

Value Added Tax (VAT)

Value Added Tax, or VAT, is used in all European Community states and in many other nations around the world. Canada, for example, adopted VAT in 1991. Although it is not used in the US, such a tax has been considered frequently, especially at federal level. Because it is so common throughout the world, it is sure to be of continuing interest in the US.

VAT, as its name suggests, is a tax on the value added by each producer in the economy. This concept can be explained with the assistance of Figure 1, which lists some hypothetical data on the cost of producing a wooden baseball bat.

In the first step of the process, a logger cuts down a tree and sells enough wood to make one baseball bat to a sawmill for \$4. The sawmill cuts the logger's tree into lumber, selling enough lumber to make one bat to the bat manufacturer for \$7. The bat maker then makes the bat and sells it for \$15 to a sports goods store, which sells it to a customer for \$25.

GOOD	PRICE	VALUE ADDED	10 PERCENT VALUE ADDED TAX
Logger's Wood	4	4	.40
Sawmill's Lumber	7	3	.30
Bat Maker's Bat	15	8	.80
Sport Store's Bat	25	<u>10</u>	<u>1.00</u>
Totals		25	2.50

Figure 1: Example of Value Added Tax

If a 10 percent VAT is in effect, each producer is required to pay a tax on 10 percent of the value added to the final product. In this case, the logger who cuts the tree pays VAT of 40 cents on the wood used to make one baseball bat because the logger's wood contributes \$4 to the value of the product. The sawmill buys the wood for \$4 and, after cutting it up, sells the lumber to make the bat for \$7, meaning that it adds \$3 in value to the product. Therefore, the sawmill owes 30 cents in value added tax. The bat maker takes a \$7 piece of lumber and makes it into a \$15 bat, adding \$8 in value to the bat in the process and paying 80 cents in value added tax. The retailer who sells the bat for \$25 adds \$10 in value to the bat by making it conveniently available to the customer and so owes \$1 in value added tax. The total VAT paid is \$2.50, or 10 percent of the retail price of the good. This total tax figure should not come as a surprise. After all, the total price of the good is going to equal the sum of the values added by each intermediate producer and, if each producer pays 10 percent of the value added, the total tax has to equal 10 percent of the final value of the product.

Note also that the total VAT collected is the same as would be obtained with a retail sale tax of the same percentage. It is therefore worthwhile comparing the effects of VAT and the retail sales tax in more depth.

Value Added Tax versus Sales Tax

The obvious difference between VAT and sales tax is that the people who physically pay tax revenue to the government will be different. With VAT, tax is paid by every producer in the chain. By contrast, a retail sales tax is paid either by the retail purchaser or, as is usually the case, is collected from the purchaser by the retailer, who then pays the tax on the customer's behalf. In short, VAT is levied on suppliers in a market while the sales tax is levied on the customers.

So who ultimately bears the burden of each tax?

Whether the tax is initially levied on the suppliers or the customers in a particular market, both end up bearing the same tax burden in either case. Consider the chain of suppliers in the baseball bat example. It makes no difference if the logger pays the VAT or if the logger is exempted from the tax and the sawmill pays the logger's share. Likewise, it makes no difference if the bat maker pays the shares of the logger and the sawmill, and so on, down the chain of production. Thus, the ultimate burden of VAT is the same as that of sales tax. Even though the taxes are initially levied on different people, the same people ultimately end up paying VAT as would end up paying sales tax of the same amount.

Despite the similarities in the economic effects of the two taxes, sales tax can be preferable to VAT in many ways. For one thing, retail sales tax is easier to collect than VAT. Only retail sellers need to be bothered with the collection of sales tax, whereas every seller in the production chain must pay VAT, meaning that many more taxpayers have to contend with the record keeping and payment schedules under VAT. In addition, sales tax is much easier to calculate for those who would have to pay under either tax. A retail establishment need only add up its total revenues and take a fixed percentage of that to pay as sales tax. However, with VAT, that same retail seller would have to add up their total revenues and then subtract purchases on which the tax had already been paid to compute the amount of tax owed. Thus, fewer people need to be bothered with sales tax, and even those who must collect sales tax will find the compliance costs lower with sales tax than with VAT.

Many complications with VAT arise when investment goods are purchased. In the example of the sports goods store selling a bat, the only costs considered in the example were the costs of producing the bat. But what happens when the store buys shelves, a cash register, and other capital goods that will last for years? If these costs are included as costs of selling the bat, then when the store undertakes large investments, its purchases on which VAT was paid will probably exceed its sales and, by the calculation method given earlier, the store will owe a negative amount of tax. Should the store be given a rebate or be allowed to carry over its negative VAT to the next year? In practice, the VAT already paid on investment goods can be carried over to reduce future VAT liabilities. This creates another record-keeping complication in the computation of the amount of VAT a business owes.

Other complications arise when different VAT rates are charged on different goods, as is the case in most countries that have that tax. Some goods are subject to reduced VAT or are “zero” rated so no VAT is due - see Figure 2. Zero-rated goods not only do not pay VAT but also get a rebate for VAT paid on the inputs for such goods. Other complications arise in applying the VAT to financial services, gambling and the treatment of sales of secondhand goods.

When compared with VAT, it is easier to monitor and enforce the provisions of the sales tax. Because fewer taxpayers are involved, fewer need to be monitored, which lowers both compliance and enforcement costs. Also, the relative simplicity of calculating the tax makes it easier for each taxpayer to accurately determine the amount of tax due, especially when capital goods are involved. The difficulties involved in understanding the value added tax, which are similar in nature to the difficulties in understanding the provisions of the income tax in the US, add to the complexity of the tax and make it more difficult to monitor. When compared with VAT, sales tax is far simpler and less costly. However, the two taxes have the same economic effects.

Although sales tax has many advantages over VAT, the latter does have the benefit that it is not necessary to distinguish retail from wholesale purchasers. When a business buys a computer to do book-keeping, this is not a retail transaction and should be exempt from sales taxation, whereas when an individual buys a computer for home use that is a retail transaction that should be taxed. With VAT, the tax is the same either way. Because of this difficulty with sales taxation, in practice much of the retail sales tax is paid on non-retail transactions, resulting in some of the inefficiencies associated with turnover taxes. Also, people might try to evade sales tax by claiming they are not making a retail purchase when in fact they are. Furthermore, evasion of sales tax can be more profitable because the whole tax is paid at once rather than incrementally on the value added. Furthermore, if one producer in the chain of production evades VAT, accounting practices like those used in the European Community will assess the tax on the next producer in the chain. VAT does have some advantages when compared with a sales tax but overall it is much more cumbersome, imposing substantial compliance and enforcement costs on an economy when compared to sales tax.

Value Added Tax in the European Community

Earlier, when taxes on international transactions were discussed, we noted that often it is difficult to tell when a country is subsidizing an exporter. One reason is that subsidies often come in the form of differential tax treatment. That is, the exporting country imposes lower taxes on exporting firms than the importing country imposes on its firms producing competing products. Thus, there is an argument for tariffs and quotas to ‘level the playing field’ for domestic and foreign producers. When the European Economic Community was being formed in the 1960s, one objective was to remove all trade barriers between member nations. To deal with the issue of differential tax treatment among nations, the member states agreed to ‘harmonize’ their tax structures. That meant all states would use similar tax structures so that no nation would have a government-subsidized advantage over the others. A key component of this harmonization was that the European Community nations all agreed to use VAT as a major source of revenue.

Before this harmonization of tax structures, European nations used a variety of different taxes. France adopted VAT in 1954 but other nations used sales taxes and turnover taxes to varying degrees. VAT was adopted within the European Community partly because

France was already using it but also because it had efficiency advantages over other taxes that had been in use, especially turnover taxes. Thus, VAT was adopted in the European Community partly on economic grounds and partly as a result of the history of taxes in Europe before harmonization.

A strong reliance on VAT means that taxes on goods and services are heavier in European Community states than in the US. Looking only at central government, Britain and France raise about 30 percent of their revenues from taxes on goods and services and Germany raises about 24 percent of its taxes that way. By contrast, the federal government in the US raises only about 4 percent of its revenues from taxes on goods and services. After agreeing to form a common market, the European Community member countries introduced VAT between 1968 and 1973.

As actually applied in the European Community, VAT is complicated by the fact that some goods are not taxed under VAT and that different rates are used for different goods. In addition, to further the goal of harmonization, tax is rebated for exports. Imports are charged a tax equal to their full value in order to place the same VAT rate on imports as domestically produced goods. Thus, there are substantial record-keeping demands, plus the inefficiency of rebating taxes already collected on exports and zero-rated goods. In terms of compliance costs, VAT is more similar to income tax than sales tax.

Nominal VAT Rates % in European Community		
	Standard	Reduced
Austria	18.0	6.0
Belgium	21.0	6.0
Denmark	25.0	--
Finland	22.0	17.0
France	19.6	5.5
Germany	16.0	7.0
Greece	18.0	8.0
Ireland	20.0	12.5
Italy	20.0	10.0
Luxemburg	15.0	6.0
Netherlands	19.0	6.0
Portugal	18.0	6.0
Spain	16.0	7.0
Sweden	25.0	12.0
U.K.	17.5	5.0

Figure 2: Actual VAT Rates EU (04-2002)

For companies importing goods into The Netherlands, the paying of VAT can be moved from the time of import to the periodical declaration of taxes. The periodical declaration is in general monthly. This procedure is called 'VAT Deferment'.