Tax Policy: Starving the Beast?" *Tax Notes*, 105(8): 999-1002. November 15.
- Government Accountability Office. 2008. "Value-Added Taxes: Lessons Learned from Other Countries on Compliance Risks, Administrative Costs, Compliance Burden and Transition." GAO-08-566. April.

Hubbard, R. Glenn and William M. Gentry. 1997. "Distributional Implications of Introducing a Broad-Based Consumption Tax" in J.M. Poterba, ed., *Tax Policy and the Economy*, volume 11, Cambridge: MIT Press.

International Monetary Fund. 2010. "Fiscal Monitor: Navigating the Fiscal Challenges Ahead." Washington: International Monetary Fund. May.

Johnson, Richard W., Leonard E. Burman, and Deborah J. Kobes. 2004. "Annuitized Wealth at Older Ages: Evidence from the Health and Retirement Survey." Urban Institute.

Mazerov, Michael. 2009. "Expanding Sales Taxation of Services: Options and Issues." Center on Budget and Policy Priorities Publication. July. <http://www.cbpp.org/files/8-10-09sfp.pdf>

McLure, Charles E., Jr., 2002. "The Nuttiness of State and Local Taxes: and the Nuttiness of the Response Thereto." *State Tax Notes*. 25:12 (841-56).

Metcalf, Gilbert E. 1994. "Lifecycle vs. Annual Perspectives on the Incidence of a Value Added Tax," *Tax Policy and the Economy* 8: 45-64.

Mulligan, Casey B., Ricard Gil, and Xavier X. Sala-i-Martin. 2010. "Social Security and Democracy," *B.E. Journal of Economic Analysis & Policy*, Vol. 10: Iss. 1 (Contributions), Article 18. <http://www.bepress.com/bejeap/vol10/iss1/art18>

OECD. 2008. "Value Added Taxes Yield, Rates and Structure." In *Consumption Tax Trends 2008: VAT/GST and Excise Rates, Trends and Administration Issues*.

PriceWaterhouseCoopers. 2006. "Retail Sales Tax Compliance Costs: A National Estimate." Prepared for Joint Cost of Collection Study. April 7. <http://www.bacssuta.org/Cost%20of%20Collection%20Study%20-%20SSTP.pdf>.

Romer, Christina D. and David H. Romer. 2009. "Do Tax Cuts Starve the Beast? The Effect of Tax Changes on Government Spending." *Brookings Papers on Economic Activity*, 2009(2): 139-200.

Rubin, Robert E., Peter R. Orszag and Allen Sinai. 2004. "Sustained Budget Deficits: Longer-Run U.S. Economic Performance and the Risk of Financial and Fiscal Disarray." Paper presented at the AEA-NAEFA Joint Session, "National economic and Financial Policies for Growth and Stability." San Diego, CA: June 4.

Sullivan, Martin A. 2010. "VAT Lessons From Canada." *Tax Notes, News and Analysis*. May 3.

Tait, Alan A., ed. 1991. "Value-Added Tax: Administrative and Policy Issues."
Washington, DC: International Monetary Fund. October.

Toder, Eric and Joseph Rosenberg. 2010. "Effects of Imposing a Value-Added Tax to Replace Payroll Taxes or Corporate Taxes." Tax Policy Center Publication. April 7.
<http://www.taxpolicycenter.org/publications/url.cfm?ID=412062>

U.S. Census Bureau. 2010. "Tax Revenues See Some Gains; Sales and Income Down."
Quarterly Summary of State and Local Government Tax Revenue. March 30.