## ECONOMIC VIEW

## Why a Tax the U.S. Hasn't Embraced Has Found Favor in Much of the World

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You may not like paying taxes, but your burden will be even higher if others don't pay their fair share.

That, in a nutshell, goes a long way toward explaining why a value-added tax, or VAT, is used by just about every major country in the world except the United States.

Although the concept has never caught on in this country, the VAT has been a powerful, wellmannered weapon for progress. That is especially true in less-affluent nations, because it reduces tax evasion in a relatively effective and gentle way, as an emerging body of research shows.

Rich countries collect 34 percent of gross domestic product in taxes on average (the United States collects about 27 percent). But most low- and middle-income countries — a range of places, from Mali to Malaysia — collect much less, typically just 10 to 20 percent of G.D.P. The main reason is that it is harder to collect taxes in less-advanced nations, where a larger share of economic activity is informal, making tax evasion easier. Yet tax revenue, which enables governments to provide public goods like roads and schools, is at least as important in poorer countries.

Enter the VAT, which taxes personal income indirectly by collecting it from businesses. A valueadded tax also has a built-in, self-enforcing feature.

Here is how it works.

At its most basic, a VAT taxes the value a business adds to a good or service as it is being produced. The added value may be thought of as the price at which the business sells its product minus the cost of producing it.

Are you a student? Subscribe for \$1/week until you graduate. For example, a wholesale bakery earns revenue by selling bread to grocery stores. Subtract from that the bakery's spending on flour, yeast and other ingredients. The difference is the added value on which the bakery is taxed. In addition, the flour company would pay a VAT on the revenue from its flour minus what it pays for wheat and the like.

When you tally the value added at every stop on the supply chain, from wheat farmer to bread eater, you get the retail price of the bread. Thus a VAT is a tax on consumption and it can be easier to administer than a personal income tax.

For one thing, the government collects the VAT from businesses (of which there are relatively few) rather than households (of which there are many). For another, especially in less-advanced economies, personal income tax systems are rife with problems because so many people are self-employed, with latitude to fudge their reported income.

In the United States, the Internal Revenue Service estimates, self-employment and farm income are underreported by over 60 percent. Even so, the personal income tax system in the United States works pretty well because most people have an employer. That's not the case in many other countries.

A VAT resembles a sales tax, with an important difference: It is paid at every stage of production, not just the point of sale. That makes a VAT marvelously self-enforcing, because one firm's tax deductions are another firm's tax liability.

When the baker buys flour, it is in her financial interest to inform the tax authority about the purchase, so that she can deduct the cost from her tax base. That information alerts the tax authority about the flour producer's income.

These theoretical advantages are well known, but Dina Pomeranz, an economist at the University of Zurich, found a way to test how important they are in practice. In a study published in the American Economic Review in 2015, she collaborated with the tax authority in Chile, using the prospect of audits to uncover where fraud was rampant.

The Chilean tax authority sent letters to a randomly selected set of firms, all of which were required to pay a VAT, informing them that they were under special scrutiny. Professor Pomeranz found that after the letters were received, the reporting of business-to-business sales hardly budged, suggesting that income was already being reported accurately.

In contrast, businesses like grocery stores that sold to consumers started reporting more income and paying more VAT.

Why was there a difference? With a VAT, there is a last-mile problem: A store customer buying bread had no incentive to ask for a receipt, because she couldn't deduct the cost from her income as businesses could, so many business-to-consumer transactions were underreported.

Governments have tried to solve the last-mile problem by adding a reward for customers who ask for a receipt. The state of São Paulo, Brazil, started a program in 2007 that gave customers a rebate of roughly 1 percent on their retail receipts. (To make the program more enticing, some of the rebate is in the form of raffle tickets for prizes worth up to \$500,000.)

Retailers had to submit the receipts to the tax authority, and consumers in São Paulo could check online whether stores had submitted their receipts and complain to the tax authority if they hadn't. In essence, shoppers were enlisted as citizen tax auditors.

The Brazilian program succeeded in increasing tax collection among retailers 21 percent, according to a research study by Joana Naritomi at the London School of Economics that analyzed the program's first four years and is scheduled to appear in the American Economic Review.

The success of VAT systems in emerging economies is welcome news for the beneficiaries of that tax revenue. It might be useful one day in the United States, too, and for another reason. Because a VAT taxes consumption, rather than income, it tends to encourage saving and investment.

It has its problems, too. A big one is that it is regressive. If you have barely enough money to get by, you can't afford to save: Your entire income is spent on essentials and, thus, taxed. Richer people are taxed on a much smaller share of their income.

But a VAT can be paired with progressive tax policies, like a tax credit for low-income people, that counterbalance this deficiency, as argued by William Gale of the Brookings Institution in his book "Fiscal Therapy."

In the end, a VAT's major advantage is that it can bring in a great deal of revenue with comparatively little administrative cost and without as much need for intrusive enforcement. It could be an appealing option for the United States one day.

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