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THE VALUE ADDED TAX AND DEVELOPING COUNTRIES

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A value added tax (VAT) is a tax on the value that a business firm adds to the things it buys from other firms in producing its own product. Wheat is grown on a farm, then sold to a miller. A bakery buys flour from the miller and adds value to it by transforming it into bread. The bread is sold to a wholesaler, which adds further value to it by transporting it and storing it, before selling it to a retailer. The retailer adds still more value by making the bread available to the consumer in convenient form, storing it, and displaying it on the retail shelves. The total value, or cost, of the bread to the consumer is the sum of all these additions in value. So a tax that strikes each of these values added sums up to the same thing as a tax levied simply on the final sales value (exceptions to this will be noted below).

A VAT is comprehensive if it covers all economic activity from the earliest stage of farming or mining right through to the retailer. In some countries, the VAT does not extend through the retail stage. Let us term this the restricted, or "preretail," VAT. This article refers to the comprehensive type of VAT, unless otherwise noted.

The speed with which the value added tax has spread around the world is unmatched by that of any other tax in modern times. Thirty years ago there was no comprehensive VAT anywhere. Two countries, Brazil and France, had been experimenting with a restricted VAT. Today, the comprehensive VAT is found in some forty countries, most of them in Europe and Latin America. The restricted form of VAT is used by twenty more countries, chiefly in Africa. In 1988 value added tax is scheduled to be introduced, apparently in comprehensive form, in two such disparate economies as Hungary and Tunisia.¹ However, there is no value added tax in Australia, Canada, Japan,² or the United States (except for the state of Michigan, as discussed below).

The comprehensive value added tax first appeared in Brazil in 1967, when the Brazilian states adopted it to replace their turnover taxes.³ Later that year Denmark imposed it to replace a wholesale sales tax. From the beginning, therefore, the comprehensive VAT appeared practicable for both industrial and developing economies.

The Replacement Tax

The VAT has not been introduced, usually, to add to a country's tax revenue. Instead, it has chiefly replaced other types of sales tax that were deemed to have serious defects, defects not to be found in the VAT.

Foremost among these defective taxes is the turnover tax, levied as a percentage of sales, not just value added.⁴ Thus the miller would pay tax on sales to the bakery, and the bakery would pay tax on its sales to the wholesaler, and so on. The value added by the miller would thus be taxed several times, the retailer's activity only once. This turnover (or cascade) tax puts pressure on the economic system to reduce activity at the earlier stages, manufacturing, for example, and expand it at the last stage, retail. The turnover tax thus favors the kind of good that is sold in a luxurious shop with a high mark-up, say, a jewelry store or one selling expensive clothing, relative to goods sold in low-margin operations such as supermarkets or by mail order.

The value added tax, in contrast, is neutral in this respect. The total accumulated tax, down through the retailer, is the same for every dollar of retail price, no matter how the values added that make up this dollar are distributed among the stages of production and distribution. Such economic neutrality is generally considered desirable. Moreover, equity is an issue. Under a turnover tax, the rich consumer is taxed more lightly than the poor consumer, because the former buys more of the lavishly retailed goods, the latter of the supermarket types of goods.

Turnover taxes have two other serious defects. One is that they encourage vertical mergers between business firms. If the miller and the bakery merge into one concern, total turnover tax decreases, since one stage of sales has been eliminated. Total VAT, in contrast, remains unchanged. The value of milling and the value of baking are still each taxed just once; the only difference is that the tax is collected from one firm, not (in sections) from two.

The other defect is the difficulty of exempting exports. The turnover tax will have been levied several times on the constituents of the good that is to be exported, including constituents not physically embodied in the exported good (such as fuels and the wearing out of machinery in production of the good). If this cumulated turnover tax could be estimated fairly closely, a refund of the total could be given, thus freeing the good for export. In practice, a rough estimate is all

that can be offered—which may result in overrefunding or underrefunding of the actual tax on exports. Countries importing these goods may protest that they have been subsidized, while the exporters are denouncing an export penalty. These misgivings are important if the countries are about to enter into an economic union in which intraunion trade is to be free of import duties. By contrast, the VAT affords a fairly close estimate of the total tax that should be refunded upon export. This is accomplished through the tax credit technique (described below).

Finally, a turnover tax tends to inhibit growth by taxing capital goods, if not directly then through taxation of materials and other inputs entering into the production of such goods. The VAT can be shaped so that it reaches only consumption goods.

In several countries the VAT has replaced, not a general turnover tax, but a manufacturers sales tax or, less commonly, a wholesalers sales tax.⁵ These taxes have a much smaller base than the VAT, so a higher tax rate is needed to raise the same revenue—and a higher rate provides more temptation for tax evasion. Both taxes favor value added at retail, and the manufacturers tax favors it at wholesale as well. With both taxes it is somewhat more difficult to ensure that the tax strikes only consumption goods, not capital goods, than under the VAT.

The VAT has also replaced a retail sales tax, but in only two countries, Sweden and Norway. It did so chiefly because it was considered more likely to ensure exact exemption of all exports (Shoup 1969).

The value added tax has not been substituted for the income tax, corporate or personal, anywhere except the state of Michigan⁶ in the United States. In the United States some business executives have occasionally urged such a substitution, chiefly on the grounds that the VAT exempts exports and taxes imports, while the income tax does neither, so that a change would improve the balance of trade. This argument is a rather weak one, as noted below.

Countries introducing the VAT have had to choose between taxing all income or only consumption.⁷ The VAT is imposed on the value that a firm adds to the things it buys from other firms. From the sales of this firm, then, we subtract the cost of the things it has bought from other firms, and the result is the value added. But what if the firm purchases, this year, a capital good that will not be worn out in this one year? Part of the good's cost will be attributable to producing goods in the years ahead, as it is gradually worn down (depreciated). Should we not allow subtraction, in this year, of only that part of the machine's cost that is represented by the wearing-down that occurs in this year's production of what the firm sells?

*Consumption
VAT versus
Income VAT*

That rule is too restrictive, if the aim is to tax only consumption, not total income. A simplified example will make the point. Suppose that firm A has only labor costs. With its labor force, it produces a long-lived machine that it sells to firm B. Suppose that firm B does not use this machine at all during this tax period; indeed, it has no sales yet, so there is no sale of goods to ultimate consumers in this period. If the intention is to tax only such sales, there must be zero tax for the two firms together. Firm A will be subject to the VAT on its sale to firm B. A negative tax, a tax refund, for firm B is needed to attain zero tax overall. This is accomplished by allowing firm B to subtract from its sales (zero) the full cost of the machine, getting a negative tax base that is the same as the positive tax base on which firm A pays the VAT. The tax administration collects a certain amount from A and pays the same amount to B. In practice firm B will have some sales and other costs, but full subtraction of the cost of the machine will allow it to pay correspondingly less VAT, and thus benefit just as it would from a tax refund in the extreme case of no sales by B.

To continue this example, suppose that firm B wears out its machine, year by year, in making some consumer good that is sold to consumers in the same year produced. The sale of this consumer good is taxed, and no subtraction is allowed for the machine, since its cost has been fully subtracted in the year of purchase. The result is the consumption type of VAT. Tax is levied only as personal consumption by households occurs.

The income type of value added tax uses the reverse of this technique, with respect to machinery and other capital goods. Again, firm A is taxed on its sale of the machinery to firm B, but firm B is not allowed to subtract that cost in computing its own VAT for the year. It therefore has a zero tax base, not a negative tax base entitling it to a tax refund. Instead, firm B is allowed to deduct the cost of the machinery in later years, bit by bit, as it is used up in producing goods. In effect, the wages of the workers that made the machinery (firm A workers) are taxed, in the first year, and the profit firm B makes by using the machinery is taxed in succeeding years. Such profit is computed by subtracting, from sales, the year's depreciation of the machinery. All income is in effect taxed in the year that it arises; hence the tax is labeled an income type of VAT.⁸

A more direct way of computing tax due under the income type is to ignore a firm's sales and purchases from other firms, and go directly to the firm's records of income payments that it makes: chiefly, wages paid to its labor force and the profit it earns. This approach, however, calls for somewhat more complex accounting records.

Why do almost all the VAT countries use the consumption type rather than the income type? Probably because virtually all of them also levy an income tax proper, usually both on corporations and on

individuals; to impose an extra tax on income would be to overdo the taxation of income as against consumption. A desire not to tax income heavily as compared with consumption may imply a desire to encourage growth by using a substantial part of the year's economic activity to add to the stock of capital equipment.

Another reason for not relying entirely on taxation of income is that such taxation changes the terms on which an individual makes a choice between consuming now and waiting to consume (somewhat more) later. The advantage to be gained by waiting is decreased by an income tax, which takes away part of the interest and profit from saving and investing. With a consumption tax, the ratio of consumption later to consumption now is left unchanged. Unless there is some good reason for thus changing the ratio, neutrality is to be preferred.⁹

The appropriate treatment of imports and exports depends on whether what is wanted is a tax that reaches all consumption within a country, including consumption of goods produced abroad, or a tax on all economic activity within the country, including activity embodied in goods that are consumed or worn out (capital goods) in other countries. The first aim is that of a consumption type of VAT; the second aim is that of an income tax. An income tax does not seek to tax all the income of those who, in a foreign country, made the good that is imported and consumed domestically, but it certainly does seek to tax the incomes of domestic firms and people who get those incomes by exporting their products. Taxation of exports is therefore consistent with the income type of VAT; taxation of imports, with the consumption type.

In fact, practically all VAT jurisdictions tax imports and free exports. (This approach is known as the "destination principle," because goods are taxed in the jurisdiction where they are to be used. The opposite regime uses the "origin principle.") This might seem like a worldwide triumph of logic, since virtually all VAT systems have opted for the consumption type of tax. Unfortunately, there is reason to suspect that this treatment of imports and exports owes more to pressure from certain interests and some confused thinking than from a nice appreciation of the congruence of the consumption type of VAT and import taxation. (This point is covered in the "Fallacies" section below.)

Imports, Exports

It was said earlier that the method used in computing the consumption type of VAT is the subtraction method. Actually, it is a refinement—the tax credit method—that is in almost universal use. A firm first applies the VAT rate to its sales for the taxable period. It then subtracts from this gross tax the sum of the VAT taxes shown on the

Tax Credit Method: A Substitute for Subtraction

invoices of the goods and services it has purchased during that period. Thus, against the gross tax on its sales the firm credits this sum of the VAT taxes that its suppliers have charged to it on the firm's purchase invoices.

From a government's point of view, the tax credit method has certain advantages. If some wholesale firm is outside the VAT system, perhaps because it falls under an exemption for small firms, the simple subtraction method never allows the VAT to reach the value added by that small exempt firm.¹⁰ Under the tax credit method, in contrast, such an exemption not only loses no VAT revenue, it actually causes overtaxation. When an exempt firm, paying no VAT, sells to a taxable firm, that latter firm of course finds no VAT stated on its purchase invoices—and therefore has no tax credit, as far as these inputs are concerned, to subtract from the gross, tentative, tax reckoned on its sales. When the exempt firm had purchased inputs from taxable firms, it had received invoices showing these taxes paid by its suppliers, but such taxes now vanish from the records (the exempt firm files no VAT return), are never creditable, and amount to overtaxation of total value added. Indeed, a firm that could be granted exemption because of its small size may want to get into the VAT system, pay a VAT on its value added, and thus be able to pass the tax credits on VATs levied at earlier stages along to its customers.

The tax credit method is also useful when some end product is to be completely freed of all VAT, including that collected at all earlier stages. Exports are the primary example. A firm that exports some or all of its output applies to those exports the rate applicable, which in this case is a zero rate. From this it subtracts the taxes shown on the purchase invoices (input VAT), and the result is a negative tax, leading to a tax refund, if the firm produces only exportables. If it also sells goods for domestic use, it can credit against the VAT on those goods not only the VAT shown on purchase invoices relevant to such goods but also the VAT on invoices relevant to its exportables. The result, if the domestic sales are large enough, is simply a reduced tax, calculated as a percentage of domestic sales, with no tax refunds being needed. In other words, there is no allocation of input VATs between goods to be exported and the other, taxable goods the firm sells. The total of such input VATs is credited against the total of the gross, tentative output VAT, which includes the zero VAT on exports.

Another example is food, which some governments exempt from the VAT on grounds of social policy. Zero-rating the retailer on his sales of food operates to lift the entire VAT from the good.

To be sure, the simple subtraction method could give the same result just by omitting, in computation of the firm's value added, its sales of such a good, provided that the VAT had been levied at the same rate at all prior stages. But if, for whatever reason, the VAT rate

is not uniform at this and all earlier stages, only the tax-credit method gives the desired result (McLure 1987, Shoup 1986).

*Freeing
from VAT*

There are two sets of reasons for freeing from VAT: those to do with the complexities of administration (usually for small firms) and those of social policy. They call for quite different methods of freeing.

- *Exemption.* If the complexity of administration is the problem, especially for small firms, such firms may be exempted from the tax, but the products they deal in should not be completely unburdened from the VAT at all stages.
- *Zero-rating.* If some social policy is to be implemented by freeing a certain good from the VAT, the unburdening should be complete; no VAT should rest on any of the values added in producing and distributing the good at any stage in the production or distribution process. This can be achieved by zero-rating at the last stage (retail or export), when a tax credit method (not a subtraction method) is being used.

In practice, this distinction has not been followed entirely. In some VAT jurisdictions, certain goods, not only certain types of firm, are given exemption rather than zero-rating. The value added for the good at a particular stage is freed from tax, but no effort is made to lift the tax already collected at earlier stages or to be collected at later stages. This narrow type of freeing is accomplished by forbidding the firm to credit against the tentative tax on its sales of taxable goods the VAT shown on the purchase invoices of the exempted good or its constituents.

This procedure seems to have little, if any, justification. Administrative problems do not usually occur with respect to a particular type of good, regardless of the size of the firm handling it, and social policy, to repeat, cannot be fully implemented by a freeing from VAT at just one stage. Moreover, a business purchaser of the exempted good, finding no VAT stated on his purchase invoice, is deprived of a credit against the VAT on his own sales for any VAT levied before the exempt stage.

Exemption (not zero-rating) is commonly granted to three groups of firms: those with annual sales of less than a specified amount; farmers; and certain service firms.

In some developing countries the first group may embrace much of the retail trade. Absence of accounting records and financial fragility may be so extensive there that the VAT will be restricted to wholesalers and producers. Those developing countries that do have a comprehensive VAT may still exempt most of the retail firms by a size test (sales) applicable to all firms. At least, exemption at the retail stage does not

produce overtaxation, as it does, paradoxically, when it occurs at an earlier stage under the tax credit method.

Farmers are commonly exempted on the same grounds as retailers: lack of records, financial fragility. Here, economic distortions in the use of machinery, materials, and the like may result. The farmers are not at the last stage; they are intermediates. When they are out of the VAT system, not filing VAT returns, they can make no use of the tax credits on the invoices of their suppliers. A farmer on the verge of using more fertilizer and less direct labor (because, with no tax, this would pay) will be deterred by the VAT from doing so. In some VAT jurisdictions a "downstream" extra credit is granted to firms that, buying from the farmers, are subject to tax, just to make up for this break in the tax credit chain, but the size of that credit does not vary with the amount of fertilizer the farmer buys, so does not influence such a purchase. A better method is to zero-rate important farm inputs, such as seed, fertilizer, and tractors. All in all, however, farming remains one of the most difficult issues for a VAT jurisdiction, as it is indeed under an income tax.

Certain service companies, notably financial institutions, are exempted in many VAT jurisdictions chiefly because of the difficulty of measuring the value of certain outputs that are not specifically priced. Accordingly, these are exceptions to the general rule that administrative problems usually do not occur just because of the nature of the product.

For the other technique of freeing from VAT, zero-rating, there are three social or economic goals that are deemed to make this kind of freeing worthwhile. One is to gain an alleged advantage in international trade (discussed in the section "Fallacies"). Another, widely recognized, is to tax the poor either not at all, or relatively less than the well-to-do. A third, hardly recognized but potentially important, is to encourage and facilitate production by not forcing a reduction in certain kinds of personal consumption, as described below.

Food absorbs a larger part of a poor household's budget than of a rich one's. Zero-rating of food therefore makes the VAT less regressive than it would otherwise be. The same applies to certain types of clothing. Industrial countries, notably the United Kingdom, use zero-rating on one or another type of product for this social aim. In a developing country, zero-rating of these necessities might exclude so much of the potential tax base that the tax rate on the remaining sectors would have to be so high as to create formidable administrative problems. As a compromise, a lower rate might be imposed on these necessities, but not a zero rate. In fact, most of the VAT countries do use more than one tax rate.

To be effective, the zero rate, or lower positive rate, must apply at the last stage of the production and distribution process. It would

accomplish nothing to zero-rate a manufacturer's sales of processed foods and stop there. The wholesaler or retailer would find no VAT on its purchase invoices to credit against the VAT on its sales.

In some developing countries, many people are on so meager a diet and in such poor health that their ability to work is impaired. If their incomes after tax were increased, the resulting increase in their consumption spending might so increase their productive energy as to make the resulting increment in output exceed the increment in their consumption. Such an increment we may call gainful consumption (see Shoup 1965 and 1970). A decrease in the VAT on such consumption would spur more consumption, hence a more than equivalent increase in total output.

This road to economic growth, which calls for zero-rating of certain necessities, seems obvious. But it is rarely mentioned in discussions of tax policy for growth. In developing countries, especially, it seems worth further study. As with progressivity, a slower approach to this goal would be through a lower positive rate, rather than a zero rate, on the goods in question. Ideally, such goods would be zero-rated only when sold to the households with gainful consumption—though trying to distinguish those households might prove impracticable.

Three fallacies about the value added tax are widely held. One, the tax will improve a country's balance of trade because usually it exempts exports and taxes imports at a rate high enough to make an appreciable difference. Two, the tax is inflationary, because it must be recouped by firms through increases in prices. Three, the tax is relatively easy to administer, because it contains some self-enforcing features.

If a value added tax simply replaces another type of general sales tax, there is, in principle, no change that would stimulate exports and check imports. If the VAT replaces part or all of a corporation income tax, there may be some stimulus to exports if the corporate income tax had been reflected in the prices of the corporations' goods (a rather doubtful proposition). Imports, their content having been free of the importing country's income tax, are now subject to a VAT and so might be reduced. Exports, for which no income tax refund was given, are now freed from a VAT and might increase. But these effects would probably not last long. Under a system of freely fluctuating exchange rates, the reduction in imports would lead to less pressure on a country's currency, which would tend to appreciate in its purchasing power of other countries' goods. Thus imports would tend to rise and exports to fall.

This tendency for exchange rates to counter the initial effects of an

Three Fallacies about the VAT

international trade tax or exemption is stated in its extreme form as the equivalence principle. This claims that a general, uniform levy that taxes all imports and frees all exports comes to the same thing as one that does just the reverse, because exchange rates will adjust accordingly to reflect the real underlying competitive conditions (see Shoup 1954).¹¹ We need not accept this extreme form of the theorem, because of the special conditions under which it is valid, but it does indicate that the offsetting effects of changes in market-driven exchange rates will diminish, perhaps notably, the alleged trade advantage said to come from substituting a destination-principle tax for an origin-principle tax.

Again, if a VAT replaces another type of general sales tax, the net effect on the general price level could be zero, or very small, either way. If it replaces a corporation income tax that has not been reflected in prices, we might expect a rise in the price level roughly equal to the rate of the VAT, if an accommodating monetary policy is followed. Beyond that one-time rise in prices, there seems little reason to expect the VAT to trigger an inflationary spiral, unless most wages are tightly indexed to cost-of-living data—and, again, monetary policy is accommodating. Recent empirical studies seem to support this conclusion (Tait, forthcoming, and Gillis, Shoup, and Sicut 1987; see also Tait 1980). A VAT imposed to cover an increase in government expenditures should also have only a one-time effect on prices.

As to administration, the value added tax does contain an element of self-enforcement that is lacking in other types of general sales tax. The firm buying from another firm is harmed if its vendor understates the price actually charged, in an effort to deceive the tax administration and reduce its own VAT. The purchasing firm's credit for input tax is correspondingly reduced, and its net VAT payable is increased. This conflict of interests between customers and suppliers is particularly noticeable when the tax administrators check the records of the two firms with respect to particular transactions. A discrepancy between the two firms' tax records rings a warning bell: one of them must be cheating, or at least incorrect. In contrast, the turnover tax and other types of sales tax take no account of what a firm pays for its input, in computing the firm's tax.

The VAT will still be far from self-enforcing, however. The task of matching buyer's and seller's records on each particular transaction is an enormous one, perhaps not achievable even with a high degree of computerization.

Offsetting the modest degree of self-enforcement is the task of acquainting taxpayers with an unfamiliar concept of the tax base: value added. Much time (up to two years) and effort must be spent in an educational campaign for the taxpaying firms before the tax can be implemented. If the tax credit method of computation is used, taxpay-

ers must become accustomed to making out invoices in the proper form. As for tax administrators, they will find it much more difficult to estimate the value added by a noncooperating taxpayer than to estimate the gross turnover of such a taxpayer under the turnover tax. External criteria alone—number of customers, size of shop or store—will tell little of value added. And if small firms are to be excluded, the true volume of value added may be substantial for some firms with a small volume of sales and negligible for other firms with much larger sales volume.

The administrative outlook is not discouraging, however (see Casanegra 1986). The best guide to the feasibility of the VAT is the fact that, apparently, no country except South Vietnam in the early 1970s has repealed VAT permanently.

When a developing country is considering enactment of a value added tax, it is implicitly comparing the VAT with some other tax. The comparison may be with an existing turnover tax. In a developing country still at an early stage of development, where most business activity is fragmented among small firms, a turnover tax may be preferred on administrative grounds, but scarcely for any other reasons. If only the retail trade is fragmented, the value added technique may be applied in a less than comprehensive manner to affect only imports, manufacturers, extractive industries, and perhaps wholesalers.¹² However, the rate required, on this narrow base, to raise the same revenue as that coming from a turnover tax may be so high as to tip the balance against this reform.

In the more advanced developing countries, a retail sales tax becomes a real rival to the VAT. In comparing the two (see Due 1973, Shoup 1973a, and Cnossen 1987), consider first the advantages of the VAT.

The taxpayers' responsibility is spread much more widely under a VAT, in smaller amounts. With a retail sales tax (RST), retailers carry the whole load of making the tax payments. To be sure, they collect the tax from their customers before making payments to the treasury; but the handling of large sums is not always easy, quite apart from the temptation it provokes to evade the tax. If this temptation proves too great, and if the retailer evades the entire RST (by not even filing a return), tax on the full value of the good is lost. With VAT, if the retailer fails to file a return, only the tax on the value added at retail is lost. (If, however, the retailer evades by understating the volume of his sales, while taking full credit for the VAT on all his purchases, full tax is lost on the amount of sales he has not reported.)

A second advantage of VAT is that it is better at exempting producer goods, leaving the tax resting finally only on consumer goods. This

Alternatives to a VAT in Developing Countries

conclusion has not been universally accepted, but it does seem, on balance, to be correct. Consider a typewriter sold by a retailer to a business firm, which uses the typewriter in its business, not at all as a consumer good. If the retailer is to be exempt (as he should be) from the RST on this sale, he must depend on the buyer to tell the truth when declaring that the typewriter will be used only in business, not for personal use. The buyer is making this statement to another business firm, not to the tax authorities. Under the VAT, in contrast, the retailer is taxed on all his sales, whether to consumers or to other firms; it is up to the buyer of the typewriter to get the tax off the machine by claiming a tax credit in his VAT return. A false claim, if made, must be to tax officials, not to another firm. It is probably more difficult, psychologically, for most taxpayers to file a return containing a false statement than it is to make a false statement to a vendor.

Whatever the explanation may be, the fact is that retail sales taxes have always included in their definition of taxable sales the sales of some types of producer goods. The VAT, consumption type, seems to have little difficulty in striking only consumer goods. Under an RST, exports get taxed when they have been produced in part by the use of producer goods that have paid the retail tax. Sweden abandoned its RST some twenty years ago and introduced a VAT chiefly because of this hidden tax on some of its exports. Denmark replaced its wholesale tax by a VAT, at about the same time, largely for the same reason (Shoup 1969).

If administrative considerations require that all very small firms be left outside the tax, the resulting decrease in the tax base will be larger under an RST. Each small retailer left outside the system means a decline, in the RST base, of the entire value of the goods it sells; under a VAT only the value added by this small retailer is lost.

To be sure, a small-firm exemption means that the tax base is shrunk at earlier stages: wholesaling, farming, manufacturing, extractive industries. An offset, however, is the overtaxation caused by the consequent breaks in the credit chain, noted earlier. In the aggregate, the loss of tax revenue is probably greater under an RST.

Services are somewhat more easily taxed under a VAT, without giving rise to taxation of services used by a business. Under a retail sales tax, each sale of a service must be designated either as one to consumers or one to firms. No such distinction is needed under a VAT, where the buyer of the service (not the seller) implements the exemption through the tax credit mechanism.

In some respects the two taxes seem to pose about equal difficulties in implementation: housing, financial intermediaries, rate differentials for luxuries and necessities, and the sale and resale of used goods.

A retail sales tax does have some advantages over the VAT. A larger

number of firms must file returns and pay tax under a VAT, because that tax encompasses virtually the entire economy, not just retail stores. If, in an effort to overcome this disadvantage, the VAT law exempts all small firms, the tax credit chain may be broken in many places. The result will be overtaxation, as described above. There is no credit chain to be broken under an RST. More paper work, more time and effort, are needed for compliance with a VAT, since not only the firm's sales, but also its purchases and the VAT paid on them, must be tabulated.

Although the retail sales tax does not ensure the freeing of exports to the degree that a VAT does, the freeing that does occur is done with less paperwork and less movement of funds than under a VAT. Most exports do not pass through retailers' hands in the exporting country, so are automatically free of an RST. Under a VAT, the zero-rating mechanism must be used.

The value added tax is not ideal for all developing countries.¹³ Consider those where (a) foreign trade plays a minor role, (b) small-scale agriculture is important, (c) retail trade is fragmented among very small sellers, (d) vertical integration of producer, manufacturer, wholesaler, and retailer (or with any two or three of these stages) is unlikely to be induced by a turnover tax, (e) discrimination against investment goods is not considered harmful, (f) basic accounting is not widespread, and (g) efficient and impartial tax administration has not yet been achieved. A country with, say, three or more of these seven features may do better to rely on a simpler turnover tax, despite its defects, or on a single-stage tax at the manufacturing or wholesaling level.

If the fragmentation of retailers is the only feature discouraging use of a VAT, single-stage taxes might be superseded by a preretail VAT, one that covers all firms except retailers. Less venturesome still is a VAT applied only to transactions within a single stage: manufacturing, for example.

The choice of a VAT over other taxes is especially difficult when a country has some of the seven elements listed above, but combined with the opposites of the other elements. For example, a fragmented retail structure often coexists with a large foreign trade sector, or the potential for tax-induced vertical integration may be high in a country that has not yet achieved an efficient and impartial tax administration. The choice between a turnover tax and a VAT then becomes a matter of subjective weighting of the pros and cons.

Accordingly, no generalization seems justified on the suitability of the value added tax for developing countries as a group.

*Developing
Countries
for which VAT
Is Suitable*

Abstract

The comprehensive value added tax (VAT), now a principal source of revenue for some forty countries, was nowhere to be found only thirty years ago. This article analyzes the reasons for this dramatic change and weighs the advantages and disadvantages of the VAT for developing countries. It points out the choices a government instituting a VAT must make with respect to taxing all final products or only consumer goods, and it offers suggestions on how to treat exports and imports, how to compute the VAT payable, whether to use "exemption" or "zero-rating" approaches, and whether to have one or various tax rates. For countries with a fragmented retail trade the VAT may apply only to wholesale and earlier stages. The article draws no general conclusions on the suitability of the VAT for developing countries, because these countries differ so widely.

Notes

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1. *Tax News Service* 1987, pp. 199, 209, 212, and for Hungary Lukács 1987. In the Philippines a VAT takes effect January 1, 1988 (*Tax News Service* 1987, p. 202). For development of the idea of a tax based on value added, see Sullivan 1965. For current use of the VAT and the issues associated with it, see Gillis, Shoup, and Sicut 1987 and Shoup 1986. Important recent analyses and appraisals of the VAT are Aaron 1981, Arthur Andersen 1979 and 1980, Aguirre and Shome 1987 (for Mexico), American Bar Association (forthcoming), Bovenberg 1986, Cnossen and Shoup 1986, McLure 1987, Sandford 1981, Schenk 1986, Thirsk 1987, U.S. Treasury 1984, and World Bank (forthcoming). Earlier descriptions and analyses are Chown 1973, Cnossen 1977 (appendix B), Due 1957 (ch. 7), Due 1970 (ch. 6), Due 1974, McLure 1973, Price Waterhouse 1979 and 1980, Shoup 1970, Spain, Ministerio de Hacienda 1971, Tait 1972, and Wheatcroft 1972.

2. A VAT was recommended for Japan's prefectures in 1949 by the Shoup Tax Mission, to lighten the cumulative burden of three layers of income tax (national, prefectural, and municipal), but was not put in force; see Sullivan 1965 and references there. In 1986 a proposal by the Japanese prime minister for a national government VAT was overwhelmed by a wave of protest from the business community, partly because this VAT was quite complex, with many distinctions among industries.

3. See Guerard 1973 for a thorough description and analysis of the Brazilian states' VAT. For a general survey and evaluation of the VAT in developing countries at that time, see Lent, Casanegra, and Guerard 1973.

4. For a detailed description and analysis of the French turnover tax as of 1930, see Shoup 1930.

5. For the case of Denmark, see Shoup 1969.

6. For a history of the VAT in Michigan, see Barlow and Connell 1982. Michigan's first VAT, 1953–67, preceded that of the Brazilian states, but its "various exclusions, deductions, and credits" made it far from "a pure version of the [income-type] VAT" (p. 676), and the rate was only 0.4 percent (0.1 percent for public utilities). The second Michigan VAT, 1975, is of the consumption type, at 2.35 percent.

7. For recent descriptions and analyses of the various types of VAT see Gillis, Shoup, and Sicut 1987, McLure 1987, Shoup 1986, and U.S. Treasury 1984.

8. For proof that this subtraction technique gives the same result as adding factor payments, see Shoup 1956 and the example in Shoup 1973b.

9. A tax simply on labor income bears an interesting relation to a consumption type of VAT. It has the same present-value revenue stream as a consumption VAT, but not the same distribution of the yield year by year. Consider a two-factor economy (labor and capital) and let this year's labor income ("wages") create a machine that will wear out in future years in making a consumer good. This consumer good will be priced to cover

depreciation and profit (here, the same as interest) on the investment good, the machine. Then the cost of the machine this year, W_p , is also I_p , where p stands for the present year. I_p in turn equals $P_{f,d} + D_{f,d}$ where f stands for future years and d means discounted to the present year. The flow of future years' profits and depreciation recovery will, when discounted to a present value, equal I_p . This is the condition necessary and sufficient for inducing the investment this year; that is, creating the machine this year by paying wages this year.

Let $C_{f,d}$ be the present value of the consumption in future years made possible by the wearing out of the machine created this year. It is the sum of $P_{f,d}$ and $D_{f,d}$.

We start with $W_p = I_p$. We know that $I_p = P_{f,d} + D_{f,d}$ which is in turn the same as $C_{f,d}$. Therefore $W_p = I_p = P_{f,d} + D_{f,d} = C_{f,d}$.

Wages, in this example, paid in the initial year, equal $C_{f,d}$; that is, wages paid this year equal the present value of consumption in future years, consumption of the good produced by the wearing out of the machine that is created this year by labor.

In this sense, a wages tax is the same as a consumption tax. Budgetary comparisons, however, are not commonly expressed in present values. This equality of a wages tax and a consumption tax must therefore be asserted with care. See Shoup 1968 and Shoup 1970.

10. But see McLure 1987 for a sophisticated subtraction method, under which no subtraction is allowed of purchases on which the vendor had paid no VAT. This sophisticated subtraction method replicates the tax credit method (including its over-taxation when there is a break in the credit chain), except when the VAT tax rate differs from one stage to another.

11. For details on the VAT as applied to international transactions, see International Fiscal Association 1983.

12. This kind of VAT may be planned as a temporary measure, to be expanded to the retail sector within a few years, if all goes well.

13. Notable is the extent to which developing countries have pioneered in the introduction of a value added tax. The Brazilian states' action has been noted above. Of the six Andean Pact nations, it was one of the least developed, Ecuador, that led the VAT parade in 1970, with a 4 percent tax rate extending through the retail stage (Gillim 1972). Gillim noted that "the Andean countries not only want more revenue, but also more investment, production, and exports, and will be attracted to the value added tax because it can raise revenue as a broad-based tax without having to rely on very small retailers, does not penalize investment goods, does not distort the organization of industry, and does not interfere with foreign trade. Ecuador's experience will be viewed as a test of the value added tax in the [Andean] sub-region." Ecuador's VAT excluded services, some of which were subject to a separate tax on services. The Ecuadorian services tax was not creditable against the VAT, but the VAT on input goods was creditable against the tax on services sold by the firm buying these input goods. Gillim points out that even a service exempt from both taxes did not in fact escape the VAT, if it were sold to a firm that was subject to the VAT and hence became incorporated in that firm's taxable goods. Services subject to the separate tax on services suffered double taxation when sold to a VAT-liable business firm (because of noncreditability). See Gillim 1972, pp. 273-75.

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