



THE VALUE ADDED TAX EXPERIENCES AND ISSUES

**Background Paper
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THE VALUE ADDED TAX

EXPERIENCES AND ISSUES

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I. INTRODUCTION

This paper¹ is intended to provide general background for the conference on the value added tax (VAT) organized by the International Tax Dialogue (ITD), and hosted by the government of Italy, in March 2005. This section describes the main features of the VAT, and its continuing spread. As in all areas of taxation, the distinction between policy and administration is not entirely clear-cut, but for convenience—and in the same spirit as the distinction between the two sets of parallel sessions at the conference—Section II focuses on issues that are primarily ones of policy, and Section III on issues of administration. Section IV summarizes the main conclusions, focusing on likely challenges for the VAT in the years ahead.

A. Why a Conference on the VAT?

The spread of the VAT has been the most important development in taxation over the last half-century. Largely unheard of, outside of France, in the 1950s, it has now been adopted by about 136 countries; and in these countries it typically accounts for about one-quarter of all tax revenue. Table 1 lists the VATs currently in place, and the rates applied.

The VAT is very much work in progress. More countries continue to adopt it. Those that already have it grapple with improving its design and implementation, facing problems—dealing with refunds and fraud, for instance—that are in many respects similar across countries. New problems arise, such as those from electronic commerce. And new ideas emerge as to what a VAT is capable of achieving, in relation, for example, to the treatment of financial services and the public sector.

With many countries, developed and developing alike, facing similar challenges, the scope for experience sharing is immense. The conference is intended to encourage and facilitate a continuing dialogue on these issues, which are central to the prospects for efficient and fair taxation in so many countries.

¹ The paper has been prepared by staff of the IMF, OECD, and World Bank, but the views expressed should not be interpreted as those of any of these institutions, or of the government of Italy. Nor does the paper necessarily represent the views of conference participants. Except where indicated, further details of the results and arguments reported here, and full references, can be found in Ebrill, Keen, Bodin, and Perry, 2001, *The Modern VAT*, (International Monetary Fund: Washington DC).

Table 1. VATs of the World 1/

	Date VAT Introduced	Standard Rate	Other Positive Rates		Date VAT Introduced	Standard Rate	Other Positive Rates
			(In percent)				(In percent)
Albania	Jul. 1996	20		Ecuador	Jul. 1970	12	
Algeria	Apr. 1992	17	7	Egypt	Jul. 1991	10	5; 20; 30
Argentina	Jan. 1975	21	10.5; 27	El Salvador	Sep. 1992	13	
Armenia	Jan. 1992	20		Estonia	Jan. 1992	18	5
Australia	Jul. 2000	10		Ethiopia	Jan. 2003	15	
Austria	Jan. 1973	20	10; 16	Fiji	Jul. 1992	12.5	
Azerbaijan	Jan. 1992	18		Finland	Jun. 1994	22	8; 17
Bangladesh	Jul. 1991	15		France	Jan. 1948	19.6	2.1; 5.5
Barbados	Jan. 1997	15	7.5	Gabon	Apr. 1995	18	10
Belarus	Jan. 1992	18	10	Gambia	Jan. 2003	10	15
Belgium	Jan. 1971	21	6; 12	Georgia	Jan. 1992	20	
Benin	May 1991	18		Germany	Jan. 1968	16	7
Bolivia	Oct. 1973	14.9		Ghana	Dec. 1998	12.5	
Botswana	Jul. 2002	10		Greece	Jan. 1987	18	4; 8
Brazil 2/	Jan. 1967	20.5	22	Guatemala	Aug. 1983	12	
Bulgaria	Apr. 1994	20		Guinea	Jul. 1996	18	
Burkina Faso	Jan. 1993	18		Haiti	Nov. 1982	10	
Cambodia	Jan. 1999	10		Honduras	Jan. 1976	12	15
Cameroon	Jan. 1999	18.7		Hungary	Jan. 1988	25	5; 15
Canada	Jan. 1991	7		Iceland	Jan. 1990	24.5	14
Cape Verde	Jan. 2004	15		Indonesia	Apr. 1985	10	5
Central African Republic	Jan. 2001	18		Ireland	Nov. 1972	21	4.3; 13.5
Chad	Jan. 2000	18		Israel	Jul. 1976	17	9
Chile	Mar. 1975	19		Italy	Jan. 1973	20	4; 10
China 3/	Jan. 1994	17	4; 6; 13	Jamaica	Oct. 1991	15	12.5
Colombia	Jan. 1975	16	7; 10; 20; 35	Japan 4/	Apr. 1989	5	
Congo, Republic of	Jun. 1997	18	8	Jordan	Jan. 2001	16	4
Costa Rica	Jan. 1975	13	5	Kazakhstan	Jan. 1992	15	
Côte d'Ivoire	Jan. 1960	20	11.1	Kenya	Jan. 1990	16	13
Croatia	Jan. 1998	22		Korea	Jul. 1977	10	
Cyprus	Jul. 1992	15	10	Kyrgyz Republic	Jan. 1992	20	
Czech Republic	Jan. 1993	19	5	Latvia	Jan. 1992	18	5
Denmark	Jul. 1967	25		Lebanon	Feb. 2002	10	
Dominican Republic	Jan. 1983	12					

Table 1. VATs of the World (continued)

	Date VAT Introduced	Standard Rate	Other Positive Rates		Date VAT Introduced	Standard Rate	Other Positive Rates
			(In percent)				(In percent)
Lesotho	Jul. 2003	14	5; 15	Russia	Jan. 1992	18	10
Lithuania	Jan. 1992	18	5; 9	Rwanda	Jan. 2001	18	
Luxembourg	Jan. 1970	15	3; 6; 12	Samoa	Jan. 1994	10	
Macedonia	Apr. 2000	18	5	Senegal	Mar. 1980	17	7
Madagascar	Sep. 1994	20		Serbia and Montenegro	Serbia:	18	8
Malawi	May 1989	17.5	10		Jan. 2005,		
Mali	Jan. 1991	18			2003		
Malta	Jan. 1995	18	5		Mont.:	17	
Mauritania	Jan. 1995	14			2003		
Mauritius	Sep. 1998	15		Singapore	Apr. 1994	5	
Mexico	Jan. 1980	15	10	Slovak Republic	Jan. 1993	19	
Moldova	Jan. 1992	20	8	Slovenia	Jul. 1999	20	8.5
Mongolia	Jul. 1998	15		South Africa	Sep. 1991	14	
Morocco	Apr. 1986	20	7; 10; 14	Spain	Jan. 1986	16	4; 7
Mozambique	Jun. 1999	17		Sri Lanka	Apr. 1998	15	10
Namibia	Nov. 2000	15		Sudan	Jun. 2000	10	
Nepal	Nov. 1997	10		Suriname	Apr. 1999	10	8
Netherlands	Jan. 1969	19	6	Sweden	Jan. 1969	25	6; 12
Netherlands Antilles	Mar. 1999	5	3	Switzerland	Jan. 1995	7.6	2.4; 3.6
New Zealand	May 1986	12.5		Taiwan	Apr. 1986	5	
Nicaragua	Jan. 1975	14	7; 10; 12	Tajikistan	Jan. 1992	20	
Niger	Jan. 1986	19		Tanzania	Jul. 1998	20	
Nigeria	Jan. 1994	5		Thailand	Jan. 1992	7	
Norway	Jan. 1970	24	12	Togo	Jul. 1995	18	
Pakistan	Nov. 1990	15	2; 18; 20	Trinidad and Tobago	Jan. 1990	15	
Panama	Mar. 1977	5	10	Tunisia	Jul. 1988	18	6; 10; 29
Papua New Guinea	Jul. 1999	10		Turkey 5/	Jan. 1985	18	1.; 8
Paraguay	Jul. 1993	10		Turkmenistan	Jan. 1992	20	
Peru	Jan. 1973	19		Uganda	Jul. 1996	17	
Philippines	Jan. 1988	10		Ukraine	Jan. 1992	20	
Poland	Jul. 1993	22	3; 7	United Kingdom	Apr. 1973	17.5	5
Portugal	Jan. 1986	19	5; 12	Uruguay	Jan. 1968	23	14
Romania	Jul. 1993	19	9				

Table 1. VATs of the World (concluded)

	Date VAT Introduced	Standard	Other Positive
		Rate	Rates
(In percent)			
Uzbekistan	Jan. 1992	20	15
Vanuatu	Aug. 1998	12.5	
Venezuela	Oct. 1993	16	8
Venezuela	Oct. 1993	16	8
Vietnam	Jan. 1999	10	5; 20
West Bank and Gaza	Jul. 1976	17	
Zambia	Jul. 1995	17.5	
Zimbabwe	Jan. 2004	15	

Sources: *International Bureau of Fiscal Documentation* (IBFD, 2004); and *Corporate Taxes 2003–04, Worldwide Summaries* (PricewaterhouseCoopers).

1/ Rates are in tax-exclusive form (i.e., specified as a proportion of the net of tax price).

2/ Effective rates of 7.5 percent and 13.6 percent apply for interstate transaction between registered taxpayers.

3/ The 4 percent and 6 percent rates apply, respectively, to small producers and small traders whose annual turnover is within stipulated ranges. VAT payers subject to these rates cannot claim credits for VAT paid on their purchases, but regular VAT payers could claim credits for VAT paid at these rates using special procedures.

4/ Including 1 percent local tax.

5/ Rates of 26 percent and 40 percent rates apply to luxury goods.

B. Definition and Spread of the VAT

The essence of a VAT is that it is charged on a wide range of transactions, with a mechanism for offsetting tax paid on inputs against tax paid on outputs (see Box 1). Beyond this, the VATs observed in practice exhibit considerable diversity as regards, inter alia, the base of the tax and the range of economic activity to which the tax applies. As a result, there can be room for disagreement as to whether a given tax is properly called a VAT or not.² This paper takes a VAT to be: *a broad-based tax levied on sales up to and including, at least, the manufacturing stage, with systematic offsetting of tax charged on inputs—except perhaps on capital goods—against that due on outputs.*

While there are many variations on the structure of the VAT and how it is implemented, there is wide agreement on some core issues. First, the consensus favors ensuring that the final base of the tax is consumption. Such a VAT, which requires that tax on capital goods be credited, does not distort the prices that producers face in buying and selling from one another, and, accordingly, has the desirable feature of preserving production efficiency (so that the tax does not move the economy off its production possibility frontier). Given that it is levied at each stage of production, ensuring that the VAT bears only on consumption also requires both full crediting of the tax paid on inputs and the absence of breaks in the VAT chain. The exemption of inputs causes such breaks (see Box 1).

There is also agreement that the invoice credit method³ should be used (Japan being a notable exception). This is for several reasons, notably that by explicitly linking the tax credit on the purchaser's inputs to the tax remitted by the supplier of those inputs it discourages fraudulent undervaluation of intermediate sales.

The VAT was initially developed to meet rising revenue requirements that could not easily be satisfied by existing turnover taxes, the cascading nature of which could seriously distort economic decisions.⁴ Adoption of the VAT, which came first⁵ in

² Moreover, many countries choose to call what is a VAT by some other name, such as a general sales tax or a goods and services tax. The label is of no economic importance.

³ Under this method, each trader charges output tax at the specified rate on each sale and gives the purchaser an invoice showing the amount of tax thus charged. Traders can then credit such payment of input tax on their own purchases against the output tax charged on their sales, remitting the balance to the authorities (or, if the net balance is negative, claiming a refund).

⁴ Since a turnover tax is levied on turnover irrespective of value added, the tax collected on a given commodity will reflect the number of taxable stages in the chain of its production, resulting in a "cascading" tax burden. This gives producers an incentive to substitute away from taxed inputs, resulting in production methods that are privately profitable but inefficient from a wider social perspective. As a result, and as a further distortion, there is an incentive for industries to integrate vertically solely to reduce tax liabilities.

⁵ The idea of the tax itself originates in the writings of a German businessman, von Seimans, in the 1920s.

Box 1. A Primer on the VAT

The key features of the VAT are that it is a **broad-based** tax levied at **multiple stages** of production, with—crucially—taxes on inputs **credited** against taxes on output. That is, while sellers are required to charge the tax on all their sales, they can also claim a credit for taxes that they have been charged on their inputs. The advantages of this is that revenue is secured by being collected throughout the process of production (unlike a retail sales tax) but without distorting production decisions (as a turnover tax does).

Suppose, for example, that firm A sells its output (produced using no inputs) for a price of US\$100 (excluding tax) to firm B, which in turn sells its output for US\$400 (again excluding tax) to final consumers. Assume now that there is a VAT at a 10 percent rate. Firm A will then charge Firm B US\$110, remitting US\$10 to the government in tax. Firm B will charge final consumers US\$440, remitting tax of US\$30: output tax of US\$40 less a credit for the US\$10 of tax charged on its inputs. The government thus collects a total of US\$40 in revenue. In its economic effects, the tax is thus equivalent to a 10 percent tax on final sales (there is no tax incentive, in particular, for B to change its production methods or for the two firms to merge), but the method of its collection secures the revenue more effectively.

Zero rating refers to a situation in which the rate of tax applied to sales is zero, though credit is still given for taxes paid on inputs. In this case, the firm will be due a full refund of taxes paid on inputs. In a VAT designed to tax domestic consumption only, exports are zero rated, meaning that exports leave the country free of any domestic VAT. This **destination principle** and is the international norm in indirect taxation, with total tax paid on a good being determined by the rate levied in the jurisdiction of its final sale and revenue accruing to that jurisdiction. The alternative to destination-based taxation is **origin**-based taxation, under which the tax is paid at the rate of, and to, the country or countries in which the item is produced rather than consumed.

Exemption is quite different from zero rating in that, while tax is also not charged on outputs, tax paid on inputs cannot be reclaimed. Thus, no refunds are payable. In this case, because tax on intermediate transactions remains unrecovered, production decisions may be affected by the VAT.

France (in several steps from 1948) began slowly. As can be seen from Table 2, however, the pace of adoption subsequently accelerated.⁶ The adoption of VAT as a requirement for entry to the European Union—where a primary attraction of the tax was the ability to transparently eliminate indirect taxation (or subsidization) of exports—prompted its expansion in the developed countries in that region (including non-member countries such as Norway and Switzerland, and, more recently, accession countries). All OECD countries other than the U.S. have now adopted a VAT.

The 1990s witnessed a particularly spectacular increase in the take-up of the VAT, with its adoption by almost all of the transition economies (reflecting the need to replace their traditional sources of revenues), by a large number of developing countries, notably in Sub-Saharan Africa, but also in Asia and the Pacific (where the adoption of the VAT has

⁶ The regions in Table 1 are defined so as to capture the spread of the VAT to different types of economies as well as to different geographic regions.

Table 2. Spread of the VAT 1/

	Sub-Saharan Africa	Asia and Pacific	EU15 plus Norway and Switzerland	Central Europe and FSU	North Africa and Middle East	Americas	Small Islands 3/
Total 2/	33 (43)	18 (24)	17 (17)	27 (28)	9 (21)	23 (26)	9 (27)
1996–Present	18	7	0	6	2	1	3
1986–1995	13	9	5	21	5	6	6
1976–1985	1	2	0	0	2	6	0
1966–1975	0	0	11	0	0	10	0
Before 1965	1	0	1	0	0	0	0

Sources: From Table 1.

1/ Regions defined as in Ebrill and others, 2001, except Serbia and Montenegro included in Central Europe.

2/ Figure in parentheses is number of countries in the region.

3/ Island economies of under 1 million, plus San Marino.

been given additional impetus by the long-run revenue implications of trade reform), and by the small island economies, almost none of which had a VAT a decade ago.

There is considerable diversity in the structure of the VATs currently in place. For example, the standard VAT rate is higher in Western Europe and in the transition economies than elsewhere, being lowest in the Asia and Pacific region. Moreover, Western Europe, North Africa, and the Middle East have the most complex VATs in terms of the number of rates. Further analysis indicates that those countries that have implemented a VAT are both relatively more developed and have a relatively higher ratio of international trade to GDP. Almost 30 percent of the remaining countries without a VAT have populations of less than 1 million.

It is suggestive of the perceived success of the tax that only five countries have ever removed an existing VAT—Vietnam (in the 1970s), Grenada (introduced 1986, dismantled shortly thereafter), Ghana (introduced March 1995, removed two months later), Malta (introduced 1995, removed 1997), and Belize (introduced 1996, removed 1999). Three of these countries have since reintroduced the tax: Ghana in 1998 and Malta and Vietnam in 1999.

Looking forward, the VAT is likely to have a key role to play, in many parts of the world, in dealing with the revenue consequences of continued trade liberalization. In Sub-Saharan Africa, for example, about one-quarter of tax revenue still comes from trade taxes. If liberalization is to proceed, this revenue may need to be recovered from domestic sources, and here both theory and practice suggest that indirect taxes—excises as well as the VAT—have a key role to play. Theory, because a switch from trade to consumption taxation implies a widening of the tax base, with the reduction in prices implied by tariff cuts being transformed into gains in the form of both lower final prices and higher government revenue. Practice, because, as with customs duties, much of the revenue from a VAT—often half or more, in many developing countries—is collected at the border.

C. Performance of the VAT

A central claim made by advocates of the VAT is that it is a particularly efficient form of taxation⁷—has that actually proved to be the case? One way of testing for this is to ask whether, all else equal, countries with a VAT raise more revenue, overall, than do those without. Econometric analysis of this issue leads to several suggestive results (subject, of course, to a range of caveats not dwelt on here).⁸

⁷ There are dissenting views: see, in particular, Emran, M.S. and J.E. Stiglitz, 2001, “On Selective Indirect Tax Reform in Developing Countries,” forthcoming in the *Journal of Public Economics*.

⁸ The results will naturally reflect the fact that they are based on VATs that have been implemented in practice, rather than some ideal VAT. Actual VATs incorporate a range of exemptions and the like (see below) that will undermine the revenue productivity of the tax.

There is some evidence that the presence of a VAT has been associated with a higher ratio of general government revenue and grants to GDP. This is more likely to be the case the higher is GDP per capita and the lower is the share of agriculture in GDP—the latter may simply reflect the typical exemption of agricultural output from VAT. The positive revenue effect associated with the presence of a VAT is smaller, however, where the ratio of imports to GDP is higher, possibly reflecting the fact that in such economies other types of taxes—most obviously tariffs—are no less effective at raising revenue than the VAT.⁹

These general results conceal considerable variation across countries in the performance of the VAT (as measured, for example, by the ratio of revenue from the tax to the product of the standard VAT rate and aggregate consumption).¹⁰ What explains this variability? Or, put differently, what are the factors—both in terms of tax design (e.g., the precise definition of the tax base) and the wider economic environment (e.g., the share of imports in GDP)—that are conducive to revenue productivity of the VAT? This issue can again be addressed by econometric analysis, relating VAT yields to characteristics of both the VAT itself and the economy at large. Subject once more to caveats, the principal results include:

- **The standard VAT tax rate** has (unsurprisingly) a significant impact on revenues: each 1 percentage point increase in the standard rate raises the ratio of VAT revenues to private consumption by about 0.6 percentage point on average.
- **The importance of trade to an economy also has a significant positive association with the yield of the VAT.** This is a different question from how much additional overall government revenue is raised by adopting a VAT in economies where trade is particularly significant, addressed above—the interpretation here is that, all else equal, the more important is trade, the more revenue can be collected from an existing VAT. The obvious interpretation is that border formalities (and, perhaps, an established customs service) make the collection of VAT on imports relatively easy.

⁹ It has sometimes been suggested that the adoption of a VAT should be good for export performance, as a consequence of the exclusion of exports from the tax. The theoretical issues here are more complex than they may seem, since the exchange rate and/or internal prices can adjust to offset to some degree the effects of taxes bearing on production costs. For these reasons, improved export performance is rarely used as an argument for adoption of the VAT. Recent empirical work suggests, however, that in developing countries the presence of a VAT is associated with, if anything, lower trade flows (there being no significant effect in high income countries): Desai, M. A. and J. R. Hines Jr., 2002, “Value Added Taxes and International trade: The Evidence”(mimeo, University of Michigan).

¹⁰ The idea is that a benchmark VAT levied at a uniform rate on all consumption would have “C-Efficiency,” thus measured, of 100 percent. The use of this measure is subject to a range of caveats, as discussed in Ebrill and others, 2001.

- **The age of the VAT has a significantly positive effect.** One interpretation is that administration of the VAT, and compliance with it, improves with experience; another, that unobserved attributes of VAT design improve over time.
- **Literacy also has a powerful positive association with VAT yield.**
- Albeit fragile empirically, and surely not a basis for policy recommendations, there is evidence that the range between the highest and the lowest positive VAT tax rate in countries with multiple-rate VATs also has a positive bearing on VAT revenues for a given standard rate. (Among potential explanations of this counterintuitive result is that it is picking up the positive revenue effect from taxing favored items of final consumption at a positive rate rather than simply granting exemptions.)

It is sometimes argued that the VAT is a particularly complex and costly tax to comply with and administer, and is consequently ill-suited to developing countries. Indeed, the econometric analysis referred to above indicates that VAT revenues are higher—all else equal—in countries with higher literacy rates and hence presumably with better administrative capacities.

However, the real issue is whether, at lower levels of development, the VAT fares worse than other taxes for similar amounts of revenue. This will depend on the costs involved in its operation. These resource costs can be decomposed into the *administrative costs* incurred by the tax authorities and the *compliance costs* incurred by taxpayers. Given the potential role of the VAT as a catalyst for change both within the tax collection agencies and among taxpayers (e.g., by stimulating a culture of record keeping), a VAT may involve substantial collection costs, especially at the outset, but still be very successful.

It is widely agreed that collection costs are significantly lower where the VAT is simple,¹¹ with a single rate and high threshold are conducive to relatively low collection costs. Since compliance costs are largely independent of the amount of tax payable, however, they fall more heavily on smaller traders. This is borne out by a recent European Commission Staff working paper, which suggests significant differences in costs for small and medium sized enterprises (2.6 percent of sales) and those for large companies (0.02 percent of sales).

The evidence for developed countries suggests that the VAT is less costly than the income tax, but the more relevant question is whether it is more or less costly than alternative forms of sales tax, and, in particular, than the taxes that it replaced. Making

¹¹ Some guidance can be found in the various studies of VAT collection costs for OECD countries. It has been estimated that administrative costs to the government for a broadly “best-practice” VAT are about US\$100 per registrant per annum. Estimates of taxpayer compliance costs for such a VAT are around US\$500 per registrant per annum. These dollar figures will overestimate the corresponding costs in developing countries, since they largely reflect labor costs.

such a comparison for six Francophone and six Anglophone African countries, it becomes clear that the predecessors to the VAT were far from simple to collect. In West Africa, the VAT generally replaced turnover taxes of the kind prevalent in France before the adoption of the VAT there. In East Africa, it generally replaced a manufacturer level sales tax on the old Commonwealth model. There were many similarities among the earlier regimes: numerous and sometimes narrowly differentiated rates (including luxury excises); many specific exemptions, an exemption for retail trade, and, in some cases, differential treatment of domestic sales and imports.

Especially notable is that all of these VAT predecessors included complicated methods for avoiding the cascading inherent in turnover taxes. In the Eastern and Southern African systems, for example, this role was played by a combination of a “ring” system exempting sales of certain items between registered traders only and general exemption of some categories of products normally viewed as being intermediate goods. In many countries, both Francophone and Anglophone, “fixed investments” or “capital equipment” and “raw materials” were exempt, raising complicated identification issues. Indeed, the complexity of some of the predecessors to the VAT is quite stunning. For example, in Mauritania, which now has a VAT, the predecessor system involved three distinct turnover taxes each levied at multiple rates, with relief against cascading being provided by deducting the cost of certain inputs from sales receipts.

Although differing in a number of respects, the VATs that have replaced these taxes during the 1990s have crucial common features including: the use of the credit/invoice method; broader bases than the predecessor taxes (even where there are still wide exemptions); exemption of agricultural production; a single, or few, positive rates; zero rating of exports; inclusion of all levels of production while excluding much retail trade and other small businesses by means of a threshold; and identical treatment of domestic production and imports.¹² It is thus hard to argue, for these countries at least, that the VAT currently in place is inherently more complex or more costly to collect than the taxes it has replaced. Indeed, with the precursor taxes commonly already embodying, as just noted, some measures to credit or suspend tax paid on inputs, introducing a VAT has in many cases meant the consolidation and simplification of previous crediting devices.

¹² Alternatives such as VATs at either the manufacturing and import stages or the wholesale and import stages were tried until the end of the 1980s. However, these attempts were not viewed as successes, with the extension of the VAT to the retail level seen as an improvement in all cases.

II. TAX POLICY ISSUES

This section raises and addresses some of the most common and troublesome questions of VAT design.

A. How Many Rates of VAT?

Standard advice has been for a single-rate VAT (other than a zero rate for exports only). This has not always been followed. Table 3 shows the number of positive rates adopted in the full set of countries currently having a VAT as a proportion of all countries having a VAT. Closer analysis indicates that the older the VAT, the more rates there are and, conditional on age, that the number of rates is significantly higher in Europe and North Africa and the Middle East than in the other regions.

Table 3. Distribution of the Number of VAT Rates 1/

One Rate	Two Rates	Three Rates	Four Rates	Five Rates	Six Rates
51	30	13	5	1	0

Source: Table 1.

1/ Figure is percentage of all countries currently with a VAT with numbers of VAT rates shown.

Since the VAT is designed to tax consumption, the question is why one might wish to tax different components of consumption at different rates. Differentiated rates can be supported on efficiency grounds, with the “inverse elasticity” rule implying that inelastically demanded goods should be subject to particularly high tax rates. However, such a case for differentiation in rates of VAT is greatly weakened by the need to take account of administrative considerations and by the fact that separate excise taxes can be levied on some of the more inelastically demanded commodities (e.g., alcohol, gasoline, and tobacco products), which are largely final products (so that cascading is either insignificant or, where the tax also in part corrects for environmental damage, appropriate).

The more important issue, therefore, is the potential for rate differentiation to accommodate equity considerations. It will be desirable, all else equal, to tax most heavily those goods that account for a greater share of the expenditure of the better-off members of society. The strength of the equity case depends on the range of policy instruments available. In contrast to the situation in developed countries, many developing countries do not have well-functioning income taxes and/or targeted expenditure programs to facilitate attainment of equity objectives. The redistribution that can be achieved through indirect taxes alone, however, is intrinsically limited. The key point here is that even if the poor spend a larger

proportion of their income on some particular item (food, for example), the rich will typically spend a larger *absolute* amount; so a reduction in the tax rate on that item actually transfers more money to the rich than it does to the poor.¹³ To this must be added the increase in administration and compliance costs, including the increased likelihood that refunds will have to be paid (to sellers of lightly taxed commodities embodying heavily taxed inputs), the possibility of definitional disputes and evasion, and the possibility that increased differentiation will make it harder to resist the political pressures for yet more differentiation. The real question for policy in many developing countries is whether the better policy is not to maintain a single rate and use the enhanced revenue this yields to finance pro-poor spending that is better targeted than would be a reduced VAT rate.

A related issue is whether the VAT is intrinsically a regressive tax. It is true that the share of current income consumed tends to decline with increases in current income. The issue becomes less clear, however, when one considers consumption over a lifetime, where consumption and income tend to be proportional with respect to each other. Moreover, one needs to compare the distributional implications of the VAT with those of the taxes replaced, and indeed to assess the distributional consequences of the whole tax-spending system, of which the VAT is just one part. There are also important incidence questions concerning, for instance, the competitive advantage that may be enjoyed—depending on what other taxes they are subject to—by small traders below the VAT threshold. Notwithstanding these caveats, it is interesting that recent (albeit limited) empirical evidence for a few developing countries finds that the distribution of VAT payments is not especially regressive and, in particular, can be more progressive than that of trade taxes.

B. What Exemptions?

Standard advice is also for a short list of exemptions, limited to basic health, education, and financial services. Systematically documenting worldwide practice in this area is difficult, but the proliferation of exemptions in VATs in practice is an increasingly common concern (as is also true with other taxes, such as the corporate income tax).

Exemptions are often justified on the grounds that the output is hard to tax (such as the exemption for financial services) and/or that they are a practically convenient substitute for a reduced rate. There can also be specific reasons offered for selected exemptions; the commonly encountered agricultural and fuels exemptions seem to reflect distributional concerns, while that for donor-funded projects in many cases reflect conditions imposed by donors.

¹³ In one IMF technical assistance mission, staff estimated that for every US\$100 (say) in VAT revenue forgone as a result of zero-rating food, less than US\$15 accrued to the poorest 30 percent of the population, while about US\$45 benefited the richest 30 percent.

The consequences of exemptions are complex and generally adverse. Exemptions violate the basic logic of the VAT, being part way between levying a positive VAT rate in the usual way (by taxing output and crediting input tax) and zero rating (removing all VAT embodied in the price of a product by crediting input tax, while not taxing output). As a result, exemptions: (1) may reintroduce cascading, with associated production distortions—when an exempted good is an input into another good, the VAT embodied in the exempted good from earlier in the production chain cannot be claimed as a credit; (2) compromise the destination principle for internationally traded items—if an exporter uses exempted goods as inputs, that exporter’s zero-rated exports will embody VAT from earlier in the production chain; (3) can create a competitive advantage for imports over domestically-produced exempt items (since zero-rating abroad means that input tax is recovered on the former, but not the latter); (4) in the case of exempt traders, create incentives for the avoidance of tax liability by vertical integration and, in some developed countries, more aggressive tax planning; and (5) initiate a dynamic whereby exemptions feed on each other resulting in “exemption creep”—once a sector receives an exemption, it has an incentive to lobby for exemptions to be granted to those from whom it buys its inputs (so as to “recover” the VAT paid in earlier stages of production). On the administration side too, exemptions can be problematic: allocation rules for taxed inputs are needed for traders selling both taxed and exempt output, and further problems arise from voucher and other schemes used to exempt foreign-financed assistance projects.

Reflecting these difficulties, the rolling back of exemptions is likely to be a recurrent theme in VAT reform over the coming years. On the intellectual front too, much has been learned about practicable alternatives to exemption in relation to the public sector and financial services. On the latter, for example, the possibility of a cash-flow form of VAT has attracted attention in recent years, and New Zealand has adopted a zero rate for supplies by financial service providers where the customer is a taxable person with at least 75 percent of their output taxable. This does not eliminate the cascading problem, but is an interesting development.

C. The Threshold

The level of the threshold at which registration for the VAT becomes compulsory is a critical choice in the design and implementation of the VAT. Experience suggests that many countries have tended to set the threshold too low, putting themselves in considerable difficulty when their tax administration is found to be insufficiently developed to administer a large VAT population. Indeed, in both Ghana and Malta an initially low threshold was one of the primary reasons for the failure of their first VAT.

There is considerable variation across countries in the level of the VAT threshold, ranging from a few thousand dollars to over US\$200,000. Even within the European Union, where there is a common legal framework governing the VATs of Member States, the threshold levels vary from zero to approaching US\$100,000. There is also significant variation in the form that thresholds take and in the extent and nature of related measures. In addition to the most common case of a single threshold, variations include: different

thresholds for different activities; sliding adjustments to the tax liability of entities below the threshold to smooth the discontinuity around the threshold; and the application of simplified schemes, such as a presumptive tax,¹⁴ to the smaller traders below the threshold.

The appeal of a high threshold stems from the empirical regularity that a relatively small proportion of firms typically accounts for a very large proportion of potential VAT revenue. A high threshold thus economizes on scarce administrative resources at little cost in revenue. The authorities can afford to exempt small traders without adverse revenue consequences since the value added among that group can be expected to be modest. This is in marked contrast to single stage taxes, such as the retail sales tax, where a threshold implies that the full amount of tax—not just that on their value-added—is lost on the exempt sales made by those under the threshold.

Nevertheless, many countries—including, ironically, many with relatively weak administrative capacity—have evidently not been persuaded by the arguments for a high threshold. In addition to the revenue implications, national authorities are also often concerned that a high threshold unfairly favors small traders (by exempting them from the tax). By way of example, the European Commission’s first proposal for a directive to tax “imported” electronic services¹⁵ advocated a threshold of €100,000 for non-EU based suppliers making supplies to consumers in the EU. However, in the ensuing negotiations the Member States removed the references to thresholds. This has led to a situation where a non-EU business has, in theory at least, to account for EU VAT on all sales into the EU, irrespective of the amount of sales involved. This contrasts with thresholds available in most, but not all, EU Member States, thereby introducing an element of distortion.

The trade-off between revenue and collection costs is key, with the appropriate threshold being higher the more costly are administration and compliance, the less urgent is the government’s need for funds, and the lower is the ratio of value added to sales.¹⁶ This last is important since, all else equal, it makes a case for setting a reduced threshold for more profitable and/or labor intensive activities. However, this raises the practical difficulties of distinguishing between different activities and of dealing with traders conducting multiple activities. The literature has developed an explicit expression for the optimal threshold that permits illustrative calculations.

¹⁴ Presumptive taxes are levied on observable variables, such as gross turnover, which are seen as a *presumptive* indicator of underlying profitability or value added.

¹⁵ COM(2000)249, final, June 7, 2000.

¹⁶ For example, suppose administrative and compliance costs of US\$100 and US\$500 per taxpayer, a marginal value of a dollar of tax revenue of US\$1.20, a tax rate of 15 percent, and ratio of value added to sales of 40 percent. Then a simple formula capturing the key elements of this trade-off, developed in Ebrill and others, 2001, implies an optimal threshold of about US\$52,000. The issue of the optimal VAT threshold is pursued further in Keen, M. and J. Mintz “The Optimal Threshold for a Value-Added Tax,” *Journal of Public Economics*, 2004, Vol. 88, pp. 559–76.

The differential treatment of those above and below the threshold also raises issues. For example, firms selling to other firms would wish to register for VAT in order to reclaim tax paid on inputs. Hence, it is normal practice to allow firms below the threshold voluntarily to register for VAT. In contrast, firms characterized by a high ratio of value added to sales and selling to unregistered purchasers—notably, small traders providing services directly to final consumers—are likely to find it advantageous to be exempt from VAT. The favoring of small over large traders implicit in the use of a threshold has equity and efficiency implications. Specifically, it will benefit higher-cost small traders at the expense of more efficient larger traders, implying, all else equal, an optimally lower threshold. Related to this concern, and also tending to favor a lower threshold, is the potential scope that the threshold creates for the avoidance of VAT by organizing production in a series of sufficiently small enterprises.

The extent and nature of the distortion between those above and below the threshold will, however, depend on how those below the threshold are taxed. Presumptive taxes (such as a simple turnover tax) are relatively common, which implies that the calculation of the optimal threshold needs to be recast in terms of the differential revenues and collection costs associated with the two taxes around the threshold. As a general result, the cheaper the alternative tax is to collect, and the higher the rate at which it is levied, the higher is the optimal threshold for the VAT.

D. Small Countries

Are there countries so small that a VAT would be inappropriate? The question is important to the future spread of the VAT, since many of the remaining countries without a VAT are small. As noted above, empirical analysis indicates that VAT revenues are higher the greater the significance of international trade for an economy, all else equal. Since smaller economies tend to rely more on trade, there is a sense in which VATs actually perform *better* in small countries than in larger. Moreover, a consumption tax will in general distort the economy less than a tariff regime levying an equivalent amount of revenue. However, whether a VAT is especially appropriate for small economies will also depend on the difference in collection costs between a VAT and the alternative revenue source.

A VAT will be less advantageous for countries that import most of their consumption and for which the share of intermediates in imports is low, since the difference between an import tariff and a consumption tax is then evidently slight. For the smallest economies, the bulk of consumption would likely be imported. The share of intermediates in total imports, however, is not a matter of size alone: it will also depend on the degree of development of domestic activity. In addition, a country using a broad-based tariff may also deploy excises on selected domestic goods, which will further diminish the efficiency gain from moving to VAT.

Much, therefore, may hinge on the potential differential administrative and compliance costs in the comparison between VAT and alternative strategies. First, the fixed costs of collection associated with a VAT administration may be relatively burdensome for the

smallest economies with either small and/or just a few firms. Second, an economy with only a few sizable retail firms might find an advantage in implementing a retail sales tax.

E. Interjurisdictional Issues

The VAT faces challenges too in the context of trade relations between countries, and in defining its role in the tax systems of federal countries.

International issues

With respect to international trade, the standard¹⁷ and recommended approach is to levy the VAT on domestic consumption through the destination principle. That principle has always been implemented by zero-rating exports and taxing imports, with the result that total tax paid in relation to a commodity is determined by the rate levied in, and revenue accruing to, the jurisdiction of its final sale. The alternative to destination based taxation is “origin” based taxation in which the tax is paid at the rate of, and to, the country or countries in which the item is produced.¹⁸

Implementing the destination principle by zero-rating exports requires some mechanism for identifying the movements of goods and services across borders. Recent trends toward regional integration and the development of the Internet have complicated this. The elimination of borders within the EU has resulted in a long-running debate on how best to deal with VAT on intra-union trade.¹⁹

Particular problems arise in the VAT treatment of international services. In this case, border controls cannot be used to monitor international flows, and it can be far from clear in which country consumption is properly deemed to occur. A recent report from the OECD²⁰ suggests that there are some significant issues for cross-border supplies of services and intangibles, and notes the absence of internationally accepted principles in this area. As trade

¹⁷ The main historical exception was the use of the origin principle for much intra-CIS trade until mid-2001.

¹⁸ A destination-based VAT preserves production efficiency across countries since foreign and domestic producers face the same VAT tax treatment within each country. This is widely recognized as an especially desirable feature in tax design. An origin-based VAT does not have this property.

¹⁹ The initial proposal was to tax exports at the rate of the exporting country, with full crediting of those taxes for (nonexempt) VAT-registered importers. Revenues would subsequently be reassigned across member states to achieve the zero-rating assignment—receipts in the exporting country would be transferred to the importing country, financing the payment of credits. In the same vein, there is currently a successful destination-based VAT between the West Bank and Gaza and Israel, using a clearance mechanism based on computerized and cross-checked invoices.

²⁰ *The Application of Consumption Taxes to Trade in International Services and Intangibles* (OECD), 2004.

in services continues to grow, these problems are set to become more important in the coming years.

For these reasons, traditional implementation of the destination basis becomes more difficult as more trade involves services and intangibles rather than goods, and as more countries form regional trading blocs and/or reduce (or fail successfully to implement) traditional customs formalities. As is likely to emerge from the current OECD work in this area, building on the report referred to above, while this poses difficult problems, the best answer is not likely to be a switch to the origin basis, but rather a focus on the different methods of implementing the destination basis for trade, as discussed above.

The problems are compounded for developing and transition countries. Specifically, zero rating of exports implies the need to ensure the appropriate refunding of excess VAT input credits to exporters, which, as discussed below, has raised serious administrative difficulties. Methods to address this situation, while still producing the appropriate economic outcome to avoid distortions, will be increasingly critical. This is an area for close monitoring of developments to ensure that future implementation and updating of the VATs are both current with the latest thinking and consistent with the new and evolving realities of the global trading system.

Federalism

The widely-perceived success of the VAT has raised the question of whether it might be used as a subnational tax in federal countries, with lower levels of government having some autonomy in the design of the tax.²¹ Only a few examples of such systems now exist—in particular in Brazil, which has long had a subnational origin-based VAT, and, more recently, in Canada.

Interjurisdictional trade at the subnational level in federal countries, where there are seldom true customs borders, poses significant challenges to the implementation of subnational VATs. Traditional advice has been that a VAT should *not* be implemented at a subnational level because of a lack of internal borders and problems with cross-jurisdictional crediting.²² Recent conceptual advances, however, have pointed to alternative forms of VAT that may mitigate many problems, though all would work best with an overarching federal level administration. This too is an issue likely to receive continuing attention in the coming years.

²¹ Arranging some sharing with and across subnational governments of a centrally-designed VAT raises a distinct set of (generally easier) issues, not addressed here.

²² Brazil has often been advised to replace the subnational VAT with a national VAT supplemented by regional retail sales taxes.

III. TAX ADMINISTRATION ISSUES

In contrast to tax policy, there is little theoretical guidance with respect to the impact of any particular feature of administration. Any tax administration review must rely more on accumulated experience with what works and what does not. The result is to develop a sense of “best practices” which can change over time, and, moreover, need to be sensitive to individual country circumstances.

A. Organization of the VAT Administration

The introduction of a VAT can facilitate a substantial improvement in overall tax administration, and indeed adoption of the VAT is often seen as an opportunity for overall tax administration modernization. The introduction of the tax, however, has occasionally disrupted the functioning of an existing administration because of inadequate preparations and/or ill-advised implementation decisions.

One important decision concerns where to place VAT administration within the overall tax administration. Virtually all countries make the collection of all taxes on imports, including VAT, the responsibility of the customs department. Moreover, irrespective of the type of organization recommended, there needs to be close coordination of the VAT preparations between the income tax administration and the customs department, though this coordination has been rather poor in some countries. An important and less settled issue in a few countries is the question of who should administer the domestic VAT and account for the tax collections on imports reported by customs. There are three possibilities:

(1) administration of the VAT by the department responsible for domestic tax operations (including personal and corporate income taxes, and, in several countries, social contributions); (2) administration by a separate VAT department; or (3) administration by the customs department.²³

Several factors bear on this choice. First, although the experience with physical controls acquired by customs officers is sometimes useful, the VAT is essentially a self-assessed, accounts-based tax, which calls on the skills typically found in domestic tax administrations rather than in customs. Second, establishing a specific VAT department results in fragmentation of the tax administration and recruitment difficulties, and thus in increased administration and compliance costs. On balance, while administering the VAT in the domestic tax administration may initially raise some potential difficulties—notably, that there may be insufficient focus on the specifics of the VAT—almost all experts now favor such a choice. In particular, that choice is consistent with establishing a function-based

²³ This last approach was adopted by the United Kingdom until recently. Only two other countries currently have this organizational structure: Israel (where integration of VAT and income tax administration is under consideration) and Malawi.

organization that supports modern tax administration systems based on self-assessment and risk-management principles.

Against this background, how have countries structured their VAT administration? In the vast majority of countries, (around 90 percent), the domestic VAT is administered by the domestic tax administration. In these cases, discussions when the VAT was implemented focused on the respective merits of establishing separate VAT offices or administering the VAT, along with the income tax, in a function-based tax administration. Although most countries opted for a function-based organization, some initially introduced the VAT in a separate division (e.g., Albania, Australia, Bulgaria, and Sri Lanka), an approach that was generally supported to facilitate the administration of the VAT during the first years of its implementation.

Discussions on where to locate the VAT administration have been more extensive in those (relatively few) countries with no tradition of administering indirect taxes in the domestic tax administration. These are mainly former U.K. colonies with a tradition of administering indirect taxes and excises in the customs department. It is worth noting here that the U.K. itself has recently decided to merge its direct and indirect tax departments into one administration (including, at least initially, customs) and that a number of countries in the Middle East and Africa (e.g., Botswana, Jordan, Kenya, Nigeria, Uganda, and Tanzania) have also recently introduced major organizational reforms to integrate their VAT and income tax administrations. Although advice has usually been to integrate the domestic tax administrations, there have been a few exceptions reflecting a growing recognition of the limited capacity of customs to administer a VAT-type tax. In recent years, the recommendation has typically been for creating an integrated domestic tax department, including in most countries where a separate VAT department was initially established.

Since the end of the 1990s, significant work has been undertaken in those countries with fragmented domestic tax administrations—particularly in Anglophone countries with VAT and income tax administered in separate departments—to implement integrated, function-based organizations, which are seen as much more effective and more efficient to administer a modern tax system, using self-assessment and risk-management principles.²⁴

B. Self-Assessment Procedures

Modern tax systems and their administration are built on the principle of “voluntary compliance,” meaning that taxpayers are expected to comply with their basic tax obligations with only limited intervention by revenue officials. In practice, voluntary compliance is achieved through a system of “self-assessment,” under which taxpayers, with reasonable access to advice from the tax administration, calculate their own tax liabilities;

²⁴ Most other countries, including Francophone as well as the vast majority of countries in Latin America and Central and Eastern Europe, have generally had a tradition of integrated domestic revenue administrations.

complete their tax returns; submit returns and payments to the tax administration; and are then subject to risk of audit. In most countries, the development of self-assessment is closely linked to the rise of the VAT. Indeed, the real question is not how to administer a VAT in a country without the capacity to administer self-assessment, but how to implement the basic principles of self-assessment in a country willing to introduce a VAT.

Why is self-assessment so critical? Without the need to calculate every taxpayer's liability and notify them of it, tax officials can concentrate on the minority of "at risk" taxpayers who do not comply with their tax obligations. At the same time, taxpayers' compliance costs are reduced because the need for constant interaction with the tax administration is greatly reduced. Conversely, absent self-assessment, filing and payment procedures become burdensome, with taxpayers carrying out several time-consuming steps in the tax office and at the bank.²⁵ Not only do such procedures reduce the tax administration's efficiency and effectiveness, but the resulting regular contact between taxpayers and officials can encourage corrupt practices.

The arguments against self-assessment sometimes encountered are unpersuasive. One such argument is that "small traders are too illiterate to complete their returns." With a sufficiently high threshold, however, small traders are kept out of the VAT. A second is that "taxpayers cannot be trusted." The answer to this lies in developing effective taxpayer service and enforcement programs, and good understanding by tax officials of basic risk management principles. It is certainly true that if the tax department must assess each taxpayer, there will be few resources left for necessary compliance and control. Third, "the preconditions for self-assessment have not been met." This is the most challenging argument, particularly in the CIS and some Middle-Eastern countries where historically there was a complete absence of a taxpaying culture and where proper accounting standards and basic tax administration systems were lacking.

Has self-assessment been adopted in practice? A review of experience in 31 developing countries found that VAT administration is based on the concept of self-assessment in 26 of them. But further analysis of the data indicated that there has been less progress than would appear. First, only about 40 percent of the surveyed countries have implemented modern collection procedures (using simple filing and payment forms and a self-assessment system). Second, another 40 percent, although using self-assessment procedures, still have a weak understanding of risk-management and so place excessive data requirements on taxpayers—forms often comprise several pages, and sometimes taxpayers are requested to attach additional documentation (such as invoices). Third, a number of countries, notably transition economies where there is still less than complete appreciation of the administrative requirements of an accounts-based tax, do not use self-assessment at all. Beyond the survey results, the VAT at present is administered without any self-assessment procedures in about

²⁵ VAT filing, unlike that associated with the income tax, would normally take place at least 12 times a year.

10 percent of the countries that have introduced the tax. In these countries it is typically a complicated process to file and pay VAT liabilities.

Another approach that has been implemented in some countries, particularly in Latin America and some parts of West Africa, is the implementation of VAT withholding schemes. These oblige certain business and government entities to withhold VAT from payments to their suppliers. The rationale is that this ensures that unregistered traders, particularly in hard-to-tax sectors, are forced to pay at least some VAT. Proponents of these schemes maintain that they provide a manageable way of increasing VAT collections where administration is weak and attitudes to taxation are poor, particularly among smaller traders. Opponents argue that the better way to deal with VAT compliance problems in the small business sector is to regulate the number of registered taxpayers by adopting a high VAT threshold,²⁶ and point to the increase in refund claims if withholding rates are set too high. But while opinions on withholding differ somewhat, there appears to be consensus that the proliferation of such schemes can seriously undermine the integrity and long-term health of the VAT.

Even more resources may need to be allocated to VAT preparation needs in those countries, such as the transition countries, with little or no prior experience of self-assessment. In that regard, a longer timetable has been suggested for VAT implementation, including such measures as the establishment of pilot Large Taxpayer Units, the development of a function-based administrative organization, taxpayer education programs, and modern collection forms and procedures. While this approach has been successful in a number of cases, it has been less successful in Russia and the other CIS countries, where significant efforts are still needed to understand, develop, and implement effective tax administration procedures supported by risk-management systems.

C. Audit

In many countries, especially developing and in transition, audit performance is reported to be a particularly poor aspect of VAT administration. The evidence is that several of the developing countries which adopted the VAT in the last 10–15 years do not yet have effective audit programs. And, for those that do have some elements of such a program, it is often dominated by pre-refund verification. There is also a tendency for these countries to try to offset weak audit by adopting complex procedures, such as increased filing requirements and massive cross-checking of audit. These compound administrative difficulties and add to compliance costs. Without effective audits, VAT compliance deteriorates and the credibility of tax administration suffers. Strengthening audit is thus a key challenge, particularly in developing countries.

²⁶ A recent survey of the countries where a VAT withholding system has been implemented shows that almost all have very low VAT registration thresholds.

Countries with well-designed VATs that have been properly implemented are likely to face fewer compliance problems in the longer-term. Experience shows that it takes 18–24 months to implement a VAT effectively. Key to success is a sound policy design (a single rate, few exemptions and high threshold), simple laws and procedures, an appropriately structured and resourced administration, and compliance strategies based a balanced mix of education and assistance programs, and risk-based audit programs. Well-managed implementation of these critical components has been shown to lead to quicker establishment of the registration base, better understanding by taxpayers of their obligations, lower levels of non-compliance, lower administration costs, and greater revenue mobilization. Some countries have found that a program of advisory visits by auditors during the early months of the new tax has promoted taxpayer goodwill towards the VAT, as well as towards the tax administration. It has also helped auditors better understand their wider role of promoting voluntary compliance. In contrast, countries whose preparation has been less complete often face greater compliance issues, and are more inclined to look to ad hoc measures to overcome them.

The most common types of VAT evasion parallel those associated with traditional sales taxes—non-registration of businesses, underreporting of gross receipts, abuse of multiple rates, and non-remittance of tax collected to the tax authorities—**but there are additional types of evasions arising from the nature of the VAT.** These include the use of fake invoices and the claiming of VAT credits for noncreditable purchases. Perhaps most important, and distinguishing the VAT from other types of general sales taxes, is the relationship of an effective audit to the ability to administer an appropriate refund system, as discussed below.

Advanced administrations have found that a well-designed audit program is critical to reducing the extent of VAT fraud and evasion, simply because potential fraudsters are deterred by the belief that they stand a reasonable chance of detection and punishment. The most successful audit programs, within an overall risk management strategy, are marked by the following design features and principles:

- A broad coverage of taxpayer groups, by size and by sector, and of compliance issues.
- Audit resources spread across all elements of the audit program, ensuring that a disproportionate share is not absorbed in verifying refund claims prior to payment; pre-refund audits are limited to high-risk cases only, while lower-risk claims are subjected to selective post-refund audits.
- Audits that are mainly short, issue-oriented (checking, for instance, for credits claimed for taxable supplies to exempt activities, or on private purchases), and limited to one or two tax periods.

- Audits of accounting systems rather than individual transaction checking, especially with larger taxpayers.
- Close coordination between the VAT audit program and the audit programs of other taxes, especially the income tax.
- Investigation of cases involving serious fraud, with a view to criminal prosecution.

In many developing and transition countries, reasons for the failures to implement effective audit programs include: (1) insufficient numbers of the required highly skilled and appropriately remunerated audit practitioners; (2) lack of an institutional history of sound audit practice; (3) the authorities' concerns about collusion between taxpayers and auditors; (4) inadequate preparations at the time of VAT implementation, possibly because the consequences of a weak audit program are not immediately perceptible; (5) the lack of clear political support for the tax administration; and (6) the lack of an appropriate legal and judicial environment. The defensive resort to overly complicated procedures compounds such problems.

However, it is clear that VAT losses are not confined to developing or transition economies. Recent evidence points to substantial abuses in developed economies, particularly the EU. Among these countries, the U.K. has adopted a strategic approach in which it has, through statistical and operational information, estimated the "VAT gap"—the amount of VAT being lost each year. This has demonstrated increasing losses in the last decade, rising from about 8 percent to more than 15 percent of VAT revenue. These losses are due to a number of factors, including criminal attacks on the VAT system (typically the "carousel" fraud, which involves intra-community supplies and traders going missing after reclaiming input tax), general non-compliance, failure to register, and aggressive tax avoidance. Rather than adopt a piecemeal approach to countering these issues, the U.K. has taken a strategic approach incorporating all the issues and has set targets to reduce the losses in the coming years. Such an overarching approach provides the tax administration with clear objectives and enables governments with solid bases for measuring its performance.

There are a number of ways in which the effectiveness of practice and advice in this area can be improved. Attention has too often concentrated on the administrative preparations for and functioning of the VAT during the first few months following its introduction at the expense of ensuring that the tax performs satisfactorily over the long term. This longer-term performance will depend critically on implementing effective audit programs. There also needs to be more forceful convincing of authorities that massive checking of refunds and invoices is self-defeating. The benefits of such a program are very unlikely to offset the considerable administrative and compliance costs they involve.

A strategic approach, incorporating all aspects of VAT losses and countermeasures, would provide governments, especially in developed and transition countries, with significant tools for measuring tax administration performance. The U.K. is a leading

example, having not only measured the VAT gap and its components, but developed a strategy to counter the losses.

D. Refunds

A key feature of the invoice-credit form of VAT is that some businesses—notably exporters (since their sales are zero rated), and those businesses with large investment purchases—will pay more tax on their inputs than is due on their output, and therefore should be entitled to reclaim the difference from the government.²⁷ It follows that an effective refund mechanism is essential to preserve the VAT as a tax on consumption and to avoid distorting the allocation of resources. While refunding excess credits is straightforward in principle, formidable problems arise in practice, making the refund process arguably the Achilles heel of the VAT. First, the payment of refunds can create lucrative opportunities for fraud (e.g., exporters making false claims by overstating input taxes paid). Second, the power of tax officials to make refunds may invite corruption. Third, governments may be tempted to delaying refunds when their budgets are under pressure, thereby creating serious cash flow problems for businesses. This is particularly so in countries that pay refunds out of consolidated VAT collections rather than from specific expenditure appropriations.

Failure to fully refund excess credits undermines the integrity of the VAT and the credibility of the tax administration. When tax authorities deny payment of legitimate refund claims, the VAT ceases to be a tax only on domestic consumption—it becomes, in part, a tax on production). Intermediate goods transactions are distorted; the competitiveness of the export sector is harmed; and the competitive edge is tilted against new firms with large start-up costs. In addition, compliance is seriously jeopardized if businesses lose faith in the VAT system and are motivated to operate outside the law and engage in tax fraud and evasion.

The risk of fraudulent claims is often cited by tax authorities as the main reason for auditing all claims and delaying payment of refunds. In several countries, particularly those with a weak tax administration and inadequate experience with modern risk management practices, the authorities pursue time-consuming and labor-intensive processes to verify claims before approving refunds, resulting in backlogs of refund requests and considerable disquiet among businesses that have been deprived of their working capital. In contrast, the most advanced tax administrations tackle refund-related fraud as part of a broader VAT compliance strategy based on risk management principles, and generally limit pre-refund verification checks to high-risk claims.

²⁷ Refunds can be substantial. Many countries (such as the U.K., Netherlands, Sweden, Russia, Hungary, South Africa, and Canada) have refund levels exceeding 40 percent of gross VAT collections. Countries with refund levels below 20 percent are mostly found in Africa, Asia, and Latin America.

While most—but not all—developed countries make timely refund of excess credits, many developing and transition economies with less developed tax administrations often limit the entitlement to VAT refund. Though partly due to a reluctance of cash-poor governments to return taxes received, it is also clear that weak tax administration and associated compliance issues are a major contributing factor, and that increasing awareness of the risks of fraud has led to departures from the theoretically ideal practice of immediate refunding. A measure adopted by many countries is to impose a mandatory carryforward period for excess credits. This means that a refund is paid only if an amount of excess credit remains to be recovered by the taxpayer at the end of the carryforward period (generally three to six months). The rationale of the carryforward scheme is that, for a non-exporting business, an excess VAT credit in one tax period should normally be followed by periods where net VAT liabilities are sufficient to absorb the credit brought forward.²⁸ Businesses tend to see this as rough justice—a credit delayed is to some degree a credit denied. Another measure adopted by some tax administrations is to require security or bank guarantees from traders who seek refunds.

Approaches have emerged in an attempt to reduce the number of VAT refund claims and address business cash flow concerns. For example, some EU countries (e.g., France and Ireland), as well as some countries in North Africa and Asia, have implemented schemes which apply a zero rate on supplies to exporters. While the perceived benefits of these arrangements may be tempting, they add complexity to administration and open up new revenue risks, especially in developing countries and transition economies where administrative capacity needs significant strengthening. These factors should be carefully considered if introduction of these measures is contemplated.

With the aim of further shielding the VAT system from refund abuse and controlling taxpayer behavior, a small number of countries have attempted, with mixed results, to introduce more intrusive systems. One such system involves collecting and cross-checking of purchases and sales transaction data from all VAT-registered businesses. With similar objectives in mind, a small number of countries have considered requiring business enterprises to deposit the VAT due on their supplies into special bank accounts, thereby locking away a portion of the enterprises' working capital.²⁹ A distinguishing feature of such schemes is that they subject businesses to extra workloads and higher compliance costs, and thus raise important questions about the extent to which they should be expected to bear the costs of tax administration. Because of their intrusive nature on all traders, good and poor compliers alike, these schemes deviate significantly from the principles of a modern tax system based on voluntary compliance (with tax administrations focusing their efforts on high risk cases, leaving the vast majority of traders to go about their business, free of unnecessary workloads and compliance costs).

²⁸ As a general rule, carryforward measures are not applied to regular exporters.

²⁹ Only one country has adopted the "VAT Bank Account" scheme at this stage.

In response to increasing demands by the business community for improved services from tax administrations, there has been a growing trend among countries to introduce fast-track refund processing for exporters with proven records of good compliance. This might involve a “gold card” scheme, for instance, under which exporters with good payment records obtain repayment within some specified period; silver card, and those in any lower groups, receive somewhat less prompt treatment. Alternatively, a number of transition economies exempt from VAT the import of foreign capital equipment, at least by foreign investors, in order to reduce the generation of excess credits. **Of course, these schemes may create their own difficulties and distortions,** as beneficial treatment of firms with established reputations are biased against new firms.

There is a wealth of evidence indicating that problems with the refund system represent a serious pressure point in the administration of the invoice-credit VAT. This issue will require even more attention in the period ahead, particularly given the various schemes that have been implemented in an attempt to offset the lack of effective audit programs and refund systems, based on risk-management principles, in several countries. Most of these schemes include requirements that compromise the basic nature of the VAT, and as such should be seen as transitional. It is critical that tax administrations maintain their focus on the longer-term strategic goal of creating sustainable tax systems based on voluntary compliance, using self-assessment and risk-management principles. There is a risk that most of these quick-fix, ad hoc solutions are incompatible with these strategic directions, as well as with the fundamentals of the VAT.

IV. SUMMARY AND CHALLENGES AHEAD

This paper has sought to provide an overview of recent VAT experiences around the world, providing context and thoughts for the discussion at the ITD conference. This section summarizes the main conclusions.

While the net benefits depend to some degree on individual country circumstances, experience indicates that the VAT has proved to be appropriate for developing countries. It has been a core component in the broad trend toward tax reform evident in many developing and transition countries; while much remains to be done, the VAT has served to stabilize and bolster revenue mobilization in many countries while contributing to enhanced economic efficiency. Moreover, the complexity of the indirect taxes that the VAT has typically replaced belies the concern that the VAT is inherently “too complex” for developing countries. Empirical analysis indicates that the importance of international trade, high literacy, and the length of time the VAT has been in place enhance VAT revenues. While the latter two factors imply that the tax is “more successful” in the more developed countries, there is empirical evidence that it has also been “successful” in many developing countries.

More specific conclusions—and likely challenges for the future—include:

- **The choice between a single-rate and a multiple-rate VAT depends mainly on balancing tax administration considerations, favoring a single rate, against the availability of other instruments better targeted to achieve distributional objectives, the relative absence of which tends to favor further rate differentiation.** But, in any event, the extent of redistribution that can be achieved by VAT rate differentiation is typically very limited. For these reasons, most experts favor a single rate. The role of the VAT within broader strategies for alleviating poverty and achieving fairness is likely to attract continuing attention in the coming years.
- **In general, the zero rate should apply only to exports,** using exemptions instead where it is deemed essential to reduce the tax burden on a given good or service. This is not the best approach from the policy standpoint: exemptions seriously compromise the logic of the VAT. In light of the major problems with refund control in developing and transition countries, however, exemptions may reflect a logical second-best solution.
- **Efforts to eliminate exemptions are likely to figure prominently in coming years.** Exemptions are fundamentally inconsistent with the economic logic of the VAT, creating their own distortions and difficulties of administration and compliance. Appreciation of these weaknesses, and the limited benefits they offer, seems likely to increase.
- **The case for a relatively high threshold is strong.** In contrast to single-stage taxes, such as a retail sales tax, a threshold can be introduced without a significant revenue loss, thereby facilitating the implementation of the VAT. However, even greater support for simple presumptive taxes below the threshold would help to assuage the concerns over the equity and allocational implications of exempting those below the threshold from having to collect and report the tax. There is also support for differentiated thresholds (in order to accommodate systematic variations in value added across sectors), though this requires further analysis in light of the administrative implications.
- **Interjurisdictional aspects of the VAT—both internationally, within trading blocs, and inside federal countries—will require increasing attention in coming years.** Issues here include the proper role of the VAT within federal countries, and determining the proper form and extent of coordination in design and implementation.
- **In particular, the increasing importance of trade in services and electronic commerce poses new challenges for international and intra-federal tax design.** Clearly, these are areas that warrant further analysis and discussion, as with the OECD's current work on services and intangibles.

- **Organizing the overall structure of the tax administration is likely to require even more attention**, both in conjunction with the introduction of the VAT and beyond.
- **The lack of success in implementing appropriate self-assessment procedures means that, in these cases, the effective implementation of a VAT will take longer than had been envisaged.** It remains the case that it is not possible to have an effective VAT without self-assessment.
- **The development of effective audit procedures** is a clearly an area in which many countries require significant improvement.
- **There are serious problems, almost everywhere, with refunding of excess credits.** The theoretical need to issue refunds is one of the most important factors that differentiates the VAT from the taxes which it replaced in less developed countries. In addition to the reluctance of financially weak governments to pay refunds, it has become increasingly apparent that many tax administrations are incapable of policing the issuance of cash refunds to taxpayers without inviting abuse. This can be addressed through a combination of compromise measures to improve the operation of refunds (e.g., focusing on relief for exporters), and, on a transitional basis only, the adoption of measures designed to work around the need for refunds (in the case of investment, in particular).
- **For more developed countries, an overarching strategic approach to VAT losses, based on sound measurement of those losses is needed**, to help governments establish effective and targeted countermeasures and the ability to monitor tax administration performance in this area.
- **The introduction of a VAT is the start of a process, not the end.** In some countries considering the introduction of a VAT, a period greater than the standard of 18 to 24 months may be needed. More generally, the implementation of a VAT should be seen as a continuing process of improvement in both design and implementation.

The range of challenges ahead—improving the structure and implementation of the tax, dealing with the new challenges posed by international services, electronic commerce, regional integration and trade liberalization—**mean that the VAT will remain on the reform agenda for many years to come.**