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**VAT Revisited**  
**A New Look at the Value Added Tax in Developing and Transitional Countries**

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## Preface

The authors are grateful to the sponsors for their support and also, most especially, to the many colleagues both in the international financial agencies and in many national governments who have, over the years, contributed so much to our knowledge of value-added taxation (VAT) in both theory and especially practice. In particular, very useful comments and supplementary materials (often unpublished) bearing on this study were received from participants at workshops held in 2004 and 2005 at USAID and the World Bank, as well as at the first Global Conference on VAT held in Rome in March 2005.

As the extensive list of references cited in this report suggests, there is already a huge literature dealing with various aspects of VAT. As we argue throughout, however, much more work needs to be done before we will achieve a full understanding of the implications, possibilities, and limitations of the value-added tax as a fiscal tool for developing and transitional economies trying to grapple not only with the impact of trade liberalization but also numerous other problems. Despite its length, this report in many ways thus only scratches at the surface: we hope that others will be encouraged to dig deeper into many of the issues raised here, and we would of course be grateful for any comments, corrections, or criticisms that readers may be inspired to pass on to us at the address noted below.

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## 1. Introduction and Overview

Few fiscal topics are more important than the value-added tax (VAT).<sup>1</sup> Over the last few decades, VAT has swept the world: for example, apart from the United States and a few small Caribbean countries, every country in the Western Hemisphere now has a VAT. Indeed, in fiscal terms, VATs now rule in many countries around the world and are increasingly important everywhere, as shown in the Annex. But should every country have a VAT? Is the VAT in place in many developing and transitional economies (DTE) as good as it could be in economic, equity, and administrative terms?<sup>2</sup> Can it handle the growing fiscal task imposed on many DTE by trade liberalization? Can it deal adequately with the novel issues arising from digital commerce? Can it be administered sufficiently effectively by hard-pressed revenue administrations?<sup>3</sup>

The answers to such questions are critical not only to fiscal stability in many DTE but also to their growth and development. Are the VATs now in place in DTE really the efficient, simple, revenue-raisers they are often purported to be? Or are they so inequitable that it may in some cases exacerbate social tensions and hence undermine the political equilibrium reflected in a country's fiscal structure? Does VAT provide a way to tap the informal sector or may it end up expanding the range of such activities? In this report, we consider these and other critical questions about the design and performance of a tax that in recent years has become the mainstay of the revenue system in an increasing number of developing and transitional countries.

### *1.1. The Key Questions*

Since the scope and complexity of this topic precludes either complete coverage or simple summary here, we consider essentially three questions. The first question is simply, should DTE have a VAT at all? On the whole, with few exceptions, we think that they should. The second question, then, is obviously: what kind of VAT should they have? Here, the answer is by no means so clear. Different VATs may be best for different purposes in different countries, so we consider a variety of possible designs with respect to various issues. On the whole, however, we suggest that the conventional wisdom, set out notably in Ebrill et al. (2001) is generally sound, although we raise a few questions about some aspects of that wisdom. Further we suggest that the best advice one can give most DTE is that they need not worry unduly about such 'frontier' issues in VAT as the treatment of the financial and public sectors or how to cope with electronic commerce. These issues are at the forefront of VAT discussions in the developed world. They matter to DTE also, varying degrees, but what is much more

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<sup>1</sup> VAT is used throughout this report as an abbreviation for both "value added tax" and "value added taxation." The precise meaning should generally be clear from the context.

<sup>2</sup> This perhaps awkward acronym is used throughout to encompass both singular ("developing and transitional economy") and plural ("developing and transitional economies") even when "developing country" or "transitional country" (or countries) may perhaps be more appropriate.

<sup>3</sup> For discussion of some issues more specific to countries in the process of transition from centrally-planned to more market-driven economies, see e.g. Tanzi (1992, 1993), Bird (1999), Martinez-Vazquez and McNab (2000), and Mitra and Stern (2003).

important for most DTE is to concentrate on the difficult task of first getting an appropriate VAT into place and then running it effectively.

Indeed, the final, and in some ways the most important, question for DTE that already have a VAT of some sort is: how can they make a tax like VAT, which to work properly relies essentially on self-assessment, function adequately in countries that often fail to meet what most would consider the necessary preconditions for a self-assessment system (as we discuss further in Chapter 7 below)? Our answer, as already hinted, comes in two stages. First, most countries (and international advisers) should probably spend even more time and effort than they already do in attempting to determine precisely what kind of less-than-perfect VAT may function best in the particular circumstances of the country in question. Secondly, they should also work out in much more detail than anyone seems to have done so far exactly how countries can move over time from their initial VAT, which is likely to be unsatisfactory (though perhaps practically necessary), to a “good” (or at least better) VAT.

It is by no means always simple to determine how best to succeed at either of these tasks in the context of any particular country. In 1991, for example, after careful and detailed examination of Egypt’s fiscal position, its existing tax structure and its administrative capacity, as well as close consideration of recent experience with adopting VATs in other North African countries (Morocco, Algeria, Tunisia), Egypt adopted its first general sales tax.<sup>4</sup> Essentially, the new tax was a VAT limited to importers and manufactures, although it was explicitly stated that the tax base would be extended to encompass the distribution sector at a later date. It all seemed quite reasonable at the time. Looking back, however, it is now clear that this approach was mistaken.

In particular, it is now clear that the critical issue in VAT design relates not to the *stage* at which the tax is imposed but rather to the *size* of the registered firms. In 2001, when Egypt finally did extend its VAT to include wholesale and retail trade, the immediate result was to triple the number of registrants with no concomitant gain in revenue and arguably some loss in administrative efficiency owing to the need to deal with so many new, and mostly very small, taxpayers. An apparently good initial VAT design decision, based on experience elsewhere in the region as well as Egypt’s prior experience with manufacturers’ level consumption taxes and its limited administrative capacity, turned out in the end to be mistaken for at least two reasons. First, experience has shown much more clearly than was obvious fifteen years ago that one of the most critical VAT design decisions is the level of the ‘threshold’ above which firms must register from VAT—a question discussed further in Chapter 5 below.

Secondly, it is now also clear from experience in many countries that, tempting (and apparently logical) as it may often be to build upon what exists – as was done in Egypt in choosing to start VAT at the manufacturer’s level—it is generally critical to good VAT administration to start fresh with a VAT, in part precisely to remove the ‘stage’ of the production-distribution chain involved from being thought of as a critical element in tax determination. Current ‘best practice’ advice (as summarized in e.g. Ebrill et al., 2001, and International Tax Dialogue (ITD 2005) is to make a clean break and to include all firms above a

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<sup>4</sup> While many other countries could be used to make the same point, the Egyptian example is used here largely because one of the authors was partly responsible for the initial ‘mistake’ discussed here.

(fairly high) threshold. As the Egyptian case suggests, this advice seems generally sound. Nonetheless, reality may not always make it either advisable or feasible to follow this advice at those rare moments when major tax reform, such as the adoption of VAT, becomes feasible.

The standard advice may thus very often make sense. Nonetheless, it seldom provides either a clear or a simple solution in all countries. As Bird (2005) suggests, one must always keep in mind the ‘NOSFA principle’—no one size fits all. The key questions that must be answered in designing and implementing any VAT are essentially the same in all countries. However, the context within which these questions must be answered differs significantly from country to country (and indeed over time within any one country). The result is that different tax designs may be best for different countries (or for the same country at different times). Some ‘good’ features of VAT design (such as a single rate, zero-rating for exports only, or full and immediate refund of input tax credits) that in some sense may be considered universally desirable may thus be neither attainable nor indeed essential—or even necessarily desirable—in the context of a particular country at a particular time. Similarly, some ‘bad’ features (such as too high or too low a threshold, extensive exemption, or domestic zero-rating, or multiple rates) may be essential to successful adoption in the first place. Later on, of course, such features may prove to be extremely difficult to remove, so difficult choices need to be made.

In the case of Jamaica, for example, a country that introduced a VAT in 1991, a clear ‘exemption cycle’ is evident, with the initially relatively few exemptions (and domestic zero-rating) being gradually expanded over time until a major reform in 2003 eliminated many of them. Within a year, however, pressure to re-establish many of the concessions just removed was already beginning to build up (Edmiston and Bird 2004). Nonetheless, despite such later regrets, some ‘bad’ initial VAT design may still have been necessary to get the tax accepted in the first place, and on balance the price may perhaps be judged worth paying.

## ***1.2. Approaches to Answers***

Anyone who has ever tried to design and implement a VAT in any DTE is of course well aware of such realities. Nonetheless, to date surprisingly little effort appears to have been made to help those engaged in such tasks to deal with some of the important questions. For example, which factors are critical in defining the VAT design that makes most sense for a particular country? Over the years, various studies have cited a variety of factors affecting tax level and tax structure—e.g. industrial concentration, literacy, openness, ‘tax morale,’ public sector size, and administrative capacity.<sup>5</sup> Presumably, many of the same factors have a role to play in determining how particular taxes such as a VAT should be designed. Nowhere, however, can one find either a clear picture of the relationship between such features and VAT design or any clear basis for assessing the manner or extent to which the choice of particular design features in particular contexts may affect outcomes. Nor do we really attempt to provide such a picture in the present report, which is essentially a ‘state of the art’ survey rather than an empirical analysis.

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<sup>5</sup> Of course, many of the items listed are themselves conceptually imprecise and difficult to measure. Still, many attempts have been made to do so: for a recent summary of such studies ‘explaining’ tax ratios, for example, see Bird, Martinez-Vazquez, and Torgler (2004).

We do suggest, however, that two important, related but distinct, research agendas seem worth developing with respect to VAT design for DTE. First, is there a taxonomy within which countries can be placed? One size might not fit all. But might eight (or six, or twelve) VAT structures encompass all possible designs that would be both feasible and desirable? Some interesting pioneer work along these lines, albeit in rather general terms, was done some years ago (Shoup 1990). Subsequently, however, the question seems to have been left aside in the ‘rush to VAT’ in DTE. It is perhaps time to go back and take another look at this question, as has recently been done, for example, with respect to the almost contemporaneous ‘rush to decentralization’ in many DTE (Devarajan and Reinikka 2003).

A second approach that might prove rewarding would be to recast the familiar (if usually implicit) ‘decision-tree’ approach to tax design.<sup>6</sup> First, for example, one might set out more clearly and in more detail than is usually done the implications of different decisions that may be made with respect to critical ‘nodal’ points (e.g. with respect to zero-rating) for other aspects of VAT design. Next, the ‘optimal’ sequence of such decisions for particular countries (or groups of countries) might be assessed—for instance in terms of ‘best practice.’<sup>7</sup> Ideally, such an analysis would include some kind of sensitivity analysis attempting to assess how dependent the ‘rightness’ of particular decisions might be with respect to different characteristics of the environment within which the VAT is expected to function.<sup>8</sup> Of course many elements of such an approach are to be found in the literature (for example, in Ebrill et al. 2001). Indeed to a considerable extent the present report is along similar lines. The fact remains, however, that as yet surprisingly little has been done either to set out the relevant decision-points and their interdependence in a systematic fashion or to quantify them in any meaningful way, although some interesting recent work on VAT thresholds (Keen and Mintz 2004) provides a useful first step in this direction.<sup>9</sup> Much more such work is needed, however, if DTE facing critical VAT issues are to be able to depend on anything other than ‘expert opinion’—biased as it inevitably often is by the limited experience of the experts in question—in formulating policy decisions.

### *1.3 Outline of the Report*

Unfortunately, time and resource limitations mean that the aim of the present report is necessarily considerably more modest than the above may suggest, however. We begin in Chapter 2 with a brief review of how and why VAT has come to cover the world in recent decades. Then, in Chapter 3, we consider several critical questions about the desirability of this development and the role and effects of VAT in DTE that have been raised in recent literature, illustrating some of the argument with reference to recent experiences in several countries, such as Ukraine and Jamaica. As leading economists (e.g. Emran and Stiglitz 2005) begin to turn their attention to VAT, many of the questions their formal analysis raises about the trade, revenue, distributional, and developmental effects of VAT seem quite legitimate, and we

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<sup>6</sup> For an example of the application of this approach to the design of user charges, see e.g. Bird and Tsiopoulos (1996).

<sup>7</sup> For a recent interesting example of this approach in the field of tax administration, see Vazquez-Caro (2005).

<sup>8</sup> Alternatively, this might perhaps be viewed as a ‘risk analysis’ since the degree of reliability of our knowledge with respect to various salient characteristics affecting outcomes is likely to differ widely.

<sup>9</sup> Another useful example of such work, although less formally rigorous in structure, is Harrison and Krelove (2005).

certainly do not as yet have clear answers to them. Nonetheless, on the whole our conclusion remains that the best answer for most countries is almost certainly not to reject VAT but rather to understand it better and to improve its design and implementation. Almost without exception, DTE need more and better revenue systems: good consumption taxes are almost always a critical element in such systems, and a VAT is, we contend, almost without exception still the best form of general consumption tax available. In the immortal words a World War I cartoonist (Bruce Bairnsfeather) once put into the mouth of a soldier who was complaining about the inadequacy of the foxhole to which he has been assigned: ‘If you know a better hole, go to it.’ We do not think there is a better ‘hole’ than VAT for most DTE.

We are as enthusiastic about well-designed selective consumption taxes, good user charges, and in some instances even the acceptability of trade taxes as the next person. However, the sad fact remains that DTE cannot as a rule finance the education, health and infrastructure development they need from such sources. Since the revenue possibilities of both personal income taxes and corporate income taxes are limited in most DTE, the key revenue choice in reality lies generally between payroll taxes and VAT.<sup>10</sup> On the whole, given the critical role of the so-called ‘informal’ sector in most DTE and the extensive use of the payroll base to finance social security, VAT, despite its limitations, still seems to us to be the best road for most DTE to follow. Most experienced analysts of development taxation, regardless of political persuasion, seem to reach much the same conclusion.<sup>11</sup>

Better theory should of course provide better guidelines for much needed empirical analyses, although to date the few such analyses made of VAT seem to be based on inevitably questionable cross-section or (limited) panel data which are difficult to relate in policy practice to relevant country settings. Of course, empirical work is hampered by the fact that good data are often unavailable. Continued development of both theoretical and empirical analysis of VAT will presumably eventually provide better ‘optimal’ policy designs. Still, the optimal tax approach (e.g. Newbery and Stern, 1987) while often suggestive has, as yet, not proven to be of much practical help in tax policy design in any DTE setting, in part because, as Slemrod (1990) noted, it has not generally managed to factor in adequately the often dominant administrative considerations, let alone the even more important political economy dimension (Moore, 2004).<sup>12</sup> Since such large and complex tasks are well beyond the scope of this report, all we attempt to do in the remaining chapters is to set out selectively some of the tasks that need to be done as VAT becomes as important a focus for future academic and policy research as the income tax has long been.

To begin with, in Chapter 4 we consider several important issues in choosing the base of a VAT that have proved troublesome not only in DTE but more generally—the treatment of real property, the treatment of public sector, non-profit and charitable activities (the PNC sector), and the treatment of financial services. We consider a number of possibilities and conclude that

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<sup>10</sup> See, for example, the detailed discussion of the limited potential revenue and policy use of personal income taxes in DTE in Bird and Zolt (2005).

<sup>11</sup> See, for recent examples, Toye (2000), Moore (2004), and Heady (2004).

<sup>12</sup> See, however, Munk (2004) for a recent useful contribution. Even this interesting paper, however, suffers to some extent from inadequate consideration of the ‘real world’ of VAT administration, in which what is done is often very different from what reading the law suggests should be done.

while in principle more could be done in all these areas even in DTE, on the whole most DTE should not try to pioneer in such matters, particularly since the distortions arising from the present admittedly imperfect bases of most DTE VATs seem unlikely to be very important.<sup>13</sup>

In Chapter 5 we go on to consider briefly some of the key elements of VAT structure such as rates, thresholds, exemptions, and zero-rating, again illustrating some points with reference to experience in several countries. We conclude that in most cases there are excellent reasons for the prevailing conventional wisdom (as set out recently, for example, in ITD 2005) —e.g., one rate, a fairly high threshold, and as little use of exemptions and (non-export) zero-rating as one can get away with. Again, however, we note that there surprisingly little evidence supporting much of that wisdom and that there may be plausible reasons for diverging from its prescriptions in at least some instances.

Much recent discussion of VAT in the developed world has related to two ‘new’ phenomena. The first is the rise of ‘digital’ or ‘electronic’ commerce. The second is the apparently increasing interest in a number of countries in ‘sub-national’ VATs. We discuss each of these questions briefly in Chapter 6, drawing heavily on some of our earlier work.<sup>14</sup> As with the ‘frontier’ tax base issues of the PNC sector and financial services, we conclude that, on the whole, ‘e-commerce’ is not at present a matter of great concern for most DTE and is unlikely to become a significant factor in shaping their VATs for years to come. On the other hand, we suggest that there may indeed be a limited role in at least some DTE for some forms of sub-national VAT at the regional level (especially in larger federal states such as India and perhaps Argentina).<sup>15</sup>

We conclude our review of how VAT works in DTE in Chapter 7 by discussing, albeit briefly, a few of the more critical administrative issues.<sup>16</sup> In most DTE, as Milka Casanegra famously said, “...tax administration *is* tax policy” (Casanegra de Jantscher, 1990, 179). That is, the real tax system is that which is administered, not that which may appear in the formal law. It is thus critical both that the initial tax policy design takes into account real administrative limitations and that constant attention is paid not only to the many aspects to which attention must be paid in order to make VAT work but also, equally important, to maintaining and adapting VAT administration to confront the realities of changing countries and a changing environment. As Bird (2005) puts it, no DTE starts with a good VAT administration; rather, they have to ‘grow’ one. We set out some ideas on how this may best be done in Chapter 7, again illustrating some points with examples from a variety of jurisdictions. We also consider briefly some current ‘hot’ topics such as VAT refunds, VAT fraud, and VAT withholding systems as well as what may be called ‘semi-visible’ enterprises may perhaps best be dealt with in different countries.

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<sup>13</sup> We again note, however, that neither we nor anyone else have as yet really studied such matters empirically.

<sup>14</sup> See especially Mintz, Wilson and Gendron (1994), Gendron, Mintz and Wilson (1996), Bird and Gendron (1998, 2000, 2001), and Bird (2003b, 2005b).

<sup>15</sup> As Bird (2003) argues, a different form of VAT may have a role to play as a useful addition to local taxation at least in larger metropolitan areas (as it does in Japan and Italy and is under consideration in Colombia and South Africa), but we do not discuss this possibility further in the present report.

<sup>16</sup> The best overall discussion of VAT administration remains Ebrill et al. (2001); see also Tait (1988, 1991) and Bird and Casanegra de Jantscher (1992).

In Chapter 8, we step back a bit and consider whether the (relatively few) DTE, mainly small islands and countries in the Middle East that do not as yet have a VAT—as well as, perhaps, regional governments in large federal states (see Chapter 6)—should adopt one. How does a jurisdiction, national or sub-national, decide when it should adopt a VAT? We discuss the issue by considering the pros and cons of VAT compared to other forms of general sales tax such as a turnover tax and a retail sales tax.

To conclude, since in practice political considerations generally rule in tax policy decisions, we consider in Chapter 9 some aspects of the role that VAT and VAT design may play in sustaining ‘political equilibrium’ in the fiscal sphere in many DTE, a point we illustrate by drawing on some evidence from Latin America.

To sum up our general perspective in this report, VAT is of course not ‘the answer’ to all the fiscal problems facing the many and varied DTE around the world. Like most human institutions, VAT is neither perfect nor perfectible. Nonetheless, some form of VAT almost certainly constitutes a critical ingredient in the answer for most countries, although of course even the best possible VAT will not solve all the fiscal problems of any DTE. VAT may not always work well. In some cases, VAT can certainly be designed better to fit the context of the country. In many instances, VAT can definitely be better administered even in the face of adverse political and capacity factors. Nonetheless, so long as a general consumption tax makes sense as a key part of a country’s fiscal system, as is surely true in most DTE, VAT remains the best available fiscal instrument around. Our purpose here is thus neither to praise nor to bury VAT but rather simply to urge that much more study and attention needs to be devoted to a tax that has now become the mainstay of revenue systems around the world and to suggest some possible lines of inquiry that may reward further investigation.

## 2. The Rise of VAT

In this chapter, we consider four relatively simple questions. First, what exactly is VAT? Second, which countries have VATs, and how important is VAT in these countries? Third, why has VAT spread around the world so quickly and so broadly? Fourth, is there one ‘VAT world’ or two?

### 2.1. What Is a VAT?

What exactly is a VAT? A recent definitive statement defines a ‘value added tax’ as “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 advantage 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)” (ITD, 2005, 8; emphasis omitted). The same name, however—whether ‘value-added tax’ or the more recently favored ‘goods and services tax’—may cover a variety of taxes in different countries. Indeed, in many ways VAT is not really ‘a tax’ but rather a set of taxes that share certain characteristics. To put the point in zoological terms, VAT is neither a gorilla nor a chimpanzee but rather a genus such as ‘primates’. Our own attempt to survey the genus as it stood in mid-2005 is shown in Annex Table A1.<sup>17</sup> In the balance of the present section we discuss the question in more general terms.

#### 2.1.1. VAT in the European Union

Some seem to think that the only ‘real’ VATs are those that resemble the VATs found in the European Union (EU).<sup>18</sup> The member states of the European Union (EU) have all necessarily adopted essentially the same model of VAT as set out in the Sixth VAT Directive of 1977. While Cnossen (2003) argues persuasively that this Directive needs major revision to cope with the realities of the much expanded, more integrated, and more developed EU of today, it remains the basic EU VAT framework. The 10 new member states that joined the EU in 2004 thus had to adapt their VATs to fit the Sixth Directive as an important condition of membership.<sup>19</sup> All countries in the EU thus in a sense have the ‘same’ VAT. Even within the

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<sup>17</sup> The information in Annex Table A1 differs from ITD (2005) and Annacondia and van der Corput (2005)—which themselves differ, although they draw from the same source—in part because the VAT universe is constantly changing but also because what is a ‘country’ is not always clear (e.g. is French Polynesia to be considered separately from France?) and, more importantly, because just what is a ‘VAT’ remains a bit fuzzy around the edges (e.g. does India have a central VAT? Did Colombia adopt a VAT in 1966 (as Bird (1970) suggests) or in 1975 (as shown in Annex Table A1)?). When a country is a country and whether it has a real VAT or not to some extent are questions the answers to which lie in the eyes of the beholder.

<sup>18</sup> See, e.g., the emphasis on ‘crediting’ as an essential element of a real VAT in the definition quoted above from ITD (2005), which would seem to rule out ‘subtraction’ VATs such as that in Japan.

<sup>19</sup> Cnossen (1998) provides an excellent discussion of the ‘pre-EU’ state of VAT in most of the accession countries.



‘old’ fifteen member states of the EU, however, important differences exist from country to country both in the structure and the operation of VAT.

For example, Table 2.1 illustrates the range and variety of VAT rates applying in the ‘old’ EU countries. Two points are immediately obvious from this table. First, the much-recommended unitary rate structure is found only in one country, Denmark. In fact, most countries have two reduced rates. Secondly, even leaving such vestiges of colonial era as Spain’s two small African territories out of account, the range of rates in the EU is astounding—from a low of 2.1% in Corsica to a high of 25% in Denmark and Sweden.

**Table 2.1**  
**VAT in the ‘Old’ Member States of the European Union**

Country	Standard Rate	Additional Rates	Regional Rates	Domestic Zero-rating
Austria	20.0	10.0, 12.0	16.0 <sup>a</sup>	No
Belgium	21.0	6.0, 12.0	--	Yes
Denmark	25.0	-- <sup>b</sup>	--	Yes
Finland	22.0	8.0, 17.0	--	Yes
France	19.6	2.1, 5.5	0.9 to 19.6 <sup>c</sup>	No
Germany	16.0	7.0	--	No
Greece	18.0	4.0, 8.0	3.0, 6.0, 13.0 <sup>d</sup>	No
Ireland	21.0	4.3, 13.5	--	Yes
Italy	20.0	4.0, 10.0	--	Yes
Luxembourg	15.0	3.0, 6.0, 12.0	--	No
Netherlands	19.0	6.0	--	No
Portugal	19.0	5.0, 12.0	4.0, 8.0, 13.0 <sup>e</sup>	No
Spain	16.0	4.0, 7.0	0.5 to 13.0 <sup>f</sup>	No
Sweden	25.0	6.0, 12.0	--	Yes
United Kingdom	17.5	5.0	--	Yes

Source: OECD (2004).

a. This rate applies in two border regions (Jungholz and Mittelberg).

b. Annacondia and van der Corput (2005) report that although the first sales of artists’ products is subject to the standard rate in Denmark, only 20% of the taxable base is taken into account so that the result is a special reduced rate of only 5%.

c. Rates of 0.9, 2.1, 8.0, 13.5, and 19.6% apply in Corsica, and rates of 1.05, 1.75, 2.1, and 8.5% apply in Frances’ ‘overseas departments’ (DOM) with the exception of French Guyana.

d. These rates apply in the following regions – Lesbos, Chios, Samos, Dodecanese, Cycladen, Thassos, Northern Sporades, Samothrace, and Skiros.

e. Rates apply in Azores and Madeira.

f. Rates apply in Ceuta and Melilla.

Actually, the differences are even greater than Table 2.1 suggests owing to the wide variation in the extent to which domestic goods and services are zero-rated in the different countries. When differences in the scope of zero-rating—a practice much more extensive in the

UK than in France, for example—are first combined with the differences in rate structure shown in Table 2.1 and then weighted by the differing shares of the tax base to which these different rates apply in different countries, the result is that the average ‘effective’ VAT rate both varies greatly among EU member states and is often significantly different from the standard rate, as shown in Table 2.2.<sup>20</sup>

**Table 2.2**  
**Deviations between Standard and Implicit VAT Rates in the European Union**

	<b>Standard Rate (%)</b>	<b>Implicit Rate (%)</b>	<b>Gap as % Standard Rate</b>
Belgium	21	16.9	19
Denmark	25	25	0
Germany	16	14.7	8
Greece	18	14.2	21
Spain	16	10.9	32
France	19.9	15.5	22
Italy	20	15	25
Luxembourg	15	11.1	26
Netherlands	17.5	14.6	17
Austria	20	17.3	14
Portugal	17	13.2	22
Finland	22	19.9	10
Sweden	25	21.4	14
United Kingdom	17.5	13.7	22
<i>Mean</i>	<i>19.4</i>	<i>15.9</i>	<i>19</i>
<i>Coefficient of Variation</i>	<i>16</i>	<i>24</i>	<i>45</i>
<i>Minimum/Maximum</i>	<i>15/25</i>	<i>10.9/25</i>	<i>0/32</i>

Source: Mathis (2004).

With the notable exception of Denmark, where 25% means 25%, the gap between this implicit weighted rate and the standard rate varies from a low of 8% in Germany to a high of 32% in Spain. The so-called ‘non-standard’ rates (including domestic zero rates) apply, on average, to 31% of the VAT tax base in the EU. Most (but not all) of the favored transactions consist of final household consumption (Mathis, 2004). For example, in Ireland, a country that makes extensive use of zero-rating, 12% of the total VAT base is zero-rated, and 93% of the items thus freed of tax are final consumer goods and services. The UK makes even more use of such zero-rating, with as many as one-fifth of all transactions being zero-rated. Some other EU

<sup>20</sup> See also OECD (2004) for a detailed look at the many special rates and treatments to be found in almost every VAT system in the developed world. France, for example, actually applies 10 VAT rates (many in specific territories) and, as do many OECD countries, also applies special methods of base determination (‘margin schemes’) to a number of activities.

countries such as Spain, Portugal, and Greece make little use of zero-rating but subject a significant fraction of the VAT base to low rates.

Of course, differential rates are by no means the end of the tale. Without exception—even in Denmark (see note to Table 2.1)—every country in the EU has a range of different treatments and special features in its VAT that further affect the impact of the tax, as detailed recently in OECD (2004). As discussed further in Chapter 5, for example, registration thresholds vary from being non-existent in some countries (Belgium, Italy, Netherlands, Portugal, and Sweden) to about US\$90,000 in the UK. Moreover, thresholds are differentiated across sectors in some countries (France, Greece, and Ireland) and differ with respect to registration and collection in others (Belgium, Netherlands, and Portugal). Exemptions vary even more widely from country to country. Strict Denmark, for example, exempts passenger transport, burials, and travel agents, while generous Ireland goes further and also exempts public water supply, broadcasting, child care, and admissions to sporting events. Portugal exempts all agriculture. Similarly, some countries apply special administrative systems applied to certain types of transactions or activities: for example, while it is common to tax travel agencies on a ‘margin’ basis, in France the same treatment is also extended to real estate agents.

Finally, VAT administration in different EU countries obviously works with varying degrees of efficiency. Gebauer, Nam, and Parsche (2003), for example, estimate (from national accounts data) that the average 1994-96 ratio of tax evasion (as a share of VAT revenues) for 10 EU countries ranged from a low of 4.2% in (no surprise) Denmark to a high of 34.5% in Italy.<sup>21</sup> While—as the Danish case illustrates—these authors found no clear correlation between the height of the standard VAT rate and the extent to which the tax was evaded, evasion was nonetheless found to be fairly closely related to the size of the ‘underground economy’, an issue to which we shall return in Chapter 3 and again in Chapter 7 below.

### **2.1.2. A VAT is a VAT is a VAT?**

Even within the ‘old’ EU countries, many of which have had essentially similar VATs in place for close to 40 years, VATs thus differ in many important respects from country to country. It is thus hardly surprising that when one considers VAT in the world as a whole such differences are even more marked, not least within DTE. Nonetheless, in an equally important sense, a VAT is indeed a VAT no matter where it is found. In principle one can conceive of numerous types of VAT distinguished by the breadth of the base (gross product, net income, consumption), the treatment of foreign trade (origin, destination), and the method of collection (addition, subtraction, invoice-credit) (Shoup 1990). In practice, however, almost all VATs in the world today follow the EU model in that they are, at least in principle, intended to tax consumption on a destination basis (imports taxed, exports zero-rated) and are applied on a

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<sup>21</sup> Although these calculations are of course only estimates and are obviously open to question to some extent e.g. with respect to the accuracy of the underlying assumption that the national accounts of each country include the same extent of ‘underground’ activity, they are very carefully done, adjusting for example for differential coverage of different VAT rates, and so on.

transaction basis using the invoice-credit (output tax less input tax) method.<sup>22</sup> In addition to the recent ‘accession’ countries other countries aspiring to EU membership, or heavily influenced by EU advisers, have also essentially followed the EU VAT model in many respects.

Elsewhere in the world, however, while the influence of the EU model is still clear—for instance in the early Latin American VAT adopters—other models have been developed and adopted, notably in New Zealand and Japan. The principal distinguishing feature of the New Zealand (and to a lesser extent Australian) model is the breadth of the base (e.g. with respect to the PNC sector, as discussed in Chapter 4), while the Japanese VAT uniquely takes the ‘subtraction’ form for most VAT taxpayers (Schenk 1989).<sup>23</sup>

One factor shaping the VAT found in many DTE has been the nature of the expert advice they have received from abroad. In many former French colonies, for example, some key features of their VATs to this day reflect the structure of the French VAT at the time the country in question first adopted a VAT (Hill 1977). Even more important, during both the early phase of VAT adoption in Latin America and the later spread of VAT around the world, has been the role of the Fiscal Affairs Department (FAD) of the International Monetary Fund (IMF), the leading ‘change agent’ in tax policy in much of the world in recent decades. Although FAD has never formally set out its own ‘model’ of an appropriate VAT for a developing country, its preferences have, over the years, been set out in some detail in a series of important publications (Tait 1988, 1991; Ebrill et al. 2001; ITD 2005).<sup>24</sup>

Regardless of the basic model from which they may have started, however, as time passed and circumstances changed, many countries have introduced home-grown variations into whatever VAT design they initially adopted.<sup>25</sup> Nonetheless, compared to the income tax, most VATs found around the world are essentially cut from the same mold. As Thuronyi (2003, 312) notes, “while there are differences in VAT from one country to another, compared with the income tax VAT laws are remarkably similar.”

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<sup>22</sup> A major exception, however, is the origin-based income-type VAT that has been suggested as a local business tax by Bird (2003) and that exists in various forms in Italy, Japan, and several US states. Two other significant deviations from this rule are the common application of the ‘margin’ approach in some industries as mentioned earlier (an approach once also used extensively in many transitional countries) and, more importantly, as discussed in Chapter 7 below the prevalence of ‘special’ regimes for ‘small’ taxpayers.

<sup>23</sup> For further discussion of the Japanese tax, see Tamaoaka (1994), Ishi (2001), and Beyer (2001). Initially, the VATs adopted in the countries emerging from the former Soviet Union also were imposed to some extent on a subtraction basis: see e.g. the discussion of Belarus in Bird (1995). Over the 1990s, however, almost all these VATs moved to the invoice-credit approach (see Baer, Summers and Sunley, 1996).

<sup>24</sup> See also the three model VAT statutes available at <http://www.imf.org/external/np/leg/tlaw/2003/eng/>, as well as the model law set out in Schenk (1989a). The Basic World Tax Code developed at Harvard under USAID auspices also sets out a ‘model’ VAT law for developing countries (Hussey and Lubick, 1992), although not one that appears to have had much direct influence on any country.

<sup>25</sup> An interesting example, though one that probably should not be emulated, was Canada’s initial adoption of many ‘income tax’ concepts (e.g. with respect to the valuation of automobiles provided by businesses) in its Goods and Services Tax (GST), as noted in Bird (1994a). Given this starting point, it is perhaps not surprising that over the years the legislative and regulatory apparatus of the GST in Canada has come to resemble in complexity and size that of its income tax.

## 2.2. How VAT Has Spread

The Annex to this paper contains two tables summarizing the status of VAT around the world at present: The first, Table A1, is a summary table on the present status of VAT—essentially a revised version of a similar table in ITD (2005). There are now around 140 countries with a VAT of some sort.<sup>26</sup> According to Annacondia and van der Corput (2005), 26 additional countries now have some other form of general consumption tax and about the same number have no such tax. On the whole, however, the normal thing these days is to have a VAT. The few countries without a VAT constitute a heterogeneous grouping including the United States, a few odd cases like Iraq, Iran, and Cuba, some of the smaller oil-rich countries, and a fairly large number of small island countries in the Caribbean and the Pacific. The second exhibit in the Annex, Table A2, shows the importance of VAT in the revenue systems of those countries that have it and also provides some VAT indicators that we shall discuss further in Chapter 3 below.<sup>27</sup>

Table 2.3 shows a summary picture of the spread of VAT and Table 2.4. summarizes the rapid expansion of domestic consumption taxes as a share of total tax revenue in DTE in recent decades.<sup>28</sup> In revenue terms, VAT is now the single most important source of tax revenue in some countries, and one of the most important sources in many more. In Latin America as a whole, for example, as Table 2.4 shows, general consumption taxes (mainly VAT) rose from only 14% of tax revenues in the 1970s to close to one-third by the end of the century. While less marked, similar increases may be seen in other DTE regions (Africa, Asia). Note that in no region does the rise of VAT appear to have been at the expense of income taxes: VAT and income tax have, it seems, proved to be more complements than substitutes. On the contrary, excises and especially taxes on foreign trade are the categories that have over time declined to accommodate the relative expansion of VAT. We discuss the revenue aspects of VAT further in Chapter 3 below.

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<sup>26</sup> VAT may well lurk in the future even of many of those few countries that are now VAT-free. In 2004, for example, the IMF recommended that Bahrain should adopt a VAT (*Tax Notes International*, 35 (September 27, 2004, 1152), VAT is now under consideration in a number of Pacific Islands (Grandcolas, 2005), and Dominica has just enacted a VAT law ([www.taxanalysts.com/www/website.nsf/Web/FreeBulletins?OpenDocument](http://www.taxanalysts.com/www/website.nsf/Web/FreeBulletins?OpenDocument) [3 October 2005]). No doubt still more jurisdictions have leaped, or soon will leap, onto the VAT bandwagon.

<sup>27</sup> We are grateful to Bayar Tummenasan at Georgia State University for his kind assistance in assembling these data.

<sup>28</sup> For a sample of country experiences, see e.g. Gillis, Shoup, and Sicat (1990), OEA (1993), Yoinco and Guevara (1988), Gonzalez (1998), and OECD (1988). A particularly topical and important case is that of India, on which see e.g. Shome (1997), Chelliah (2001), Empowered Committee (2005), and Bagchi (2005).

**Table 2.3**  
**Spread of the VAT <sup>1/</sup>**

	Sub-Saharan Africa	Asia and Pacific	EU15 plus Norway and Switzerland	Central Europe and FSU	North Africa And Middle East	Americas	Small Islands <sup>3/</sup>
Total <sup>2/</sup>	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

Source: ITD (2005).

<sup>1/</sup> Regions defined as in Ebrill et al. (2001), except Serbia and Montenegro included in Central Europe.

<sup>2/</sup> Figure in parentheses are number of countries in the region.

<sup>3/</sup> Island economies with populations under 1 million, plus San Marino.

**Table 2.4**  
**Tax Structure by Region, Percentage of Total Tax Revenue, 1975-2002**

	Income Tax			Social Security	Domestic Goods and Services			International Trade
	Total	Individual	Corporate		Total	General Consumption	Excises	
<b>North America</b>								
1975-1980	61.0%	44.3%	15.9%	21.4%	11.7%	6.0%	5.1%	5.2%
1986-1992	57.3%	46.2%	10.5%	26.8%	12.4%	7.1%	4.6%	3.1%
1996-2002	82.4%	65.6%	15.7%	41.2%	14.7%	8.7%	5.1%	1.8%
<b>Latin America</b>								
1975-1980	25.9%	8.8%	13.9%	21.3%	32.0%	13.6%	15.3%	21.2%
1986-1992	25.3%	7.0%	14.4%	18.6%	38.5%	17.0%	17.1%	17.5%
1996-2002	29.2%	5.9%	17.8%	24.9%	54.0%	32.6%	15.5%	12.8%
<b>Western Europe</b>								
1975-1980	27.5%	21.4%	5.5%	30.8%	32.6%	18.4%	10.6%	4.3%
1986-1992	28.0%	21.3%	6.0%	31.2%	34.4%	21.6%	9.6%	2.1%
1996-2002	44.4%	30.8%	12.2%	50.1%	49.3%	29.8%	14.1%	0.3%
<b>Asia</b>								
1975-1980	37.2%	22.0%	19.7%	0.1%	35.7%	13.7%	17.6%	23.1%
1986-1992	37.2%	19.7%	18.2%	0.4%	37.4%	16.4%	15.8%	20.1%
1996-2002	44.6%	23.0%	20.3%	3.7%	38.2%	18.6%	14.5%	12.3%
<b>Africa</b>								
1975-1980	28.9%	13.2%	14.5%	6.5%	26.7%	16.6%	12.1%	34.4%
1986-1992	24.7%	13.2%	10.3%	5.9%	28.8%	16.5%	10.7%	36.7%
1996-2002	29.6%	17.1%	11.2%	6.2%	35.0%	21.1%	10.9%	32.0%
<b>CEEME</b>								
1975-1980	--	--	--	--	--	--	--	--
1986-1992	34.9%	10.1%	23.1%	20.9%	30.6%	23.3%	6.1%	11.3%
1996-2002	29.0%	13.9%	14.8%	40.2%	52.1%	31.8%	14.3%	14.2%

Source: Bird and Zolt (2005).

Notes: To maintain consistency of measurement and to allow cross-country comparisons between tax structures, the table reflects consolidated central government revenue for most countries. However, if these data were unavailable, national budget data, or some combination of national, state, and local revenues were used. To even out annual fluctuations, the figures are averaged over 1975-1980, 1986-1992, and 1996-2002.

VAT's growth has thus been both extensive, from country to country, and intensive, within countries. Once in place, VAT in many countries has grown in revenue importance for several reasons. First, to the extent countries develop, as a rule a larger proportion of transactions would generally be expected to fall within the scope of the tax.<sup>29</sup> Second, in many cases, VAT rates have tended to creep up over time. For example, even in the well-established EU system, the standard VAT rate has increased in 6 of the 15 'old' countries in the decade 1994-2003 (OECD 2004). Thirdly, as already mentioned with respect to Egypt and Jamaica in Chapter 1 above, reforms—or at least changes—in the base of VAT and other features (e.g. registration, simplified systems) that may affect revenues are not uncommon. To mention only a few recent examples: in August 2005 Greece announced its intention to introduce a 19% VAT

<sup>29</sup> For an early analysis of the changing composition of consumption tax bases, see Levin (1968). It would be interesting to move forward this sort of analysis to decompose the subsequent growth of VAT revenues in Colombia (or some other country) into e.g. automatic base growth, discretionary base growth, rate changes, and administrative improvement, but no such analysis appear to have been undertaken.

on new home sales, in July 2005 Portugal increased its standard rate from 19% to 21% (and from 13% to 15% in Madeira and the Azores), and in June 2005 Romania was reported to be increasing in its VAT rate while oil-wealthy Venezuela said it was going to lower its VAT rate.<sup>30</sup>

### ***2.3. Why VAT Has Spread***

The principal reasons for the VAT's incredibly rapid spread and success are twofold. The first was undoubtedly the early adoption of VAT in the EU and the perceived success of both the EU and its VAT. The second has been the key role played by FAD in spreading the word to developing countries. The demonstrated success of VAT in the EU showed that VAT worked. The consistent support and advocacy of this form of taxation by the IMF in a variety of countries, first in Latin America, and then around the world, first introduced the idea of VAT and then facilitated its adoption by countries with much less developed economic and administrative structures. At the same time, for various reasons of their own, all the non-EU countries of the OECD—other than the U.S.—have also, one by one, introduced VATs of their own in recent years—New Zealand in 1986, Japan in 1989, Canada in 1991, and, most recently, Australia in 2000.<sup>31</sup>

The initial stage of VAT reform has thus clearly been an enormous success. VAT has swept away other contending general sales taxes in most of the world and in many countries has come to rival and even dominate the income tax as the mainstay of national finances. Indeed, no other fiscal idea has ever spread so widely so rapidly or been so successfully adopted in such a wide variety of countries. Not all is sunshine in 'VATland,' however. Increasingly, clouds of varying sizes and shapes seem to be looming on the horizon—some in all VAT countries, but some more particularly in DTE, many of which have become particularly dependent on VAT and hence more vulnerable to looming or emerging problems with VAT.

Some such problems, such as the relatively high compliance cost for small firms and the vulnerability of the refund system to fraud, have always been inherent in the structure and operation of VAT. Such problems have, however, have been exacerbated in recent years by the increased fiscal weight being placed on this tax in many countries, particularly DTE seeking fiscal revenues to compensate for new pressures arising from the need to reduce tariffs to accord with WTO requirements.<sup>32</sup> Apart from these structural and administrative issues, the oft-alleged economic merits of VATs relative to alternative forms of taxation have recently been subjected to serious question. New issues with respect to sub-national VATs and the effects of cross-border digital trade have also become important in some countries. All these issues are discussed later in this report.

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<sup>30</sup> Information from Tax Analysts web services ([www.taxanalysts.com](http://www.taxanalysts.com), August 8 and July 11, 2005).

<sup>31</sup> The other non-EU members of the OECD—Turkey, Korea, and Mexico—all had VATs in place before they joined the OECD. Norway and Iceland, though are not members of the EU, were early adopters of VATs on the EU model. On Norway, see Bryne (2002).

<sup>32</sup> For an early discussion, see Greenaway and Milner (1993). The conventional recommendation for VAT as the main replacement source is nicely developed in Ebrill, Stotsky, and Gropp (1999). As Baunsgaard and Keen (2005) show, however, this formulation appears to work much better in developed countries than in DTE.



Much country experience suggests that many conditions are needed for durable success in tax reform, whether it takes the form of adopting a VAT or not.<sup>33</sup> Among the factors commonly mentioned are political commitment, thorough advance preparation, adequate investment in tax administration, an extensive public education program, consideration of local conditions (the NOSFA principle mentioned in Chapter 1 above), visible offsets to perceived distributional downsides, support from the business community and, by no means least, good timing.<sup>34</sup> In particular, political commitment and thorough advance preparation appear to be absolutely necessary conditions for success, followed closely by adequate investment in tax administration and extensive public education.

In DTE in which revenue constraints generally bite, fulfilling this laundry list is usually too much to expect. Unsurprisingly, few countries have managed to do it all. One result is that many problems have been encountered in implementing VAT in most DTE—ranging from flaws in tax design (e.g. inappropriate thresholds) to failures in implementation (weak registration procedures, poorly functioning refund systems, insufficient audit, etc.). Nonetheless, although a few countries (Belize, Grenada, Ghana, Malta and Vietnam) first introduced and then cancelled, suspended or modified a VAT, all appear to have subsequently reintroduced a VAT in one form or another or to be intending to do so soon. VAT, it seems, is here to stay in DTE (as elsewhere) and is almost certain to spread even further in the future. But what kind of VAT? We discuss this question in detail in Chapters 4 through 7 below. First, however, we consider in Chapter 3 some criticisms that have recently been raised about the whole role of VAT in DTE.

#### *2.4. Two Worlds or One?*

Before concluding this initial overview, however, it may be useful to raise the question of whether there are two VAT worlds or one. That is, are VATs in developed countries—like the EU examples mentioned in section 2.1—really the same animals as VATs in DTE? More specifically, what lessons might the extensive experience of EU countries and other developed countries (e.g. New Zealand, Canada) have to offer for VAT design, reform and implementation in DTE?

Experience with the recent First Global Conference on VAT held in Rome in March 2005 was on the whole encouraging in this respect. Of course, this initial attempt to establish an ‘international tax dialogue’ in the sense of creating a community that shares knowledge about mutual problems, in this case with respect to VAT was not completely successful. One reason

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<sup>33</sup> See, for some examples, Terkper (1996, 2000) and Chapman (2001) on Ghana; Schatan (2003) on Mexico; Jenkins and Kuo (2000) on Nepal; Jenkins and Khadka (1998) on Singapore; Jenkins, Kuo and Sun (2003) on Taiwan; and Waidyasekera (1998) on Sri Lanka. For a more general discussion of tax reform, see Bird (2004) and references cited there. We return to this question in Chapter 9 below.

<sup>34</sup> The case of Canada is interesting in this respect. It introduced its VAT (the Goods and Services Tax, GST) in 1991, right in the midst of a tough recession. The result was a political disaster for the party in power, which was obliterated in the subsequent 1993 election. On the other hand, as Dungan and Wilson (1993) note, one result of this timing was that the much-discussed ‘inflationary’ impact of GST (e.g. Whalley and Fretz, 1990) was not visible, as has also been noted for other countries (e.g. Tait, 1988; Pagan, Soydemir, and Tijerina-Guajardo, 2001; Valadkhadi and Layton, 2004). We do not discuss the ‘price level’ effect of VAT further in this study, except briefly in the context of foreign trade in Chapter 3 below.

was precisely because in some respects developed countries and DTE come from such different worlds that it was not always easy to communicate with each other.

Countries concerned with improving how financial sector activities are taxed in a complex developed economy (e.g. Pallot 2005; Pallot and White 2002) or with extending the scope and reach of electronic invoicing in many ways are simply not operating in the same reality as countries coping with the initial months of introducing a VAT in an environment in which tax payments are still generally made in person at tax offices or in which the idea that tax administrations should first collect a tax and then pay (much of) it back is completely novel. Nonetheless, in many ways all countries face the same problems to a considerable extent with respect to VAT, albeit in different mixes and proportions.

This point was nicely brought out at the Rome conference, for example, in a session in which a UK official made an extremely interesting presentation of VAT fraud strategy in that country (Leggett 2005).<sup>35</sup> During the discussion after this presentation, an official from an African country asked how the UK dealt with the major problem his own country faced, namely, the undervaluation of imports. The answer was that the UK had not yet dealt adequately with this problem although it was next on their agenda. Circumstances differ, and so do priorities.

Another example of mutual non-comprehension at the same conference occurred when a presenter from Barbados noted in passing that her country was concentrating on reducing arrears rather than on applying fines for various infractions in accordance with the law (Weeks 2005). Some discussants from developed countries seemed to have considerable difficulty in understanding why such a choice had to be made—that is, why Barbados did not simply apply the law in all cases. They simply did not understand the reality within which tax administrators in many DTE have to operate on a daily basis. Barbados may be making a perfectly rational allocation of its scarce resources by chasing already those in the system rather than seeking those who are in hiding.

The point of both these stories is simply that while in some sense everyone has the same problems in VAT administration, the relative importance of different problems, the priorities attached to resolving them, and the resources available to deal with them differ so widely from country to country that communication across borders may at times be a bit difficult. Still, while those concerned with VAT in different countries may sometimes feel that they are speaking to people from another world—and in some respects they are—there remains much that countries can and should learn from the very considerable experience that has now been accrued around the world with respect to VAT design and implementation.

As Ebrill et al. (2001) and ITD (2005) demonstrate in detail, for example, we all now know that good VAT design makes good VAT administration easier and that bad design may make good administration almost impossible. Similarly, it is now well understood that VAT, like all modern taxes, requires both taxpayers and tax officials to behave properly if it is to work correctly.<sup>36</sup> In the new language that those concerned with tax matters are learning all over the world, to apply a tax effectively one must know one's clients—their strengths, their weaknesses,

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<sup>35</sup> See also National Audit Office (2004).

<sup>36</sup> We discuss this a bit more in Chapter 7 below. See also Bird (2004a).

their needs. In principle, how to proceed is simple, and universally desirable: first, one must first understand the problem, which requires measurement and analysis, then develop a strategy to deal with the problem, and finally continue to evaluate and appraise outcomes and adapt as necessary to changing realities.

Of course, it is undoubtedly much easier to do all these good things in developed countries with highly developed formal sectors, experienced and capable tax administrations, and good databases than it is to do them in DTE that too often lack all these critical ingredients. Moreover, as already noted in Chapter 1, the problems at the forefront of the VAT list are unlikely to be the same in all countries. In the EU, for example, current ‘hot’ problems include coping with relatively sophisticated fraud schemes, dealing with the complexities generated by trade in digital services, coping with the nuances of financial and non-profit activities, and developing modalities within which to develop the apparently increasing need for international cooperation to resolve many of these issues. In sub-Saharan African countries and other DTE with huge informal sectors, very limited administrative resources and, in many cases, little apparent political will to support effective tax administration, the problems are both much more fundamental and generally a lot more difficult to resolve in practice. Nonetheless, despite these differences, there is much that countries can learn from each other.

Almost all countries, for example, continue to worry about the equity aspects of VATs. Although developed countries are unlikely to face political unrest on this issue at the levels seen in recent years in countries such as Mexico, Colombia, and the Philippines, it is clear that VATs in all countries have in many ways been shaped by concern about distributional issues.<sup>37</sup> In part for this reason, the conventional ‘expert’ opinion that the fewer rates and exemptions the better the VAT seems to have had less influence in some EU countries than in some of the recent DTE VAT adopters more susceptible to expert (usually FAD) guidance. Recently, for example, Sweden’s Minister of Finance explicitly rejected a report that suggested replacing the country’s present multiple rate VAT system (rates of 6, 12, and 25%) by a single flat VAT rate of 21.7%.<sup>38</sup> In practice, the balance between equity and administration in any particular country at any specific time is almost invariably struck more by luck than by science. If, as is arguably often the case, it proves necessary to do so within the VAT—an issue discussed further in Chapter 3 below—if a country is to be able to adopt a VAT and run it successfully, how should it best be done: through zero-rating, exemption, reduced rates? Although there are no very conclusive evidence on this critical issue, we suggest in Chapter 4 that perhaps the last of these three options may be the least of these ‘evils’ (as conventional wisdom would have it).

A similar point can be made about VAT compliance costs. While there has been considerable effort in a few (mainly developed) countries, from Sandford et al. (1981) to Hesseldine (2005) to measure these costs, it is by no means obvious what, if anything, one can or

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<sup>37</sup> This protest took quite different forms in the three countries mentioned. In Mexico, there were massive street protests against a proposed VAT reform, and it did not proceed. In Colombia, a similar reform resulted in such prolonged congressional debate and opposition that the reform law was withdrawn. In the Philippines, the Supreme Court issued a restraining order halting implementation of a VAT reform that had actually been passed by the legislature. But the result in all cases was the same: VAT reform was blocked.

<sup>38</sup> As reported on June 29, 2005, at [www.taxanalysts.com](http://www.taxanalysts.com). Note that the recommended flat rate is very close to the ‘effective’ rate for Sweden shown in Table 2.2 above.

should learn from such studies with respect to VAT design and administration.<sup>39</sup> Why, for instance, is the now standard IMF advice for high thresholds in DTE (Keen and Mintz 2004)—advice that is based at least in part on the findings of such studies—so generally ignored? A related issue about which much has been written but little is known is the implication of the important ‘shadow economy’ for the design and operation of tax systems in DTE. Both VAT thresholds and the more general question of special small business tax systems are clearly related to this issue, but as yet little thought seems to have been devoted either to the implications and modalities of running parallel ‘special’ and ‘general’ regimes or indeed to the more basic question of the extent to which the size and nature of the informal economy is itself a function of the interaction between the tax system and prevailing norms and customs.<sup>40</sup>

VAT fraud has come increasingly to be the focus of much discussion of VAT in developed and developing countries alike. All seem to agree that a better policy framework, better risk management and audit, and more and better international cooperation are key ingredients in the solution to this problem in developed countries. Presumably the same is true, if usually less attainable, in DTE as well.<sup>41</sup> Some countries have reportedly had success with approaches such as recourse to the cash method, VAT withholding systems, ‘tax lotteries,’ and temporary closures of premises that do not issue proper VAT receipts. But there appears to be no systematic assessment of the relative merits of such methods or of their possible transferability to other settings.<sup>42</sup> Similarly, while much has been written about the use of new technologies to assist tax administration, there again seems to be a paucity of clear empirically-based guidance for DTE as to what works best where or why.

In short, while much has been learned from 40 years of experience with VAT in a variety of countries around the world, there is also a surprising amount that we do not yet know with much certainty and many areas in which the guidance that can be given to DTEs leaves much to be desired. As we discuss in the balance of this report, while some things do seem clear, others clearly need more work. In the EU, for example, as Cnossen (2003) argues, VAT is now showing signs of age and may need some rejuvenation if it is to continue to serve as well as it has in the past. Others (e.g. Sinn, Gebauer, and Parsche 2004) have argued that the whole VAT administrative system in EU countries needs fundamental reconsideration if the revenue base is to be protected from increasing fraud.

In this instance, interestingly, the problem may perhaps prove to be simpler to solve in DTE. Although evasion of less sophisticated varieties is similarly eating away at VAT revenues in many DTE, in most it seems clear that much of the answer lies simply in devoting more resources to enforcement and using them better (Engel, Galetovic, and Raddatz 2001; Sour 2003). If this analysis is correct then most DTE may indeed gain much by ‘benchmarking’ on good developed country administrations (Vazquez-Caro 2005) and applying (simpler) versions

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<sup>39</sup> Cnossen (1994) provides a useful discussion.

<sup>40</sup> Of course, as discussed later in the present study, there is some literature on both these subjects, but it is not as yet on the whole either very convincing or very useful to practical tax policy.

<sup>41</sup> As Toro (2005) shows in his discussion of Chile, one does not have to be rich to have a good tax administration. But there seems to be little doubt that it helps—a lot.

<sup>42</sup> For a rare exception, see the (very critical) analysis of two such special approaches to checking VAT evasion in Bolivia and North Cyprus in Berhan and Jenkins (2005). As we stress further in Chapter 7 below, there seem to be no short cuts to good tax administration.

of risk management strategies such as those set out in Leggett (2005). In the end, DTE may not have to worry all that much about some of the issues now plaguing VAT in the EU. By the time DTE get over the first critical hurdles of implementing VAT effectively—a task where the political dimension almost certainly swamps the technical one—and are ready to move on and deal with sophisticated ‘carousel’ frauds and the like, they will likely be able to learn much from whatever turns out to work best in developed countries. ‘Second movers’ sometimes have an advantage in the world of policy and administration. To sum up, while there may indeed be ‘two worlds’ in some respects where VAT is concerned, the fundamental aspects of VAT design and implementation are the same everywhere. Not everyone is on the same page at the same time, but all, it seems, are in the end reading the same book.

### 3. Does VAT Have Feet of Clay?

Almost every country now has a VAT. But are the VATs now in place in most DTE as good as they could be in economic, equity, and administrative terms? Must ‘good’ VATs in such countries always follow the same pattern? Must every DTE have a VAT? Can all DTE administer VAT sufficiently well to make the introduction of the tax worthwhile? Is VAT always the best way to respond to the revenue problems arising from trade liberalization? Can VAT be adapted to cope with the rising demands in some countries, especially federal countries, for more access to revenues by local and regional governments? Can VAT deal with such new problems as those arising from changes in business practices with financial innovations and digital commerce? The answers to such questions are critical in many DTE. VAT is too important for them not to get it as ‘right’ as possible.

In this chapter we consider some of the more serious criticisms that have recently been levelled against VAT in DTE with respect to its effects on trade, revenue, equity, and development. We conclude that, although there is much we still do not know about VAT, some authors (e.g. Riswold 2004) seem to have recently given far more weight to these criticisms than the evidence available suggests is warranted. On the whole, VAT remains the best form of general consumption tax available. In subsequent chapters, putting these issues aside, we turn to some more specific aspects of VAT design and implementation.

#### 3.1. VAT and Trade

The most important rationale for the original adoption of VAT in Europe was to facilitate trade within the then-new European Community by turning sales taxes into true destination-based consumption taxes both by ‘untaxing’ exports (and removing hidden subsidies) and by placing the taxation of imports and domestic production on the famous level playing field.<sup>43</sup> In general, it is probably fair to say that this is still the dominant view of how VAT affects trade, with economists applauding the level playing field for imports and governments generally paying more attention to the removal of barriers to exports. Recently, however, some authors (notably Desai and Hines 2002) have suggested that VAT may actually deter rather than facilitate trade. Others (e.g. Keen and Ligthart 2001, 2005) have begun to explore in more detail the theoretical framework linking VAT, tariff reform, trade, trade costs, and welfare, turning up some interesting but disquieting results.

As is not uncommon in the tax world, practice has so far been well ahead of both theory and measurement. Most DTE already have a VAT and are most unlikely to shed it regardless of what theorists may argue. Nonetheless, clearly much room remains for further theoretical and (especially) empirical work in this area. In this section, we first discuss two views of the effects of VAT on trade found in the literature. We then review the empirical evidence on VAT and trade and some macroeconomic literature that may help shed light on the debate. No doubt further interesting points will emerge from this literature in the future. For now, however, there

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<sup>43</sup> For detailed discussion of the various ways in which fiscal issues came into play in the early days of what later became the EU, see Shoup (1967).

seems little reason to call the fundamental soundness of VAT as the primary form of consumption taxation in the world into question. So long as countries have general sales taxes, VAT remains the best choice in virtually all circumstances, the major exception likely being small islands in which the only real tax base is international trade in any case.<sup>44</sup>

### 3.1.1. VAT as Competitive Advantage

One popular view that has again surfaced recently in the United States (e.g. Westin 2004; Hartman 2004, 2004a) is that a destination-based VAT provides a competitive advantage to the country that implements it.<sup>45</sup> It seems obvious to many that VAT must favor exports since it zero-rates them while it taxes imports at the border. Not only do domestic exporters not charge VAT on their foreign sales but they obtain full credit from the domestic tax authority for the VAT they paid on their business inputs. Indeed, some international economics textbooks even classify VAT as, in effect, a non-tariff barrier from the standpoint of US firms doing business with EU countries.<sup>46</sup> To a US firm trying to sell in the EU VAT looks very much like a tariff and the refund paid to EU exporters looks very much like an unfair export subsidy. To some in the US, the result seems clear: the US ends up being penalized for its relatively greater reliance on direct taxation than, say, (many) EU countries, essentially because refunds of indirect taxes (but not direct taxes) are allowed by the WTO.<sup>47</sup> Of course, as noted below, such arguments are incomplete in any case since they neglect, for example, the exchange rate adjustments that may be associated with indirect taxes.

Some liken VAT to a tariff simply because both tax imports. However, VAT taxes all domestic consumption, including that from imports, while tariffs tax only the latter component of consumption.<sup>48</sup> Unlike a tariff, VAT thus has no protective effect. Indeed, as Desai and Hines (2002) properly note, setting aside the important issue of collection costs, a VAT is clearly superior to a positive tariff for a small economy simply because consumption provides a wider tax base than imports so that a tax on consumption has a smaller deadweight loss per dollar of revenue collected.<sup>49</sup>

A quite different way in which VAT may perhaps be seen as conferring a competitive advantage is from the perspective of a country contemplating replacing some other form of sales tax by a VAT. For example, one important reason Canada (1987) preferred VAT to the country's then existing manufacturer's sales tax (MST) was not only because it would remove a

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<sup>44</sup> The conclusion in Ebrill et al. (2001, 175) that one "should temper general support for the introduction of a VAT in smaller economies with a note of caution" is well taken. See also Chapter 8 below.

<sup>45</sup> This view received considerable attention, again largely in the US, in the 1970s: for a particularly detailed empirical exploration, see Dresch, Lin, and Stout (1977).

<sup>46</sup> For example, Appleyard and Field (2001, 245-246).

<sup>47</sup> Many of those who make these arguments in the US do not seem to realize that direct taxes (as a share of GDP) are often higher in many EU countries than in the US (although they may be lower as a share of total taxes). Much of this discussion also arguably distorts the history and rationale of the GATT rules on indirect taxes as carried forward under the WTO: see, for example, the interesting arguments of Floyd (1973) and the more recent discussion in Daly (2005). But these side issues, like the prolonged controversy about the US use of direct taxes to foster exports (Daly 2005), cannot be discussed further here.

<sup>48</sup> Feldstein and Krugman (1990) point out this misunderstanding.

<sup>49</sup> A 'small' economy is one unable to influence the world prices at which it trades.

hidden tax on Canadian exports (the ‘cascaded’—and unrefunded—MST imposed on transactions prior to final sale) but also, more subtly, because it would remove a bias favoring imports. VAT, unlike MST, would extend to the retail level and thus “it would ensure a uniform tax on both imports and domestic goods and services, regardless of when costs (e.g. marketing costs) are added to imports” (Canada 1987, 35). The argument here is not so much that VAT promotes competitiveness but rather that replacing an economically flawed tax with a VAT removes some distortions from the system and levels the playing field between imports and exports.

In an article published in the late eighties, three authors at the time with Canada’s Department of Finance estimated the effective federal and provincial tax rates for final demand commodities, taking into account both taxes on intermediate inputs and on capital goods (Kuo, McGirr, and Poddar 1988). Using this framework and data from 1980 the authors demonstrated that there were indeed quantitatively significant non-neutralities not only in the (then) MST but also in other commodity taxes such as the provincial retail sales taxes. Many goods and services that bore no direct taxes were, in effect, being taxed through hidden taxes imposed on their inputs. The resulting pattern of effective rates by product and industry was unsystematic and bore little relation to any legislative intent.<sup>50</sup> For example, the indirect tax content of exports was estimated to be 1.3 percent of export revenues. Subsequent analysts correctly pointed out that to some extent the “cascading” demonstrated by this analysis may have served to correct the narrowness of the sales tax base and that there was no clear evidence of the social costs of the measured difference in effective rates (Whalley and Fretz 1990, 44).<sup>51</sup> Nonetheless, there appears to have been general acceptance of these results: a general-equilibrium analysis of the tax substitution, for example, although carried out by the critical author just cited, used the effective tax rates calculated by Kuo, McGirr, and Poddar (1988).<sup>52</sup>

Did the adoption of VAT remove the anti-export bias of Canada’s MST? From 1980 (the year of the estimate cited above) to 1996 (five years after the introduction of the GST), federal sales tax as percent of GDP rose from 2.11 to 3.49 percent. In 1980, about one-third of the price impact of the MST was estimated to be passed through to exports. However, the equivalent figure was estimated by Nouroz and Bird (2003) to be only 2 percent for 1996 using an analytical framework similar to that employed by Kuo, McGirr, and Poddar (1988). Federal sales taxes had increased by 65 percent as a share of GDP over this period, but its impact on exports had been essentially eliminated. At least in the case of Canada, it might thus be argued that the move to VAT encouraged trade.

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<sup>50</sup> Much the same results hold for U.S. state sales taxes (Ring 1999). The importance of this point with respect to sub-national VATs is discussed further in Chapter 8 below.

<sup>51</sup> This is much the same analytical point as recently emphasized, in a somewhat different context, by Emran and Stiglitz (2005), as discussed later in this chapter.

<sup>52</sup> See Hamilton and Whalley (1989, 1989a).



### 3.1.2. VAT as Neutral or Even Trade Reducing

Of course, the studies just cited rest on strong and debatable assumptions about tax incidence. Returning to the theoretical literature, the view that VAT may confer some competitive advantage has been challenged for several reasons. Edmiston and Fox (2004), for example, note that VAT (like any destination-based sales tax) taxes imports and thus obviously has some tariff-like effects and may hence discourage trade. The more common argument in the theoretical literature, however, is that VAT is neutral, i.e. has no real effects on trade, subject to certain conditions.

For example, Frenkel, Razin, and Sadka (1991) show that free trade in both goods and services will equalize the after-tax price of tradable goods and services if both countries use the destination principle and apply identical taxes. Of course, these assumptions usually do not hold. More generally, as Frenkel, Razin, and Sadka (1991) also show, with balanced trade (over any period) and provided tax rates do not vary over time, taxes on either exports or imports are equivalent and will discourage trade by driving a wedge between producer and consumer prices (the Lerner Symmetry Theorem). As Van den Berg (2004, 194), puts the point: “an import tariff, by raising opportunity costs to exporters, is a tax on exports as well as imports.” Two mechanisms bring about this result. First, in a general equilibrium setting a tariff on imports in domestic sector X reduces imports and allows the sector to expand. Assuming an increasing cost sector X, the expansion of the sector drives up the demand (and hence the price of resources) for that sector as well as for the other sector (Y), thus reducing the latter’s ability to produce and export. Second, a tariff that increases the price of imports and induces domestic consumers to buy fewer imports will reduce the demand for foreign exchange. That will lead to an appreciation of the domestic currency, thereby making exports less appealing to foreign countries.

Ebrill et al. (2001) correctly note, however, that while this equivalence result has played a large role in the literature on VAT and trade, it is based on strong assumptions that are invariably violated in practice.<sup>53</sup> The assumptions include, for example, uniform taxation and the absence of both revenue and intergenerational wealth effects from a switch from the origin to the destination principle. The applicability of the equivalence argument in the real world is inherently inconclusive since its outcome depends heavily upon the relative size of various elasticities and marginal reactions. Unfortunately, as we discuss next, the empirical literature is on the whole no more conclusive when it comes to the effects of VAT on trade.

### 3.1.3 Empirical Studies on VAT and Trade

Desai and Hines (2002) have recently examined the relationship between the reliance on VAT (VAT revenue as a percent of total government revenue) and the size of exports and imports. They conclude not only that countries relying on VAT have fewer exports and imports (relative to GDP) than countries that do not but also that the negative correlation between VAT and trade (the sum of exports and imports) is stronger for low income countries. They arrive at this conclusion by regressing measures of trade intensity (openness or export share) on

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<sup>53</sup> See e.g. Lockwood (1993); Lockwood, de Meza and Myles (1994, 1994a, 1995); and Lopez-Garcia (1996).

explanatory variables that include indicators of VAT use. Three data sets are used: (1) an aggregate cross-section of 136 countries for 2000, (2) an unbalanced panel of 168 countries over 1950-2000, and (3) data on foreign affiliates of large US multinational enterprises (MNE) in 52 countries in 1999. While Desai and Hines (2002) employ a variety of specifications, the ordinary least squares results (for the most complete specifications) may be summarized as follows:

- For the cross-section data, VAT has a negative and statistically significant impact on either openness or trade.
- For the panel data, VAT continues to be associated with reduced openness and export shares but the size of estimated effects is smaller. Although the results reported are statistically significant, they are small—e.g. that openness declines by less than one percent in response to a ten percent greater reliance on VAT.
- Finally, for the MNE data, the results are similar to the panel data.

While interesting, the Desai and Hines (2002) study is clearly far from the last word. For instance, when openness and export share regressions are run for the 1970-1998 period adding average tariff rates as an explanatory variable all VAT effects become statistically insignificant (when all fixed effects are incorporated). Tariff rates pick up most of the openness and export restriction effects (i.e. higher tariffs imply higher exports), which perhaps suggests that there are model misspecification problems. Moreover, since over this period VAT has increasingly come to replace tariff revenue in many DTE (see Table 2.4 above), simultaneity may also be a problem. Unfortunately, the authors do not discuss either VAT as a substitute for other revenue raising instruments or such important practical questions as the non-uniform application of VAT (see Table 2.2 above) and the difficulties firms face in some DTE in collecting refunds (credits).<sup>54</sup>

Although Edmiston and Fox (2004) do not mention that the most extreme results reported by Desai and Hines (2002) come from the least satisfactory models from an economic and econometric point of view, they do raise a number of legitimate concerns with how VAT actually operates in many DTE and the ways in which some of these problems may discourage international trade and exports. Such common problems as delays in the payment of credits, the opportunity cost of funds that are tied up until rebates are paid, the impossibility of getting refunds in some countries, and the inclusion of VAT paid by non-registered traders in producer prices may indeed, as Edmiston and Fox (2004) say, be viewed as ‘taxes’ on exports in many countries.<sup>55</sup> It is arguable, however, that such problems are quantitatively significant in most DTE especially if compared (as they should be) with the problems associated with possible substitute revenue sources.

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<sup>54</sup> See e.g. the discussion of Ukraine in World Bank (2003) as well as Chapter 7 below.

<sup>55</sup> Actually, although we do not discuss this point further here, taxes on exports, like taxes on intermediate goods, are not necessarily always a bad idea in the circumstances of some DTE: see, for an early argument along these lines, Sanchez-Ugarte and Modi (1987). The underlying analytical argument is similar to that developed in Emran and Stiglitz (2005).

To the more theoretically minded, of course, such comments may seem essentially irrelevant. After all, standard textbook arguments suggest that in theory exchange rate adjustments will offset any effects of VAT on exports or imports.<sup>56</sup> Since reducing the demand for imports through trade restrictions reduces exports by reducing the demand for foreign currencies used to purchase imports, the result will be an appreciation of the domestic currency that makes domestic exports more expensive to foreign customers. After a transitional period, it is argued, trade will settle down to previous levels.

In practice, however, as usual with neat theoretical results, real-world exchange rate adjustments are unlikely to yield such a precisely balanced and clean outcome. The literature on incomplete pass-through of exchange rates, for example, suggests that exchange rate adjustments will not completely offset price differences associated with tax changes. The extent of pass-through—i.e. the extent to which changes in exchange rates are fully reflected in dollar prices paid by U.S. consumers for imported goods—depends on such factors as the responsiveness of mark-ups to competitive conditions and the degree of returns to scale in the production of the imported good (Olivei, 2002). Marginal cost and mark-up effects can interact in different ways to produce various outcomes. In theory, constant returns to scale with constant mark-ups will result in complete pass-through, while constant returns to scale with variable mark-ups will result in a less than complete pass-through. Empirical analysis is the only way to sort these influences, and recent empirical studies (e.g. Olivei, 2002; and Wickremasinghe and Silvapulle, 2005) conclude that the prices of imported goods respond less than one-for-one to changes in exchange rates, even in the long run.

Purchasing power parity (PPP) theory provides another view on the relationship between nominal exchange rates and relative domestic price levels. In a recent survey, Taylor and Taylor (2004, 135) refer to PPP as “a disarmingly simple theory that holds that the nominal exchange rate between two currencies should be equal to the ratio of aggregate price levels between the two countries, so that a unit of currency of one country will have the same purchasing power in a foreign country.” Of course, transaction costs such as transport costs, taxes, tariffs, and nontariff barriers may cause border effects. Even allowing for such factors, however, absolute PPP, as the version of the theory just stated is known, obviously provides a satisfyingly neat theoretical result.

Unfortunately, absolute PPP is as difficult to test as most neat theories since it is difficult to assess whether the same basket of goods is available in two different countries. What has been examined empirically instead is “relative PPP,” a less restrictive version of the theory that holds that percentage changes in exchange rates will offset differences in inflation rates between two countries over the same period. Reviewing this evidence, which they emphasize is weak, Taylor and Taylor (2004, 139) conclude that “*relative* PPP seems to hold in a long-run sense.” But even relative PPP clearly does not hold in the short run. Other research has attempted to explain the evident slow adjustment of real exchange rates. In particular, Kleiman (1997) examined the possible role of taxes in explaining the departure of national price levels from PPP and found that the overall burden of central government taxation, especially indirect taxes, raised the general price level. Unfortunately, his study did not consider VAT as such, but this result can likely be carried over to VAT without stretching matters too far. While more work is clearly

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<sup>56</sup> See e.g. Appleyard and Field (2001), Pugel (2004), and Van den Berg (2004).

needed, on the whole it thus seems plausible to conclude that adjustments in exchange rates are unlikely to neatly offset any differences in relative prices that may arise from the imposition and operation of a VAT. Nonetheless, despite the ease and certainty with which some seem to pronounce on this issue, at present it appears that the only definite conclusion one can reach is that the effects of VAT on trade flows are still not known with any degree of certainty.

### **3.2. VAT and Revenue**

VAT is not always the ‘money machine’ that it has sometimes been called. The effects on revenue of introducing VAT in particular contexts remain a matter open to interpretation and question. This conclusion has recently been underlined by some who have questioned the capability of VAT to replace revenues from trade liberalization, especially in lower-income DTE (e.g. Rajaraman 2004, and Baunsgaard and Keen 2005).<sup>57</sup> There may indeed be a somewhat stronger case for retaining some taxation on international trade on revenue grounds than has been conventionally asserted, but on the whole this case rests less on defects of VAT as such than on the assumed relative inefficiency of VAT administration compared to the administration of taxes (tariffs) at the border.<sup>58</sup> If a VAT can be administered adequately, the conventional conclusion that it offers the best way for a country to make up revenue losses from trade liberalization appears generally to hold—though much more convincingly, it seems, for more developed than for less developed countries in which trade taxes are generally more important and alternative tax bases less accessible.<sup>59</sup>

Similarly, the conventional conclusion that VAT is the most economically desirable and administratively effective way in which to collect a given share of national income through a general consumption tax also holds—provided, again, that the capacity exists to administer VAT adequately. When a country introduces VAT, whether to replace another form of general sales tax or as a new tax, there need not necessarily be an aggregate increase in revenues (either from consumption taxes or in general). All else equal, however, the economic cost of collecting revenues will decline simply because the base is broader, thus making society better off. Similarly, as with any tax, although increasing the rate of an existing VAT will neither necessarily increase revenues proportionately nor be costless, it may still be the economically most sensible way to expand revenue share in DTE, if that is the policy goal.<sup>60</sup>

Various empirical studies have examined the relationship between reliance on VAT and the size of government. In the recent US tax reform discussion, for example, the alleged relationship between VAT and government size has been an important reason for some

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<sup>57</sup> Rajaraman (2004) also raises a point peculiar to India and a few other countries, namely, that even if revenues increase after trade liberalization they may accrue to regional governments and not to the central government that has lost tariff revenue. For the conventional argument for VAT as a revenue replacement for tariffs, see e.g. Ebrill, Stotsky, and Gropp (1999).

<sup>58</sup> For recent detailed treatments of customs administration in DTE, see Keen (2003) and De Wulf and Sokol (2005).

<sup>59</sup> On this point, compare the rigorous analysis in Keen and Ligthart (2001) with the equally rigorous, but different, analysis in Keen and Ligthart (2005) and see especially the interesting empirical analysis of Baunsgaard and Keen (2005).

<sup>60</sup> Compare for example the analysis of the revenue effects of Mexican rate increases in Pagan, Soydemir, and Tijerina-Guajardo (2001) with the considerably less positive results for Jamaica in Edmiston and Bird (2004).

opposition to VAT, although Bartlett (2004, 1536) in a recent review of the evidence concludes that VAT is not “a money machine that would finance the expansion of government.” Ebrill et al. (2001) note the following empirical regularities with respect to trade, country size, and government size:

- Countries without a VAT tend to be small, with the notable exception of the US and (prior to 2005, when a number of state-level VATs were introduced) India.
- Countries that have implemented a VAT have relatively higher GDP per capita levels and rely less on international trade.
- Both income and openness, defined as the sum of exports and imports divided by GDP, are positively correlated with the ratio of taxes to GDP.
- Government consumption and importance of trade are positively correlated.<sup>61</sup>
- Government consumption as a share of GDP is smaller in larger countries, and small countries tend to be more open to international trade.<sup>62</sup>
- A relatively high ratio of trade to GDP is conducive to VAT revenue performance, an observation presumably due to the relative ease of collecting VAT at the point of import.
- Economies for which international trade is important tend to have higher tax yields whether or not they operate a VAT. Very small economies may have characteristics that facilitate tax enforcement such as social structure and remoteness.

In a subsequent update of this analysis, ITD (2005, 11) cautiously concluded that “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 study went on to note that this relationship seems stronger the higher GDP per capita and the lower the share of agriculture in GDP, though the latter relation may simply reflect the common exclusion of most agricultural activity from VAT. Similarly, ITD (2005) notes that, while the revenue impact of VAT seems smaller the higher the import ratio, this may simply reflect the fact that tariffs (or other taxes) may be equally effective in such countries. On the other hand, all else equal, the more important is trade, the more revenue can be collected from an existing VAT. The obvious interpretation, as already mentioned, is that border formalities (and, perhaps, an established customs service) make the collection of VAT on imports relatively easy. Perhaps the most important point noted in ITD (2005) in this respect, however, is the extreme variation across countries in the revenue performance of VAT, reflecting a very wide range of factors including differences in tax design, differences in economic environment, and different characteristics (e.g. literacy) in different economies. Definitive answers with respect to VAT’s revenue impact are, it seems, considerably more difficult to come by than the simple assertions that characterize political debate everywhere.<sup>63</sup> We return to this issue later in this chapter.

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<sup>61</sup> See Rodrik (1998) for further details.

<sup>62</sup> See Alesina and Wacziarg (1998) for further details.

<sup>63</sup> Similarly, definite answers on the factors determining tax ratios and tax structure more generally are equally hard to come by: see, for example, the recent review of ratio studies in Bird, Martinez-Vazquez, and Torgler (2004).

### 3.2.1. A Case Study: Ukraine

In order to illustrate some of the foregoing points, consider briefly the revenue dimension of VAT in Ukraine (Bird, 2005a). In Ukraine, as in many DTE, VAT has become the workhorse of the revenue system. In 2001, for example, almost half (47%) of state budget revenues came from VAT, which accounted for 5.1% of GDP. VAT is the largest, most important, tax in Ukraine. The design and implementation of VAT is thus a critical determinant of the performance of the entire fiscal system. But VAT collections actually declined in Ukraine for some years after a modern VAT was introduced in 1997, falling from 7.3% of GDP in 1998 to the 5.1% already mentioned for 2001, then, after a brief leap to 6.1% in 2002 again declining to 4.7% in 2003 and 4.9% in 2004. If one goes back as far as 1994, the decline is even more marked since at that time the so-called VAT—then really a turnover tax—accounted for 10.8% of GDP.<sup>64</sup> When the rate of this ‘pre-VAT’ was lowered from 28% to 20% in 1995, the ‘VAT’ share unsurprisingly fell from 10.8% to 8.3% of GDP. What is more surprising, and even disconcerting, is that revenues continued to fall even after the adoption of a real VAT in 1997.

Since the GDP-elasticity of VAT is generally close to unity, VAT revenues would normally be expected to expand at about the same rate as the economy. The (measured) Ukrainian economy expanded in 1998-2004 period, but the GDP elasticity of the VAT was an astonishingly low 0.38. To put it another way, for every UAH 1,000 (Ukrainian hryvna) increase in nominal GDP, only UAH 42 more was collected in VAT. For a VAT that was estimated to cover perhaps 62% of all household expenditure (Thirsk, 2002), this is an astoundingly poor performance. It is even more striking when one takes into account the fact that the proportion of VAT collected at the border rose from less than a quarter of total VAT revenues in 1998-99 to a third in 2000-01, a half in 2002 and almost three-quarters in 2003-04. It is true that other countries also often collect much of their VAT revenue at the border. It is also true that rapid growth in imports, such as Ukraine has experienced in the last few years, is likely to be reflected in an increase in the share of VAT collected from imports. Nonetheless, it is difficult to think of any other case in which there has been such a marked and rapid change in the extent of dependence on imports for VAT revenue. Two-thirds of the absolute increase in VAT revenues in 2004 was attributable to increased taxes on imports, although there appears to be no clear link between increasing imports and increasing total VAT revenues: for example, although imports increased by 14% in 2003 and 16% in 2004, VAT revenues as a share of GDP actually declined compared to earlier years.

The other side of the growing dependence on import VAT of course is that the residual VAT collected on domestic consumption fell sharply from an average of 5.6% of GDP in 1998-99 to 3.4% in 2000-02 and to only 1.3% in 2003-04. What can explain this dramatic decline?

Three classes of factors might explain these poor revenue outcomes. First, there may have been changes in economic structure (e.g. exports, investment) that underlie these trends to some extent. Among the most important and beneficial economic characteristics of a VAT is that it does not tax either exports or investment. It is therefore possible in principle that a rise in GDP attributable to an export-driven expansion or an investment boom may, at least temporarily,

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<sup>64</sup> A so-called ‘value-added tax’ was introduced in 1991 but it was not until 1997 that a modern VAT, allowing at least in principle for appropriate treatment of trade and business inputs, was adopted.

result in a decline rather than an increase in VAT revenues, as input credits may build up more quickly than output taxes, thus resulting in a fall in net VAT receipts. In the case of Ukraine, however, as noted in World Bank (2003), there does not appear to be any clear relation between trends in these variables and VAT.

Secondly, there may have been some changes in tax structure that explain revenue behaviour. As World Bank (2003) notes, for example, there was clearly some base ‘erosion’ in the form of increased exemptions and the like in earlier years and perhaps some of the pre-2002 decline in the VAT-GDP ratio may be attributed to this factor. But there were no base changes that could possibly explain the marked decline in 2003-04. On the contrary, following the recent change in Ukraine’s government, some of the previous exemptions were eliminated in early 2005 although it seems unlikely that the recent policy measures, while generally commendable, are sufficient to reverse the trend.<sup>65</sup>

Finally, if neither base nor structure changes explain what has happened, the only other possibility is that there has been a decline in administrative effectiveness. Bird (2005b) estimates that if the ‘collection efficiency’ of VAT—a concept explored further in the next section—had remained constant at 1998 levels in Ukraine, VAT would have yielded another 1.5% of GDP in 2004, presumably mainly from non-import collections. This calculation implies a significant deterioration in the efficiency of VAT administration over this period. This inference, however, is probably too strong. The problem appears to be not so much that VAT administration in Ukraine has deteriorated rapidly in recent years but rather than that it was never very strong and that, over time, its inherent weaknesses have been increasingly exploited by an increasingly active private sector. Nonetheless, the conclusion that the major factor explaining the decline of the VAT as a revenue-producer in Ukraine is administrative seems inescapable. And if VAT’s major problems are administrative, the solutions must also lie in strengthening VAT administration as discussed further in Chapter 7 below.

### **3.2.2. VAT Productivity and Efficiency**

Of course, it is difficult to draw simple conclusions about the comparative revenue performance of VAT in any country from aggregate data such as those discussed with respect to Ukraine owing to such factors as the differing shares of ‘informal’ activity in different countries and the varying extents to which such activities may be reflected in national GDP statistics. Recently, attempts have therefore been made to develop more comparable measures such as those labeled ‘productivity’ and ‘efficiency’ in Table 3.1, which compares VAT performance in the Western Hemisphere.<sup>66</sup>

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<sup>65</sup> World Bank (2003, 53) estimates, for example, that the cost of the regional VAT concessions eliminated in early 2005 amounted to only about 3% of VAT revenues in 2001. Although this cost may have expanded in later years, it seems most improbable that it did so sufficiently to account for very much of the observed decline in VAT revenues.

<sup>66</sup> This discussion largely follows that in Edmiston and Bird (2004). A variant of the ‘efficiency’ measure, called the “gross compliance ratio” and estimated as the ratio of actual to ‘potential’ VAT collections (as estimated by applying the standard rate to private consumption) is discussed in Gallagher (2004, 2005, 2005a).

While it is not easy to interpret these measures, they may broadly be understood as follows. ‘VAT productivity’ is the ratio of VAT revenues to GDP divided by the ‘standard’ rate of the VAT. In other words, this figure shows what percent of GDP each percentage point of the standard VAT rate collects. On average, for the countries included in Table 3.1, one percentage point of VAT collects 0.36% of GDP, with the range being between a low of 0.10% for Brazil’s (very limited) national VAT and a high of 0.62% in Nicaragua. By this criterion, the VAT in, say, Jamaica looks very good indeed. However, this measure may be quite misleading in an important sense since in principle VAT usually taxes consumption, not production, and GDP measures production, not consumption.

**Table 3.1**  
**VAT Revenue Performance in the Western Hemisphere**

Country	Current Rate	VAT as % Revenues	VAT as % GDP	VAT Productivity	VAT Efficiency
Argentina	21	30.9	3.9	0.19	0.27
Barbados	15	-	-	-	-
Bolivia	14.9	37.1	5.4	0.36	0.47
Brazil*	20.5	9.9	2.0	0.10	0.16
Canada*	7	13.4	2.7	0.38	0.67
Chile	19	44.4	8.0	0.42	0.64
Colombia	16	42.3	4.5	0.28	0.44
Costa Rica	13	25.2	4.6	0.35	0.53
Dominican Republic	12	-	-	-	0.31
Ecuador	12	-	-	-	0.42
El Salvador	13	52.8	5.6	0.43	0.50
Guatemala	12	45.8	4.5	0.38	0.45
Haiti	10	-	-	-	-
Honduras	12	-	-	-	0.55
Jamaica	15	36.5	9.2	0.61	0.93
Mexico	15	26.5	3.3	0.22	0.33
Nicaragua	15	32.5	9.3	0.62	0.70
Panama	5	-	-	-	0.52
Paraguay	10	43.2	4.4	0.44	0.54
Peru	18	45.9	6.4	0.36	0.50
Suriname	10	-	-	-	-
Trinidad and Tobago	15	-	-	-	-
Uruguay	23	30.2	7.8	0.34	0.46
Venezuela	16	35.3	4.7	0.29	0.43
<b>Average</b>	<b>14.1</b>	<b>34.5</b>	<b>5.4</b>	<b>0.36</b>	<b>0.49</b>

Source: Edmiston and Bird (2004). Note: \*Central government VAT only.

For this reason, the measure shown in Table 3.1 as ‘VAT efficiency’—sometimes called ‘C-efficiency’—has come to be used as a more reliable indicator of comparative VAT performance. This figure is calculated as the ratio of VAT revenues as a percentage of (usually private) consumption divided by the standard rate, so it has a unit value for a uniform tax on all consumption. The actual ratios shown in the table, however, range from a low of 0.16 for Brazil’s very narrow-based national VAT to a startling high of 0.93 for the VAT (General



Consumption Tax, or GCT) in Jamaica. Jamaica’s performance as measured by this indicator thus again appears to be well above average.<sup>67</sup>

Of course, many questions may be raised about this measure also. For example, while differences between countries may be interpreted as reflecting differences in both base ‘erosion’ (through reduced rates, zero-rating and exemptions) and tax evasion, the measured differences may equally well be inflated in some countries by measures such as limiting input credits and thus taxing some intermediate as well as final consumption.<sup>68</sup> In Jamaica, for example, input credits for some items (cars, entertainment) are limited and others (capital expenditures) are generally claimable only over a two-year tax period. Perhaps more importantly, in countries with differentiated rates the ratios may also be inflated if some rates—for example, those on vehicles (which are subject to an average GCT rate of over 55% in Jamaica)<sup>69</sup>—are higher than the standard rate, because the revenue produced by such rates is ‘scored’ as though collected at the standard rate. Of course, if some rates are below the standard rate, the ratio is biased downwards for the same reason. For example, in Jamaica in 2002, 9.8% of total GCT liabilities were attributable to goods and services taxed at above standard rates—mainly vehicles—and only 2.6% to items taxed at below-standard rates, so the reported ratios are slightly biased upwards for this reason. As mentioned in chapter 2 above, many—indeed most—VAT countries actually have more than one VAT rate. On the whole, however, as Table 3.2 suggests, as a rule is probably not too misleading to compare countries using standard rates only.

**Table 3.2**  
**VAT Efficiency at Standard and Weighted Average Rates**

<b>Country</b>	<b>VAT Revenue (% of GDP)</b>	<b>VAT Rate (%)</b>	<b>VAT Efficiency</b>	<b>Adjusted Rate (%)</b>	<b>Adjusted Efficiency</b>
<b>Argentina</b>	5.6	21	0.27	18.9	0.29
<b>Chile</b>	8.3	19	0.44	18.0	0.46
<b>Kenya</b>	5.5	16	0.35	17.9	0.31
<b>Panama</b>	1.5	5	0.30	5.4	0.22
<b>Turkey</b>	8.2	18	0.45	16.3	0.49

Source: Information for selected countries, for different recent years, was kindly provided by Carlos Silvani.

<sup>67</sup> The highest ratio in the world appears to be in Singapore, where it actually exceeds one owing largely to the considerable volume of taxes imposed on tourists and visitors (who can claim few refunds): see the comparison of VAT revenue effectiveness in a number of countries in Jenkins, Kuo, and Sun (2003, 30).

<sup>68</sup> Note that while this component is in large part what Table 2.2 measures as the “gap” between implicit and standard rates it also includes the effect of ‘non-standard’ (OECD, 2004) exemptions: see also the discussion in Chapter 5 below.

<sup>69</sup> Vehicles account for 5.5% of imports and 21.5% of tariff revenue in Jamaica, considerably higher than the equivalent figures in Barbados, for example, although the latter has a higher average tariff on vehicles than Jamaica (44.5% compared to 34.6%): see IDB (2004).

If the average weighted rate is higher than the standard rate, the resulting calculation may be a bit low, and if it is lower, it will be a bit high.<sup>70</sup> Of course, single-year calculations such as those in Table 3.2 may give a misleading picture, and quite different numbers may often be produced from different data sources.

For the reasons already mentioned, it may be misleading to draw inferences about the relative performance of a country's VAT from inevitably flawed and somewhat suspect international comparisons. For instance, Jamaica's 'VAT productivity' and 'VAT efficiency' ratios appear in Table 3.1 to be clearly above the average both for the Americas and indeed for countries at its per capita income level more generally.<sup>71</sup> But often it is simply not very useful to 'benchmark' performance by such averages.<sup>72</sup>

In many ways, a more useful way to use such 'performance indicators' may perhaps be in viewing a country's performance over time. As an example, Table 3.3 shows that the measured performance of the VAT in Jamaica varies considerably from year to year.<sup>73</sup> Until 2003, Jamaica's performance in terms of these measures had been gradually deteriorating. The figures shown in the table reflect repeated attempts to increase revenues—notably, rate increases in 1993 and 1995 and a significant reduction in exemptions in 2003. In Jamaica, as in many DTEs, simply maintaining VAT revenue requires constant attention and frequent policy changes.<sup>74</sup> We consider this common phenomenon further in Chapter 9 below.

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<sup>70</sup> In addition, if a country (like New Zealand) subjects a fair amount of public sector to consumption to VAT, its 'efficiency' ratio (if measured relative to private consumption) may exceed 100.

<sup>71</sup> To illustrate, for the 23 countries with GDP in the range US\$1,500-5,000 for which data are shown in Annex Table A2, the average productivity ratio is 0.36 and the efficiency ratio 0.55.

<sup>72</sup> For extended, and different treatments, of the uses and limitations of 'benchmarking' tax administration whether quantitatively or qualitatively, see e.g. Gallagher (2005) and Vazquez-Caro (2005).

<sup>73</sup> Gallagher (2004) shows that the same is true in other countries such as El Salvador and Guatemala. See also [http://www.itdweb.org/VATConference/documents/vat%20system%20in%20T\\_T.doc](http://www.itdweb.org/VATConference/documents/vat%20system%20in%20T_T.doc) for similar information on Trinidad and Tobago.

<sup>74</sup> Incidentally, Edmiston and Bird (2004) rather daringly extrapolate from Jamaica's revenue experience after two earlier VAT rate increases and estimate that the 'revenue-maximizing tax rate' in Jamaica is only 18%: see also the discussion in Chapter 5 below. In 2005 the government announced that the rate would be raised from the present 15% to 16.5%.

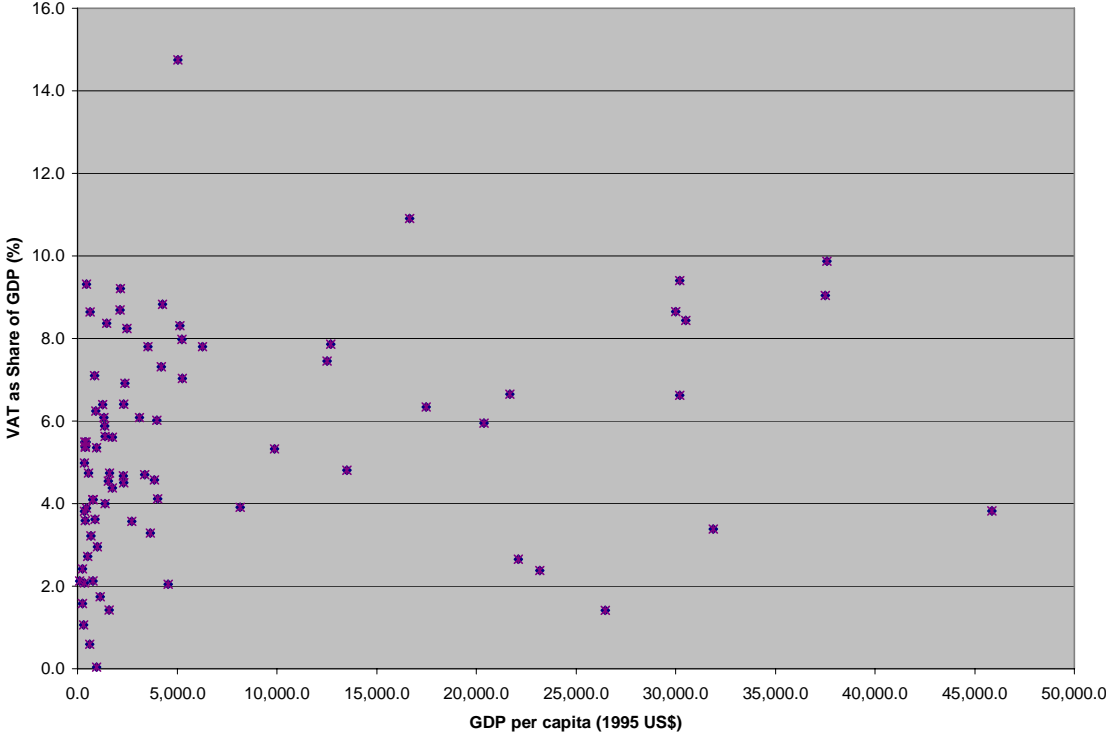
**Table 3.3**  
**Jamaica: Productivity and Efficiency of the GCT over Time**

<b>Fiscal Year</b>	<b>GCT as % Total Taxes</b>	<b>GCT as % GDP</b>	<b>VAT Productivity</b>	<b>VAT Efficiency</b>
1991/1992	11.9	2.7	0.27	0.51
1992/1993	21.4	4.9	0.49	0.80
1993/1994	28.0	7.2	0.57	0.86
1994/1995	28.6	7.2	0.58	0.85
1995/1996	31.4	8.4	0.56	0.80
1996/1997	30.6	7.5	0.50	0.71
1997/1998	30.2	7.3	0.49	0.71
1998/1999	29.2	7.4	0.50	0.74
1999/2000	26.8	7.2	0.48	0.72
2000/2001	25.7	7.1	0.47	0.68
2001/2002	25.7	6.7	0.44	0.64
2002/2003	27.3	7.4	0.49	0.71
2003/2004	27.7	8.3	0.55	0.80

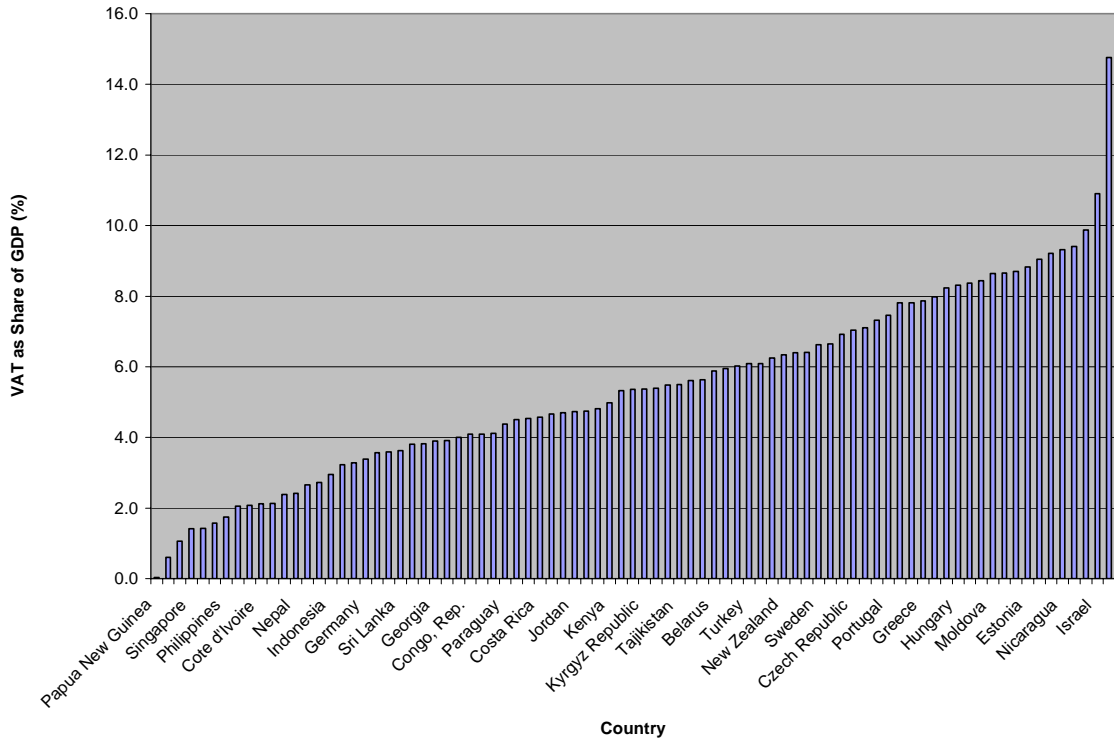
Source: Edmiston and Bird (2004).

Although all measures of VAT ‘efficiency’ have flaws, such numbers have now begun to appear sufficiently frequently that they are beginning to enter into econometric analysis. Figures 3.1 through 3.7 depict some of the basic relationships visible in the country indicators presented in Annex Table A2—the kind of raw data that underlie such work.

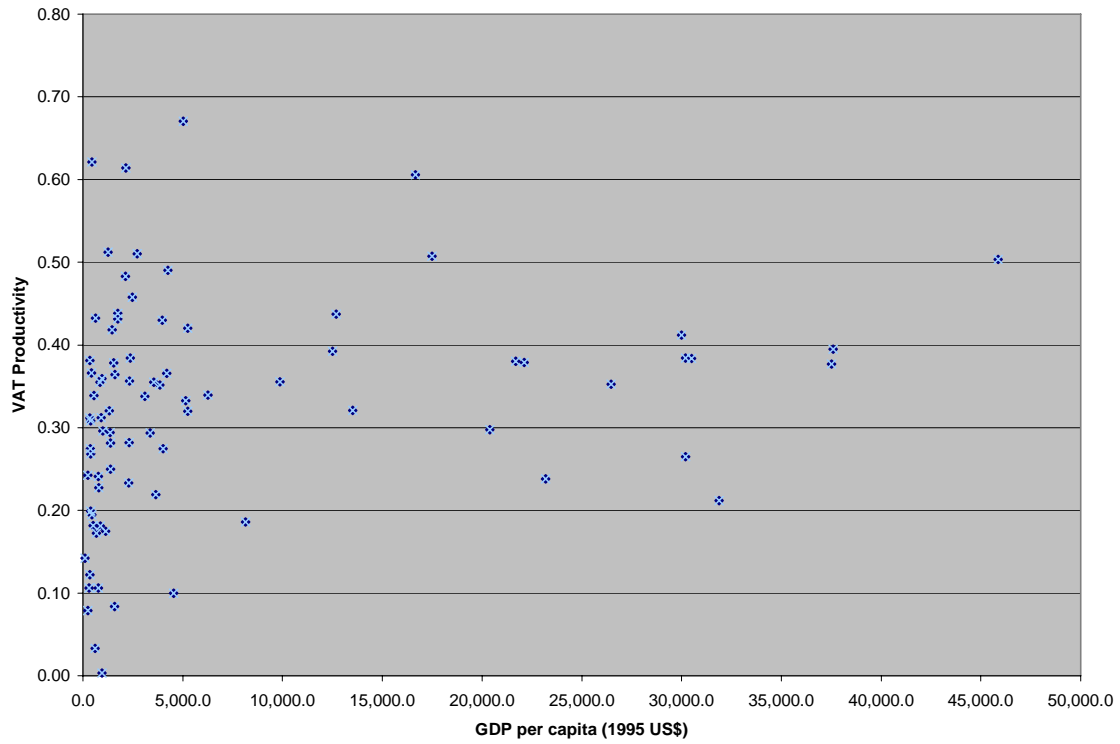
**Figure 3.1**  
**VAT Share and GDP per capita**



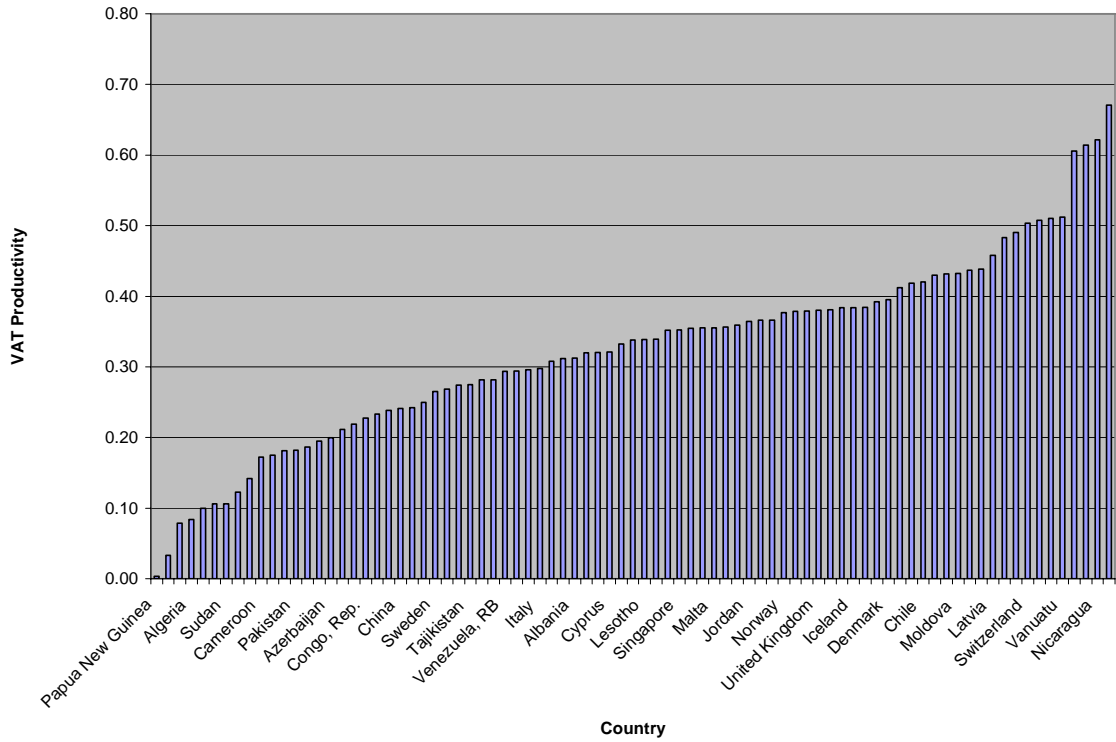
**Figure 3.2**  
**VAT Share by Country**



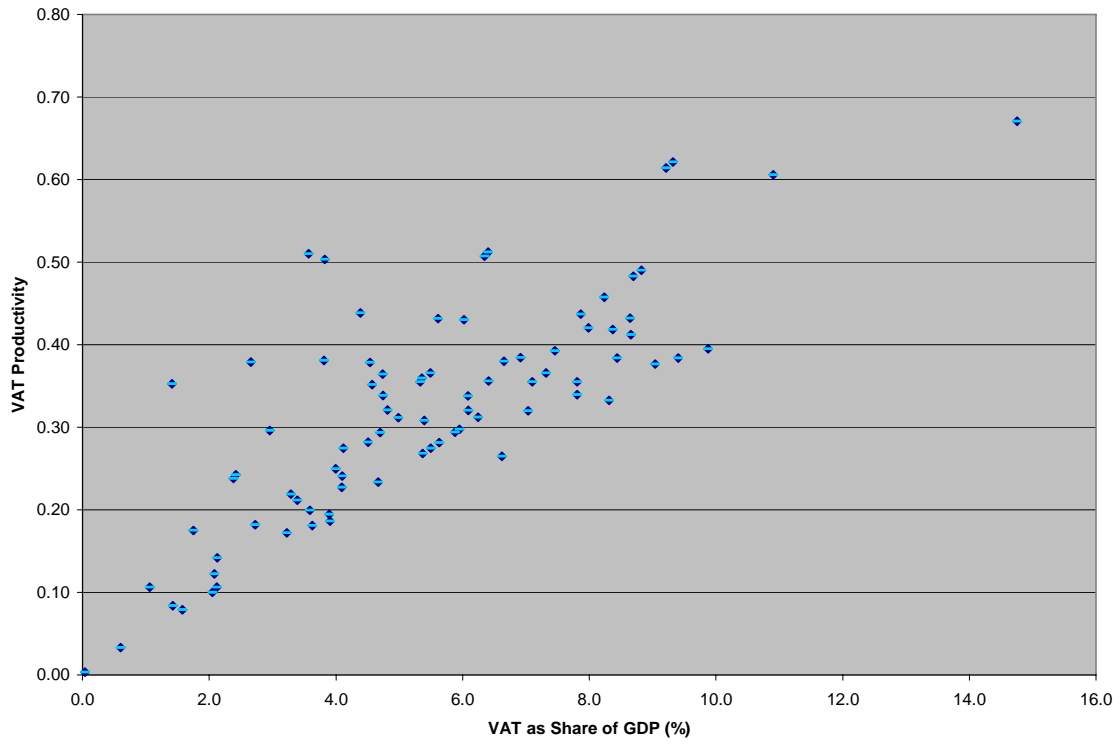
**Figure 3.3**  
**VAT Productivity and GDP per capita**



**Figure 3.4**  
**VAT Productivity by Country**

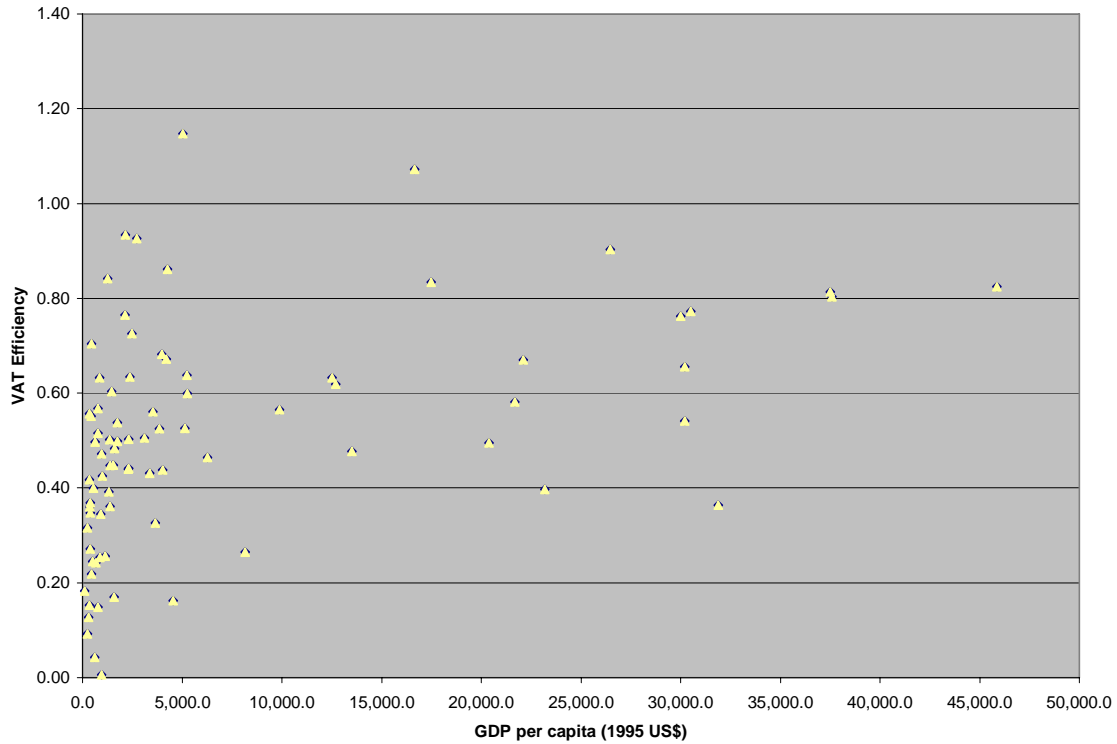


**Figure 3.5**  
**VAT Productivity and VAT Share**

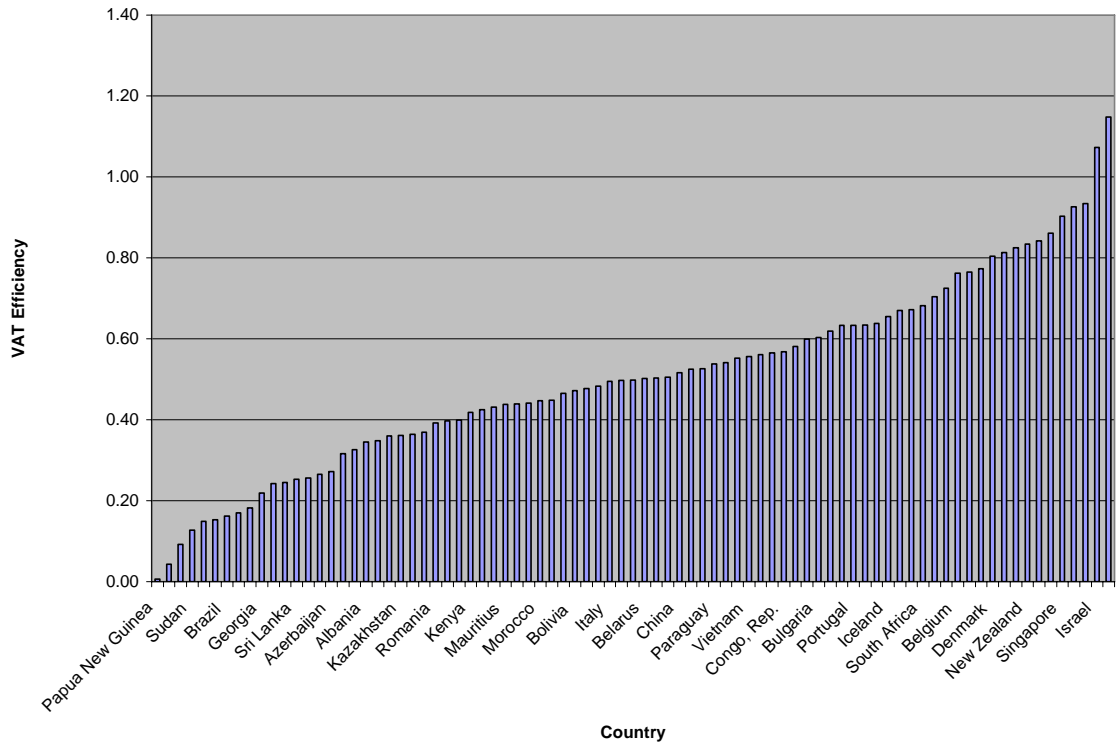




**Figure 3.6**  
**VAT Efficiency and GDP per capita**



**Figure 3.7**  
**VAT Efficiency by Country**



In brief:

- Figure 3.1 suggests that there is no obvious relation between the level of economic development and the importance of VAT revenues.
- Figure 3.2 ranks countries according to the importance of VAT revenues.
- Figure 3.3 like Figure 3.1 shows no clear relation between the level of economic development and VAT productivity.
- Figure 3.4 ranks countries according to their VAT productivity.
- Figure 3.5, however, shows that there appears to be a definite correlation between VAT productivity and VAT share of GDP, a result that is hardly surprising given the definition of ‘productivity’ noted earlier.
- Figure 3.6 shows that there is no evident correlation between VAT efficiency and the level of economic development.
- Finally, Figure 3.7 ranks countries according to their VAT efficiency.

Note that in general it seems to make little or no difference if one uses VAT efficiency based on total or private consumption (the correlation coefficient is 0.98) or even either measure of VAT efficiency and VAT productivity (the correlation coefficient is 0.91).<sup>75</sup>

If income levels alone do not explain VAT efficiency, then what does? The obvious next step, of course, is to attempt to explain the observed variations. Such work is just beginning. For example, McCarten (2005) estimates that 41% of the variability (adjusted  $R^2$ ) in the ratio of VAT revenues to consumption is explained when regressed against the standard rate of VAT, a measure of the openness of the economy, the level of illiteracy, and indexes of government capacity to control corruption and the cost of registering a new business, with all independent variables except the last being statistically significant. Using a smaller sample of transitional countries, McCarten (2005) also finds that an index related to the prevalence of bribery was a significant (negative) explanatory factor. The implication he draws from his analysis is that there is clearly substantial room to improve VAT efficiency in many DTEs by improving governmental institutions and tax administration.

In a more detailed recent econometric examination focusing specifically on the collection efficiency of VAT, Aizenman and Jinjark (2005), using an unbalanced panel of 45 countries (developed and DTE) for the 1970-99 period, find that VAT collection efficiency increases with urbanization, trade openness, real GDP per capita, and measures of both political stability and the ‘fluidity’ of political participation, but is negatively related to the agricultural share of GDP. For different specifications, from 55 to 67% of the variance was explained. The most important

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<sup>75</sup> Using data in the USAID/DAI data base (available at <http://www.fiscalreform.net/research/benchmarking.htm>), the correlation coefficient between the ‘gross compliance ratio’ (Gallagher 2004) and VAT productivity is also high (0.86).

explanatory variables were urbanization and real GDP per capita, and all results were found to be relatively robust. When high-income countries were excluded from their sample, all coefficients continued to have the same sign and significance. For the high income countries alone, however, only the level of per capita GDP and the share of agriculture had explanatory power, perhaps in part because the other variables displayed relatively little variability across these countries. Finally, when the relationship between VAT efficiency and income inequality (measured by Gini coefficients) was explored in a simple cross-country ordinary least squares regression, inequality was found to have a significant negative effect. While interesting, no doubt this study will prove to be not the last word on the subject but rather the beginning of a burgeoning new industry attempting to explain the very considerable variation observable in the measured revenue efficiency of VAT in different countries.

### **3.2.3. VAT and Revenue Reconsidered**

Potential taxpayers have many ways to escape the fiscal system in most DTE. They (or at least their tax base) may, for instance, flee abroad. Or they may remain but hide in the shadow economy. Or they may secure some form of favourable treatment by exerting influence in various ways to have changes made in the law or its interpretation. Or, if somehow trapped within the taxation system, they may finally seek by forgiveness of arrears through amnesty laws or specific grants of relief. Indeed, in some cases they may combine all of these methods of avoiding taxation. The record over the years in some DTE of repeated erosion of the base of the VAT through concessions at many levels as well as general administrative weakness suggests that such processes have been at work.

The initial VAT legislation in DTE, although usually close to standard international models, often tends over time to become both more complex and to some extent ad hoc in how it is actually applied. The structure of VAT becomes littered with privileges and exemptions that minimize its revenue impact and make it difficult to manage, requiring frequent ‘tune-ups’ to keep the revenue coming in. Sometimes, once concessions enter the system, they are subsequently enlarged, costing revenue and creating complexities and costs for both taxpayers and the tax administration. In most DTE, little assistance in coping with these complexities is offered in the way of taxpayer services. Nor is much done to guard against abuse, with most VAT ‘audits’ in many countries amounting to little more than simple numerical checks. Widespread base erosion facilitates evasion and also, when taxpayers are subject to audit, corruption. Those with influence often have their tax debts forgiven. In some DTE, VAT reality has in such ways clearly failed to live up to VAT’s initial promise.

It gets worse. With the tax base being eroded in such ways, governments hard-pressed for revenues have sometimes been driven to discretionary and unpredictable enforcement efforts—collecting money where they can and (as the common refund problem discussed in Chapter 7 below suggests) keeping it when they get it. Alternatively, they have sometimes resorted to introducing still more legislative changes (such as the ‘VAT withholding’ also discussed in Chapter 7) to close gaps arising from previous political and administrative decisions. Sometimes the outcome has been an almost continual cycle of changes in the effective tax structure, subsequent erosion of the tax base, and unrelenting pressure on the tax administration to meet

revenue targets. Those few taxpayers who remain subject to the full rigor of the formal tax system in such countries face uncertain (and often increasing) tax burdens. No one can say with certainty how any transaction will be taxed today, let alone tomorrow. Savings and investment are deterred and misallocated. Trade may be discouraged as VAT refunds to exporters are not paid out but are instead kept in the treasury and used to meet budgetary needs. Trust vanishes, the shadow economy expands, revenues fall, tax pressure is again increased on those who cannot escape, and so the cycle continues.

As suggested with respect to Ukraine (in section 3.2.1 above), the underlying problem when VAT performance is this dismal is unlikely to lie solely in poor tax design. Rather, it usually reflects one or both of two more fundamental problems. One problem is the existence of a fundamental gap between the institutional requirements for good VAT administration and the real fiscal institutions in place in a country. We discuss this aspect further in Chapter 7 below. The other problem is the extent to which deviations from ‘good’ VAT practice are used to reward political supporters or—the distinction can often be unclear—as instruments of industrial or regional policy.<sup>76</sup> As we discuss in Chapter 5, in the economic and political environments of many DTE, such policies are perhaps understandable. Unfortunately, the very instability that may seem to make them attractive almost certainly ensures that they will not have good results either in revenue or any other terms.

### ***3.3. VAT and Equity***

As anti-VAT protests and demonstrations around the world suggest, there has always been considerable popular concern about the equity aspects of VATs (e.g. Botes 2001).<sup>77</sup> Equity is of course always and everywhere a central issue in taxation. Indeed, from one perspective the principal rationale for taxes in the first place may be thought of as an attempt to secure equity. After all, governments do not need taxes to secure money: they print the money in the first place. The role of the tax system is instead to take money away from the private sector in as efficient, equitable, and administratively least costly fashion as possible. Equity, efficiency, and administrability are thus the three horsemen that drive tax design. Of course, one person’s conception of what is considered to be equitable (or fair) may differ from conceptions held by others. In the end, only through the political institutions within which countries reconcile (if they do) such conflicting views and interests is any country’s views of what constitutes an equitable tax system defined and implemented—and the results of this process may diverge widely from what outside analysts may consider fair or equitable in normative terms.

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<sup>76</sup> For examples of such policies, see e.g. the references to Kazakhstan and Georgia in IBFD (2004, 54-55) and the cases of Ukraine and China discussed in Chapter 5 below. The more general ‘political equilibrium’ aspect of VAT policy is discussed further in Chapter 9.

<sup>77</sup> See also the earlier references in Chapter 2 to protests in Mexico and elsewhere. VAT issues have often played a prominent role in political campaigns, particularly when the tax is first introduced. For example, a memorable political slogan heard in Guatemala in the mid-1980s was “el IVA no va” (roughly ‘No to VAT’). More importantly, one of the key reasons for not only the defeat of a government in Canada in the early 1990s but also the virtual elimination of the governing political party was strong public resentment of Canada’s new VAT—the GST (Bird, 1994). Despite its campaign promise to abolish the GST, however, the winning party soon found the revenue too hard to replace.

Equity issues may be approached at two different levels. At one level, the focus is on the details of exactly how different taxes impose burdens on taxpayers who are in the same or different economic circumstances. At a more general level, however, the focus is instead on the overall effects of the fiscal system on the income and level of well-being of different people. The policy implications of these two different ways to approach tax equity may be quite different. Focusing on the implications for equity of details of particular taxes leads, for example, to proposals to alter the rates and structures of particular taxes such as VAT. Such proposals may improve horizontal and vertical equity within the limited group subject to the full legal burden of the tax but in some instances they may simultaneously exacerbate inequity more broadly considered. From the perspective of social and economic inequality, what matters in the end is surely the overall impact of the budgetary system on the distribution of wealth and income rather than the details of particular fiscal instruments like VAT. Rational policy design would thus consider the combined effects of expenditure and tax policies. In practice, however, such considerations are seldom given much weight when it comes to tax design, a process which almost invariably operates on a tax-by-tax basis with as a rule far too much attention being paid to the alleged distributional effects of this or that particular tax feature considered in isolation.

### **3.3.1. Who Really Pays the VAT?**

As an example of the latter approach, consider a recent analysis of the VAT in Jamaica, where the tax is called the General Consumption Tax, or GCT (Edmiston and Bird 2004). Who really pays the GCT in Jamaica? That is, who really bears the burden of this tax in the sense that the real income at their disposal is reduced? The person or company legally responsible for paying a VAT (the seller) is of course irrelevant to the determination of who *actually* pays the tax. Consider, for example, an item that sells for \$1 before the imposition of a VAT. If the seller simply charges the same price as before and adds a 15% VAT, giving a final selling price of \$1.15, then the buyer pays the tax because it has been shifted completely forward to him by the seller. Alternatively, the seller could lower his price to \$0.87 after a 15% VAT is imposed, yielding a final selling price of \$1.00. In this case, the seller himself would pay the tax. Or the seller could lower his price partially, thereby shifting part of the tax forward to the consumer and bearing the remainder of the tax himself.<sup>78</sup> What happens in reality will depend on the relative responsiveness of sellers and buyers to changes in price—the relative price elasticities of supply and demand. We know so little about these magnitudes in most countries, however, that conventional tax incidence analysis generally avoids such complexities and simply assumes the tax is fully shifted forward from the seller to the final consumer.

Even with this simplifying assumption, it is seldom a simple or straightforward matter to determine whether a VAT such as Jamaica's GCT is progressive, proportional, or regressive. To analyze the distributional impact of a VAT, one needs to calculate the average tax payment as a proportion of an appropriate base for each household group. Often, particularly in DTE, the relevant data are simply not available. In the case of Jamaica, for example, the survey data available do not include sufficient information to determine the income of households, so consumption was used as an alternative base. Since it can be argued that people derive well-

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<sup>78</sup> Conceivably under some forms of imperfect competition, sellers may even be able to increase their price by even more than the amount of the tax, thus 'over-shifting' it forward.

being directly only from consumption, not from income itself, this approach seems reasonable. On the other hand, since of course savings also provide for future consumption, income probably remains the preferred base. Therefore, in order to approximate more closely to this broader (income) base, while households were divided into deciles based on average annual per capita consumption, GCT payments were calculated as a proportion of *total expenditure*, a survey item that includes not only consumption but also at least some non-consumption items as payments to pensions.

Given such assumptions, calculating the estimated impact of Jamaica's GCT for fully-taxed and zero-rated items was relatively straightforward, although it was also necessary to estimate the GCT embedded in the price of exempted items (because no credit is allowed for input tax). To do so, the 'embedded' rate was estimated as the ratio of input tax to total supplies for each industry. The final results of this exercise were that the indirect tax system in Jamaica (including the excises included in the GCT system) was found to be roughly proportional across the bottom five deciles but progressive overall because the proportions increase as individuals enter the remaining decile groups, with the average person in the highest consumption group paying 9.0% of total spending in indirect taxes, or over 40% more than the 6.4% paid in such taxes by those in the lowest consumption group (Edmiston and Bird 2004).

These results are a bit unusual in the sense that most studies of the annual incidence of consumption taxes find them to be regressive. Of course the results for Jamaica results are based on total spending, not income. Had income data been available, it seems likely that, as usual, the calculated incidence of consumption taxes would undoubtedly be less progressive and might even be mildly regressive. Nonetheless, a recent survey of many similar studies in DTE (Chu, Davoodi, and Gupta 2000) found that most recent (post-VAT) studies of the incidence of taxes on consumption in DTE found that such taxes were significantly less regressive than had been reported in earlier surveys (e.g. Bird and de Wulf 1973). Even when VAT in itself appeared to be regressive in its incidence, the change from import and excise taxes to general sales taxes such as VAT (shown in Table 2.4 above) motivated largely by trade liberalization has, it seems, made tax incidence a little more progressive in most poor countries.<sup>79</sup> As the selective summary presentation in Table 3.4 of some of the results emerging from a very diverse set of recent incidence studies suggests, the precise incidence of VAT in DTE depends not only on its design (rates, exemptions) but also on the nature of local consumption patterns (e.g. in-kind consumption) and on how effectively the tax is administered.<sup>80</sup>

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<sup>79</sup> Gemmell and Morrissey (2003) reach a similar conclusion.

<sup>80</sup> It should perhaps be mentioned that most studies of the effect on incidence of substituting domestic consumption taxes for trade taxes fail to consider that replacing import taxes and with domestic consumption taxes also removes an (unbudgeted) 'tax' previously imposed on consumers who paid higher prices to protected domestic producers (Harberger 2004). Of course, it is in any case far from clear how seriously one should take the results of any of these incidence studies since, despite all the effort that has been devoted to this subject, we actually know surprisingly little about either the incidence of particular taxes or, with even more force, the overall incidence of government taxing and spending programs, particularly in DTE: see Bird and Zolt (2005).

**Table 3.4**  
**The Distributive Effects of VAT**

<b>Country</b>	<b>Source</b>	<b>Selective Findings</b>
<b>Belgium</b>	Decoster and van Camp (2001)	Moving from a 7-rate structure to a single rate (combined with increase in fuel excise) would apparently increase regressivity slightly
<b>Australia</b>	Creedy (2001)	Food exemption appears to have some progressive effect
<b>Australia</b>	Warren, Harding and Lloyd (2005)	Indirect taxes on whole marginally regressive
<b>Greece</b>	Kaplanoglou and Newbery (2004)	The replacement of a 4-rate system in 1988 was slightly regressive
<b>Japan</b>	Tamaoka (1994)	VAT was found to be regressive, with little effect from exemptions
<b>Colombia</b>	Steiner and Soto (1999)	VAT found to be slightly regressive
<b>Colombia</b>	Rutherford, Light, and Barrera (2005)	An increase in VAT would be relatively progressive with respect to the lowest-income groups
<b>Colombia</b>	Zapata and Ariza (2005)	VAT appears to be slightly progressive
<b>SouthAfrica</b>	Botes (2001)	Zero-rating actually made VAT a little more regressive
<b>SouthAfrica</b>	Go et al. (2005)	VAT is mildly regressive
<b>Russia</b>	Decoster and Verbina (2003)	Indirect taxes were progressive, including VAT rates
<b>Ethiopia</b>	Muñoz and Cho (2003)	VAT found to be progressive owing to exemptions (especially of in-kind consumption)
<b>Pakistan</b>	Refaqat (2003)	VAT slightly progressive because of exemptions
<b>Peru</b>	Haughton (2005)	VAT found to be somewhat regressive

### 3.3.2. Beyond Partial Incidence Studies

Whatever conclusions one may derive from such attempts to put quantitative flesh on the structure of incidence theory, are such studies really the end of the story? Another concept of equity that is often invoked in tax analysis, for example, is horizontal equity. A tax system is said to be horizontally equitable if taxpayers with equal capacities to pay taxes pay approximately the same in taxes. One way that a tax system may be horizontally inequitable is by excluding a significant portion of taxpayers from the system. In many DTE, for example, activities taking place in the so-called ‘informal’ sector of the economy generally escape the direct tax system. However, they are less able to escape indirect taxes, so it has often been suggested that one way to impose an appropriate tax burden on those in the informal sector is through indirect taxes.

There are several versions of this story.<sup>81</sup> For instance, some argue that, with the exception of services, there is a decent tax ‘handle’ for taxes on retail trade. Most such trade is carried out by large organized firms in Jamaica, for instance. An indirect tax such as VAT can thus be used to tax an important part of the informal sector (e.g. the non-reporting plumbers and other home repair enterprises that buy supplies at a registered taxpayer). In addition, indirect taxes may potentially reach the informal sector via shifting of the taxes into wages, returns to capital, or consumer prices. Small, tax-avoiding manufacturers, for example, may be effectively taxed via indirect taxes if the tax is capitalized in some way that affects the return to capital or labor, which in turn is a function of factors such as capital to labor ratios, price elasticities of demand, and so on. To the extent that such arguments are valid, even illegal and criminal activities (a not inconsiderable part of the informal sector in some DTE) will be subject to at least some taxes. Heavier reliance on indirect taxes, no matter what form such taxes may take, will of course not bring tax-dodging businesses into the formal sector, but it may increase both the equity of the relative tax treatment of the formal and informal sector and the efficiency of resource allocation in general. Finally, whatever theory may suggest, the reality appears to be that the larger the informal economy, the more reliance countries put on indirect taxes (Alm, Martinez-Vazquez, and Schneider 2004).

Such issues are important in Jamaica, for example. Schneider and Klinglmaier (2004) estimate that the ‘shadow economy’ in Jamaica is 36.4 percent of GNP. Although this figure is a bit below the average for the region, it is almost twice the size of this sector in Chile and indeed larger than that in some neighboring countries such as the Dominican Republic. While all such estimates are at best rough approximations, all evidence, quantitative and qualitative, appears to support the common idea that there is a relatively large hidden or informal economy in Jamaica. Indeed, in many DTE estimates of the size of this sector commonly range from 30 percent to 60 percent of GDP.<sup>82</sup>

The existence of a large sector of the economy that is effectively not subject to direct taxation is important in assessing the role and effects of consumption taxation. It may, for example, affect how one assesses the equity effects of different fiscal instruments. For instance, it is conceivable that a well-designed VAT might be more progressive than a personal income tax if the latter in practice only burdens a limited group of wage-earners. In such circumstances increasing the role of indirect taxes may make the tax system somewhat less allocatively

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<sup>81</sup> This argument is developed further in Bird and Wallace (2004).

<sup>82</sup> Note that such estimates do not mean that the measured GDP is understated by such percentages. GDP is a value-added measure, and the usual hidden economy measure is a measure of total activity and hence not directly comparable. Such double counting would have to be eliminated from the estimate to be comparable to GDP. For this reason, the ratio clearly overestimates the relative importance of the informal sector in GDP. In addition, some illegal activities (e.g. drug smuggling) included in the informal sector are generally not included in GDP. The result of such factors is that an estimated underground economy of, say, 40 percent may imply an understatement in measured GDP of only 20 percent or less, depending upon the nature of the informal sector (e.g. the importance of illegal activities), the extent of double counting in the estimate of that sector, and the extent to which the activities measured are included in the measure of GDP. As these factors may vary over time, demonstrably do vary over the business cycle, unquestionably differ from country to country, and may also have very different implications with respect to tax evasion in different circumstances, even good estimates of the size of the informal sector do not provide a very useful guide to tax policy. There continues to be considerable controversy over how best to measure the informal economy: for a recent example in a data-rich developed country, see Breusch (2005) and Giles and Tedds (2005).



distorting and thus tend to reduce the pressure on market-based activities to move into the less-taxed informal sector. VAT may thus be argued to level the competitive playing field to some extent. On one hand it grants some relief from taxes on business inputs to those taxpayers who actually pay taxes on their sales. On the other hand it imposes some tax on those businesses that are not VAT registrants. Those who operate entirely in the cash economy may remain largely unknown to the tax authorities, but even they end up paying some tax to the extent they purchase either consumer goods and services or inputs for their productive activities from the taxed sector.<sup>83</sup> From this broader perspective, VAT as a component of the tax system as a whole may be less regressive than suggested by studies such as those cited earlier.<sup>84</sup>

In most DTE, however, no matter what the calculations of researchers may suggest, consumption taxes are generally considered to be highly regressive. For example, academics may claim that taxes on consumption are less regressive on a lifetime rather than annual perspective, but such refinements are likely to carry little weight in the political arena given the relatively short life expectancies in many DTE and the subsistence level at which many people in such countries live daily. It is thus not surprising to find that many DTE provide for reduced VAT rates or exemptions for certain 'basic' items such as some foods, passenger transport, medical services, and cooking fuel, particularly in countries in which substantial differences exist in consumption patterns between income groups. The common riposte to such policies (e.g. ITD 2005) is that whatever small degree of progressivity they may achieve could be more effectively and fairly attained through small changes in the income tax or by adjustments in transfer payments. This is of course true in principle and indeed to some extent in practice in developed countries.<sup>85</sup> However, in DTE in which the poor as a rule neither pay income tax nor benefit from transfer payments this observation seems largely irrelevant. We discuss VAT exemptions in Chapter 5 below.

As we also discuss further in Chapter 5, the conventional argument that there is unlikely to be much gain in imposing differential 'luxury' rates under a VAT even in DTE given the efficiency and administrative costs to which such differentiation gives rise is on the whole more convincing, especially since more can be done with less collateral damage through excise taxes on such commodities, if desired (e.g. Cnossen 1999, 2004a). However, the case for imposing VAT at a uniform standard rate and on as broad a base as possible in such countries seems less convincing. A uniform VAT is likely to increase the price of many goods essential to the poor (e.g. Ahmad and Stern 1987). Because the poor may consume a relatively small amount of such

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<sup>83</sup> Fedeli (1998) shows both that a VAT offers both more opportunity for administrative actions to reduce evasion (e.g. penalties are more effective) and is also on the whole less conducive to the growth of the 'informal' economy in the first place than other forms of consumption taxation.

<sup>84</sup> As Warlters and Auriol (2005) show in a recent comparative general equilibrium study of 38 African countries, VAT almost invariably scores well in efficiency terms even in the poorest countries. Go et al. (2005) in a more detailed study of VAT in South Africa, again using a general equilibrium model, find similarly that the VAT is an effective and efficient revenue instrument compared to other taxes, although it is mildly regressive. Somewhat similar results emerge from two other recent general equilibrium analyses of Colombia (Rutherford, Light and Barrera 2005) and Jamaica (Light 2004) although the latter is unable, for data reasons, to estimate the incidence of the GST.

<sup>85</sup> Canada is an interesting example. When it introduced its GST, it simultaneously introduced a refundable 'GST credit' under the income tax that was estimated to offset fully any impact of the new VAT on lower-income groups. Nonetheless, as Bird (1994) notes, political pressure forced the government of the day to provide a 'double dip' in the form of an extensive zero-rating system for so-called 'basic' foods.

products, it is undoubtedly true that much of the benefit of such exemptions will go to the non-poor (ITD 2005).<sup>86</sup> Nonetheless, in view of both the relatively heavy tax burden of such taxes on the poor in some DTE and the general inability of governments in such countries to provide offsets to such tax burdens through other fiscal adjustments, some relief built into VAT design often seems quite justifiable.<sup>87</sup>

To really relieve something from VAT, however, zero-rating is required and, as argued in Chapter 7 below, domestic zero-rating is perhaps inadvisable in countries already facing many difficulties with VAT refunds. At the same time exemptions increase cascading and by breaking the VAT chain also make effective enforcement more difficult. Perhaps, therefore, a reduced rate might be the best approach, although of course more careful analysis is needed of exactly what level and form of relief may be best for the particular circumstance of a particular country. There are too many instances in which the items taxed (or not taxed) in different ways appear to have been chosen arbitrarily by fiat rather than in a reasoned fashion to make one comfortable with the state of our knowledge on this issue.<sup>88</sup> Moreover, even if a country has worked out sensibly what is best at a point in time, the issue needs to be revisited from time to time, both because of the ‘exemption creep’ discussed elsewhere and because when circumstances change what is sensible may well change also.

### ***3.4. VAT and the Formal Economy***

A recent analysis suggests that in the presence of a substantial ‘informal’ sector, any general tax such as VAT that falls on the formal sector acts to deter the growth and development of the economy as a whole (Emran and Stiglitz 2005). Another recent study (Hines 2004) concludes that increasing consumption taxes will definitely foster the expansion of the hidden economy if (as seems plausible in DTE) the labor-intensity of production in that sector is greater than in the formal sector. Yet another recent study suggests, however, that even governments that are fully aware of such problems may still rationally choose to impose higher taxes, including VAT, on the formal sector of the economy (Aurioll and Warlters 2005). The reason is essentially because, given relatively weak tax administrations, the best way DTE have to raise revenue may sometimes be to increase barriers to entry to the formal sector, thus creating ‘rents’ that may then be taxed. While as yet largely empirically untested, such arguments about the interaction between VAT and the development of the formal economy—economic growth, in effect—are certainly well worth further exploration and discussion (see also Gordon and Li 2005).

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<sup>86</sup> For example, Muñoz and Cho (2003) note that most benefits from exemptions (e.g. of utility services) accrue to the rich in Ethiopia and are hence regressive.

<sup>87</sup> For an earlier detailed analysis of this point in Jamaica, see Bird and Miller (1989). A more rigorous analysis for Tunisia along similar lines, although not with special reference to VAT, may be found in Bibi and Duclos (2004).

<sup>88</sup> Even approaches that may seem sensible and empirically based may prove faulty. Some years ago, for example, the Philippines considered a system that would exempt from its then sales tax those items that were most widely consumed by low-income groups, as reported by extensive household surveys. However, when it was found that certain types of cosmetics appeared to be more widely used by even very poor groups than many ‘basic’ foods, the idea was quickly dropped.

More generally, much recent discussion of taxation in DTE has focused on the so-called ‘shadow’ (underground, informal) economy. This point may be especially important since some recent studies suggest that in at least some such countries not only has the informal sector been becoming more, not less, important but also that persons and enterprises at all income (and size) levels are engaged to varying extents in the informal sector.<sup>89</sup> In this connection, it is important to understand that many businesses in DTE operate in both the formal and informal sectors at the same time. Firms that operate in the shadow economy may escape VAT liability on their sales but in principle, of course, they are also not able to reclaim credit for any VAT paid on inputs. For this reason, as noted earlier, it has often been suggested that one way to impose an appropriate tax burden on those in the informal sector is precisely through a VAT. On the other hand, as just mentioned, others have argued that thus increasing taxation of the formal sector may expand, not reduce, the amount of hidden economic activity taking place as some current market-based activities may be able to disappear into the shadow sector.

Once again since theoretical arguments are inconclusive a balanced appraisal of such arguments in DTE requires empirical investigations—still largely undone—of the relative magnitudes of various elasticities and responses at the margin. A recent study by Auriol and Warlters (2005) of 38 African countries make a promising start on this task, although, as they note, there is considerable uncertainty about the key parameter in their analysis—the elasticity of substitution between taxed and untaxed activities. Among their more interesting conclusions are the following:

- The size of a country’s informal economy is generally considerably more important than its tax structure in determining the marginal cost of public funds.
- Within the formal tax system, general taxes on goods (notably VAT) are always more efficient than taxes on factors.
- But the most efficient way to increase taxes, ignoring distributional issues, is to increase taxes on untaxed goods. Even when distributional issues are taken into account, and when it is costly to impose taxes on firms operating in the informal economy, it is more efficient to do so than to increase taxes on the formal sector.
- The key paths to a more efficient revenue system in poor countries are (1) to reduce the size of the informal sector, e.g. by lowering barriers to ‘formality’ and (2) to reduce the administrative (including compliance) costs of the tax system.

Under any form of consumption tax, those who operate entirely in the cash economy may remain largely unknown to the tax authorities, but even they will end up paying some tax to the extent they purchase either consumer goods and services or inputs for their productive activities from the taxed sector. As noted in the previous section, both theory and experience suggest on the whole that a VAT is probably somewhat more likely to reduce tax evasion. To the extent formal-sector entities trade with similar firms, they are of course within the VAT system. If informal-sector enterprises trade only with other non-registered entities (including, of course, final consumers), they are obviously outside the system. To the extent non-registrants purchase inputs from registered firms, however, they will bear VAT. Moreover, if non-registrants wish to

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<sup>89</sup> See e.g. de Ferranti et al. (2004) on Latin America and especially Chen (2005).

sell to registered firms, the latter would prefer them to become registered so that the ‘tax’ part of their price would become ‘legal’ and hence creditable.

In short, like any tax imposed directly on formal sector entities, VAT may, as e.g. Emran and Stiglitz (2005) argue, discourage ‘formalization’ to some extent and thus be ‘anti-developmental’ in some sense. Nonetheless, it may still be argued (1) that every country needs some form of general taxation, (2) that VAT is less likely to have such undesired effects than other general taxes on consumption (let alone on income), and (3) that to the extent VAT systems in practice have discouraged ‘formalization’—and there is evidence that they have done so in some instances—the fault lies generally in specific features of the design and implementation of the tax (such as unwieldy registration and filing requirements) and not in the tax itself.<sup>90</sup> While close attention should be paid to such devilish details to avoid such undesired outcomes, the case for VAT in most DTE as yet appears to remain fairly solid.

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<sup>90</sup> For example, numerous studies have found that the tax registration process is, in many countries, one of the major barriers to formalization (Djankov et al. 2002).

## 4. What Should Be Taxed?

VAT is often thought of as a relatively simple tax, especially when compared to an income tax. Admittedly, a VAT is, by definition, simpler than an income tax both for reasons of definition (it is less ‘net’ so that its base is easy to determine) and timing (there are almost no intertemporal issues in applying VAT).<sup>91</sup> Nonetheless, designing and implementing a VAT is far from a simple task. In this and the next two chapters we consider a number of design issues, leaving some important administrative questions for Chapter 7. In the present chapter, we discuss three aspects of defining the base of a VAT—the treatment of land and real property, the treatment of public sector and non-profit activities, and the treatment of financial services. These three ‘base’ issues have been selected for examination either because experience has shown that they are troublesome or because there has been considerable recent discussion of them or for both reasons. A number of other design issues are often troublesome—e.g. the treatment of agriculture and the treatment of tourism—are not discussed here.<sup>92</sup> Indeed, as we said in Chapter 1 above, it needs to be underlined that the treatment of many of the VAT-related issues raised in this report is by no means comprehensive. Among the many issues not discussed here, for example, are the treatment of gambling, tourism, a number of issues related to VAT and services (especially cross-border services),<sup>93</sup> and on the administrative side—penalties, issues related to imports (uplifts, post-import control, etc.), tax ‘offsets’, and so on. It would take a much longer report than this one to do justice to all aspects of VAT.

### 4.1. Taxing Real Property

Real estate is tangible: it consists of land, land improvements, buildings, and building improvements. It is highly durable so that its services may be consumed over a long period of time. In contrast, “real property represents the individual legal rights associated with ownership of the tangible real estate. Since all legal rights are intangible, real property is intangible” (Reilly and Schweis 1999, 16-17). Services associated with real property include construction and renovations. All aspects of this complex set of goods and services need to be considered carefully in setting up a VAT.

In principle, there is no reason to treat durable consumption goods such as housing differently from nondurable consumption goods or services. In practice, however, the appropriate and equitable treatment of housing and housing services remains one of the most difficult areas in VAT practice. The politically most difficult aspect—one that, unsurprisingly,

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<sup>91</sup> An exception is when inflation is as rapid as it was in Argentina in the late 1980s, when VAT payments were indexed in an attempt to reduce the real revenue loss from lagging payments by as much as a month.

<sup>92</sup> We make a brief comment on the taxation of agriculture in Chapter 5 below. For some thoughts on tourism issues see Edmiston and Bird (2004) and, for a more analytical treatment, Gooroochurn (2004) and Gooroochurn and Sinclair (2003). Interestingly, Weeks (2005) notes that Barbados is currently considering eliminating its present reduced rate of 7.5% on tourist-related activities. On the other hand, both Mexico and Uruguay are currently considering measures to facilitate ‘tourist refunds’ of VAT, a feature that currently exists in a number of countries. This and other aspects of VAT and tourism could use further analysis.

<sup>93</sup> We comment briefly on some aspects of this difficult issue in Chapter 6 below but do not pretend to deal with it adequately.

as yet no country in the world has dared to tackle—is the taxation of the imputed consumption services provided by owner-occupied housing. Of course, as Conrad (1990) notes, it is clear that there are also serious administrative problems in taxing such services since it would be difficult to establish a fair tax base in the absence of market transactions.

How is real property treated under VAT? OECD (2004, 30) includes “supply of land and buildings” and “letting of immovable property” among the ‘standard’ VAT exemptions. There are many exceptions to this rule, however:

- Australia taxes supplies of land (except certain farm land), commercial property and new residential property.
- Austria imposes tax on letting of private housing.
- Canada taxes both the supply and leasing of commercial land and buildings.
- Finland and Sweden have an optional system for taxing the letting of commercial building in certain cases.
- France has a similar optional provision in some cases (letting land and buildings for agricultural use, and certain cases of letting of undeveloped immovable property for professional use) although its general rule is to tax the letting not only of immovable property but also of developed land for professional use.
- Hungary normally taxes the supply of buildings and land if not for housing purposes and also taxes non-housing letting of immovable property.
- Ireland, for variety, taxes only ‘long-term’ letting of commercial property, along with the supply of land and buildings.
- Italy taxes the supply and letting of commercial property at the standard rate, but only taxes residential housing when let by enterprises and at a favourable rate of 10%.
- Japan taxes only the supply of land.
- Korea goes the other way and taxes only the rental and supply of commercial buildings.
- Mexico, however, taxes only the letting of commercial buildings.
- The Netherlands does the same, although it will tax the supply of immovable property—provided such taxation is requested by both buyer and seller.
- New Zealand taxes the letting of non-residential immovable property as well as the supply of land and buildings (unless they have been used for residential accommodation for five years or more).
- Poland taxes the rental or tenancy of immovable property used for commercial purposes.
- Turkey appears to tax all letting but only the sale of commercial buildings.
- The United Kingdom, finally, taxes freehold sales of new commercial buildings beginning three years from completion date and, like a number of other countries already mentioned, provides an ‘option to tax’ other supplies of commercial buildings.

When 17 out of 29 OECD countries follow another path, one wonders how ‘standard’ the real property exemption really is. It is frequently said, with respect to tax issues, that ‘the devil is in the details.’ As the above list makes clear, when it comes to VAT and real property, there are many details.

Nonetheless, it is perhaps not misleading to say that the dominant VAT treatment of real estate around the world is to exempt not only services from owner occupation but also the commercial leasing or letting of residential property, presumably in order to avoid distorting the choice between house ownership and renting. Exemption of residential rentals may be justified on distributional grounds as home ownership is correlated with income. More surprising, however, is that in much of the world even non-residential property escapes VAT. One reason is undoubtedly because this is, as already suggested, to a considerable extent how it done in the ‘home of VAT’—the EU. Many DTE, however, go even further than the EU in this respect, for reasons discussed below.

Under the Sixth Directive applicable in the EU, although both sales and rentals of all real estate are exempt, newly constructed buildings as well as improvements are taxable. Applying tax to new buildings amount to charging a ‘prepaid’ VAT on future services (whether use or subsequent sale) at the time of purchase—the treatment generally applied to durable goods.<sup>94</sup> As Cnossen (2003) notes, the result of applying this treatment to commercial (as well as residential) property is obviously that increases in the value of—and hence in the services provided by—such property are not included in the tax base, which of course violates productive efficiency.<sup>95</sup> In addition, as Conrad (1990) notes, if new buildings are taxed but land and old buildings are not, owners of the latter reap windfall gains. More complexity arises when, for example, an old building on a site is replaced by a new one, since the value of the property must then clearly be divided into land value and building value.<sup>96</sup>

Of course, in most countries land and real property are subject to many forms of taxation other than VAT in different countries.<sup>97</sup> In particular, transfers of property are subject to various taxes and charges—land transfer taxes, stamp duties, notarial fees, registry charges, in some instances succession and gift taxes, and finally in some countries to VAT. There appears, however, to be little consensus as to how transfers of land and real property should be taxed under VAT, with similar transactions being treated quite differently in different countries. In Japan, for example, new construction is taxed at the ‘standard’ VAT rate, while in Canada such construction is taxed at a lower rate. In Germany it is exempt but subject to an alternative tax and in the UK, while residential construction is zero-rated, commercial buildings are taxed at the standard rate. Moreover, while the two EU member states just mentioned normally exempt sales of commercial property, as already noted, Canada taxes such sales (though at a lower rate) and Japan does so at the standard rate (Cnossen 1996).

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<sup>94</sup> Conrad (1990) suggested an extension of the prepayment method in the form of what he called a ‘stock value added tax’ (S-VAT). Under this proposal VAT would be paid on the sale of any type of real estate, new or old, improvements or constructions, with VAT registrants receiving VAT credit on purchases but not on sales, and non-taxable sellers being refunded the taxes paid by the purchaser. Rental payments would be taxed if the lessor were taxable.

<sup>95</sup> See Conrad (1990) for biting criticism of the Sixth Directive as it applies to real estate, and Cnossen (2003) for more general criticism.

<sup>96</sup> See van Steenwinckel and Theissen (2001) for a recent EU court case dealing with an analogous complication. As Bird and Slack (2004) note, in many respects it may make sense to distinguish land and building values in any case: but the point here is that since many countries do not normally do so (e.g. for purposes of real property taxation) requiring such a distinction for VAT purposes complicates matters. An additional complexity arising from the EU treatment is that a number of EU countries allow purchasers (or lessees) of commercial property an option to be taxable in order to recover VAT paid on inputs.

<sup>97</sup> For a recent book-length treatment of property taxation around the world, see Bird and Slack (2004).

As Ricardo pointed out centuries ago, taxes on the transfer of land and real property are in a sense the ultimate “anti-market” taxes because they discourage the development and formalization of land markets.<sup>98</sup> The fact that such taxes exist, often at surprisingly high rates and in so many countries around the world is presumably attributable primarily to administrative arguments since the “taxable event”—the recorded exchange of title—is readily visible, even if the true value of the transaction usually is not. In principle, DTE concerned with developing efficient markets would generally seem well advised to consider lowering specific taxes on land transfers and perhaps making up revenue losses by, for instance, strengthening basic property taxes.<sup>99</sup> This does not mean, however, that VAT should not be applied at least to property transfers. In principle, for instance, it certainly should apply to the value of the intermediation services (e.g. real estate commissions) used to effect such transfers.

In sharp contrast to the EU approach, Canada and New Zealand treat the sale and rental of real estate as taxable in general exempting only residential rents and rental values. Construction, alteration, and maintenance of all buildings are taxable, as is the rental of business accommodation. Furthermore, the sale of existing non-residential buildings is taxable. This approach obviously has the not inconsiderable virtue of keeping the VAT chain intact for more transactions. However, it is not without its own complexity as indicated by the refund rules for Canada’s complex VAT system summarized in Table 4.1.

**Table 4.1**  
**Canada: GST/HST and QST Refunds in Respect of Tax on Real Estate**

<b>Percentage of Use in Commercial Activities</b>	<b>All Registrants<sup>a</sup></b>	<b>Individuals Who Are Registrants</b>	<b>Public Service Bodies</b>
≤ 10%	None	None	None
10% < x ≤ 50%	% of use	% of use <sup>b</sup>	None <sup>c</sup>
50% < x < 90%	% of use	% of use	100% <sup>c</sup>
≥ 90%	100%	100%	100%

Notes: <sup>a</sup> under the GST/HST system, financial institutions may claim input tax credits (ITCs) based on the percentage of the property’s used in commercial activities. Under the QST, normal rules for registrants apply to financial institutions; <sup>b</sup> individuals may not claim credits if the percentage of use of the property for personal purposes is higher than 50% (there are some exceptions under the GST/HST system); <sup>c</sup> a public service body may elect to have the rules for all registrants to apply.

Many other special rules also apply to real estate in Canada. For example, builders that rent or occupy a residential property that they have built must generally pay the GST and QST on the fair market value of the property, although they may also of course claim input tax credits as appropriate. More importantly, purchasers of new housing, as well as home owners who build or substantially renovate their own home, may claim a special GST and QST rebate up to a maximum of 36 percent of the taxes paid, as shown in Table 4.2.

<sup>98</sup> For references and some discussion of such “market-discouraging” transfer taxes, see Bird (1967).

<sup>99</sup> As Bird and Slack (2004) argue, the efficiency effects of taxes on property values, in contrast to those of taxes on property transfers, are almost entirely beneficial in large part owing to the much less elastic nature of the tax base.



**Table 4.2**  
**GST and QST New Housing Rebates**

Full 36% Rebate	Progressively Reduced Rebate	No Rebate
GST Value of the residential unit is \$350,000 or less	GST Value of the residential unit is more than \$350,000 but less than \$450,000	GST Value of the residential unit is \$450,000 or more
QST Value of the residential unit is \$200,000 or less	QST Value of the residential unit is more than \$200,000 but less than \$225,000	GST Value of the residential unit is \$225,000 or more <sup>a</sup>

Notes: <sup>a</sup> Where the fair market value is \$225,000 or more but less than \$450,000, the purchaser or owner may claim a QST rebate calculated on the amount of the GST rebate.

Any purchaser of new residential rental property may claim such a rebate, provided that the residential units are subsequently leased on a long-term basis to individuals as their place of residence.<sup>100</sup> Such provisions obviously add considerable complexity to the system. There is still much that we do not know about the overall economic impact of differing VAT treatments of real property.<sup>101</sup>

What does this diverse experience suggest with respect to applying VAT to real property in DTE? In many such countries, as Youngman (1996, 276) notes, a “certain degree of circularity accompanies the process of establishing public claims on land and building values through annual taxation in the early stages of a transition to a new regime of property rights.” The same may of course be said with respect to the introduction of VAT on real property in such countries. Although the immovable nature of the tax base should in principle make it easier to enforce payment (through liens, if necessary), the difficult administrative environment in most DTE suggests that the only possible approach to taxing such property is likely to be some form of tax on sales (VAT prepayment). This approach too may be thought by some to be either unworkable or undesirable owing to the possible financial problems due to liquidity constraints when faced with large ‘up-front’ tax demands. At the very least, if VAT is applied to property transfers in DTE, the other special taxes so often imposed on such transfers should be correspondingly reduced. Should countries decide to subject real property sales to VAT, they would likely be well-advised to follow the conceptually less satisfactory but probably less complex practice of the EU and at most attempt to tax only sales of new non-residential property.

<sup>100</sup> See Québec (2003, 2003b, 2004, 2004c) for further details and explanations of the various possible situations. Chown (2001) offers a nice example of some of the complexities arising in the UK’s VAT treatment of buildings. See also Angermann (2000).

<sup>101</sup> See, for example, the discussion in Bennett (1991).

## 4.2. Public Sector, Non-Profit and Charitable Activities

Although few conceptual problems prevent the full taxation of goods and services supplied by public sector bodies including governments, non-profit organizations, and charitable organizations—hereafter referred to as the PNC sector—few countries follow this path in large part, it seems, because of policy concerns revolving around the distribution of income. One result is that some of the most complex aspects of VAT in many countries relate to the treatment of the public sector and non-profit activities. Surprisingly little effort has been made to assess the distortions, compliance and administrative costs arising from these provisions. Non-profit and charitable activities are seldom critical issues in most DTE but these countries too are frequently concerned about impeding further development of these sectors.<sup>102</sup> Moreover, the role of the state sector is sometimes dominant and often critical in DTE. We therefore examine this issue in some detail here, considering first the current VAT treatment of public sector bodies and non-profit organizations (including charitable organizations) in a number of countries and then some possible alternatives, with special reference to the circumstances of DTE.

### 4.2.1. Current Practices

Goods and services supplied by public sector bodies, non-profit organizations, charitable organizations, and similar organizations are treated in many different ways by VAT regimes around the world. Public sector bodies include government departments and ministries, state and local governments, regulatory agencies, and so on. The output of the PNC sector is often treated as final consumption by the organization itself rather than consumption by the ultimate final consumers (persons). As with other sectors, the goods and services supplied by the sector may fall into one of four categories:

- **Taxable.** The seller is entitled to a refund of the VAT incurred on input purchases undertaken to make taxable supplies.
- **Zero-rated.** Even though the seller does not collect VAT on such supplies, it is entitled to a refund of the VAT incurred on input purchases undertaken to make zero-rated supplies. (Under the usual destination-based VAT system, exported supplies are of course zero-rated.)
- **Exempt.** The seller does not collect the tax when making an exempt supply. Unlike the zero-rated case, however, the seller is not entitled to a refund of the VAT incurred on input purchases undertaken to make exempt supplies.
- **Non-taxable.** Such activities are simply outside the scope the VAT. As in the exempt case, the seller is not entitled to a refund of the VAT incurred on input purchases undertaken to make non-taxable supplies. The economic effects of the non-taxable status

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<sup>102</sup> Concern over creating tax barriers to the expansion of the ‘civic society’ was, for example, an issue of some concern in Ukraine a few years ago. A more important issue in many of the poorest DTE has been the insistence of most aid donors on ‘VAT exemption’ for all aid-financed imports. As Chambas (2005) argues, this position is both illogical and adverse to sound development policy. It seems unlikely, however, that it will be changed soon.

are the same as the exempt status. The difference is simply that some activities may be specifically exempted.

In Australia, for example, sales are said to be *taxable*, *GST-free*, and *input taxed*, respectively. In New Zealand, zero-rated supplies are called *non-taxable* supplies. A significant proportion of supplies made by the PNC sector are exempt under one label or another. In addition, a special feature of this sector is often that various VAT refund schemes may apply to input tax in certain cases.

In one of the most complete treatments of these issues, Aujean, Jenkins, and Poddar (1999) group the activities of the PNC sector into the redistribution of income and wealth, the provision of public goods and services, and the provision of other goods and services which are similar to those goods and services supplied by the private sector. Redistribution is of course a transfer and does not in itself create value added. However, organizations involved in transfers incur VAT on inputs. To the extent public goods and services are provided to the population in general, it is usually impossible to identify individual transactions to individual consumers. Health care and education are generally exempt since, although it is feasible to measure consumption and charge prices for such services, whether provided by a public agency or otherwise, it is generally considered socially undesirable to do so, presumably (though as a rule rather tenuously) on externality grounds or, more importantly, for distributional reasons. Finally, many PNC activities are essentially similar to those of the private sector—electric and water utilities, postal services, radio and television broadcasting, organizing trade shows, providing recreation facilities, and so on. Even in these cases, however, many outputs are exempt, either for distributional reasons or in some cases because they are considered hard to tax directly for a variety of conceptual, compliance, and administrative reasons.

In principle, as Aujean, Jenkins and Poddar (1999) note, it is a conceptual error to treat the PNC sector as the final consumer of the goods and services it provides simply because, in most cases, it provides such services without charge or at a much reduced charge. While exempting such activities generates revenue from inputs purchased by registered traders along the supply chain, the revenue that would have been obtained from final sales to non-registered traders and consumers) is of course lost. This creates two types of distortion. First, since the effective tax rate on final consumers falls below the statutory rate, demand patterns are influenced. Second, at the same time cascading—the charging of tax on tax or the multiple taxation of the same value-added—may take place to the extent downstream firms using exempt services increase prices to cover the cost increase due to the tax. Distortions of input choices occur because the exemption of components used as inputs makes the VAT on some intermediate inputs irrecoverable. Producers further along the chain have an incentive to substitute away from those inputs. The net revenue effect depends on the stage at which the exemption occurs. A particularly interesting example in the case of DTE is the common exempt VAT treatment of international aid to developing countries, which both costs them revenue and also distorts economic activities (Chambas, 2005).<sup>103</sup>

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<sup>103</sup> See Barlow and Snyder (1994) for a case study of Niger with some discussion of aid.

The incentive to self-supply is an extreme case of a distortion of input choice. Whenever registered traders—such as public sector bodies—produce exempt supplies, they have an incentive to self-supply taxable goods and services rather than purchase taxable goods or services, or outsource taxable services. The reason is that the input VAT on outside purchases of taxable goods and services is irrecoverable since the supplies that embody those inputs are themselves exempt. Self-supply bias is sometimes referred to as a distortion of competition. The impact of exempt status on the decision to contract out public services has received attention in the literature over the last few years.<sup>104</sup> Since PNC agencies that render exempt services face a disincentive to contract services out to the private sector, both outsourcing and, in some instances, privatization, are penalized.

Of course, the extent to which such effects are a matter of concern will vary with circumstances. The extent of the self-supply bias, for example, is directly proportional to the VAT rate. The extent to which it affects choices depends on the degree of substitutability of self-supplied goods and, of course, their pre-tax prices relative to those of purchased goods. Edgar (2001), for instance, demonstrates (in another context) that the pre-tax price advantage of outsourced services, often from more specialized providers, need not be large to negate the incentive to self-supply. In most circumstances cultural, socio-economic, and political factors are likely to constitute much greater barriers to the contracting out of public services than the VAT. Still, the issue deserves more attention than it has generally received if only because the existence of VAT registrants that are partially exempt both introduces significant complexity and creates opportunities for fraud.

Since the PNC sector often makes a mix of supplies that are taxable, zero-rated, and exempt, complexity arises from the need to apportion input VAT between taxable and exempt activities associated to those supplies. Simple in theory, such apportionment is fraught with problems in practice. Both tracking input use and determining apportionment so as to reflect the extent of taxable and exempt activities are difficult to do well. Conceptually, tracking may be done based on actual use or on some allocation formula, but providing such a choice to taxpayers comes at a compliance cost to them and may be a source of revenue uncertainty for the tax administration because taxpayers can manipulate the allocations. Small non-profit organizations, like all small traders, are likely to bear especially high compliance burdens.

#### **4.2.2. Alternatives to Current Treatment**

On the whole, the discussion to this point suggests that the *prima facie* case to maintain the exemption system in its current form in the PNC sector is unappealing. Two alternatives may be considered. The first is to modify the exemption system; the second is to replace it. We discuss each in turn.

Table 4.3 sets out several approaches that have been suggested to *modify* the mostly exempt treatment of the PNC sector.

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<sup>104</sup> See, for example, Dijkgraaf and Gradus (2003), Wassenaar and Gradus (2004), and Gjemms-Onstad (2004).

**Table 4.3**  
**Alternative Approaches to Modify the Exemption System for the PNC Sector**

	<b>Canadian System</b>	<b>Exemptions with Rebates (self-funded)</b>	<b>Exemptions with Rebates (general)</b>	<b>Reduced Exemptions</b>
<b>Sources</b>	Canada, 1999, 2004 Poddar 2005 Québec 2003a, 2004a,b,c	Poddar 2005 Wassenaar & Gradus 2004	Poddar 2005 Wassenaar & Gradus 2004	Aujean et al. 1999
<b>Supplies within scope of VAT</b>	All	No	No	Yes or no
<b>Compensation mechanism</b>	Rebates of input VAT on exempt supplies	Rebates of input VAT self-funded by public bodies	Rebates of input VAT funded by extra VAT revenue or general revenue	Credit of input VAT on exempt supplies made taxable
<b>Bodies covered</b>	Public, non-profit, charitable	Public	Public	Variable
<b>VAT revenue effects</b>	Negative	Positive but neutral on net since rebates funded by reducing grants	Positive	Positive, esp. if tax all explicit fees
<b>Economic advantages</b>	Mostly reduction of self-supply bias	Mostly reduction of self-supply bias	Mostly reduction of self-supply bias	Reduces distortions, self-supply
<b>Economic disadvantages</b>	Distortions, need for allocations, departs from Canada-Québec harmonization	Complex, allocations, distortions, local bodies need to make up lost grant funding, selective	Complex, allocations, distortions, selective	Cascading, distortions, need for allocations, self-supply
<b>Administrative / compliance costs</b>	Low to medium	High, involve other fiscal mechanisms	High	High
<b>Jurisdiction(s) of application</b>	Canada, New Brunswick, Québec, Newfoundland and Labrador, Nova Scotia	Denmark, Finland, Netherlands, Norway (temporary scheme, not final), Sweden	UK	None

**The Canadian System.** Under what is called in Table 4.3 the ‘Canadian’ system, all supplies made by organizations in the PNC sector are within the scope of the VAT.<sup>105</sup> However, some services are taxable, some are exempt and some are zero-rated. Input taxes that such organizations incur to deliver taxable or zero-rated supplies are fully creditable. However, in the case of exempt supplies the Canadian VATs depart from the pure exemption model by granting rebates of tax paid on inputs used to make exempt supplies. Specific exemptions for health, education, social welfare, public administrations, and most supplies made by charitable organizations are paralleled by rebates to other activities in recognition of the problems pure exemption causes. Indeed, federal (GST) rebates have been enhanced recently: in 2004 the GST rebate rate for municipalities was increased from 57.14 percent to 100 percent, and in 2005 the 83 percent GST rebate rate for hospitals was extended to eligible charities, non-profit organizations, and public institutions that render services similar to those usually rendered by hospitals (the “GST/HST Health Care Rebate”). Table 4.4 shows the rebate rates for the GST/HST and the QST by type of supplier as of January 1, 2005. All these fixed rebate rates are funded from general government revenues.<sup>106</sup>

**Table 4.4**  
**Rebate Rates under Canadian GST/HST and Québec QST**

<b>Type of Organization</b>	<b>GST/HST Rebate Rate (%)</b>	<b>QST Rebate Rate (%)</b>
Municipalities	100	0/43 <sup>c</sup>
Universities <sup>a</sup>	67	47
School Authorities	68	47
Public Colleges	67	47
Hospital Authorities	83 <sup>b</sup>	55 <sup>d</sup>
Charitable Organization	50	50
Non-Profit Organization	50	50 <sup>e</sup>

Notes: <sup>a</sup> includes affiliated colleges or research institutes under the GST; <sup>b</sup> Health Care Rebate applies to charities, non-profit organizations, and public institutions that render services similar to those usually rendered by hospitals; <sup>c</sup> the QST refund was abolished January 1, 1997 so only municipalities that made arrangements prior to the expiry are eligible to claim the 43% refund; <sup>d</sup> rate will drop to 51.5% effective April 1, 2006; <sup>e</sup> rebate applies only if public funding of organization accounts for at least 40% of total funding.

<sup>105</sup> In Canada, the “VAT” encompasses three taxes—the federal Goods and Services Tax (GST), the Harmonized Sales Tax (HST) in operation in the provinces of New Brunswick, Newfoundland and Labrador, and Nova Scotia, and the Québec Sales Tax (QST) in operation in the province of Québec.

<sup>106</sup> As one would expect, once the doors of zero-rating were opened the pressure to expand access to the central treasury rapidly increased. For example, within a few days of the initial federal announcement of a full rebate to municipalities one of the authors saw a banner hung on a nearby elementary school saying “Why Discriminate Against Schools? Give Us the GST Rebate Also!”

This system seems simple, but a few issues arise. Most generally, of course, rates that vary by type of supplier may result in non-neutral treatment of similar supplies and, as discussed earlier, create at least a small incentive to choose some service-delivery methods over others. Although the new 100 percent GST percent rebate for municipalities approximates zero-rating, the reduction in distortions is of course costly in revenue terms. The new GST/HST health care rebate involves extra complexity since it requires taxpayers to extend the necessary allocations of activities to one further activity.<sup>107</sup> Furthermore, in spite of the fact that the GST and QST are relatively well harmonized, the Québec rebate system is generally less generous and the different rates for the same supplier-activity combinations introduce additional compliance costs. Under the Québec system, the apparently equal treatment of charitable and non-profit organizations effectively penalizes charitable organizations since most of their supplies are exempt while most supplies made by non-profit organizations are taxable. As a consequence, the latter recover a much larger fraction of the total QST paid on inputs.

***Exemption with rebates (self-funded and general).*** Some European countries also have rebate systems that compensate public bodies for input VAT paid to make exempt or non-taxable supplies (Wassenaar and Gradus 2004).<sup>108</sup> In the EU, activities of public sector bodies in education and health are exempt while other activities of public sector bodies in their role as public authorities are non-taxable. An example is a local government that collects refuse. Both non-taxable and exempt activities are considered outside the scope of the VAT in the EU, although derogation of non-taxable status is possible in the event of a significant distortion of competition.<sup>109</sup> In practice, the EU regime for the PNC sector is highly complex and has given rise to conflicts between community law and national law as well as the occasional court case.<sup>110</sup>

Although Wassenaar and Gradus (2004) describe VAT refund schemes in the specific context of refuse collection, the schemes are actually general and apply to non-taxable or exempt activities of local governments. Table 4.5 summarizes the key characteristics of the schemes used in several EU member states to compensate suppliers of refuse services for VAT paid on inputs, thus levelling the playing field between government and private sector supplies. Although we do not have information on the specific refund rates, it seems likely that they are usually less than 100 percent and vary by activity.<sup>111</sup> The Netherlands provides refunds for VAT incurred in the Netherlands or in other EU member states. None of the other refund schemes mentioned in Table 4.5, however, covers VAT paid to other EU member states, which seems inconsistent with EU rules.

With the exception of the UK refund scheme, which is funded by the central government, all these schemes in effect create vertical imbalances by forcing local authorities to contribute the majority of the cost of the refunds through reduced grants by the central government. As

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<sup>107</sup> Some of the many complexities to which the rebate system has given rise, not least in the health area, are discussed in e.g. Kreklewetz and Seres (2005) and Diamant and McKinney (2005).

<sup>108</sup> Swinkels (2005) discusses some other aspects of PNC treatment under VAT. Yang (2005) notes that in China, where government purchases in principle bear VAT, 25% of the amounts paid by local governments are in effect refunded since local governments receive 25% of VAT collected in their jurisdiction.

<sup>109</sup> Norway has VAT exemptions for health and social services that are similar to those under the EU regime: see Bryne (2002) for a comparison of the VAT system in Norway with that in the EU.

<sup>110</sup> See e.g. Swinkels (2005) on the VAT exemption for medical care.

<sup>111</sup> Wassenaar and Gradus (2004) specifically note that refunds vary by activity in Denmark.

mentioned in the notes to Table 4.5, it appears that increased VAT receipts are far from sufficient to pay for the refund schemes. The result may be that, while the central government may end up with a net revenue windfall, local public bodies may be left holding the bag and may have to increase local property taxes or other local levies to make up for the shortfall.

**Table 4.5**  
**Input VAT Compensation on Public Sector Services in Europe**

Country	Compensation Scheme <sup>a</sup>	Suppliers	Funding of Scheme
Denmark	VAT refund, taxable activity (refuse collection)	Counties, municipalities, inter-authority companies	Municipalities fund a “VAT Compensation Fund”
Finland	VAT refund	Municipalities, municipal federations	Municipalities fund the refund scheme
Netherlands	VAT refund	Municipalities, provinces	Through reduction in grants <sup>b</sup>
Norway	VAT refund, taxable activities (postal services, refuse collection, etc.)	Local governments	Through reduction in general grant to municipalities <sup>b</sup>
Sweden	VAT refund	Municipalities, country councils	Municipalities & country councils fund the refund scheme
United Kingdom	VAT refund	Local and police authorities	Central government revenues, no contribution by local authorities

Notes: <sup>a</sup> for further details including exceptions and exclusions, see Wassenaar and Gradus (2004); <sup>b</sup> extra VAT receipts from increased contracting out are added to the fund but that does not cover the drop in grants—for example, in Norway in 2000, the reduction in grants accounted for 80% of the funding, whereas corresponding Dutch figures are not available from secondary sources.

**Reduced exemptions.** Another possible approach is simply to permit some degree of departure from a pure exemption system. This might be done, for example, by bringing goods and services that are otherwise outside the scope of VAT into the scope of the tax, or by converting exempt goods and services into taxable or zero-rated goods and services. One variant of this method would be to tax explicit fees when the fee represents the full consideration and is therefore equal to the market value of the supply. This approach may be appropriate in cases where no subsidies or grants are involved to finance part of the supplies, as with some goods and services that compete directly with those supplied by the private sector.

To complete this review, Table 4.6 summarizes several approaches that have been suggested in the literature to replace the present essentially exempt treatment of the PNC sector.



**Table 4.6**  
**Alternative Approaches to Replace the Exemption System for the PNC Sector**

	<b>Australian System</b>	<b>Full Taxation</b>	<b>New Zealand System</b>	<b>Status Quo (Exemption)</b>	<b>Zero-Rating &amp; Reduced Rates</b>
<b>Sources</b>	Australia 2003 Poddar 2005	Aujean et al. 1999 Poddar 2005	New Zealand 2001 Poddar 2005	Aujean et al. 1999 Poddar 2005	Aujean et al. 1999 Ebrill et al. 2001 Poddar 2005
<b>Supplies within scope of VAT</b>	All	All	All	Yes or no (e.g. EU)	Yes
<b>Compensation mechanism</b>	GST credit on most sales	Full input VAT credits on taxable sales	GST credit on most sales	None for exempt or non-taxable supplies (in EU)	Full credit of input VAT on taxable supplies
<b>Bodies covered</b>	Public, non-profit, charitable	Public, non-profit, charitable	Public, non-profit, charitable	n/a	Variable
<b>VAT revenue effects</b>	Positive	Positive	Positive	Positive with growth in supplies	Highly negative for zero-rating
<b>Economic advantages</b>	Reduces distortions, no specific exemptions for supplies by public bodies, simplicity	Eliminates almost all distortions, self-supply, need for special regime & definitions for PNC organizations	Reduces distortions, simplicity	Avoids reform costs	Removes some distortions, self-supply
<b>Economic disadvantages</b>	A few zero-ratings and optional exemptions for non-profit organizations	Complexity with regards to consideration, redistribution	Negligible	Cascading, distortions, need for allocations, self-supply	Distorts choice, need to determine what is to be zero-rated
<b>Administrative / compliance costs</b>	Low	Medium, perhaps low in long-run	Low	High	Medium or high if multiple rates
<b>Jurisdiction(s) of application</b>	Australia	None	New Zealand	Most jurisdictions worldwide	UK

***The Australian-New Zealand system.*** As noted by Poddar (2005), the Australian and New Zealand treatment is refreshingly simple: all activities of public bodies and non-profit organizations are within the scope of the VAT. In short, as David and Poddar (2004) say the GST in Australia and New Zealand applies to organizations in the PNC sector in the same manner as to private sector organizations.

Nonetheless, a few special rules apply in Australia to charities, gift-deductible entities, and government schools.<sup>112</sup> For example, sales of donated second-hand goods, raffles and bingos, non-commercial sales of goods or services (if amounts charged by organization for the good or service is less than 50 percent of the market value, or less than 75 percent of the amount the organization paid for the goods or services), non-commercial supplies of accommodation (if amount charged by organization is less than 75 percent of the market value, or less than 75 percent of the cost to the organization of providing the accommodation), are ‘GST-free’ (zero-rated) for such entities. However, they may also elect to make sales at a fundraising event *input taxed* (exempt). Finally, non-profit organizations that are members of the same non-profit association can elect to form a ‘GST group’ if they make a lot of sales and purchases amongst themselves. With group treatment, members do not have to pay GST on group transactions and, of course, no credits can be claimed. As this case shows, even apparently simple rules when examined carefully often turn out to be surprisingly complex, as indeed they must be to work in a complex world.

***Full taxation.*** Aujean, Jenkins and Poddar (1999) make a coherent, convincing, and passionate case for the full value added taxation of the PNC sector. They begin by noting that the original VAT thinking on this issue was formalized at a time where there was little competition between the private and public sectors. Almost 50 years later, the exemption system which applies to much of the sector is now likely to be much more distorting owing to the existing and potential competition between private and public sector provision of many goods and services. Moreover, as it applies in the EU, the current system is quite complex. The economic advantages of full taxation and the reduction in complexity provide compelling motives for change. Of course, there are some difficulties with the proposal, particularly for determining the tax base. As mentioned earlier, explicit fees are easy to deal with. But what to do with subsidies, grant payments, and mandatory levies that are earmarked for certain recipients? Table 4.7, taken from Poddar (2005), provides a useful synthesis of how one might treat supplies of private and public goods by organizations in the PNC sector.

Wassenaar and Gradus (2004, 383) conclude that “such a thorough change of the European VAT legislation is not to be expected in the near future mainly because of some conceptual issues.” It appears, however, that is not conceptual difficulties that stand in the way but rather political ones. Although developing countries considering subjecting the PNC to full taxation would not carry the specific political baggage of the EU, few of them as yet seem willing to follow the Australian and New Zealand examples for both political and administrative reasons. Understandably, problems other than the proper treatment of the PNC sector generally loom larger on the VAT policy horizon of most DTE.

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<sup>112</sup> A “gift-deductible entity” is one to which gifts are deductible for income tax purposes.

**Table 4.7**  
**Requirements for Equality of Treatment under Full Taxation**

	<b>Taxation of Private Goods</b>	<b>Taxation of Public Goods</b>
<b>Economic neutrality</b>	Same treatment of supplies made by private businesses and PNC bodies	Apply to any consideration charged for supplies
<b>Consideration</b>	Apply VAT on amounts charged as consideration (price <i>plus</i> grants directly linked to supply)	Supplies made for nil consideration call for zero-rating
<b>Input tax deduction</b>	Full (once supplies become taxable)	Full
<b>Revenue loss</b>	None	None if government collecting VAT is the one making the supply
<b>Distortion of competition</b>	None	None since public goods are supplied by private businesses

**Zero-rating.** The 100 percent rebate to municipalities under the Canadian system is equivalent to zero-rating. Zero-rating is consistent with full taxation in the case of public good supplied for nil or nominal consideration.<sup>113</sup> Apart from its negative revenue impact, zero-rating poses other problems. First, neutrality is violated if private goods supplied by PNC bodies are zero-rated while private goods supplied by the private sector are not. Second, choice between taxable and zero-rated goods is also distorted. Finally, complexity costs are increased since rules defining the goods and services to be zero-rated must be designed and their implementation monitored. A special reduced tax rate for PNC activities has similar problems—zero-rating is of course simply the extreme case of reduced rates—but costs less in revenue and, perhaps, is more likely to be monitored carefully. As we suggest in Chapter 5 below, perhaps reduced rates may provide in some instances an appropriate compromise between the Scylla of exemption and the Charbydis of zero-rating – although of course such a compromise solution also has some of the defects of both extremes.

In principle, it seems clear that developed countries should consider seriously full taxation of the PNC sector. The case for the status quo is extremely weak and the case for taxing such services at any positive rate is quite strong. The Australian-New Zealand system described above appears to be the best option to replace the current treatment. Under that system, all goods and services supplied by public sector bodies, non-profit organizations, and charitable organizations are within the scope of the VAT and are treated like any supplies from the private sector. Such a system would be administratively simple, reducing compliance and administrative

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<sup>113</sup> Interestingly, pure transfers are not zero-rated but are rather simply not subject to VAT since of course they do not constitute consumption nor involve value added. (Presumably the services needed to arrange transfers are intermediation services that use up real resources and therefore create value added.)

costs. Taxpayers would also gain from the removal of the self-supply bias under the current system, from which no one really benefits. If countries are not willing to go this far, something like the Canadian system may provide an acceptable compromise between the status quo (which is riddled with problems) and moving all the way to taxation. Finally, as a first step, a country may perhaps consider taxing only fees as discussed earlier.

But do such conclusions apply equally to DTE? Most developing countries do not have well-developed and sophisticated tax administrations. Should they also consider following this path? In at least some instances they should perhaps do so, though probably not until VAT becomes well established. Historically, DTE have been more reliant on trade taxes and excise taxes than on sales, consumption or income taxes. With trade liberalization, however, the emphasis has shifted away from the use of import tariffs towards VAT. However, no country is given a good VAT administration: instead it must 'grow' one over a (sometimes) long period of time. Much the same is true with respect to 'growing' a taxpayer base that makes the essentially 'self-assessed' VAT a feasible revenue source for any country. No tradition of voluntary compliance exists in most DTE, 'tax morale' is low or non-existent (Bird, Martinez-Vazquez, and Torgler 2004), and, as we discuss further in Chapter 7 below, self-assessment is essentially an alien concept. The illiteracy of small traders, widespread underreporting of tax liabilities, weaknesses in tax administration and lack of taxpayer support compound the problem.

In such conditions, when might it make sense for DTE to extend VAT to the PNC sector? Considerable evidence suggests that one key to VAT sustainability in DTE is to 'do it right, right away.' But does this mean a DTE has to begin with full taxation of PNC? Our general answer is No. As Poddar (2003) notes with respect to financial services taxation in DTE (see next section), DTE should generally stick to tried and proven approaches. The NOSFA principle does not mean that every country should try to build its own 'perfect' VAT from scratch. This approach worked amazingly well in New Zealand, but in the very different and considerably more difficult circumstances of most DTE it seems more likely to produce disaster than success. Instead, DTE should generally try to combine 'off-the-shelf software' in the form of tax policy and administration design components that fit their particular circumstances.

Specifically, with respect to taxing the PNC sector, the central problem is to balance the objective of applying taxation to the PNC sector as a source of revenue with the avoidance of distortions that arise under the exemption system. Since the income elasticity of the outputs of the PNC sector is positive and probably greater than one, revenue-short countries should in principle apply VAT as widely as possible to goods and services provided by both public sector bodies and non-profit organizations and charities, subject to the (important) public policy interest constraints noted earlier. In doing so, however, they should as much as possible avoid multiple rates, non-standard exemptions, and excessive zero-rating. To implement such advice successfully, in principle DTE might employ any of the approaches set out earlier in this section. In practice, however, approaches creating (rather than resolving) complexities such as the EU exemptions with rebates and zero-rating are unpromising. DTE that wish to move in the direction of a better VAT would perhaps be best advised to begin simply with taxing explicit fees, and gradually move more or less along the lines of what was called above the Canadian system. Those that are able and willing to do more or that do not yet have a VAT would be best

advised to consider the Australian-New Zealand approach: it is not perfect, but it is probably about as close as any country is likely to get in practice.

### ***4.3. Financial Services***

Even more than the PNC sector, financial services taxation is in many ways the key ‘frontier’ issue for VAT in developed countries. No convincing conceptually correct *and* practical solution for capturing the bulk of financial services under the VAT has yet been developed. DTE of course face constraints that make the taxation of financial services an even more formidable challenge. Since even developed economies with sophisticated financial institutions and markets and capable tax administrations have opted, with few exceptions, to exempt such activities, it is not surprising that exemption is also the rule in DTE. Nonetheless, in some ways, as we discuss below, it would perhaps not be all that difficult to collect some VAT on financial services even in developing countries.

#### **4.3.1. Current Practice**

Under the system found in most VAT countries, the output of the financial sector—financial services—is untaxed but input VAT incurred by suppliers of financial services is, for the most part, irrecoverable. Two reasons used to justify the exemption of financial services from VAT. First, it may be argued that the consumption of financial services should not be taxed in the first place. Secondly, identification and measurement problems—sometimes referred to as administrative and compliance problems—are often said to preclude taxing such services.

Contrary to the first argument, the basic logic of VAT would seem to imply that household consumption of financial services *should* fall into the VAT net since the production of such services uses up real resources and hence creates value-added. On the other hand, as Whalley (1992) notes, it can also be argued that financial intermediation services do not increase consumption per se but only change the intertemporal budget constraint facing consumers, a point subsequently expanded on by Chia and Whalley (1999). Grubert and Mackie (2000) have argued similarly that financial services used by consumers should not be taxed under a consumption tax since such services do not enter consumer utility functions. However, while Jack (2000) accepts the lack of direct consumption benefits, he goes on to suggest that fixed fees charged for financial services should be taxed while implicit fees should be zero-rated. In contrast, Rouslang (2002) invokes a different set of assumptions and asserts that VAT on financial services to consumers should be at least as high as VAT on other consumer goods. Similarly, Auerbach and Gordon (2002) argue that VAT should apply to resources devoted to financial transactions as it does in other sectors. Most recently, Boadway and Keen (2003), basing their discussion on production efficiency, argue first that the view that financial services purchased by consumer should not be taxed because they yield no utility is a fallacy. Then they go on to suggest that lower (but nonzero) tax rates on financial services may provide an appropriate solution to the problem of designing an optimal consumption tax problem. As Poddar (2003) rightly notes, however, what this suggests is in effect that the ‘correct’

consumption base is not ‘value-added’. The view advanced by Poddar (2003, 360) is simply that “VAT is designed to be a tax consistently applied to all the inputs that contribute to value-added.”

The second rationale for exempting financial services may be called the “hard to tax” argument. According to this view, the outputs from financial services activity are so hard to tax for a variety of conceptual, administrative, and compliance reasons that it is preferable to sacrifice taxing household consumption and instead settle for simply collecting some VAT revenues on inputs used by registered traders along the supply chain. The major difficulty is identifying the intermediation service element that is part of a margin or spread.

The exemption approach has its own problems, however. Specifically, in the case of financial services, while VAT generates revenue from inputs purchased by registered traders along the supply chain, it does not of course generate any revenue from final sales so that the effective tax rate falls below the statutory rate. In addition, cascading—tax on tax or multiple taxation of the same value-added—also takes place along the chain to the extent downstream firms using exempt services increase prices to cover the cost increase due to the tax.

In principle, and other things equal, registered traders unable to recover input VAT paid to produce exempt services might prefer to substitute taxable inputs for exempt inputs in order to maximize VAT recovery. In practice, such substitution seems unlikely to be widespread since any substitutes are likely to be at best imperfect, although only anecdotal evidence is available on the extent of the resulting distortion. For instance, Schatan (2003) reports serious problems in Mexico where banks reportedly managed to artificially shift inputs away from exempt activity and towards taxable activities so as to maximize input VAT recovery.

The incentive to self-supply is closely related conceptually to the distortion of input choice. Cascading provides an incentive to self-supply taxable goods and services rather than purchase taxable goods or outsource taxable services since both activities give rise to irrecoverable input VAT. Again, however, it seems unlikely in the case of financial services that self-supplied goods and services are perfect substitutes or that, given the benefits of specialization in this field, the pre-tax prices of self-supplies and purchased goods and services would be equal (Edgar 2001).

The exemption system may also affect cross-border flows of goods and services. For instance, EU banks that export financial services outside the EU can claim VAT on inputs since such exports are zero-rated. In contrast, EU registered traders purchasing exempt financial services in the EU must bear some irrecoverable input VAT. Moreover, registered traders have an incentive to import zero-rated (in the exporting country) services rather than purchase them domestically from exempt suppliers and thus indirectly bear input VAT.

Partially exempt traders make both taxable and exempt sales and thus introduce significant complexity in the VAT system owing to the need to apportion input VAT—and hence input use—between taxable and exempt activities.<sup>114</sup> Such apportionment may seem simple in

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<sup>114</sup> Gale and Holtzblatt (2002) define the complexity of a tax system as the sum of compliance and administrative costs.

theory but is fraught with problems in practice. As Schatan (2003) notes, insufficient control by the tax authority over the apportionment process can lead to absurd results. For example, not only may partially exempt banks with significant shares of taxable and exempt activities recover most of their total input VAT but some may even end up in a net credit position.

Exemption is thus not without problems, and much effort has been devoted to working out alternative approaches to applying VAT to financial services. On the whole, however, as seems true of many important VAT topics, there is little empirical work quantifying the economic distortions and costs that result from the exemption system. In the absence of such evidence, it is perhaps not unreasonable to conclude that such effects are probably not decisively important. DTE might thus be well advised to maintain the exemption system since at least it wrings some VAT revenue out of the financial sector by taxing inputs at the pre-retail stages.

#### **4.3.2. Alternative Approaches**

Nonetheless, considerable attention has been paid in recent years to possible alternatives to the exemption system. Since many of the methods discussed do not apply equally well to all types of financial services, it is usually to distinguish several types of such services (following Poddar 2003):<sup>115</sup> (1) deposits, borrowing, and lending (banking operations; credit card operations); (2) purchase, sale, and issuance of financial securities (bonds, shares, options, guarantees, and foreign currencies; gold and precious metals); (3) insurance (life; property and casualty); (4) brokerage and other agent services (buying and selling of financial securities; and underwriting and other transactions where agents act as principals); and (5) advisory, management, and data processing (asset management and investment advice; administrative and information services, incidental or supplementary to financial services).

Table 4.8 summarizes the key features of a number of approaches that have been suggested to tax these various activities and that are, in a few cases, actually used to some extent in some countries, as follows.

***Addition method.*** This is an accounts-based method under which value added is calculated as the sum of wages and profits. Israel currently taxes financial services and non-life insurance using this method but since the tax is administered outside the VAT system, those taxed cannot claim VAT paid on purchases. Unlike Israel, Québec (Canada) zero-rates some financial services, imposing payroll, capital, and premium taxes on the financial sector to compensate for the revenue loss.

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<sup>115</sup> See also Bakker and Chronican (1985) for an early but excellent appraisal of tax options.

**Table 4.8**  
**Alternative Approaches to the Exemption System for Financial Services**

	<b>Addition Method</b>	<b>Cash Flow (CF) VAT</b>	<b>Full Invoicing</b>	<b>Modified Reverse-Charging</b>	<b>Net Operating Income</b>
<b>Sources</b>	Poddar 2003 Schenk & Zee 2004	Poddar & English 1997	Bakker & Chronican 1985	Zee 2005	Bakker & Chronican 1985
<b>Target service(s)</b>	All	Most	All	Most, in principle	All
<b>Base</b>	Aggregate financial intermediation services	Intermediation services	Full value of transaction	Intermediation services	Net operating income
<b>Possible variant(s)</b>	Addition method with compensatory taxes (France, Israel & Quebec)	Basic CF tax, TCA system, TCA & business transaction zero-rating	Full taxation of fees & commissions only (not margins)	Basic reverse charging	None
<b>Consistency with C-I VAT</b>	No (accounts-based, outside of VAT)	Yes	Yes	Yes	No (accounts-based)
<b>Revenue effects</b>	Positive with compensatory taxes	Unclear	Positive, overstates revenue	Unknown	Positive, overstates revenue
<b>Economic advantages</b>	Simplicity	Full taxation without distortions	Input credits to businesses	Full taxation with few distortions	Ease of calculation at entity level
<b>Economic disadvantages</b>	Cascading, competition, no input credits, self- supply	Liquidity problems with basic CF tax	Excessive tax liability (taxes capital amounts), liquidity problems	Depositors are assumed not to consume services	Cascading, competition, credits hard to compute, tax not identified
<b>Administrative / compliance costs</b>	Low	High or very high	Low or high depending on aggregation	Potentially low although unproven	High
<b>Jurisdiction(s) of application</b>	France, Israel (also non-life insurance taxable), Quebec	None	None	None	Mexico (stock transactions & “repos”)



**Cash flow taxation.** Much more theoretically appealing is a cash flow VAT under which all cash inflows from financial transactions are treated as taxable sales on which VAT must be remitted to the tax authorities and all cash outflows by financial institutions are treated as taxed purchases with entitlement for input VAT credit. This approach has two variants. First, the Tax Calculation Account (TCA) system is a tax suspension account for margin transactions that is handled by financial institutions. Tax or credit amounts credited to the TCA accrue interest until the TCA is closed and the net VAT remitted. The second variant is similar except that business transactions are zero-rated. This method seems the conceptually correct way to apply the VAT to margin services, but it is obviously complex and has not yet been adopted anywhere.<sup>116</sup>

**Modified reverse-charging.** Under this approach, suggested recently by Zee (2005), a registered business collects the VAT on both the input and output side of its business. The proposal is a modified version of the TCA (see above) and is intended to achieve the same results without the administrative complexity of the TCA. Consumers that borrow, however, would be overtaxed since in effect they would be taxed on gross interest. In response to this problem, Zee (2005) suggests a ‘franking’ mechanism that, he claims, “ensures that, when borrowers are granted VAT credits, the credits are derived from deposits that have in fact been reverse-charged.” While this idea is interesting, it has not yet been worked out in detail and is hence difficult to assess. A related approach suggested earlier (Bakker and Chronican 1985) to reduce this problem would be to use only part of the interest as the tax base, in principle adjusting the tax rate to cover only the proportion of the transaction that represents the service charge, which would of course require estimating the service charge. In principle, this ‘separate tax rate’ approach has been superseded by the development of the cash flow VAT which solves the problem of identifying the service charge in the margin.

**Net operating income.** A method actually used to a limited extent in at least one country (Mexico) is simply to calculate VAT liability on the basis of net operating income. For an institution, the tax base consists of net interest, plus margins and fees received from other activities of the institution. For a specific activity, the tax base would be net income before other costs, with tax calculated at the tax-inclusive rate as is done in Mexico for a small range of transactions.

**Subtraction method.** In Japan, VAT is levied on an accounts-based measure of value added, with each business calculating value added as the difference between revenues and allowable purchases. While simpler than some alternatives, complex rules—similar to those in the income tax—are needed to separate financial from non-financial businesses.

**Taxing gross interest.** Argentina applies a variant of this method under which VAT applies to the interest on most loans. Although the measure was implemented outside the realm of tax policy—to curb borrowing in order to reduce inflation—the government allowed the

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<sup>116</sup> The cash-flow method is set out succinctly in Poddar and English (1997) and more comprehensively in Commission (1997). An earlier method (suggested by e.g. Bakker and Chronican, 1985), would have required an invoice setting out the full value of the transaction— its actual amount (such as fees and commissions) or its nominal amount (such as capital or income amounts from deposits, loans, withdrawals, and so on). The obvious problem with this method is that it may cause liquidity problems since it applies the tax to capital and income amounts in the case of margin services. The cash flow method avoids this problem.

interest on loans from certain institutions to be taxed at about half the standard VAT rate.<sup>117</sup> The fact that interest on deposits is exempt is consistent with the non-tax policy objective.

**Zero-rating.** Since January 1, 2005, New Zealand allows zero-rating of financial services supplied between registered businesses or by a (registered) financial intermediary to a registered business. As noted earlier, Québec also zero-rates financial services. The treatment considerably reduces distortions and greatly reduces the complexity of the tax. It has two disadvantages, however. First, final consumers are taken out of the VAT net, and all revenue from taxation of inputs under the exemption system is lost.

In addition to methods that replace the exemption system for (some or all) financial services, several additional approaches, as summarized in Table 4.9, have been suggested to modify the exempt treatment of financial services.

**Australian system.** Although the Australian Goods and Services Tax (GST) essentially exempts financial services, it makes some important exceptions. For example, brokerage not undertaken by a principal, financial agency services, and non-life insurance are all taxable. Moreover, to reduce the self-supply bias, a credit is allowed equal to 75 percent of GST paid on a specified list of eligible goods and services purchased to make exempt supplies.

**Input credits.** An exemption system that permits full input credits of course approximates zero-rating. In Singapore, financial services are taxable if they are provided in return for a brokerage fee, commission, or similar consideration but are otherwise exempt. Input tax credits may be claimed using two methods. The first one requires segregation of eligible sales and amounts to the zero-rating of services provided to registered businesses. The second one is based on recovery rates that depend on the type of financial institution. The purpose of the policy is to reduce cascading and therefore preserve the competitiveness of the financial sector.

**Option to tax.** Under this method, financial institutions may elect to be taxable if they wish. The option is appealing to financial institutions that deal mostly with business customers that can claim credit for VAT paid. At present, only Belgium, France, and Germany appear to provide such an option.

**New Zealand system.** Prior to 2005 New Zealand exempted financial services but with some exceptions. Non-life insurance other than creditor protection policies was taxable under something like the cash flow system since VAT was charged on premiums and recoverable by registered businesses. Australia, Singapore, and South Africa use a similar approach with claims paid grossed up by one plus the VAT rate on account of deemed VAT paid. Since the beginning of 2005, as noted earlier, New Zealand zero-rates all supply of financial services between registered businesses and from financial institutions to registered businesses. It does not, however, zero-rate supplies from financial institutions to other financial institution as the vast majority of such supplies consist of exempt services.

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<sup>117</sup> See Schenk and Zee (2004) for a fuller description of the VAT treatment of financial services in Argentina. This approach in some ways is similar to the separate tax rate approach mentioned above.

**Table 4.9**  
**Alternative Approaches to the Treatment of Financial Services**

	<b>Australian System</b>	<b>Input Credits</b>	<b>New Zealand System</b>	<b>Option to Tax</b>
<b>Sources</b>	Joseph 2004 Poddar 2003 Schenk & Zee 2004	Poddar 2003 Schenk & Zee 2004	Joseph 2004 Poddar 2003 Schenk & Zee 2004	Poddar 2003
<b>Target service(s)</b>	Agency services & non-life insurance	Exempt	Non-life insurance <sup>c</sup>	Vary by country
<b>Base</b>	Fees & premiums	n/a	Premiums & settlements	Gross cash flows
<b>Possible Variant(s)</b>	None	Recovery rates between 0 & 100%	Modeled after cash flow VAT	None
<b>Coherence with I-C VAT<sup>a</sup></b>	Yes	Yes	Yes	Yes
<b>Revenue effects</b>	Unknown	Negative	Likely positive	Negative
<b>Economic advantages</b>	Full or partial input credits based on 75% tax recovery rate, less self-supply	Less cascading & self-supply, competition, control over revenue, obviates need for allocations	Moves closer to intended base (consumption)	Competition, less cascading, input credits
<b>Economic disadvantages</b>	Complexity in form of DAM <sup>d</sup>	Move away from taxation of non-registrants and towards zero-rating, recovery methods, segregation	Distortions very similar to those from exemption	Distortions, input allocations needed, restrictive and uneven availability
<b>Administrative / compliance costs</b>	Depend on definition of services eligible to 75% rate	Depend on tax recovery method	Unknown	Low
<b>Jurisdiction(s) of application</b>	Australia	Australia, EU, Singapore	New Zealand	Belgium, France & Germany

**Table 4.9 (continued)**  
**Alternative Approaches to the Treatment of Financial Services**

	<b>Reduced Exemption</b>	<b>Taxing Agency Services only</b>	<b>Taxing Explicit Fees &amp; Commissions</b>
<b>Sources</b>	Poddar 2003 Schenk & Zee 2004	Poddar 2003 Schenk & Zee 2004	Poddar 2003
<b>Target service(s)</b>	Almost all explicit fee-based services & non-life insurance	Agency fee-based services	Fee- & commission-based services
<b>Base</b>	Fees & premiums	Fees	Fees & commissions
<b>Possible Variant(s)</b>	Extent of fee coverage	Restrictive special case of taxing explicit fees & commissions	Deeming margins earned, limit exemption to consideration received in the form of margin, option to tax margin services, zero-rating of financial transactions among registrants
<b>Consistency with I-C VAT<sup>a</sup></b>	Yes	Yes	Yes
<b>Revenue effects</b>	Unknown	Unknown	Positive
<b>Economic advantages</b>	Competition in unregulated markets, less cascading and distortions	Broadens base, competition, less cascading and distortions, taxes areas where of low margin for fee substitutability	Consistent with deregulation, disintermediation & attendant unbundling of prices, reduce distortions & self-supply bias
<b>Economic disadvantages</b>	Distortions due to substitution of implicit fees for explicit fees, input allocations needed	Cascading in case of exempt principal transactions, narrow coverage	Incentive to shift consideration of services to consumer to exempt margins
<b>Administrative / compliance costs</b>	Unknown	Unknown	Reduced compared to present system, low once implemented
<b>Jurisdiction(s) of application</b>	Singapore, South Africa	Singapore	Singapore, South Africa

Notes: <sup>a</sup> Invoice-credit VAT method; <sup>b</sup> taxing agency services only; <sup>c</sup> excludes life insurance, creditor protection policies, and other financial intermediation services.

**Reduced exemptions.** South Africa taxes almost all explicit fees and non-life insurance. However, it requires taxpayers to allocate input credits between the remaining exempt (margin) services and taxable fees.

**Taxing agency services only.** In Singapore taxable services include brokerage for executive transactions for the sale of securities on behalf of customers, brokerage for life or general insurance, general insurance premiums, and merchant banks' fees for corporate restructuring. Principal services are exempt (Poddar 2003). This approach is essentially is a narrower variant of the method described next.

**Taxing explicit fees and commissions.** Although no country currently applies this method on a comprehensive basis, as already mentioned Australia, New Zealand, Singapore, and South Africa apply partial versions of the method, with each being located at different points on the continuum between full exemption and full taxation.

**Insurance.** The taxation of life insurance is so complex that it is not summarized in the tables or discussed in detail here.<sup>118</sup> As Chen and Mintz (2001) show, property and casualty insurers in several OECD countries face a combination of value-added taxes, sales taxes on premiums, premium taxes, property transfer taxes, property taxes, taxes on capital or assets, and income taxes. This pattern of taxation suggests significant compensatory taxation and, in all likelihood, a complex pattern of distortions. This issue is too complex to pursue further here.

As Huizinga (2002, 516) notes, although much of the discussion of alternative approaches to VAT with respect to financial services have taken place in the EU, little has actually been done there, in large part, he suggests, because “the current exemption system almost operates like a system where all banking services, supplied to businesses and households, are zero-rated.” While full zero-rating would be cleaner and more efficient, the present system gives governments some control over revenue from the financial sector. Despite the numerous (but largely unquantified) shortcomings attributed to the exemption system, exemption continues to be dominant in the world perhaps in part because no single alternative seems to have much appeal to many. If any trend looks promising, it is perhaps the increasing taxation of fees and commissions, although this too seems unlikely to be long sustained given the substitutability of margin consideration for fees and commissions and the continuing dilemma of how to tax margin services.

### **4.3.3. Conclusions for DTE**

The foregoing discussion still refers only to developed countries. When it comes to DTE, what lessons can be learned? Since weak tax administration is the principal impediment to the successful implementation and use of sophisticated and diversified tax instruments in such countries, any method imposing heavy administrative loads should be viewed with great scepticism. At this stage of development in most DTE, it seems likely that they are best advised to leave aside issues as complex as the taxation of financial services as far as possible and to

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<sup>118</sup> See Schenk and Zee (2004, 72-74) and Ebrill et al. (2001, 96-97) for brief general discussions, as well as Commission (1997).

concentrate on more essential aspects of VAT design and implementation, like those discussed in Chapter 5 below.

Essentially, only two approaches to financial services seem feasible in most DTE—exemption or reduced exemption. For DTE with an existing exemption system, the case for the status quo seems compelling from the perspective of pure policy inertia alone. Edgar (2001) makes a detailed argument in support of the exemption system on the basis of what he sees as serious deficiencies and difficulties with both the major alternatives of zero-rating and cash flow taxation.<sup>119</sup> Moreover, and importantly, as Boadway and Keen (2003) noted, making financial services fully taxable will not necessarily increase VAT revenues and may even reduce them. The reason is simply that only final consumers pay VAT in a full taxation regime. In the exempt regime, however, VAT is collected on business inputs, with some revenue leakage in the case of exports (which are zero-rated), and some revenue increases when taxable goods and services embodying financial services sell at a higher price to reflect input VAT. As Huizinga (2002) shows, even the EU countries seem to gain substantial revenue from this system. Boadway and Keen (2003) properly note that such results should not be extrapolated to DTE owing to the very different profiles of such countries with respect to e.g. the distribution and levels of consumer wealth and income, the sophistication of financial markets and final consumers, the income elasticity of demand for financial services, and traditions of risk-aversion.<sup>120</sup> Nonetheless, given the much tighter revenue constraints faced by such governments, this aspect of exempting the financial sector is not unimportant.

The only real alternative in the context of DTE might be what may be called a “hybrid” system, as follows: (i) subject all fees and commissions to VAT in the usual way, and (ii) subject all margin services to VAT using the separate tax rates and taxing gross interest methods.<sup>121</sup> This hybrid approach has several advantages. First, since all services are taxable, the scheme reduces the incentive to institutions to substitute margins for fees, the incentive for self-supply, and the import bias. Substitution of margins for fees will not reduce tax revenue unless services move to the informal sector or abroad. Second, it keeps the VAT chain intact all the way to non-registered persons. Third, it provides full input VAT credits to all registered traders without the need for complex input allocation mechanisms and the attendant distortions. Fourth, the tax ultimately falls on final consumption, the intended base. And finally, it avoids liquidity problems since it does not apply VAT to capital amounts (e.g. deposit and loan amounts) themselves but rather to interest or margins.

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<sup>119</sup> Although Edgar (2001) makes some arguable comments on definitional issues, his points on complexity seem sufficient to make the case in DTE.

<sup>120</sup> Oddly, the literature emphasizes the price elasticity of demand in discussion of the taxation of financial services. Horror stories are usually based on estimates of price elasticity that seem too large to be plausible for financial services as a whole (since there are very few, if any, substitutes for financial services). Since the end purpose of the VAT is to raise revenue, the income elasticity is more important and deserves more attention in future empirical work.

<sup>121</sup> This suggestion draws heavily on Bakker and Chronican (1985), who appraise separate tax rates and taxing gross interest for each of the following service groups: financial intermediation, trading in financial assets, fee and commission activity, and insurance services. See their Table 1 for a summary of the key features of separate tax rates and taxing gross interest. As noted earlier, in conceptual terms these systems are clearly superseded by the cash-flow approach, but if no one—and certainly no DTE—can yet implement the latter, they may still have some merit in the DTE context.

Moreover, across the board application of the two methods for margins may yield more revenue than taxing the true base on average since in most cases the value of the intermediation service is not known and is subject to estimation error.<sup>122</sup> The value of the service is clearly less than the full margin, which includes the pure time value of money, the risk premium, and the intermediation charge. In its pure form, the separate tax rates method would apply the tax to a portion of the margin (or interest paid or received if margin is not available) to acknowledge the fact that the intermediation charge is a fraction of the full margin. This is equivalent to applying a lower tax rate to the full margin. This method therefore corrects for excessive taxation at the full VAT rate so that no further adjustments would be needed in principle. The portion of the margin that represents the intermediation charge could be based upon transaction-specific data. This would be burdensome, however. Alternatively, it could be based upon aggregate institution data for the type of transaction involved, for instance calculating the proportion of interest paid on consumer loans that represents intermediation. In either case, the method requires some approximations.<sup>123</sup> Taxing gross interest is a special case of separate tax rates where the full VAT rate is applied to gross interest. In that case, the problem of excess tax does not self-correct.

This approach entails compliance and administrative costs. Financial institutions would need to provide data to the tax administration in order for the latter to arrive at the proper tax rate for the type of transaction involved. It is likely that banks, for instance, would be unwilling to reveal the composition of margins for competitive reasons. Some trade-off always exists between precise assessment (and hence neutrality) and high compliance costs, on the one hand, and simpler methods on the other. Still, any DTE with a relatively developed financial sector and good tax administration should be able to operate such a system, perhaps coupled with some special administrative schemes such as zero-rating of transactions between registered traders if the result is significant savings in compliance and administrative costs. The absence of exempt services obviates the need for ring-fencing of zero-rating (New Zealand, 2004).

Of course, most DTE probably cannot satisfy the conditions just set out. An alternative, simpler approach might be simply to tax gross interest or margins. The resulting tax collection would be excessive, but, provided refunding worked properly—a major proviso in many DTE (see Chapter 7 below)—this would pose little problem for registered traders since they obtain full credit for VAT paid. To handle excessive tax collections at the consumer level, countries could in principle follow something like the Canadian model of providing refundable income tax credits for excess VAT paid on financial services based on a notional amount of excess VAT paid (in effect an ex post correction rather than the ex ante one used in the separate rates method).<sup>124</sup> In effect, this approach converts the transactional ‘separate rate’ method to an

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<sup>122</sup> From averaging borrowing and lending rates, and averaging proportion of margin that represents elements other than intermediation, for instance.

<sup>123</sup> As noted earlier, a cash flow VAT would of course obviate the approximation problem entirely and thus supersede the separate tax rates method entirely. Our premise here, however, is that the cash flow method is too complex for DTE.

<sup>124</sup> The methods developed in Commission (1997) and subsequent reports could provide useful guidance in preparing estimates of notional amounts. One way to ensure equity of treatment would be for the administration to develop and use the same guidelines for a certain period (say one or two years) and revise guidelines periodically to reflect innovations in services and other relevant changes in markets. Filers would need supporting documentation

aggregate (taxpayer level) method, substantially reducing compliance and administrative costs. In principle, it also has the advantage of encouraging overall compliance with respect to overall tax system by creating an incentive to file an income tax return to receive credit, and by linking indirect and direct tax systems.<sup>125</sup> Of course, this process too would also not be easy to apply in the many DTE that do not have either broad personal income taxes or competent tax administrations. If so, exemption remains the policy of choice.

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in the form of invoices or bank statements showing the name of the supplier, its VAT registration number, the description of the services, capital, interest, and other relevant amounts, and VAT paid.

<sup>125</sup> The government could use the notional refund rate as a mechanism to achieve a target amount of net revenue from the sector. This mechanism could of course also be implemented as part of the pure separate tax rates method. It would require selecting tax rates subject to a revenue constraint. However, the *ex ante* basis of the scheme and the requirement for separate implicit tax rates by type of transaction makes the mechanism far more complex than the aggregate approach suggested in the text.



## 5. Designing a VAT

Once the base of a VAT is determined, several key design issues remain to be resolved such as the level and structure of rates. Although many of the lessons for VAT design suggested by experience in Europe and other developed regions are relevant everywhere, some need to be reconsidered in DTEs in which tax reality is even more dominated by administrative capacity and political necessity. As Laffont (2004) remarked in surveying another important policy issue in DTE (public utility regulation) not only do we as yet have surprisingly little solid empirical knowledge about which factors are critical in deciding what policy design is best for any particular country but in some respects even the relevant economic theory remains rather sketchy. And, of course, we generally know even less about the relevant political economy context. An important theme in this report is that it is through closer analysis of and reflection on the experience of particular DTE that we can probably best discern the real challenges that face VAT in DTE and thus the questions that most need further attention. In this chapter, much of the discussion of five important issues (rates, thresholds, exemptions, zero-rating, and the treatment of excises) draws on personal experience with these issues in a variety of DTE over the years.

### 5.1. Rates

The conventional advice when it comes to the rate of a VAT is simple: there should be one VAT rate and one rate only. Of course, what this really means is that there should be two rates, since there is always a zero rate on exports. The principal rationale for the uniformity of this ‘uniform’ rate advice is twofold: administrative and economic. Administratively, more rates are generally associated with higher administrative and compliance costs and reduced VAT efficiency (Cnossen 2004). Economically, differential rates are usually associated with increased distortion of choice and hence welfare losses (Agha and Haughton 1996). While neither of these propositions rests on very strong empirical evidence, much persuasive anecdotal evidence suggests that the administrative argument against multiple rates is correct. It is also plausible that in all likelihood the rate differentiation found in many DTE seems more likely to distort than to correct resource allocation decisions.

Nonetheless, two important points should be noted. First, even countries that appear to have simple ‘uniform’ VAT rate structures seldom do so, as noted earlier with respect to the EU (see Table 2.1). Jamaica, for example, is usually cited as having a uniform 15% VAT rate. In reality, however, in addition to imposing a rate of only 12.5% on some construction inputs (cement, steel bars, etc.) and rates varying between zero and 157% on motor vehicles, Jamaica also imposes special rates (20%) on some telecommunications services and, as discussed below, an effectively lower rate on tourist activities. In reality, Jamaica thus does not have a uniform rate GCT but rather what one recent study called “anarchy in tax rates” (Artana and Naranjo 2003).

Secondly, despite the preponderance of expert advice to the effect that the best sales tax with respect to both efficiency and administration is one with a single uniform rate applied to all taxable transactions, most countries do not seem to be listening. As seen in Table A1, the real

‘standard’ appears to be to have at least two (non-zero) rates. The most important reason for the proliferation of multiple rate structures is undoubtedly that it is perceived to be more equitable to levy multiple rates. Of course, this argument is disputable for many reasons:

- As already mentioned, international experience suggests strongly that more rates make it harder to administer a sales tax e.g. by increasing the scope for misclassification of transactions (Ebrill et al. 2001; Cnossen 2004).
- Multiple rates mean that a higher average rate is required to raise a given amount of revenue, thus increasing the economic costs of imposing the tax (Agha and Haughton 1996).
- In particular, higher sales tax rates on ‘luxury’ goods are an ineffective means of increasing the progressivity of the fiscal system. Not only are such levies usually poorly targeted, but any minute equity ‘benefit’ attained in this fashion is unlikely to offset the costs in terms of reduced efficiency and effectiveness of the tax (Cnossen, 2003a).<sup>126</sup>
- Similarly, lower tax rates on ‘necessities’ are generally poorly targeted and ineffective. The rich may spend relatively less of their income on ‘basic food’ for example, but they are likely to spend absolutely more and hence receive more benefit from such concessions (Ebrill et al. 2001).

Nonetheless, as we discussed earlier in Chapter 3 above, is not implausible that a good case may be made in many DTE that the distributive impact of imposing a uniform VAT on a highly unequal income-consumption structure should be taken explicitly into account in designing the rate structure of the tax. In particular, given the general inadvisability of both domestic zero-rating (section 4.4 below) and widespread exemptions (section 5.3 below), a single ‘reduced’ rate may sometimes prove to be the lesser of evils when, as seems often to be the case, either political necessity or distributional policy objectives mandate a more explicitly ‘progressive’ VAT.

For many DTE an equally (or more) important question concerns the *level* of VAT rates. We shall comment briefly on only three aspects of this question. Is there a minimum VAT rate? Is there a maximum rate? And if there are two rates, is there some ‘magic ratio’ that should be maintained between them? Since almost no serious research appears to have been done on any of these critical questions, at this stage all we can do is offer some preliminary thoughts, based on experience.

### **5.1.1. Minimum Rate**

Conventional wisdom (e.g. Tait 1988) is that it does not make sense to impose a VAT with a standard rate less than 10%. The reasoning underlying this conclusion appears to be simply that because VAT is a relatively complex and expensive tax to set up and administer it is unlikely to be worth doing so unless it collects a good deal of revenue, and at a rate of 10% it will likely do so. In the absence of serious economic study of administrative (including compliance) costs at different rate levels, this argument does not on its face seem very

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<sup>126</sup> As we mention in section 5.5 below, there may sometimes be a case for limited ‘luxury’ excises imposed separately from the VAT.

persuasive.<sup>127</sup> Moreover, in reality it has obviously not prevailed in a number of important countries such as Japan, Taiwan, and Canada, all of which have standard rates well under 10%. Indeed, the initial rate of the Japanese VAT was set at only 3%, although it was subsequently raised to 5%. However, although a few DTE (e.g. Nigeria, Panama) also have rates less than 10%, in most the need for revenue—and the failure of other taxes to produce sufficient revenue—have led to the imposition of rates of 10% or higher.<sup>128</sup> Indeed, in most transitional countries emerging from the former Soviet bloc, VAT rates were initially closer to 20% than to 10%, reflecting the former dominance of the turnover tax in the revenue structure, although many of these countries subsequently lowered their standard rates somewhat. In Ukraine, for example, recent political discussion has canvassed everything from going back to the turnover tax, converting the VAT to what is essentially a retail sales tax and drastically lowering the standard VAT rate (currently 20%) to 12%.<sup>129</sup>

### 5.1.2. Maximum Rate

The lowest standard VAT rate that makes sense for any country in principle depends primarily on the marginal cost of raising public funds through a VAT compared to other possibilities, which in turn depends on factors such as the marginal administrative cost of different taxes, the size of the informal sector, and the level of revenue required (Warlters and Auriol 2005). While such a ‘minimum’ rate could presumably be calculated for at least some countries, no one seems to have done so yet. The highest VAT rate feasible in a given country at a given time presumably depends on similar factors. If one focuses solely on revenue, however, it is not difficult to estimate what that rate might be in at least some circumstances.

As tax rates rise, potential taxpayers seek to lower their tax liability through both legal and illegal means. The ‘revenue maximizing tax rate’ (RMTR) is the rate which would yield the most in terms of tax revenue. At rates lower than the RMTR, increases in the rate will increase revenue; once the RMTR is reached, however, more revenue would be raised by *lowering* the rate, as Laffer and Seymour (1979) argued was true with respect to U.S. income taxes in the 1970s, for example. Although, as Fullerton (1982) showed, this argument was empirically invalid with respect to U.S. taxes on wage income at the time, much the same argument has frequently been made with respect to the economy as a whole (Scully, 1991), with respect to capital taxes such as those on capital gains (Burman, 1999) and, perhaps most credibly, with respect to particular excise taxes (Bird and Wallace, 2005). For example, as the tax rate on beer increases, all else constant, consumers may shift to consumption of wine or soft drinks, thus

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<sup>127</sup> Auriol and Warlters (2005) present data on administrative costs (budgetary outlays as a percentage of revenue collected for 10 DTE; some similar data may be found in Gallagher (2005) and the Fiscal Reform project database. No one appears to have collected compliance cost information for VAT in DTE.

<sup>128</sup> We do not discuss here how to estimate the initial VAT rate needed to produce a given revenue target, which obviously depends both on the base chosen and the estimated administrative effectiveness in reaching that base. Various approaches to this task are discussed in detail in Bird (1991). For other treatments, see e.g. Aguirre and Shome (1988), Mackenzie (1992), Pellechio and Hill (1996), and Jenkins and Kuo (2000).

<sup>129</sup> The last of these options was, for example, suggested in September 2005 by a Presidential Task Force set up by the new government (Lanovy et al., 2005).

reducing the beer tax base. Depending upon the price elasticity of demand for beer and the efficiency of the revenue system, this base reduction may in time reduce beer tax revenue.<sup>130</sup>

Can similar thinking be applied to a general consumption tax such as VAT? On the whole, in DTE consumption can probably be expected to grow as a rule at around the same pace as economic activity in general. Over time, however, as income levels rise, savings will tend to expand at the expense of consumption. In addition, and often more immediately important, experience in a variety of DTE suggests that over time the tax base will likely become eroded as a result of both ‘creeping exemption’ and persistent evasion. As discussed further in Chapter 9 below, for these reasons periodic rate increases (or base expansions) are thus often necessary simply in order to maintain consumption tax revenues.

In the case of Jamaica, for example, a 1993 rate increase to a standard rate of 12.5%—a 25% rate increase—yielded a substantial increase in revenues, 99% in nominal terms and 53% in real terms. A few years later, however, a similarly-sized increase in the standard rate (to 15%) yielded a much more modest increase in revenues, 45% in nominal and 16% in real terms. Based on this experience, and assuming that the tax continued to be administered in the same way and at the same level of efficiency as in the past, Edmiston and Bird (2004) estimated that RMTR for the GCT in Jamaica was 18%. Of course, this estimate, based as it is on the very limited evidence of the two previous rate changes is at best only very rough. Nonetheless, absent major changes in either the base or the administration of the tax, or both, there would seem to be not all that much room left in Jamaica for further exploitation of the VAT as a revenue source.<sup>131</sup>

### 5.1.3. The Range of Rates

We noted above that there may be a stronger case for at a reduced VAT rate in many DTE than is usually suggested. Can anything be said about precisely how ‘reduced’ that rate should be relative to the standard rate? An important consideration in this respect is that DTE should, as we note below (section 5.4), avoid all domestic zero-rating essentially because of the considerable strain excessive refunds create for good VAT administration. This argument suggests that any reduced rate should therefore be sufficiently above zero to minimize the need for refunds. One might, for example, argue that a reduced rate no less than, say, 40% of the standard rate should serve this purpose. Again, however, there appears at present to be no empirical support for this or any other rate configuration.

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<sup>130</sup> If there is only one good to consider, the RMTR is equal to  $-1/2\eta$ , where  $\eta$  is the own price elasticity of demand for the taxed good. More generally, the revenue maximizing rate is a more complicated function of demand and supply elasticities. Moreover, since taxes are not costless, both the administrative and compliance costs associated with particular tax rates should also be taken into account when computing the RMTR (Bird and Wallace 2005).

<sup>131</sup> In 2005, Jamaica announced that the standard rate would be increased to 16.5%

## 5.2. Thresholds

As a rule, a small number of VAT registrants, sometimes less than a few dozen, account for 80 percent, 90 percent or even more of VAT collections in DTE.<sup>132</sup> Obviously, it is critical to keep a very close idea on these fiscal ‘whales’ as Baer, Beno and Toro (2002) demonstrate. What has proved much more troublesome in VATs around the world is the question of how best to deal with the ‘minnows’ of the system—small taxpayers. While we discuss this increasingly troublesome issue more fully in Chapter 7 below, one important aspect is considered in this section. That issue is where to set the threshold – the point at which firms must register as VAT taxpayers. The usual ‘first stage’ advice with respect to thresholds was, on the whole, that this entry point to the VAT system should be set as low as possible in order to widen the tax base, thus ensuring that all potentially taxable transactions were caught in the fiscal net. However, as experience with the difficulties of imposing general sales taxes in fragmented economies with large informal sectors has accumulated, a ‘second stage’ recommendation that is increasingly being heard is that the threshold should be set considerably higher. A level of something like US\$100,000 is probably more or less what current ‘conventional wisdom’ would suggest.

Developed countries with good tax administrations may be found at both end of this spectrum, from countries like Sweden with thresholds of zero—all in!—to Singapore (US\$700,000) at the other extreme. Table 5.1 illustrates the range of thresholds, and the variety of different rules, to be found even in the mainly developed countries covered in the table. Similar variety may be found in other regions. In the Middle East, for example, thresholds range from EUR18,000 in Morocco and Pakistan to a high of EUR100,000 in Lebanon, the most recent (2002) VAT adopter in the region (Crandall and Bodin 2005).

The argument supporting an increase in the VAT thresholds in many DTE is elegantly made in Keen and Mintz (2004). Even if a little revenue is forgone by dropping many small taxpayers, any such revenue loss should as a rule soon be recouped because the administration will be able to concentrate its efforts where most needed, namely, on the medium and large taxpayers who universally account for almost all the revenue from VAT. Although Keen and Mintz (2004) note that a good case can be made for a lower threshold for service firms (where value-added presumably constitutes a larger share of turnover), to avoid imposing an additional classification burden, with concomitant costs, on the system the usual advice for DTE is, for reasons of simplicity, that whatever the level of the threshold, it should be identical for all VAT registrants.<sup>133</sup>

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<sup>132</sup> In Egypt, for example, 10% of registrants account for over 90% of GST collections. In Jamaica, the largest 100 taxpayers accounted for two-thirds of domestic GST collections.

<sup>133</sup> As Table 5.1 shows, such differential thresholds exist in a number of countries. Incidentally, note that all taxable items should be taxed at import, regardless of whether they are imported by a VAT registrant or not. (Of course, there is no need to require all importers to be VAT registrants.)

**Table 5.1**  
**VAT Thresholds: Selected Countries**

<b>Country</b>	<b>Standard Threshold (In local currency)*</b>	<b>Threshold In U.S. \$**</b>	<b>Special Rules</b>
Australia	50,000	28,075	Businesses <\$A1million are on cash basis
Austria	22,000	23,102	Must register if turnover >EUR7500, but sales only taxable if exceeds EUR22,000. Thresholds for non-profits is EUR100,000
Belgium	Zero	Zero	Only taxable (and have to file) above EUR5,580. Flat rate scheme if <EUR500,000 – need not issue invoices
Bulgaria	50,000		
Canada	30,000	19,082	Simplified scheme if <200,000. Threshold for non-profits is CAD50,000.
Cyprus	9,000	25,867	
Czech Republic	3 million	99,960	Based on last quarter
Denmark	50,000	7,071	
Estonia	250,000	16,106	
Finland	8,500	8,926	If turnover is <EUR20,000, a decreasing portion Of the first EUR8500 is exempt
France	76,300	80,123	EUR27,000 for services (other than provision of Accommodation). Simplified schemes for prescribed businesses.
Germany	16,620	17,453	<125,000 can use cash basis
Greece	9,000	9,451	EUR4,000 for services. Flat rate scheme for e.g. farming, fishing.
Hungary	2 million	8,918	EUR15,488 for entrepreneurs subject to flat-rate PIT
Iceland	220,000	2,724	
Ireland	51,000	53,555	EUR25,500 for services. Apportionment scheme for retailers and flat rates e.g. for farming
Italy	Zero	Zero	Special schemes for some categories of businesses
Japan	30 million	252,660	
Korea	Zero	Zero	Simplified scheme for small business.
Latvia	10,000	15,493	
Lithuania	100,000	29,197	Firms with turnover >EUR2,,896 have the option to register
Luxembourg	10,000	10,501	
Malta	15,000	35,326	EUR23,364 for services with low value added, and EUR14,018 for other services. In all cases, figures quoted are those at which exempt status is lost even though to qualify for such status the thresholds are lower (e.g. EUR28,037 in the standard case)
Mexico	Zero	Zero	
Netherlands	Zero	Zero	Non-corporate registrants that owe less than EUR1,883 in a calendar year can get a reduction in liability which cancels it at the level indicated and then diminishes to nil at EUR1,883. Simplified method optional for some traders.
New Zealand	40,000	20,963	Small businesses may use cash method.
Norway	30,000	4,332	>NOK140,000 for non-profits.
Poland	10,000	2,605	Three years after losing the exemption because of exceeding the threshold in the previous year, firms may again qualify for the exemption

Country	Standard Threshold (In local currency)*	Threshold In U.S. \$**	Special Rules
Portugal	Zero	Zero	However, there is an effective exemption of EUR12,470 for those under the simplified regime and a 'standard' exemption of EUR9,975 for taxpayers (other than those engaged in foreign trade) who do not have to keep standard accounting records
Romania	1.7 billion	43,928	
Slovak Republic	3 million	75,990	The reference period is the previous three months
Slovenia	5 million	21,394	
Spain	Zero	Zero	Simplified scheme for unincorporated businesses.
Sweden	Zero	Zero	But specific activities (e.g. provision of food by natural persons to employees) may be exempt if <EUR3,315
Switzerland	75,000	54,317	Cash basis on request. Flat rate scheme for prescribed traders. >CHF150,000 for non-profits.
Turkey	Zero	Zero	
United Kingdom	55,000	88,627	<600,000 can use cash basis. Simplified flat rate schemes for retailers and farmers

Note: \*Most data refer to 2003 or 2004. \*\*Converted at (approximately) 2004 rates.

Sources: Annacondia and van der Corput (2003) and OECD (2004, 2004a).

As ITD (2005) notes, it is a puzzle why most DTE persist in setting such low thresholds for VAT registration, thus encumbering their already overburdened administrations with a large amount of essentially useless work. To some extent, in many countries this result may occur simply as the result of inflation. As Table 5.2 shows for the case of Jamaica, even creeping inflation erodes the real value of any threshold level.

**Table 5.2**  
**Jamaica: Threshold Required to maintain 1991 Level, Allowing for Inflation**

Year	Actual Threshold	Maintenance Threshold
1991	144,000	144,000
1992	144,000	259,488
1993	144,000	363,802
1994	144,000	473,307
1995	144,000	600,626
1996	144,000	753,786
1997	144,000	872,884
1998	144,000	953,189
1999	144,000	1,028,491
2000	144,000	1,090,201
2001	144,000	1,156,703
2002	144,000	1,244,612
2003	300,000	1,335,469

Source: Edmiston and Bird (2004)

Although the threshold was increased substantially in 2003, it was still only a fraction of that initially implemented in 1991. To be constant in real terms, the threshold in 2003 should have been closer to J\$1.4 million than its actual level of J\$300,000. As Table 5.3 shows, even higher thresholds would have had small direct effects on revenue. Indeed, imposing a threshold closer to the US\$100,000 mentioned earlier, although it would have removed 75% of existing VAT taxpayers would have resulted in a revenue loss of less than 4%.

**Table 5.3**  
**Jamaica: Revenue Losses of Alternative Thresholds**

Share of Taxpayers Dropped	Threshold (in J\$)	Revenue Collected (2002) (in J\$million)	Revenue Loss (2002)	Revenue Loss (%) (2002)
	144,000	14,0504		
48.37	1,000,000	14,032.3	J\$18,174,493	0.13
50.00	1,109,376	14,019.6	J\$30,845,348	0.22
71.72	5,000,000	13,632.0	J\$418,421,158	2.98
75.00	6,571,948	13,499.4	J\$551,142,355	3.92

Source: Edmiston and Bird (2004)

Nonetheless, several rationales may be suggested for keep thresholds low. First, since good tax administration rests on information it is obviously advantageous in principle to include as large a share of economic activity in the tax base as possible in order to be sure to capture the necessary information. Such an explanation would be more convincing, however, if there were more evidence that any DTE put such information to good use or if the very countries that set unduly low thresholds did not so often provide many of those thus caught in the VAT net with escape routes through various simplified systems or in some cases simple neglect.

In some countries a less savoury rationale for establishing and maintaining a low threshold may perhaps be the resulting increased demand for large numbers of low-qualified staff as well as, perhaps, the increased opportunities for corruption.<sup>134</sup> Less pejoratively, still another rationale may simply be that the deep distrust of taxpayers prevalent—often for good cause, of course—in many DTE administrations may perhaps encourage them to dip as deeply as possible into the pool of potential taxpayers in order to try to catch some ‘hidden whales.’ If this is the rationale, however, the results seem unlikely to be very positive and may well, by overloading the administration, be negative. As ITD (2005) says, in the end it simply does not seem to make much sense for most DTE to attempt to apply VAT as widely as their laws attempt to do, and it remains a puzzle why so many have followed this path.

Wherever the threshold is set, however, and for whatever reason, it is of course well recognized that compliance costs are relatively more burdensome for smaller firms (Cnossen, 1994). A second question is therefore what, if anything, should be done to ‘simplify’ VAT procedures for small registrants. Many DTE have tried to lessen the blow in different ways, reaching answers that range from providing some form of simplified accounting to subjecting

<sup>134</sup> If (as in Egypt) the level of staff is not increased, the result is presumably a decrease in the amount of administrative effort devoted to the larger taxpayers who pay most of the VAT.



them, in effect, to a tax other than VAT—usually some form of flat-rate turnover tax (see Table 5.1). Jamaica goes exceptionally far down the first of these paths, providing three distinct ‘simplified’ systems, and Japan perhaps goes furthest down the second, with 95% of registrants being subjected to a ‘simplified’ tax. With either approach, the effect is essentially to take out of VAT most of the very firms that an unduly low threshold has brought in—e.g. by applying some form of turnover or presumptive levy to firms below a (usually self-reported) threshold. The extreme version of this approach is the ‘simplified’ or ‘unique’ tax—flat-rate or even in some cases lump-sum—that has become popular in some DTE in recent years (Bird and Wallace 2004).

In some circumstances, this approach may have the virtue of allowing new and potentially growing firms to escape from often arbitrary tax administrative practices (Engelschalk 2004). As discussed further in Chapter 7, however, such ‘simplification’ has its own complexities. On the whole, not nearly enough attention seems to have been paid either to the details of the design and implementation of such ‘supplementary’ or ‘complementary’ (depending on how one views them) levies as part of a VAT ‘system’.<sup>135</sup> Once again, there seems much useful research that can and should be done on such matters.

### *5.3. Exemptions*

A recent OECD (2004, 30) publication sets out what it calls the ‘standard exemptions’ found in VAT systems in OECD member countries: postal services; transport of sick/injured persons; hospital and medical care; human blood, tissues and organs; dental care; charitable work; education; non-commercial activities of non-profit making organizations; sporting services; cultural services (except radio and television broadcasting); insurance and reinsurance; letting of immovable property; financial services; betting, lotteries and gambling; supply of land and buildings; certain fund-raising events, etc. Of course, many of the activities listed have already been discussed in chapter 4 above under the headings of real property, financial services, and the PNC sector. Others (e.g. sporting and cultural services) may perhaps to some extent also be pushed into the ‘PNC’ category at least to some extent.

As we noted with respect to real property in section 4.1 above, however, what is more interesting is that, without exception, every single one of the 29 OECD members covered in OECD (2004) actually departs to some extent from this ‘standard’ list. New Zealand is at one extreme: not only does it not grant any ‘non-standard’ exemptions but, as we discussed in Chapter 4, it actually subjects to tax almost all of the ‘standard’ exemptions. But almost every other OECD country exempts some favourite activity or other e.g. Portugal exempts agriculture as does Poland; Belgium exempts legal services as does Greece, which also exempts ‘author rights’ and ‘artist services’; many countries exempt burials (Korea, Netherlands, U.K., Italy, etc.) and public transport (Denmark, Iceland, Ireland, etc.), Australia exempts specific basic foods, and, among other things cars for use by people with disabilities, while Finland exempts ‘certain transactions by blind people’ and Japan does the same for ‘certain kinds of equipment for the

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<sup>135</sup> A separate issue, important in some countries, is how such levies relate to the similar turnover-based local business taxes (Bird 2003). For some discussion of this issue, see e.g. World Bank (2003) on Ukraine, Yang and Jin (2000) on China, and Kaplan (2005) on Argentina.

physically handicapped'; and so on and on. Similarly idiosyncratic lists of exemptions may be found in every country, developed or not, with a VAT, as Table 5.4 illustrates for Jamaica.

**Table 5.4**  
**Exemptions in Jamaica, 2004**

Food Items	Raw foodstuff including fresh fruit and vegetables, ground provision, legumes, onions and garlic, meat, poultry, fish, crustaceans, and molluscs; milk; cornmeal and cereal flour; corn, Soya meal, and wheat; infant formulae; bread and other bakery items; rice; brown sugar; salt; eggs; meat and vegetable patties; rolled oats; baking flour in large quantities (45+ kg); live animals used to yield or produce food; unprocessed agricultural produce; cooking oil; corned beef; pickled mackerel, herring, shad and dried salt fish; canned sardines, herring, and mackerel; syrup; fish, crock, and noodle soups in aluminum sachets;
Other Goods	School uniforms and school bags
Buildings and Structures	Construction, alteration, repair, or destruction of buildings and structures or of works forming part of the land, such as road works, railways, docks, pipelines, and sewers; operations which are integral to or preparatory for other operations in this category; painting; rental or lease of residential property for residential purposes; the rental or lease of land for agricultural purposes or as a building site
Financial Services	Exchange of money; issuance of letters of credit, traveler's cheques, bank cheques, postal notes, cash cards, credit cards, or money orders; issuance, allotment, drawing, endorsement, transfer of ownership, or payment of a debt security; issuance, allotment, or transfer of ownership of an equity security, debt security, or participatory security; provision of credit under a credit contract; provision of a guarantee, indemnity, security, or bond in respect of the performance of the above; assignment of a hire-purchase agreement; the provision or transfer of ownership of a life insurance contract or reinsurance of such a contract; the provision or transfer of ownership of an interest in a superannuation scheme; the provision or assignment of a futures contract through a futures exchange; arrangement of any exempted financial service; payments of dividends and interest
Utilities and Public Works	Public postal and telegraph services; water supply (excluding bottled water); electricity supply to the public; sewerage disposal services
Charitable and Social Works	Services rendered by Legal Aid clinics and under the Poor Prisoners' Defence Act; services rendered by the Jamaican branch of the Red Cross Society or the St. John's Ambulance Brigade; services rendered by the Boy Scouts or Girl Guides Associations of Jamaica or any other approved youth organization or association
Medical Services	Medical, dental, nursing, and optical services
Other Services	Undertakers' services; transportation within Jamaica other than armored courier services and tour operations; most services pertaining to education and training; services performed under contract paid for by a foreign government or multilateral agency; services, excluding catering, rendered in a port or international airport in connection with importation or exportation of goods or international transport of people; travel tickets for international travel

Source: Edmiston and Bird (2004)

Any exemption system, ‘standard’ or (more commonly) non-standard, produces a myriad of economic effects, some quite complex. Ebrill et al. (2001) provide a few neat categories that capture the most important and identifiable problems:

- Revenue effects.
- Distortions of input choices.
- Incentive to self-supply.
- Import bias and undermining the destination principle.
- Compliance costs and further distortions due to partially exempt traders.

Although the most broad-based consumption taxes in the world (e.g. the New Zealand VAT) come close to including most final (private) consumption in the tax base, most VATs in developed countries probably encompass something closer to 50%-60% of such consumption. The general sales taxes found in developing countries generally do considerably worse in this respect, often tapping little more than 30% of the theoretical consumption tax base.<sup>136</sup>

The broader the base the better, for two reasons. First, with a broader base, the rate required for any revenue is obviously lower, which means that the efficiency cost of raising revenue is correspondingly lower.<sup>137</sup> Second, administration is simpler with a broader base, in part simply because there are fewer avenues of escape and in part because a larger proportion of all activities are encompassed in the tax net. Nonetheless, as the figures just mentioned suggest, no country ever succeeds in taxing all consumption, nor would any country probably want to do so. There are several distinct reasons why full taxation of consumption is seldom achieved:

- It may not be possible to tax some consumption.
- It may not be efficient to tax some consumption.
- It may not be equitable to tax some consumption.
- Other policy reasons may be thought to warrant exemption.<sup>138</sup>

Although most public discussion of this issue focuses on the last of these points, it is arguably the least important.

Some consumption simply cannot realistically be taxed by a sales tax. A principal example is of course ‘home-produced’ consumption, including the consumption people enjoy from durable assets such as houses and vehicles. In theory it may be possible to tax some such consumption in advance, so to speak, by taxing the acquisition of the asset. This is also referred to as ‘prepayment’. For example, as discussed earlier (section 4.1), there is a considerable literature on possible ways of taxing real property under a consumption tax. Similarly, there is an even larger literature on the possibility of taxing financial services (section 4.3). As we noted earlier, however, neither of these seems promising as an area into which most DTE should soon

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<sup>136</sup> As Ebrill et al (2001, 41) show, the proportion of private consumption reached by VAT is actually highest (83% on average) for small island countries where most goods are imported, but with this exception the regional range is between 38% for sub-Saharan Africa to 64% for the European Union.

<sup>137</sup> In the simplest case the ‘excess burden’ (distortionary cost) of taxation increases with the square of the tax rate.

<sup>138</sup> Of course, to be completely exempt from VAT, zero-rating is required so much of the discussion here applies also to section 5.4 below.

venture. It is difficult enough to get a VAT up and running satisfactorily in DTE without saddling it with tasks that most developed countries have not yet resolved adequately. Exempting such sectors—and thus subjecting to VAT on inputs—is probably about all that most DTE can or should do.

In addition, some consumption should not be taxed either because it is economically inadvisable to do so, or because there is no net revenue gain from doing so, or because it would be administratively simply too costly to do so. Examples found in most jurisdictions in addition to financial services are public sector consumption, education, health, real estate and construction, and agriculture. As discussed in section 4.2 with respect to the public sector, for example, most countries simply exempt activities carried out under these headings from tax. This common practice obviously leaves a lot of consumption out of the tax base. It also creates a number of both economic inefficiencies and administrative complexities and is being increasingly called into question on these grounds.<sup>139</sup> Nonetheless, for the reason mentioned at the end of the preceding paragraph, few DTE should try to pioneer in these areas.

Consider, for example, the vexed issue of applying VAT to agriculture. In common with a number of other transitional countries, Ukraine subjects agriculture to VAT. There is no reason in principle why this should not be done, and some important agricultural countries like New Zealand do so. In practice, however, even such countries, with excellent administrations, collect little or no net revenue from agriculture. This outcome is even more predictable in Ukraine since the combination of the reduced rate (10%) applied to the agricultural sector (which includes agricultural processing) and the more unusual feature that agricultural taxpayers required to charge VAT (and hence entitled also to claim input credits) are not required to remit the VAT collected on sales but can rather keep it. This obviously means that there is no net revenue from this source. The present Ukrainian system thus complicates tax administration and produces no revenue. Nonetheless, political, economic, and administrative factors all suggest that any conceivably acceptable reforms in the present system are unlikely either to reduce administrative and compliance costs or to raise net revenue. On the whole, therefore, it might be simpler just to exempt agriculture—remembering of course that exemption under a VAT is the equivalent to partial taxation but without the necessity of administering the tax formally in the agricultural system. It would then no longer be necessary to devote considerable administrative resources to the futile attempt to extract much revenue from this sector. Most DTE, and even many developed countries, largely exempt agriculture from VAT. Arguably they should not do so. In Ukraine as in many other DTE, however, given the many more urgent tasks facing such countries, it is not at all clear that attempts to tax agriculture should be given a very high priority at this stage of their development.

One problem with such arguments, of course, is that there is always a serious danger of what has been called ‘exemption creep.’<sup>140</sup> That is, once any activity or product or use is exempted from a tax, it often seems to be almost impossible ever to subject it to tax in the future. Moreover, since any exemption involves drawing ‘lines’ between what is exempt and what is not

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<sup>139</sup> See, for example, Ebrill et al. (2001, chaps. 8-9) on VAT (as well as Due and Mikesell, 1994, chapter 6 on similar problems with retail sales taxes).

<sup>140</sup> See, for example, Gauthier and Gersovitz (1997).

exempt, there is always pressure from near-substitutes or competitors to extend rather than contract exemptions.

Exemptions may take various forms in addition to the sectoral exemptions (and the threshold exemption by firm size) already discussed. For example, particular items may be excluded or exempted from VAT for three distinct reasons. Sometimes specific *products* (e.g. basketballs) are exempt, sometimes specific *purchasers* (e.g. education institutions) are exempted, and sometimes specific *uses* (basketballs used for purposes of teaching youth) are exempt. Almost every conceivable combination of these three approaches is also to be found: some users are exempted with respect to certain uses of (broadly) anything, some specific items are exempted only if used for certain purposes by certain users, and so on. Such exemptions substantially complicate the administration of the tax, increase the economic distortions to which it gives rise, and generally serve no significant equity or other policy purpose.

### 5.3.1. Exemptions for Equity

By far the most common exemption for equity reasons is that of food. In South Africa, for example, various basic food items (maize meal, dried beans, rice, unprocessed vegetables and fruit, etc.) are exempted (Go et al. 2005).<sup>141</sup> Such exemptions are common with many VATs, as well as other forms of sales tax.<sup>142</sup> In the U.S., for example, food exemptions have been estimated to cost up to 25% of potential retail sales tax revenue in most states. As Due and Mikesell (1994, 79) noted, this “food exemption is perhaps the largest mistake the states have made in their sales tax structures, costing substantial revenue, adding administrative and compliance problems, and deviating from the basic rule of uniformity of treatment of all consumption expenditures. Large volumes of expenditure of persons above the lowest income levels are freed from tax for no justification whatsoever.” Exactly the same can be said about exempting food under VAT, of course, and there is wide (though not universal) agreement among experts that a better approach to any perceived regressivity resulting from the taxation of food is through some form of income-related credit (e.g. based on income tax returns or added to welfare payments). When such offsets are feasible, we agree with this view. However, as noted in section 3.4 above, in many DTE this option is not available and a good case can be made at times for exempting food (and perhaps some other ‘basic’ items) on equity grounds (Bird and Miller 1989).

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<sup>141</sup> South Africa also exempts paraffin (a fuel used by many poor households). As Hughes (1987) shows, in many DTEs certain fuels tend to be used extensively by lower-income groups e.g. for cooking, but the impact of taxing (or exempting) such fuels varies substantially from country to country depending on the degree of substitutability of different fuels for different purposes and the structure of the fuel market. In Indonesia and Tunisia, for example, the tax on kerosene was found to be quite regressive, while in Thailand—in part because fuel prices in general were much less distorted by taxes, so that expenditure patterns had not been seriously altered as a result – it was not.

<sup>142</sup> Kreklewetz (2004), for example, tells the story of the food exemption in Ontario, Canada, noting that the attempt a few years ago to withdraw a long-standing exemption of ‘prepared food’ (e.g. take-out meals) valued at less than CAD\$4 was quickly killed by popular outcry. Interestingly, while most tax policy analysts would argue that there is no case at all for the exemption of food in developed countries like Canada, Kreklewetz (2004) draws the opposite conclusion and argues apparently on equity grounds that food, whether take-out or not, should not only be exempt from retail sales tax but also zero-rated for VAT. When even well-informed experts in developed countries with good welfare systems make such arguments, it is hardly surprising to find food exemptions everywhere.

Many exemptions found in DTE have no plausible equity or other rationale that can possibly justify the cost and complexity of administering and complying with them. Consider, for example, some of the exemptions listed in Table 5.4 such as school bags and noodle soups in aluminum sachets. Edmiston and Bird (2004) estimate that in total 44% of the potential VAT base was exempt in Jamaica. Even more questionable exemptions—e.g. vehicles used by veterans or production by firms employing a certain proportion of disabled workers—are not uncommon in other countries. Provisions that exempt certain items when used by certain people for certain purposes—even if (or perhaps especially when), as is sometimes the case, some other official agency is supposed to certify compliance—are always a bad idea. Tax departments have enough trouble administering simple general consumption taxes. They should not be burdened with such complex and ultimately unachievable tasks as trying to administer a hodgepodge of trivial exemptions.

### 5.3.2. Exemptions for Incentive Purposes

This conclusion is even more relevant when it comes to the use of VAT concessions for ‘incentive’ purposes. In Ukraine, for example, there are many such exemptions. World Bank (2003) reports that in 1999, 14% of registered enterprises were effectively exempted and in 2000 VAT concessions amounted to over 27% of VAT revenues—that is, over 21% of potential VAT revenue was forgone for these purposes. Some of these concessions are questionable. Although the exemption of so-called “critical imports” – as determined largely on an ad hoc basis—was officially eliminated in May 2000, other, equally questionable, exemptions—such as of imports of cars and parts—remain. Such exemptions appear to represent inappropriate industrial policies and have no place in a good VAT system. Indeed, World Bank (2003) suggests that about three-quarters of VAT exemptions in Ukraine could advantageously be eliminated with no cost to equity and gains to efficiency and administration.

The initial VAT law of 1997 did not contain many of these questionable exemptions, but the process of base erosion started almost immediately, with 10 amendments to the law in 1998 and still more in later years. Reforms in 1999 reduced the revenue cost, but it remained substantial. Such widespread tax concessions not only facilitate evasion but also, when the taxpayer is subject to audit, corruption. Sometimes, once concessions enter the system, they have been subsequently enlarged surreptitiously without quick response from the tax administration, becoming in effect almost a ‘self-assessment’ system—though one without the necessary administrative systems and safeguards or approaches to support such a system.<sup>143</sup> In the context of Ukraine tax concessions create opportunities for abuse and expand the prevalent system of “audit by checking”<sup>144</sup> to the detriment of the needed focus on more strategic approaches to collection and compliance. Moreover, as always, ‘exemption creep’ is a problem:

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<sup>143</sup> As Ebrill et al. (2001) stress, in an important sense the essence of a modern VAT is that it is a ‘self-assessed’ tax. However, Ukraine is hardly the only country in which, it may be argued, the administrative, political, economic, and political context is not yet quite up to supporting a self-assessment system (Bird, 2005). We return to this issue in Chapter 7 below.

<sup>144</sup> For a brief discussion of the lack of any real tax audit in many ‘post-Soviet’ economies (in which what is called ‘audit’ is usually simply numerical verification), see Bird (1999).

concessions feed on themselves, encouraging taxpayers to lobby for still more concessions just as they also have an incentive to defer payment in anticipation of future tax amnesties.<sup>145</sup>

Tax economists as a rule do not favor tax incentives, for good reasons (McLure 1999). Either they are redundant and ineffective, forgoing revenue and complicating the tax system without adding to capital formation, or else they are distorting and inefficient, directing investment into less than optimal channels. In view of the difficulty of assessing the effectiveness of tax concessions and the ease with which they may be perverted to benefit special interests, even the best-designed tax incentive is likely to be a useful tool of public policy only when a country has not only a stable macroeconomic environment but also a stable political and administrative system. Nonetheless, many countries like Ukraine that clearly do not satisfy these conditions continue to have recourse to such incentives for investment in part because, as in Ukraine, they seem to be thought of by many as costless. They are not.

Consider, for instance, the case of the special territorial tax concessions Ukraine established during the 1990s in 20 special zones (11 “Free Zones” (FZ) and 9 “Territories of Priority Development” (TPD). Among an array of other concessions, enterprises established in such zones were freed from all VAT on raw materials, equipment and spare parts for own needs for up to five years. This provision amounted to an estimated 3 percent of VAT revenues in 2001, when 16 zones were in operation, with the major beneficiaries being located in the Donetsk basin. The concession was apparently viewed largely as an additional support to the maintenance of some of the older industrial enterprises located in this region. Not only is there little or no evidence that such policies are effective in attracting investment to less favored regions in any country, but there is also considerable evidence that such discretionary and non-transparent policies are readily conducive both to corruption and to reducing substantially the effectiveness of tax administration in general (Bird, 2001). Creating such “on-shore tax havens” in a country in which there is already a huge underground economy inevitably adds to the difficulty of enforcing taxes fairly and effectively. The import of tax-free imported foods into the special zones and their subsequent resale, for example, soon became such a problem in Ukraine that the government attempted to limit imports of raw materials used to produce foodstuffs and created a special commission to investigate the legality of import operations in the zones. In such ways fiscal favoritism may lead to abuses and then, in an attempt to cope with the resulting problems, increased complexity and increased administrative costs with few demonstrable offsetting beneficial effects and clear negative effects on revenue.

The territorial concessions were finally abolished in Ukraine at the end of 2004, but unfortunately it would not be surprising for them to reappear soon since the underlying reasons they were created still exist. The problem in Ukraine is less defective tax design than a political environment that has a demonstrated preference for using the tax system as an important means of managing its political constituency. Some of the same forces seem to be at work also in a quite different ‘transitional’ economy, China. As Li (2005) discusses, the VAT in China is not a ‘normal’ VAT since it is essentially a tax on production rather than consumption because credits

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<sup>145</sup> Edmiston and Bird (2004) tell much the same tale in Jamaica, for example.

are not generally allowed for capital assets.<sup>146</sup> China's VAT is also unique in that it does not really zero-rate exports but rather permits fixed rates of export rebate on a presumptive basis, with different rates for different classes of products. This practice has been of substantial concern with respect to China's accession to the WTO. Moreover, for a period China deliberately subsidized the semi-conductor chip industry through its VAT (specifically, by imposing VAT at 17% on such chips but then refunding up to 14% of the base to companies that designed and made chips in China), although it agreed to halt this practice in 2005 (Li 2005). China has also used VAT reduction or exemption as a tax incentive in other instances, for example, with respect to attracting investors to develop certain industries in the western region of the county.<sup>147</sup> China is now in the process of moving towards a more conventional consumption VAT, but it is again doing so only in a very differential fashion, specifically by permitting input rebates in several poor north-eastern provinces, in large part, it seems, to stimulate growth in these regions (Yu 2004).

### 5.3.3. Limiting the Damage

Although there may have been some slowdown in the process of base erosion in the last year or two, base erosion whether through exemptions or the zero-rating discussed in the next section is a potential time bomb in many DTE VATs. Excessive use of the tax system to deliver what, in effect, really consists of 'tax expenditures' (Bruce 1990) damages the integrity of the tax system. Such tax expenditures complicate administration and facilitate both evasion and corruption. Once in the system, such concessions are often hard to remove and may all too easily be enlarged at the initiative of taxpayers who may lobby for more concessions or simply redefine existing concessions in unforeseen and presumably undesired ways. Numerous privileges and exemptions make it difficult to administer the VAT effectively. The level of discretion of tax auditors is increased and bargaining situations—and hence the risk of corrupt arrangements—created. Such hidden costs of incorporating concessions of various sorts as part of the basic tax structure may be a major hindrance to efforts to improve and strengthen tax administration in many DTEs. No quick solution to such problems seems likely in countries in which tax incentives are seen as an important means of managing political constituencies (e.g. Ukraine) or achieving specific economic objectives (e.g. China). A partial solution may be simply to have a periodic 'clean-up' reform every decade or so in order to clear the deck of at least some of the accumulated debris of years of erosion. As in Jamaica after the 2003 reform, the process of erosion will of course resume the next day in the absence of more fundamental environmental changes. The underlying political problem needs to be addressed if at all possible. One small but important step in this direction may simply be to do more to promote awareness of the problems and dynamics of tax expenditures both within the government and more widely. More specifically, to maximize the likelihood of beneficial results from tax concessions, and to reduce the damage that may be caused by poorly-designed and implemented incentives, countries should follow three simple rules (Bird 2000):

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<sup>146</sup> The principal reason given for disallowing such credits is to restrain 'excess demand' for investment goods—in other words, to provide some offset for the perceived biases of financial markets. Revenue concerns have also clearly been a factor, however (Yu 2004).

<sup>147</sup> We are grateful to Duanjie Chen for calling to our attention the item on "Tax Preferential Treatment for Developing Western Regions, in Tax Yearbook of China 2002 [in Chinese].



**1. Keep it Simple.** The more concessions there are and the more complex they are, the less likely they are to produce desirable results at reasonable cost and the more likely they are to be conducive to evasion and corruption. Concessions should therefore be as few in number and simple in structure as possible. When it comes to VAT, as suggested elsewhere, reduced rates may be a lesser evil than either exemptions or zero-rating, and concessions linked to specific products are much simpler to deal with than concessions granted only when such products are purchased by specific users or for specific uses or, even worse, specific uses by specific users.

**2. Keep Records.** Whatever concessions exist, consistent records should be kept as to who receives what concessions and at what cost in revenue foregone. If a concession is intended to achieve a particular result, e.g. to encourage investment, the results in terms of investment, employment, and so on should be systematically reported. In the absence of such information, governments are operating blindly.

**3. Evaluate the Results.** As we discuss further in Chapter 7 below, it is not enough just to gather potentially useful numbers. Such numbers must be used to be of any value. Ideally, at regular intervals—say annually or at most every three or five years—data on each tax concession should be examined carefully to assess whether the concession is achieving results worth its estimated cost. If not, it should be eliminated.

Of course, few DTE follow any of these prescriptions. One result is that all too often tax expenditures seem to be thought of by many as costless. Ideally, not only should the fiscal cost of tax expenditures be reported annually but it should be done as part of the annual budgetary process—a so-called *tax expenditure budget*. Many developed countries now do this, and the result, though not dramatic, has arguably been to call attention to the existence and cost of tax concessions and perhaps to reduce their number and scope to at least some extent (Surrey and McDaniel 1985). Some have called for similar tax expenditure exercises in developing countries (e.g. Maktouf and Surrey 1983), and a few such studies have been done (e.g. for Guatemala, by Mann and Burke 2002). A recent report (World Bank 2003) suggested that perhaps countries might consider imposing a ceiling on the combined effect of tax expenditures—for example, providing that all tax expenditures combined cannot reduce taxes by more than  $x\%$ —although we are not aware that any country has followed this approach with respect to VAT.<sup>148</sup>

## 5.4. Zero-rating

Under a VAT, of course, an item is only truly ‘exempt’ when it is ‘zero-rated’, that is, subject to a rate of zero so that VAT imposed on previous transactions are then rebated at the time of final sale. Both exemption and zero-rating complicate administration. Exemption requires that registrants making both exempt and taxable sales prorate their input tax credits. The easiest form of exemption to deal with under a VAT is to exempt some activities from collecting

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<sup>148</sup> Such an ‘alternative minimum tax’ is of course not uncommon with respect to income taxes. This approach obviously raises more problems when it comes to indirect taxes. Nonetheless, it is in effect what is done when, as discussed in Chapter 7 below, a system of VAT ‘withholding’ is applied or any of the many ‘simplified’ systems that constitute part of the VAT structure in many countries are used.

VAT on their sales but to subject them to tax on their purchases. Exemptions of particular products—e.g. for distributive reasons—give rise to the prorating problem. So do exemptions of purchasers by particular users. As mentioned earlier, exemptions of particular products when used by particular users for particular purposes add the problem of verifying use. All these exemptions are of course subject to potential abuse and require careful policing to protect the tax base.

To avoid such problems, sectors such as finance and agriculture that are often exempt from tax on their sales for various reasons are normally not exempted from tax on their purchases. But of course this means that all these good things are then to some extent taxed. One response to this problem followed, for instance, to a considerable extent in Jamaica (see Table 5.5) is to zero-rate such items.

The major problems with this solution are twofold. First, it faces the tax administration with the possibility of having to refund tax to hundreds, perhaps thousands, of non-exporters. In 2002, for example, Jamaica was liable to refund about J\$2 billion in ‘negative GCT payable.’ In some countries, such as Ukraine, one result has been the accumulation of substantial arrears of VAT refunds, as discussed further in Chapter 7 below. The second problem is that with weak tax administrations, the problem of fraud may become uncontrollable. Again, we discuss this further in Chapter 7. To anticipate our conclusion here, however, the combination of the fraud problem with refunds and the high administrative cost of dealing with many non-taxable or negative returns should, we think, simply rule out of court any non-export zero-rating at all in most DTE.

To be able to administer a general consumption tax as fairly and effectively as possible, the efficiency and possible equity costs of ‘partial’ taxation through exemption or reduced rates seem as a rule to be clearly a better choice in practice for most DTE than the theoretically ‘best’ solution of zero-rating. Once again, however, we have to emphasize that neither we nor, to our knowledge, anyone else have any solid empirical evidence upon which to base such judgements. Instead, as is so often true when it comes to VAT, all we can do is rely on our assessment of experience in a number of countries.

**Table 5.5**  
**Zero-Rating in Jamaica, 2004**

Category	Items
Agriculture	Animal feeds, except pet food; machetes; farm forks; planting material; agricultural chemicals; insecticides; coverings and containers designed for the packaging of agricultural goods
Health	Most drugs; contraceptives; orthopedic appliances; laboratory appliances; invalid carriages; goods acquired on behalf of Jamaican branch of the Red cross, St. John's Ambulance Brigade, or the University Hospital of the West Indies or any private hospital necessary for their functioning
Government and Diplomatic and International Organizations	Goods and services for the personal or official use of non-service staff of missions and international organizations, trade commissions, and consular officers; Goods and services for a ministry or department of government or a statutory body or authority (with some exceptions)
Exports	Exported goods and services other than used goods
Places of Worship	Non-consumable goods used as vestments, furnishings, or decorations in a place of worship; altar bread and wine; offertory envelopes
Education	School books; school buses; items for use in an examination on behalf of examination bodies approved by the Minister of Education; goods and services acquired by the University of the West Indies and the Council of Legal Education; exercise books
Motor Vehicles	Motor vehicles for numerous categories of persons, mostly people in political positions or higher government offices, people recruited by the government from overseas; or people employed by educational institutions
Items Under Certain Enactments	Exemptions from customs duty due to The Bauxite and Alumina Industries (Encouragement) Act; The Export Industry Encouragement Act; The Hotels (Incentives) Act; The Industrial Incentives Act; The Industrial Incentives (Factory Construction) Act; The Jamaica Export Free Zones Act; The Motion Picture Industry (Encouragement) Act; The Petroleum Act; The Petroleum Refining Industry (Encouragement) Act; The Resort Cottages (Incentives) Act; goods used in the Modernization Programme
Other Items	Coins and currency imported by the Bank of Jamaica; equipment and materials used solely in a research and development program

Source: Edmiston and Bird (2004)

## 5.5 VAT and Excises

In most tax systems around the world selective taxes on consumption, or excises, produce a significant amount of revenue. An important questions to be considered in designing a VAT is therefore what to do with the excise taxes. As discussed in e.g. Cnossen (2003b), so far as DTE are concerned, in general only alcohol, tobacco, motor vehicles, and fuel are potentially high enough yielding items to deserve special consideration.<sup>149</sup> In principle, these items, with the exception of vehicles, whether imported or produced domestically, should essentially be taxed on a specific basis at levels that are set both to offset externalities arising from their consumption and for revenue reasons and that are also periodically adjusted to offset the effects of inflation.<sup>150</sup>

Goods subject to such specific excise taxes should also be subject to general consumption tax at the normal rate. That is, the base of the sales tax should include any special excise (or import) levy. This treatment is usually considered essential if a VAT is applied because otherwise firms producing excise goods would not be able to credit input taxes so this sector of the economy would therefore be relatively disadvantaged. If the resulting combined rate of tax is considered ‘too high’ the excise rate (not the VAT rate) can be adjusted downward. On the other hand, if the rates of excise taxes are set correctly to offset externalities arising from consumption of e.g. petroleum products, there is no reason for making any adjustment to these rates.<sup>151</sup>

Many countries honor this rule—set the excise tax and then subject the price-cum-excise tax to the normal VAT rate—more in the breach than the observance, however, and complicate their VATs significantly by incorporating what are really excise taxes in the same system. In Egypt, for example, a wide variety of selective taxes at both specific and ad valorem rates are included in the VAT law although, since the items in question can neither claim or give rise to input credits, they are not really in the VAT system. In Jamaica, although the system is more logical in subjecting only a few items to selective taxes, matters are again complicated because some excise goods are subject to VAT and some are not. Moreover, over the years, the inclusion of differential taxes on motor vehicles in the VAT structure has substantially complicated the system. The most logical treatment is clearly to confine selective excise taxes to a few items, but also to subject these items to VAT (including the excise tax, like the customs duties) in the VAT base. VAT taxpayers who buy such goods would then, of course, be entitled to credit VAT on inputs (but not excises) against VAT due on their own sales. Enterprises subject to excise tax would of course be similarly entitled to deduct their own input VAT from VAT due on their sales.

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<sup>149</sup> Environmental taxes and gambling are also discussed in Cnossen (2005) but seem unlikely to be major revenue sources in most DTE.

<sup>150</sup> For a detailed discussion of how to tax alcohol, for example, see Bird and Wallace (2003).

<sup>151</sup> Interestingly, the almost universal reaction to recent increases in fuel prices in Canada has been to urge that the VAT, not the excise, on gasoline should be reduced. While this recommendation makes no sense for many reasons, it is striking that absolutely no one taking part in the political discussion has made the obvious point that, if the excise tax is correctly set in economic terms—which is of course always somewhat arguable—then unless VAT is applied at the same rate as on other goods, consumption patterns will be distorted.

Finally, however, it should be noted that in some jurisdictions restrictions are imposed on the extent to which VAT imposed on 'excise' goods is creditable to reduce the obvious scope for abuse (e.g. having businesses buy vehicles that are used essentially for personal purposes). The simplest form of such restrictions is perhaps simply to prohibit claiming VAT input credits at all for e.g. tobacco or alcohol products (unless purchased by distributors of such products). DTE with weak tax administrations and hence vulnerable to fraud might be well advised to have some such limiting rules in place.

## 6. New Issues in VAT Design

In recent years, several new issues have been added to the list of problems facing VAT designers. In this Chapter, we discuss two such issues—VAT and the taxation of electronic commerce and the increasing interest in the possible use of VAT in some form at the sub-national level of government. Although neither of these issues is simple, our discussion here is brief since we have treated these issues at considerable length elsewhere.

### 6.1. VAT and the Digital Economy<sup>152</sup>

In recent years few VAT issues have given rise to more discussion among those concerned with tax matters in recent years than electronic commerce. Governments, international organizations, and pundits have poured forth reams of material on this subject. The general OECD line that taxation should be neutral and equitable between all forms of commerce, electronic or otherwise, while simultaneously minimizing both compliance and administrative costs and the potential for tax evasion and avoidance, seems both reasonable and persuasive.<sup>153</sup> But what, if anything, does e-commerce imply for VAT in DTE?<sup>154</sup>

#### 6.1.1. VAT is a Partial Solution

A first important point that should be emphasized is that in an important sense the mere adoption of VAT (compared to any other form of consumption tax) in itself offers a partial solution to the problems posed by digital commerce. No special problem arises under VAT in any country when it comes to the B2B (business-to-business) sales that continue to constitute the bulk of all e-commerce transactions since they can be handled by what in the European Union (EU) is called the "reverse charge" mechanism (Doernberg et al. 2001).<sup>155</sup> What this means is simply that such services (e.g. telecommunications services) are deemed to have been supplied where they are received, and the buyer is liable for the tax. In practice since no tax is imposed on the import of services there is no input tax credit against subsequent output taxes. Buyers are thus taxed indirectly, in effect paying the tax on both the value added by these purchases and that added by their own subsequent taxable sales.

To work well, however, this mechanism requires that the seller have information on the nature of the buyer and in particular his VAT identification, if he has one. Ideally, this could be done electronically if there is an online real-time central registry of all VAT taxpayers—a system that has existed in Singapore for some time, for example (Bird and Oldman 2000). The EU's VIES (VAT Information Exchange System) serves essentially this purpose for VAT registrants

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<sup>152</sup> This section largely follows Bird (2005b).

<sup>153</sup> For a thorough treatment of the subject, see Li (2003).

<sup>154</sup> For a useful overview of this issue, see McLure (2003).

<sup>155</sup> For example, B2B sales accounted for over 70% of e-commerce sales in Canada in 2002 (Bird 2003b).

in the EU.<sup>156</sup> When purchases are made from unregistered non-resident vendors, however, in principle the reverse charge should be paid directly by the buyer, a system that essentially depends on self-assessment and is hence unlikely to be any more effective in practice than the similar "use tax" imposed under the retail sales tax in the US.<sup>157</sup>

Moreover, to work well this system like all VAT administration to a considerable extent depends ultimately upon the efficacy of tax audit—notoriously the weakest point of tax administration in DTE. As discussed further in Chapter 7 below, the 'self-assessment' nature of VAT is at the root of much of the difficulties many DTE encounter with VAT, so it is not surprising that most DTE in practice undoubtedly face some problems when it comes to taxing even B2B e-commerce under VAT. In addition, of course, DTE like all countries face even greater problems when it comes to dealing with sales of digitized services to non-registered taxpayers—so-called B2C (business-to-consumer) transactions. Even the most developed countries with the best tax administrations find it difficult to compel non-resident sellers of such items to register or buyers to report their purchases.

In an attempt to deal with this problem, for example, since 2003 the EU has required non-EU vendors with EU internet sales over EUR100,000 to register for VAT in the EU and to collect and remit the tax. But what tax? There are now 25 EU Member States, with different VATs. If a remote seller is already "established" in one of the EU Member States, it is supposed to apply the VAT of that Member State. If it is established in more than one EU Member State, however, it can apparently choose which rate to apply. If a seller has no EU establishment, it is required, first, to determine if its EU customer is a consumer or a business.<sup>158</sup> If it determines that the purchaser is a consumer, the online seller must then register in an EU Member State and file and pay VAT to that country, a procedure that is obviously difficult to verify or enforce. Under a so-called "simplified scheme", however, such vendors have the choice of registering in *any* Member State they choose and paying tax (if applicable) to that Member State. That country is then supposed to remit the revenue to the country of consumption—information on which must presumably also be supplied by the seller. In contrast to all this complexity, an EU online seller simply applies his home country's VAT to all sales within the EU (Gnaedinger 2003).

This way of dealing with B2C cross-border sales is complex, difficult to enforce, and may not be sustainable. In effect, what it amounts to is that within the EU such sales are taxed on an origin basis, that is, by the country of the seller. Suppliers outside the EU, however, are faced with higher compliance costs since they are in effect taxed on a residence basis (country of the consumer). It would not be too surprising to find that those EU Member States (or regions) with lower VAT rates will prove particularly attractive to new non-EU vendors that are considering establishing an EU subsidiary or branch and thus putting themselves in a position to be treated like EU sellers.<sup>159</sup> The effect of such tax planning would of course be to shift revenues to those regions. No doubt the EU will work out some solution to such problems. The

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<sup>156</sup> See the discussion in Ligthart (2004) as well as OECD (2005). The compliance costs that the VIES imposes on VAT registrants are significant, however, according to Verwaal and Cnossen (2002).

<sup>157</sup> See Due and Mikesell (2004) on the very limited efficacy of the use tax in the U.S.

<sup>158</sup> While it is not clear how this can easily be done, the obvious way would be to permit access to the VIES system mentioned earlier, as suggested by Ligthart (2004) but it is not clear how non-EU sellers could be given such access.

<sup>159</sup> For example, Heredia and Fernandes (2003) noted that the autonomous region of Madeira in Portugal had the lowest VAT rate in the EU (13%)—although this rate has subsequently been increased.

prospects that DTE facing similar problems in dealing with cross-border services will be able to do much about them in the near future, however, seem rather bleak. The best that OECD countries have come up with so far, for example, is to recommend a simplified registration system, requiring non-resident suppliers who sell more than a specified amount into a jurisdiction to register as a sales tax payer in that jurisdiction and, preferably, taxing them on a simplified 'turnover' (gross receipts) basis (OECD, 2003).

Perhaps the best that DTE can hope for is that somehow the developed countries, one way or another, will manage to figure out a way to deal with B2C sales before the problem becomes significant. At the moment, perhaps the best advice one can give to DTE concerned with the looming problems electronic commerce poses for VAT may be, as we argued in Chapter 4 with respect to such other 'frontier' issues as the treatment of the financial sector and the public sector, is simply that they probably should not worry much about such esoterica. A much more important and immediate task in most DTE is to concentrate on first getting an appropriate VAT into place and then running it effectively with respect to non-electronic trade and commerce. Once that is done it will then be time to think about how to cope with digital issues.

In short, the basic question in many DTE is not how to deal with such 'new' problems as e-commerce but rather simply how one can make a tax such as VAT which essentially depends on self-assessment function adequately in countries that in many instances do not appear to have satisfied the necessary preconditions for a self-assessment system. The answer, we suggest, is to spend more time and effort in the first place determining what kind of less-than-perfect VAT will function best in such countries and then to concentrate on working out the best way in which they can move over time from such unsatisfactory (though probably necessary) initial positions to a good VAT. The best answers along these lines can in all likelihood really only be determined in the context of close study of particular countries.

### **6.1.2. Lessons from History**

Taxation has always been the art of the possible. Changes in tax policy and tax structure in any country usually reflect changes in administrative realities as much or more than they do changes in policy objectives. Early tax systems in all countries depended mainly on levying taxes on items subject to physical control, count and verification, such as land and excise taxes and customs duties. The rise of mass industry and the development of the financial system led to the dominance first of withholding at source with respect to the income tax and then to the consumption tax equivalent of withholding—the VAT. Digital fiscal pessimists argue (or assume) that the digital revolution has overthrown the administrative and informational underpinnings of the present system: "What may be a sound rule from a tax policy perspective may be totally unworkable in light of available technology (e.g., the ability to make anonymous, untraceable electronic cash payments or the ability to locate a server anywhere)" (Abrams and Doernberg, quoted by McLure 1997, 298).



The digital revolution is by no means the first such revolution to affect the flow of commerce and hence the actual and potential tax base: "In 1831 a British member of Parliament asked Michael Faraday, a pioneer of electrical theory, what use his discovery might be. Mr. Faraday replied that he did not know, but that he was sure governments would one day tax it. The Internet may be rather harder to tax, but someone, somewhere will find a way."<sup>160</sup> What lessons might DTE confronting the growing reality of digital commerce learn from fiscal history?

The two critical problems in taxation are first to identify the tax base and then to enforce the tax. The anonymity and mobility associated with electronic commerce make both of these tasks more difficult. No cloud, however, comes without a silver lining. In the case of the cloud cast over taxation by the rise of digital commerce, the silver lining is that the new information-driven world simultaneously makes it easier to improve services and reduce costs in tax administration. The new technology of tax administration may also make it easier to maintain and even extend the reach of the tax net. Technological revolution brings with it not just problems but also the possibility of technological solutions. Many writers on this subject, for example, seem to take as an article of faith that the Internet is a borderless technology. In reality, however, given the interests of not only governments but also businesses in knowing where customers live, borders are being constructed in cyberspace every day in various ways.

There is no 'quick fix' for the problems digital commerce raises for VAT, but if necessity is indeed the mother of invention, then a workable technological solution to at least some of the fiscal problems arising from the new technology may loom in the not too distant future (Ainsworth 2005). One possible solution, for example, might simply be to require that, in order to be legally valid, a transaction must be geographically coded with the physical location of both buyer and seller. No wall is perfect, but one can certainly be built to enclose much of the existing tax base—provided always that the will to do so is present in enough jurisdictions. In effect, for example, the VAT already does essentially this for B2B transactions by shifting the onus to the purchaser who is visibly tied to a particular jurisdiction.

Indeed, one view of the possible future is that the final outcome of the advent of the digital economy may be to strengthen, not weaken, the government's role as tax collector. The more tax authorities are driven to share information, and to promote the identification technology that reveals the jurisdiction of buyers and sellers, the more effective will taxation become not just with respect to electronic commerce but for all international (and interjurisdictional) transactions. From this perspective, a real danger of the effect of e-commerce on taxation may lie not so much in the erosion of the tax base as in the erosion of privacy, as governments take defensive action to protect their fisc (Cockfield, 2002). On the other hand, as Brin (1998) argues, more transparency in this respect may simply be another price we have to pay for living in a complex modern society.

Another response might be for countries to, as it were, "go backwards to the future" and once again rely increasingly on old and traditional tax handles as excises and property taxes as Bishop (2000) suggests. Within countries—and some day perhaps even within the European Union—some reassignment of revenues (e.g. perhaps more personal income taxes to lower-level

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<sup>160</sup> Quoted in "The End of Taxes?," *The Economist*, 23 September 2000, 30.

governments and more corporate and sales taxes to the upper level) and a greater role overall for payroll and consumption taxes in general may occur in the long run as governments struggle to maintain their revenues in the face of new pressures tending to expand the underground economy and tax evasion.<sup>161</sup> In the short run, however, reactive changes seem more likely to take the form of minor "fixes" here and there than such major swings in tax mix. For example, the provincial consumption taxes in Canada (some of which are VATs, as discussed later in this chapter) may move (as in the EU) towards a single registration system, which would seem to be both feasible and in the interests of all. Moves in this direction would be facilitated if all provinces moved to VATs, a desirable change in any case (Bird and Wilson 2004) that the rise of digital commerce is likely encourage. Such a solution seems much less likely in the US context, however, where, despite its obvious problems, the multi-state approach to a "streamlined" RST seems about the best that can be hoped for at present (Hellerstein 2005).

Coupled with new information requirements, such measures may stem the tide for a while. In the longer run, however, if the state is not to be downsized, the result of the pressure of e-commerce on the tax system in all countries may well have to be a stronger cartel—as some might call it—against the taxpayer. As McLure (2003, 2003a) has eloquently argued, no approach except continued efforts to develop more coherent international tax standards and policies seems to hold much promise, although any progress in this direction is certainly not likely to take place quickly, or uniformly, and especially not in DTE. Continued and expanded coordination, cooperation and convergence (voluntary harmonization) between governments both sub-nationally and internationally almost certainly lies somewhere in everyone's fiscal future. Such cooperation will not occur simply or quickly (Keen and Ligthart 2004), but it is also, as experience suggests, not impossible (Bird and Mintz 2003; Duncan and McLure 1999). Crises are often the mothers of solutions.

Such mild conclusions with respect to the big questions posed by the "digital revolution" for taxation may not be very exciting. Nonetheless, achieving the needed degree of agreement will require major revisions in policies as well as a great deal of hard, detailed and persistent effort on all sides. As many have noted before, in the end no completely satisfactory solutions to the problems posed for traditional tax systems, whether local or national, by electronic commerce—or, more precisely, by the increased strain that such commerce places on already existing weak aspects of those systems—seems likely to emerge. About the best that can be done is for all involved to try to be as reasonable and consistent as possible. The endless negotiation and compromise on tax matters needed at both the local and national levels may be more intensive than before, but it will be no different in kind than the past fiscal adjustments to the changing world have required. Tax policy, as Ken Messere (1999, 342) reminds us, "... is about trade-offs, not truths". The process through which we develop the needed trade-offs, both nationally and internationally, in the end will largely determine how tax systems are reshaped over time in response to the rise of international commerce in general and not simply to the probably increasing share of these cross-borders flows that takes digital form.<sup>162</sup>

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<sup>161</sup> See e.g. the extended discussion of taxation and the underground economy in Alm, Martinez-Vazquez and Schneider (2004).

<sup>162</sup> For further reflections on this theme, see Bird and Mintz (2003).

## 6.2. Sub-national VATs<sup>163</sup>

Independent VATs applied simultaneously by two different and overlapping jurisdictions were long considered to be either undesirable or infeasible for a variety of reasons (Bird 1993). Some emphasized the high administrative and compliance costs of imposing two sales taxes on the same base. Others stressed that divided jurisdiction over such an important tax base might unduly limit the scope of central macroeconomic policy. Still others simply noted that central governments are obviously most reluctant to allow others to share this attractive tax base. The major technical problems that have been emphasized in the literature, however, arise from cross-border trade.

Traditionally, it has been asserted that the only way in which sub-national units can effectively levy a VAT was on an origin basis (as in Brazil).<sup>164</sup> Unless they did so at uniform rates, however, the results would be highly distortionary.<sup>165</sup> Acceptable origin-based sub-national VATs could thus only be achieved by giving up the desirable degree of sub-national fiscal autonomy (and accountability) that such taxes might otherwise help to achieve.<sup>166</sup> On the other hand, it was believed that a destination-basis consumption VAT imposed through the generally used invoice-credit method could not be successfully implemented without physical border controls. In the absence of borders, the only feasible approach was thought to be some form of clearing-house in which transaction-based input tax credits and tax liabilities could be netted against each other, with any remaining balance being settled by interstate payments.<sup>167</sup>

In the circumstances it was not surprising that, until recently, most federal countries solved the problem simply by keeping all VAT at the central level. If the central government wished to share a certain percentage of VAT revenues with sub-national governments, it did so either by using a formula (as in Germany) or by using consumption statistics, as was recommended for the EU a few years ago in an important official report (Commission 1996). If, as was true in the Russian Federation, a nationally uniform VAT was administered by sub-national authorities and the revenues were shared on the basis of origin, much the same undesirable and distortionary incentives were created as in the case of non-uniform sub-national origin-based VATs (Baer, Summers and Sunley 1996).<sup>168</sup>

The principal reason VAT was originally adopted as the required form of general sales taxation in the European Common Market (now the EU) was its advantage in implementing the destination principle with respect to cross-border trade. Only with the value-added form of sales tax could member countries be sure that imports were treated fairly in comparison to domestic

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<sup>163</sup> Much of this section is adapted from Bird and Gendron (2000, 2001).

<sup>164</sup> See Guerard (1973) on the development of VAT in Brazil; for a more recent view, see e.g. Afonso and de Mello (2000).

<sup>165</sup> This argument is clearly stated in Neumark (1963), for example.

<sup>166</sup> For a detailed argument on the desirability of such accountability, see e.g. Bird (2001).

<sup>167</sup> See, for example, the discussions of these problems by McLure (1980), Cnossen and Shoup (1987), OECD (1988), and Poddar (1990). An interesting example of a clearing-house arrangement exists between Israel and the West Bank-Gaza, although the flow of revenues has proved to be vulnerable to political factors.

<sup>168</sup> For later developments in Russia, see Mikesell (1999) and McDonald (2001). The many special problems of tax systems in transitional countries cannot be further discussed here (see Bird 1999; Martinez-Vazquez and McNab 2000; and Mitra and Stern 2003).

products, and that exports were not subsidized by over-generous rebates at the border.<sup>169</sup> It is thus somewhat ironic that the issue of how best to apply VAT to cross-border trade *within* the EU itself has not yet been fully resolved. From the Neumark Report (1963), with its recommendation for the eventual adoption of the origin principle for intra-EU trade to the proposals of the European Commission (1996) and since, numerous experts have put forth a variety of solutions to the perceived problems. As yet, however, no proposal has achieved full acceptance in the European context.

Although some interesting arguments have been made in favor of the origin principle of applying a VAT within a country (or economic union), we think that the destination principle clearly wins the day.<sup>170</sup> The conditions of wage and exchange rate flexibility needed to avoid substantial distortions in production efficiency when different jurisdictions levy different rates under the origin principle seem most unlikely to be satisfied in most federal states (let alone in the EU, even after the move to the Euro). The destination principle is both more compatible with independent taxation of consumption and, in practice, seems less likely to result in important economic distortions (Keen and Smith 1996).

At present, the EU applies the destination principle using what is called the "deferred-payment" method (Cnossen and Shoup 1987). Exports by firms in one member country *A* to *registered traders* in other member countries are zero-rated in *A* without requiring border clearance. Such sales are therefore treated in the same way as all sales outside the EU. In contrast to imports from non-EU countries, however, imports by registered traders in *A* from firms in other EU member countries are *not* taxed at the border. Instead, importers in *A* in effect pay the VAT on imports (at country *A*'s rates) on their own sales since they have no input tax credits to offset against the tax due. The system works on a self-assessment basis. Importers are supposed to declare their imports, compute the VAT that would be due, and claim credit for that VAT, all in one return. The effect is that VAT is collected on imports only when they are resold or incorporated into goods sold by the importing firm (since imported inputs, unlike domestic inputs, will not generate offsetting input tax credits at that time). As an aid to enforcement, exporters that zero-rate sales to other member countries have been required to quote the VAT registration number of the buyer since 1993 (Keen and Smith 1996).

The deferred-payment system may be contrasted with the "clearing-house" method under which VAT would be charged on exports by the exporting state, with a credit allowed for this VAT by the importing state (as for any other input VAT, but at the tax rate imposed by the *exporting* state).<sup>171</sup> Revenue accounts would then be balanced between states either on a transaction basis or in accordance with consumption statistics.<sup>172</sup> In practice, the deferred payment system—which in effect puts reliance on private sector accounting subject to VAT

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<sup>169</sup> This question has come up recently with respect to China's export rebate system (Li 2005).

<sup>170</sup> For a useful outline of the various ways in which "destination" and "origin" have been defined over the years in GATT and EU discussions of sales and excise taxes, see Messere (1994). We do not discuss the theoretical debate about the relevant merits of origin and destination principles and the effects of switching from one to the other: see, for example, Lockwood (1993); Lockwood, de Meza, and Myles (1994, 1995); Bovenberg (1994); Lopez-Garcia (1996); and Genser (1996).

<sup>171</sup> As noted below, this is essentially how the Commission's "common" system would work (Commission 1996).

<sup>172</sup> As discussed later in this section, the latter system is used with respect to Canada's HST system; the deferred payment approach is used with respect to the QST.

audits—appears to work as well as or better than the alternative explicit public sector offsetting of accounts required in the clearing-house approach. Nonetheless, as discussed in section 6.1 above, the recent EU measures with respect to digital commerce have in effect instituted a kind of clearing-house system with respect to certain cross-border sales

The deferred-payment system is not without its own problems, of course. This is particularly true with respect to the possible revenue loss from cross-border sales to final users. In addition to the new EU rules with respect to taxing digital commerce discussed in section 6.1, some special rules have long been in place in an attempt to cope with this problem. For example, vehicles (which are subject to high taxes) are subject to tax in the country in which they are registered, and firms that would otherwise be exempt from VAT are subject to VAT on the destination basis once their imports exceed a specified threshold (Keen and Smith 1996). As we note below, similar provisions apply with respect to sub-national VATs in Canada and have been recommended to deal with problems of interstate trade under the state retail sales taxes in the United States (McLure 1997a). No one has yet found any simple and uniform way to deal with *all* cross-border shopping problems under any destination-based sales tax, but such special provisions appear to have helped to keep serious problems largely in check so far, at least in the EU and Canada.

### 6.2.1. The Current Situation

Table 6.1 summarizes the current situation in ten federal countries. As this table shows, the current situation with respect to sub-national sales taxation in federal countries is characterized by diversity.<sup>173</sup>

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<sup>173</sup> Similar systems apply in some non-federal countries, of course. In Japan, for example, there is a “local consumption tax” at the prefectural (regional) level that is 20 percent of the national VAT, or in effect a 1 percent VAT. (See Schenk 1989 for a description of Japan’s rather unusual VAT.) This tax is collected by the National Tax Administration in each prefecture and the local portion is paid to the prefecture (which pays tax collection costs of 0.35 percent of collections for national transactions and 0.55 percent for imported goods to the national government). The total is distributed among the prefectures by the following formula: 75 percent in proportion to retail sales in the prefecture (as shown in official statistics), 12.5 percent according to population, and 12.5 percent by the prefectural share of the number of employees. Any “surplus” or “deficit” is cleared between prefectures by direct payments. In addition, each prefecture transfers half of its VAT revenue to municipalities (50 percent according to population, and 50 percent on number of employees). Obviously, local governments have no autonomy with respect to VAT in this system.

**Table 6.1**  
**Sales Taxes in Federal Countries**

Country	Federal VAT	State Sales Taxes	Type of State Tax
Australia	Yes	No	All VAT revenue goes to states
Canada	Yes	Yes	Some have VATs, some have RST
Germany Austria	Yes	No	States share in VAT revenue
Switzerland Belgium	Yes	No	None
United States	No	Yes	Most have RSTs
Argentina	Yes	Yes	Gross receipts taxes*
Brazil	Yes (limited)	Yes	VAT (origin base)*
India	Not really (so-called CENVAT)	Yes	States moving from (in most) tax at producer level to VAT

\* States also receive a share of federal VAT revenues.

Indeed, at first glance, international experience appears to suggest, as one of us noted several years ago, that no one has managed to work out an acceptable system for taxing sales at two levels of government (Bird 1993).<sup>174</sup> Although at least five possible methods for dealing with the problems potentially arising from two-level sales tax exist—and each may be found to some extent in one country or another—none is entirely satisfactory.

Firstly, sales tax may be collected *only* at the regional level, either as VAT or retail sales tax (RST). Outside of the EU, where only the member states and not the union impose VAT, only the United States and a few Canadian provinces currently follow this path (with RSTs). Table 6.2 shows the present complex situation in Canada.<sup>175</sup> Few central governments are likely to be able or willing to give up the revenue they now collect from VAT without making equally drastic changes on the expenditure side. Such complete realignments of governmental responsibilities and revenues are not easy to achieve.

<sup>174</sup> For a more recent, and different, take on this question, see Bird (2005c). As George Bernard Shaw (or someone) reportedly once said when accused by a critic of changing his mind on some issue: “When circumstances change, sir, I change my mind. What do you do?”

<sup>175</sup> Even in the United States, in which sub-national VATs have usually been considered as replacements for business taxes, rather than sales taxes, some have recently suggested that VATs should now be considered also to replace retail sales taxes (Fox 2000; Capehart 2000; Ebel and Kalambokidis 2005). As we discuss in Chapter 8 below, we think there is good reason for this position.

**Table 6.2**  
**Sales Taxes in Canada**

Jurisdiction	Name of Tax	Type of Tax	Rate	Administration	Comments
Canada	GST/HST	VAT	7%/15%	Federal except in Quebec, where it is provincial	GST rate (federal) is 7% and applied throughout the country; HST rate is 15% and applied only in the three HST provinces
Newfoundland and Labrador	HST	VAT	8%	Federal	Provincial share of HST is 8%, with revenues distributed to provinces based on estimated taxable consumption
Nova Scotia	HST	VAT	8%	Federal	Same as for Newfoundland
New Brunswick	HST	VAT	8%	Federal	Same as for Newfoundland
Prince Edward Island	PST	RST	10%	Provincial	Applied to retail sales price including GST
Québec	QST	VAT	7.5%	Provincial	Applied to GST base including GST
Ontario	PST	RST	8%	Provincial	Applied to retail sales price
Manitoba	PST	RST	7%	Provincial	Same as Ontario
Saskatchewan	PST	RST	7%	Provincial	Same as Ontario
British Columbia	PST	RST	7.5%	Provincial	Same as Ontario

*Notes:* (1) The remaining province, Alberta, and the three northern territories (Yukon, Northwest Territories, Nunavut), have no sales tax; (2) The base of the QST is slightly different from that of the GST/HST. Each of the RST provinces has its own tax base, generally with considerable taxation of business inputs and with limited coverage of services; (3) Although two provinces, Manitoba and British Columbia, permit some (very limited) access municipal access to sales taxes but there are essentially no local sales taxes in Canada.

Secondly, sales taxes may be levied only at the central level. Germany, for example, has a single VAT levied at the national level, although a proportion of VAT revenue is shared on the basis of a formula with the states.<sup>176</sup> Similarly, in Austria, the *länder* receive 18.557 percent of VAT revenue (with another 12.373 percent going to municipalities (Genser 2000). Among other federal countries, Australia (since 2000), Belgium, and Switzerland also have a VAT only at the

<sup>176</sup> Although the state share is supposed to be 50.5 percent, in fact this proportion is applied only after deducting several other earmarked shares from total VAT revenues. In 1999, for example, the states (*länder*) received about 47 percent of VAT revenues. Another 2.2 percent went to local governments, 5.63 percent to the federal public pension fund, and the balance to the federal government (Genser 2000).

central level. In Australia, however, all the revenues from the new Australian VAT (called the GST or Goods and Services Tax) go to the states. These funds are distributed in exactly the same way as the long-established equalization system. In fact, since other funding for equalization was cut correspondingly, in effect the central (Commonwealth) government retained some of the VAT revenue for itself. As Greenbaum (1999, 1744) puts it, in effect “all the GST does is to ensure the source for the equalization payments.”<sup>177</sup>

Many have argued that the “German” solution of a centralized VAT with some of the revenue shared with states on a formula basis is probably the best approach in a federal country (Tait 1988). For example, some proposals for reform in both Brazil (Silvani and dos Santos 1996) and the European Union (Smith 1997) have essentially taken this tack. This approach is clearly feasible and has substantial advantages in terms of administrative and compliance costs. Even if all or some of the proceeds of the tax are to be distributed to the states, either on the basis of estimated consumption or on some formula basis, a single central VAT has substantial advantages and avoids many problems. This approach may indeed be the best way to finance regional governments in the context of many DTE.<sup>178</sup>

Such so-called “tax sharing” is in reality, however, simply an alternative form of intergovernmental fiscal transfer. The total to be transferred is determined by the designated share of VAT collections, and the amount to be allocated to each state is determined by a formula established by the central government.<sup>179</sup> Such revenues are not really regional (or local) taxes in any meaningful sense since the jurisdictions that receive the revenue are not politically responsible for raising that revenue. In federal countries in which regional governments are strong, it is by no means obvious why either the central or the regional governments would be willing to accept such a system.<sup>180</sup>

The present system in Spain is interesting in this respect. On the whole, Spain has followed the German model with respect to VAT, with 35% of VAT revenues being ‘ceded’ to the states (‘autonomous communities’) and distributed (as in the Canadian HST cases) on the basis of estimated consumption. However, the communities can, and do impose their own tax rates for property transfer taxes and stamp duties. As is common (see Chapter 4 above) transfers of existing immovable property are not normally subject to VAT in Spain. But taxpayers have the option, under certain conditions, of waiving this exemption and pay VAT instead of the property transfer tax, which applies only when transactions are not subject to VAT. They may

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<sup>177</sup> As part of the readjustment of federal-state fiscal relations accompanying the GST, it was originally expected that many state taxes, notably stamp duties, would be abolished in exchange for increased transfers, but the reduced base for the GST that finally passed meant that some of these duties continue to be levied (Cooper 2001).

<sup>178</sup> In general, however, it is preferable not to base sub-national transfers on the yield of any one tax, since doing so is likely to bias national tax policy choices: for further discussion, see Bird and Smart (2002).

<sup>179</sup> In some instances, as in China, allocations are determined on the basis of the ‘source’ or ‘origin’ of the revenues. This practice not only re-creates some of the problems of origin-based state sales taxes (as long deplored in the case of Brazil, for example) but also opens a potential Pandora’s box of complexity in attributing source or obvious inequity e.g. when all revenues are attributed to the location in which a firm files its return.

<sup>180</sup> On the other hand, even in such countries, weaker regions—those most dependent on central transfers—might indeed prefer such transfers to the right to tax a base that they do not really have. Asymmetrical regional tax systems, like that now existing in Canada (see below) may over time become a more prominent feature in such countries as Spain and Belgium as well as, perhaps, some DTE, particularly so-called ‘conflict’ countries emerging from regional civil wars.



choose to do this, for example, to claim input tax credits. Of course, when they do so, they reduce community revenue. Consequently, as Ruiz Almendral (2003) discusses, some communities have tried to discourage such behaviour by lowering the property transfer tax if a person who has the option to waive the VAT exemption does not to so and to increase the stamp duty (which applies to transactions subject to VAT) if the option is exercised. In Spain, VAT and intergovernmental fiscal relations are thus, it seems, closely related.<sup>181</sup>

In neither a completely central nor a completely regional VAT fills the bill there remain three ways in which both levels of government might levy sales taxes. First, although the VAT may be the best of all possible sales taxes in some general sense, there may be something to be said for maintaining two distinct sales tax bases in a federal state in which both levels of government tax sales. Such a solution is obviously untidy and may be costly, but it may be argued that such costs should perhaps be viewed as part of the price paid for a federal system which presumably has offsetting virtues, such as respecting local preferences (Bird 1993). As shown in Table 6. Canada provides an example of this approach (five provinces have RSTs), as do Brazil, India, and Argentina (as well as the Russian Federation) in all of which there are distinct taxes on sales at both state and federal levels.

Alternatively, both levels of government could maintain independent dual VATs, perhaps reducing compliance and administrative costs by harmonizing bases and to some extent rates. As Poddar (1990) argued, it is in principle possible to retain a substantial degree of state fiscal autonomy while still reducing substantially the economic and administrative costs of levying two independent and totally uncoordinated VATs at different levels of government. The Canadian province of Québec provides an example of such a system. Bird and Gendron (1998) suggested that, with some adaptation, a similar approach may prove workable in the context of the EU. Varsano (1995, 2000) and McLure (2000) have argued that an alternative approach to the same result might be more appropriate for large developing countries with weak tax administrations. We discuss these alternatives further in section 6.2.2.

A final alternative is that the VAT could become in effect a joint or concurrent federal-state tax. Such a tax could be administered by either level of government and apply to a jointly-determined base, but with each government setting its own tax rate. From the point of view of fiscal accountability, this solution seems clearly preferable to the German approach. A variant of this approach is now used in three provinces of Canada, as set out in Table 6.2 and discussed in the next section.

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<sup>181</sup> The same is even truer in China: see Yang and Pin (2004) and Wong and Bird (2005).

## 6.2.2. Approaches to Regional VATs

Table 6.3 illustrates some of the key characteristics of four possible approaches to state VATS in federal countries:<sup>182</sup>

**Table 6.3**  
**Features of Alternative “Federal” VAT Models**

<b>Feature</b>	<b>Independent VATs</b>	<b>Dual VATS</b>	<b>Joint VATs</b>	<b>CVAT</b>
Rate autonomy	Yes	Yes	No	Some
Collection incentive	Strong	Strong	Unknown	Unknown
Administrative requirements	High	High	Lower	Moderate
Administrative costs	High	Depends on how done	Low	Moderate to high
Need for central administration	No	No, but lower cost	No, but probable	Probably
Need for single administration	No	No	Yes	No
Need for interstate administrative cooperation	High	Limited	No	No
Need for central state cooperation	No	Yes	Complete	Yes
Revenue distribution	Independent	Independent	Formula	Essentially independent
Need for clearing of some credits	No	No	No	Yes
Potential for interstate evasion	High	Restricted	No	Restricted
Cross-border shopping a problem	Yes	Yes	No	Yes

<sup>182</sup> Much of this section is based on Bird and Gendron (1998, 2001). See also Schenk and Oldman (2001) for a review of some of the issues discussed here. It should be noted that many important questions—for example, the treatment of exempt sellers—are not discussed here. Varsano (2000) discusses some of these matters.

To summarize:

- The two levels of governments may have completely independent VATs. Brazil comes close to this, although its states do not have rate autonomy since the rate is essentially set by central legislation.
- Each level of government may have an independent VAT—what we call “dual” VATs—in which each level sets its rates independently but on similar bases and there is a high level of administrative cooperation (as in the GST-QST case).
- There may be a single “joint” VAT—essentially a central VAT with some of the revenue flowing to the states either in accordance with estimated consumption (as in Canada’s HST) or with a distributive formula (as in Germany).
- There may be what McLure (2000) has called a “compensating VAT” or CVAT, as described below.

Of these four possibilities, only the second (dual VAT) and fourth (CVAT) seem worth further consideration if any importance is attached to state rate autonomy and administrative feasibility. Essentially, as Table 6.3 suggests, the dual VAT approach appears to rate higher in terms of autonomy but lower in terms of administrative feasibility. One’s assessment of these alternatives thus hinges largely on the relative weight attached to each of these characteristics.

***The Dual VAT Approach.*** What lessons might Canadian experience with the ‘dual VAT’ GST-QST system, which handles the cross-border issue essentially on the ‘deferred payment’ basis, offer for developing federal countries such as Brazil, Argentina, and India?<sup>183</sup> One important lesson appears to be that the best basis for a sub-national VAT system is a well-designed and comprehensive national VAT. A second lesson, perhaps equally difficult to apply to DTE, is that another key factor appears to be the existence of an adequate degree of (justified) mutual trust in each other’s competence by the sub-national and central governments. That the system works between two such strong political opponents as the government of Canada and the government of Québec suggests that the level of trust (or, perhaps more appropriately, respect) required may not be all that high. Nonetheless, it is probably asking too much to expect an equivalent relationship (or quality of administration) to exist soon in most developing countries.

Presumably, a single central administration and a common base (as in Canada’s personal income tax system) would also be ideal, but this degree of convergence is not, we think, either essential or necessarily desirable. What Canadian experience does suggest is critical is either a system of joint or unified audits or at least a high level of information exchange to make the system work well, combined with each taxing government independently determining its own VAT rate in order to create the right incentives.<sup>184</sup>

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<sup>183</sup> The same question—what lessons does Canadian experience with two-tier sales taxation offer—is considered with respect to the U.S. in Bird (2005c).

<sup>184</sup> The details of the Canadian system can be very complicated, as discussed briefly in Chapter 4 above, and may vary (e.g. with respect to the extent to which non-resident vendors are required to collect provincial sales taxes) considerably from province to province (e.g. Poore 2004).

***The CVAT Approach.*** In many DTE, of course, there may be little realistic prospect of “good” tax administration in the near future, especially at the sub-national level. As Varsano (1995, 2000) and McLure (2000) have shown a promising approach in these circumstances may be to impose what is in effect a supplemental central VAT, which McLure has called the “compensating” VAT or CVAT. This simple proposal has the major virtue of protecting the revenue when tax administration (at all levels of government) is not well-developed. Specifically, it reduces the risk that households (and unregistered traders) in any state dodge state VAT by pretending to be registered traders located in other states.<sup>185</sup>

How might such a CVAT work? Briefly, assuming that states can levy their own independent VAT rates—a key element of the system—CVAT would be imposed by the central government on sales between states at some appropriate rate such as the weighted average of state rates (McLure, 2000). States would zero-rate not only international but interstate sales, but the latter would be subject to the central CVAT (as well as the central VAT, of course). Domestic sales would thus be subject to central VAT and either state VAT or central CVAT. There would be no need for any state to deal explicitly with any other state nor, generally, would there be any need for interstate clearing of tax credits.<sup>186</sup> Registered purchasers in the other state would of course be able to credit CVAT against central VAT. The results of this procedure are twofold. First, the central government, which first levies CVAT and then credits it, would gain no net revenue from it.<sup>187</sup> Second, the state VAT applied to the resale by the purchaser would be that of the destination state. In other words, the results are exactly the same as in the GST-QST case—a destination sub-national VAT is applied—but the CVAT now acts to protect state revenues from some obvious frauds.

This simple system seems to make sub-national VATs feasible and potentially attractive—at least in large federal countries in which states have major expenditure roles, the VAT is the principal source of actual and potential revenue, and tax administration is not up to Canadian standards.<sup>188</sup> More homogeneous or smaller countries would seem better advised on the whole to follow the German or HST approach to sharing VAT revenues, if they must do so, rather than attempting to introduce an inevitably complex system of sub-national VATs.<sup>189</sup>

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<sup>185</sup> An alternative VIVAT (“viable integrated VAT”) proposal has been put forth by Keen and Smith (1996), Keen (2000), and Keen and Smith (2000). Although this proposal has some merits with respect to the EU case for which it was developed, we do not think it is very applicable to the case of DTE, as argued in Bird and Gendon (2000) and hence do not discuss this alternative further here. (See also Genser (2000) for further discussion.)

<sup>186</sup> This assumes that the state VAT rates are lower than the central rate. If, as in Brazil, the state rates are substantially higher, there might be some residual need for a “clearing house”—though on an aggregate, not transaction basis—but this would not seem to be a very difficult problem if, as would seem generally advisable in DTE, there is central administration of state VATs. For detailed exploration of the vices and virtues of separate local tax administrations, see Mikesell (2002).

<sup>187</sup> Presumably, as in Canada, the central government might receive an agreed fee for its services.

<sup>188</sup> A question that requires further exploration is whether there is a minimal size of government that can levy an independent VAT surcharge. While cross-border shopping would obviously limit rate variability in metropolitan areas, this question is important in less developed countries—for example, some in Africa—in which expenditure functions such as education are being decentralized even to quite small rural governments which have no access to significant local revenues.

<sup>189</sup> Recall that the German approach is essentially a revenue-sharing approach, with a share of VAT being allocated among sub-national jurisdictions in accordance with a centrally-determined formula. The HST approach which in principle permits regions to set different rates though on uniform national base, allocates revenue on the basis of consumption statistics i.e. on an (approximate) destination basis.

CVAT versus Dual VAT. The CVAT approach is, of course, inherently more centralizing than the dual VAT. In the dual VAT system (the GST-QST system in Canada) the CVAT, the only VAT rate set centrally is that of the central government itself. There is no need for any ‘central’ edict with respect to either the range or level of state taxes applied to interstate trade since no such taxes are applied. But a smaller degree of fiscal autonomy may be a price that has to be paid to implement successful regional VATs in countries in which the qualities of administrative competence and intergovernmental trust emphasized in Bird and Gendron (1998) are inadequately developed.

The dual VAT system may also in some cases be superior to the CVAT proposal in terms of administrative simplicity and cost (as a share of revenue). Neither CVAT nor the dual VAT requires traders to identify the state of destination.<sup>190</sup> In addition, neither requires any procedures to track and clear individual tax credits. In this connection, while even a dual VAT system may conceivably produce “excess” credits, it seems much less likely to do so than the CVAT, precisely because of the over-arching central VAT, as McLure (2000) explicitly recognizes. In addition, unlike CVAT (which is a final tax for unregistered purchasers but a creditable tax for traders), the dual VAT does not require any distinction to be made between purchasers other than determining whether they are non-residents or not.<sup>191</sup> A potentially important feature of the dual VAT system as applied in Canada is that the inclusion of the central VAT in the tax base of the sub-national VAT provides a small direct financial incentive for sub-national administrators of such a system to pay close attention to the proper application of the central tax.

Finally, the CVAT approach may simply not provide sufficient room to permit the implementation of the many compromises that are likely needed in order to move from the low-level fiscal equilibrium (poorly designed and poorly run tax systems) that now prevails in many countries to a more workable system that may be able to deliver the goods in the sense of both generating adequate revenues and establishing the needed “Wicksellian connection” (Breton 1996) between revenues and expenditures at each level needed for good fiscal management in a multi-tiered government structure.<sup>192</sup> As Canadian experience demonstrates, the dual VAT system can easily accommodate even states that do not levy VAT (such as the province of Alberta) as well as some degree of difference in VAT bases with respect both to zero-rating final services and crediting input taxes (as in Québec). Conceptual purists may not like the effects on efficiency of such policy flexibility, but real-world politics, we suggest, may often require such flexibility if major policy reforms such as the introduction of sub-national VATs are to be implemented. On the whole, the dual VAT approach seems most able to accommodate such compromises because of its greater tolerance for variation and less-than-perfect agreement

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<sup>190</sup> Although Bird and Gendron (1998) mentioned approvingly both the EU practice of requiring that the registration number of registered purchases be quoted on the invoice and the possible desirability of including in this number some indication of the location of the purchaser, neither feature is strictly essential to the functioning of a dual VAT, as Canadian practice demonstrates. Given the weaker tax administrations in most developing countries, however, such additional features might make any sub-national VAT more feasible. OECD (2004) provides a recent summary of current thought on this question.

<sup>191</sup> Of course, CVAT can do without this distinction also if taxes on sales to unregistered traders are divided among jurisdictions in accordance with some formula. While the treatment of such sales is not discussed further here, such treatment would move the system closer to a revenue-sharing scheme.

<sup>192</sup> See chapter 9 below for further discussion of ‘fiscal equilibrium.’

amongst the various governments concerned, as real-world experience in Canada eloquently demonstrates.

### 6.2.3. Developing Federal Countries

To conclude, Table 6.4 summarizes what appears to be the current situation in India, Brazil, and Argentina, contrasting these countries with the GST-QST system in Canada on one hand, and the HST system on the other.

**Table 6.4**  
**Features of Alternative “Federal” VAT Models**

<b>Feature</b>	<b>Independent VATs</b>	<b>Dual VATS</b>	<b>Joint VATs</b>	<b>CVAT</b>
Rate autonomy	Yes	Yes	No	Some
Collection incentive	Strong	Strong	Unknown	Unknown
Administrative requirements	High	High	Lower	Moderate
Administrative costs	High	Depends on how done	Low	Moderate to high
Need for central administration	No	No, but lower cost	No, but probable	Probably
Need for single administration	No	No	Yes	No
Need for interstate administrative cooperation	High	Limited	No	No
Need for central state cooperation	No	Yes	Complete	Yes
Revenue distribution	Independent	Independent	Formula	Essentially independent
Need for clearing of some credits	No	No	No	Yes
Potential for interstate evasion	High	Restricted	No	Restricted
Cross-border shopping a problem	Yes	Yes	No	Yes

On the whole, in India, as in Brazil and Argentina, any move to a decent VAT system with two levels of government applying independent VATs appears to require two preconditions.<sup>193</sup> The first is a way to implement the destination principle on interstate trade. This problem has already been discussed. It appears to be technically resolvable when there is a high enough degree of intergovernmental trust and cooperation and relatively competent administration. The difficulty is that these conditions are hard to satisfy in most developing countries. The second precondition is some means of compensating “losing” states for revenue losses implied by the transition. Interestingly, neither of these problems had a very high profile in the case of Canada, the only developed country with a two-tier sales tax system.

The debate on how best to design and implement a sub-national VAT is far from settled. The final answer may turn out to be—not too surprisingly—that different contexts call for different solutions. What a country can, should, and will do obviously depends on many factors. Trade patterns, the location and size of the country and its sub-national jurisdictions, the relative importance of B2B versus B2C transactions (see section 6.1 above) in the tax base, the quality of administration, the degree of trust and feasible coordination, the desire for local autonomy, the tolerance for asymmetry, the offsetting nature of equalization, the extent and nature of revenue shifts, and, not least, the existing sales tax structure—all these things will determine what happens. The road to feasible sub-national VATs may be long and winding in many countries. But, as has often been noted, the longest journey starts with a single step and, with respect to sub-national VATs, the three large developing countries discussed here are already much further down this path than a few steps.<sup>194</sup>

In striking contrast to how the fiscal world saw matters until very recently, the question of sub-national VATs is thus now definitely on the policy table around the world. We still have much to learn about this subject, but one lesson that has already clearly emerged over the last decade is that any answers that emerge are more likely to lie in systems carefully “customized” for local circumstances rather than in any one uniform system.<sup>195</sup>

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<sup>193</sup> Bird and Gendron (2001) discuss each of these cases in more detail. For updates and some additional useful discussion see e.g. Piffano (2005) on Argentina and Bagchi (2005) on India.

<sup>194</sup> Another interesting case not discussed further here is Mexico: see e.g. Webb (2001) and Diaz-Cayeros and McLure (2000).

<sup>195</sup> We have not discussed here another possible use of VAT, in quite a different form, as a local business tax. As Bird (2003) discusses, this approach may be particularly suitable for regional and local governments in non-federal or small DTE in which it is inadvisable to fragment the national VAT. Since sub-national governments around the world do, and probably always will, tax business, doing so through an income-type origin-based VAT—a quite different tax from the destination-based consumption VAT discussed in the present study would be considerably less distorting than most other possible local business taxes and is hence an attractive option. Such taxes exist in Italy, Japan, and some U.S. states and are under consideration in e.g. Colombia and South Africa. Note that Bird and McKenzie (2001) argue in the context of Canada that such a tax would also be preferable to provincial taxes on enterprise (corporate) income.

## **7. Aspects of VAT Administration**

As we have emphasized throughout this report, the administrative aspects of VAT are critical. As with the rest of this report, however, our aim in the present chapter is not to attempt to cover all the relevant ground in detail but rather to highlight a few issues that experience suggests may prove to be important in many DTE. We begin by discussing briefly some aspects of launching a VAT in a country that previously has not had one. (Chapter 8 below discusses when countries should do this). We then review some of the key elements in VAT administration, noting how one may improve a bad initial VAT by ‘growing’ a better one over time. After discussing briefly the VAT refund problem, we then consider in broader terms the need to strengthen VAT administration (and the futility of trying to avoid this difficult task by inventing clever ‘gadgets’). We conclude with some preliminary thoughts on how DTE can best deal with the worlds of ‘the small and the shadowy.’

### ***7.1. Launching VAT***

DTE are generally advised that a preparatory period of between 18 and 24 months is necessary to set up a VAT (Tait 1988). This advice seems both reasonable and to some extent accords with experience. Certainly some countries that have tried to do it in less time have paid a substantial price for their haste and had to spend a lot of resources subsequently in getting it right. On the other hand, in other cases too long a preparation period may prove dangerous in the sense that the window of opportunity open to introduce major tax changes may be open only for a very short time. Countries that adopt a VAT must sometimes for better or worse thus take what may be called the ‘big bang’ approach. Of course, when this has happened the experience has seldom worked out well, which is no doubt experts so often emphasize the desirability of following the ‘normal’ time schedule mentioned above.

Nonetheless, another lesson suggested by experience in many DTE is that even two years may vastly understate the nature and time scale of the task in many countries. Two years is not nearly long enough to have a good (or even an acceptable) VAT system up and running well. Ten years—or at least five—is perhaps closer to reality. Many DTE cannot be, as it were, simply ‘given’ a good VAT administration. Instead, they need to ‘grow’ it themselves, a process that may sometimes take a long time. VAT is usually considered to be a pre-eminent example of a ‘self-assessed’ tax (e.g. Ebrill et al. 2001). But, as Ebrill et al. (2001, 141) recognize, the successful implementation of such a tax requires the prior satisfaction of a number of conditions. For example:

- Simple, clear, stable tax laws.
- Adequate service and support to taxpayers in complying with tax obligations.
- Simple procedures for registration, filing, payment and refund.
- Effective collection enforcement.
- Reasonable audit coverage.
- Strict application of penalties.
- Provision for independent review.



Few, if any, DTE can possibly meet all these conditions. Indeed, the conditions needed for the successful functioning of a ‘self-assessed’ tax like VAT must instead generally be somehow created, a difficult and probably lengthy process.<sup>196</sup> Most DTE may thus be caught in the throes of a difficult dilemma when it comes to VAT. If it is to be done, it must generally be done quickly, when the time to act is right. But to be done well, it must equally be done carefully, deliberately, and with much forethought and preparation. So the important question is often, if it has to be done quickly or not at all, what *really* has to be done, and in what order? It would be helpful to separate out more clearly than has usually been done the steps in the process of launching a VAT that are really critical as well as any necessary sequence such steps must follow—instead of simply laying out what might perhaps be called the ‘complete’ or ideal preparation process as is usually done.

Wherever a country may start, moving from whatever imperfect ‘there’ is initially implemented to the desired ‘here’ of a good VAT is a process that is most unlikely to follow an even or smooth path. Policy innovation often follows a sort of logistic path, with an initial leap forward at the time of creation when attention levels and reward expectations are high, a subsequent period of letdown and perhaps even regression, and then, finally, if all goes well, a period of gradually settling into the ‘normal’ bureaucratic pattern. Such a path may be particularly noticeable in the many DTEs in which a new VAT is intended to serve as either a pilot or a catalyst for the reform of revenue administration more generally, not least because the success or otherwise of VAT is, as mentioned above, intimately related to the ability and willingness of a country to create the needed conditions for successful self-assessment—an issue that itself requires much closer examination than it seems to have received from anyone.

One obvious implication of this line of thought is that both the sequencing and the time scale of the ‘normal’ schedule need reconsideration. Which elements in the initial VAT design are most critical in the sense that if they are not in place the tax simply will not function? Which are most urgent in the sense that if they are not done, other critical things cannot be done? How much time and effort is really needed in the circumstances of particular DTE to do the critical and urgent things as distinct from the nice and perhaps eventually desirable ones? It is of little use to tell those who have nothing that they must do everything before they can have something. Where does a country with almost no elements of a decent tax administration—or, to put it another way, that satisfies none of the conditions of self-assessment—begin when it comes to VAT? So far as we are aware, no one appears to have studied these critical issues carefully. As we mentioned in Chapter 1 above, two possible approaches to these questions that may repay further exploration are the development of a thorough taxonomy of relevant characteristics and a more explicit VAT ‘decision tree.’

Considerably more study and gathering of relevant evidence seems needed with respect to what one really has to know about any country in order to devise the ‘right’ implementation schedule for VAT in its particular circumstances. What matters most and in what ways? Is it the size distribution of the potential tax base? Or the relative importance of ‘key’ base components (such as imports and excise goods) and the degree of administrative control that can realistically be expect with respect to those components? Or the level of accounting skills in the potential

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<sup>196</sup> See Kramer (1994) for an example of early public recognition of this point with respect to VAT in transition countries.

taxpayer population? Or the detailed industry-by-industry flow of ‘VATable’ items between different sectors and different sized firms? Or the capacity of tax officials to administer an accounts-based tax and in particular attention to audit such a tax? Or, perhaps most fundamentally, the degree of existing ‘trust’ between officials and taxpayers and how quickly (and in what ways) that trust can be built up sufficiently to support a self-assessment system?<sup>197</sup> Or is it all of the foregoing and more?

Whatever one’s answers to such questions may be, what experience makes clear is that one cannot expect success simply by transferring experience from very different developed country settings to DTE with fragmented economies, large informal sectors, low tax morale, rampant evasion, and total distrust between tax administrators and taxpayers. The research agenda with respect to VAT administration in DTE is thus even larger and probably more important than that with respect to VAT design in such countries. If, for example, the extent and behaviour of the informal sector depends, as some recent literature (Gerxhani 2004) suggests, largely on the interaction between formal institutions such as the tax administration and the prevalent norms and customs in a country, the ‘best’ VAT design and implementation in many DTE will undoubtedly be rather different from that suggested by experience to date in the EU and other developed countries.

When it comes to launching a VAT, as in many other respects, China is an interesting and unusual case. To begin with, China began to experiment with VAT in 1979 only with respect to two industries (machinery and agricultural tools) and three products (bicycles, sewing machines, and electric fans) in a number of specific cities such as Shanghai and X’ian (Yang and Jin 2000). Such a narrowly-based VAT at first glance seems weird, but of course in reality all VATs are limited in terms of coverage (see, for example, the discussion in Chapter 4 above), although seldom as drastically and usually more by force of circumstances than as a matter of smart design. From this small beginning, in 1984 China moved to a nation-wide VAT. But China’s VAT was still very far from being a normal VAT. Its base was still quite narrow, many different tax rates were applied, and the whole accounting and administrative system was inconvenient and complicated. With the major tax reform of 1994, many of these problems were removed and China finally put into place a more or less ‘standard’ VAT system.

Nonetheless, China’s VAT is still far from being a complete VAT for a number of reasons. For example, it excludes a considerable share of the service sector which is instead subjected to a local business tax levied on a gross rather than value-added basis. Of course, many countries have similar local business taxes (Bird 2003) and, as discussed elsewhere many countries also in effect impose similar taxes as part of their VAT systems. More importantly and more unusually, China does not credit inputs in general because of concerns about investment and perhaps also revenue.<sup>198</sup> Moreover, apparently largely for revenue reasons—but perhaps also for incentive reasons—China does not have the usual zero-rating system for exports. China continues as it were to ‘grow’ its VAT gradually with its current experiment in granting credits for capital purchases in a few provinces. As Wong and Bird (2005) argue more generally, however, one has to wonder whether China may not soon have to move on from such gradualism

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<sup>197</sup> Aspects of this issue are discussed further in section 7.2 below.

<sup>198</sup> The latter argument certainly lies behind Argentina’s initial denial of investment credits and the continuing limitation of such credits for large business in Québec’s QST (e.g. Gendron, Mintz, and Wilson 1996).

and take a more holistic look at the intertwined nature of many of its problems in the fiscal area, not least with respect to its ‘made-in-Beijing’ VAT. The ‘NOSFA’ principle does not imply as a corollary that the NIH (not-invented-here) exclusion must hold. Countries can learn from each other, and it is perhaps time for China to take another close look at its VAT in light of world-wide experience.

## **7.2. Making VAT Work**

Tax administration consists of several related but separable processes—registration, filing, payment, audit, and enforcement. We discuss each of these briefly in turn.<sup>199</sup>

### **7.2.1. Registration**

Every person, sole proprietor, corporation, partnership, or any kind of legal entity that engages in an activity that is taxable under a VAT should be required to register for the tax. A good registration process is a critical ingredient of a good VAT system. The reality of applicants for new registration must be verified, and those detected using fraudulent practices must equally be deregistered.<sup>200</sup> The critical issue of the registration threshold has already been discussed in section 5.2 above. In addition, it is essential to provide new businesses with much better service and support than they receive at present in order not to make the already far too slow and complex process of establishing a new business even more burdensome than it already is too many DTE. From the very beginning, close attention must be paid to providing adequate taxpayer service—one-stop shopping, complete and accurate records, clear explanations, quick processing—if a VAT is to work satisfactorily. To those familiar with how many DTE tax administrations function in practice such advice may seem too far removed from reality to be practicable, but it is nonetheless not only correct but also essential to encourage rather than discourage the development of the formal economy.<sup>201</sup>

Registrants should, of course, be required to keep at least minimal books—essentially records of sales and purchases. In a well-designed and adequately administered VAT the incentive to register for most traders (the tax-free purchase of inputs) should be sufficiently great so that it should not be necessary to undertake any extensive ‘outreach’ registration process. If a VAT is well-designed and administratively credible, registrants will come into the system voluntarily since it will be so clearly in their interests to do so. If they do not, as noted above in the discussion of the ‘informal sector’ elsewhere in this report, they will pay a fiscal penalty for their choice and the interests of both equity and competitive efficiency should be served at least roughly.

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<sup>199</sup> Much of this discussion is based on Edmiston and Bird (2004).

<sup>200</sup> In the UK, for instance, about 1,000 registrants a year (out of 1.4 million) are deregistered.

<sup>201</sup> World Bank, *Doing Business in 2006* (portions of which are now available at [www.rru.worldbank.org/](http://www.rru.worldbank.org/)) emphasizes the need for reducing such barriers to formalization. See sections 3.4 above and 7.5 below for more on this point.

### 7.2.2. Filing

Registrants are normally required to file returns on a monthly basis if their annual taxable sales exceed some specified limit, with smaller taxpayers filing bi-monthly, quarterly, or even annually. There seems to be little empirical study of the relative costs and benefits of such different filing periods, but the practice is almost universal. Returns generally have to be filed within a month (or less) of the end of the relevant taxable period. Some countries have different types of returns for different taxpayers, especially when some file on a ‘simplified’ or ‘quick’ basis and some are subject to special high-rate excise (or VAT) rates. In Jamaica, for example, there is a general return used by all registered taxpayers who do not use the quick method, another for the quick-method taxpayers, and yet another for those subjected to excises—since in Jamaica (contrary to our advice in section 5.5 above) excises are treated as part of the VAT system, as well as special forms for those engaged in tourism activity (which is treated with special favouritism) and, for those dealing in general insurance. All this seems unnecessarily complicated. Even if the present special treatment of these sectors is retained, which seems unnecessary (in the case of insurance) and undesirable (in the case of tourism), such firms could simply file the basic return, supplemented as necessary by any additional information to support the special deductions allowed.

If a registered taxpayer fails to file a return on time, a failure to file notification should be issued automatically, and the delinquent filer charged an appropriate penalty (e.g. a fixed amount or a percentage of the tax due, whichever is greater).<sup>202</sup> For those who continue to be delinquent, it is then necessary to issue an official assessment e.g. calculating the estimated tax payment as the average of recent returns or, at a minimum, perhaps as a pro-rata share of estimated annual gross receipts—in some instances, it seems, as reported on the initial registration application perhaps many years earlier! In Jamaica, a particularly troublesome attribute of the estimated assessment program is that once payment is made on an estimated assessment, the account is cleared, and in practice there appears to be no requirement to file an actual return for the relevant period. Under these rules, taxpayers who are assessed an amount (taking into account the non-filing penalty) that is less than they would have owed had they filed an accurate return thus have a strong incentive not to file a return at all. This is not a trivial issue since over 10% of domestic (non-import) VAT in Jamaica is calculated on an estimated basis.

### 7.2.3. Payment

All payments, including those on estimated assessments, should be accompanied by returns (Casanegra de Jantscher and Silvani, 1991). If payments are made without an associated return, either taxpayers have to indicate to which assessments the payments apply or some ‘stacking rule’ (e.g. delinquent principal first, then penalties, interest, and surcharges) has to be applied. If an overpayment is made with a return for a particular period, a similar ‘stacking’ rule may be used after the current tax due is paid. Alternatively, if a taxpayer overpays, he may receive either a credit (to be carried forward against future liabilities) or a refund. Even if government pays interest on such refunds (as it should), most such taxpayers will probably

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<sup>202</sup> The design of an appropriate penalty structure (e.g. Oldman 1968) is an interesting and important subject that is not further discussed here.

request refunds, a subject we discuss further in section 7.3 below. Of course, if tax due is not paid or paid only in part, appropriate penalties and interest need to be promptly assessed, and enforced.

Finally, in some countries—but by no means all—tax payments may be made to recognized financial institutions such as banks, to the revenue department itself, or to both. Those that do not already make use of financial institutions to both collect payments and do an initial processing of simple returns (those accompanied by full payment) should definitely explore this possibility further.<sup>203</sup> On the whole, as a matter of good policy it seems best to keep the function of actually collecting and processing money out of the hands of revenue officials who should be more concerned with ensuring that the right people pay the right amounts than with spending their evenings in adding up the day's proceeds.

#### 7.2.4. Audit

Perhaps the safest statement that can be made about VAT administration in any DTE is that auditing procedures should be modernized and strengthened. Audit is the core of any tax system, especially of essentially self-assessed taxes like VAT. In most countries, the data exist to begin to design sound audit design policies for those already in the tax net.<sup>204</sup> In principle, such audits should be done both randomly and on a more selective basis taking into account the 'risk profile' of different types of taxpayers. For example, since VAT is applied in effect to the difference between sales and purchases (or the 'gross margin' as it is often called with respect to retailers), a critical factor is the reported mark-up coefficient—supplies as a ratio of inputs. When this ratio is equal to or less than 1, a taxpayer is in effect reporting that his sales are less than his purchases, thus claiming that his 'gross profit margin' (value-added, under another name) on such sales is negative. While those taxpayers with persistently very low mark-ups (less than 0.5, for example) may sometimes have such reasonable explanations as substantial export sales on the whole, as Silvani (1992, 286) notes: "Experience has shown that taxpayers who report a low mark-up (under 1.10, for instance) have a strong likelihood of turning out to be tax evaders." Firms in particular lines of industry that report markedly lower 'mark-ups' than their competitors would seem to bear close and automatic examination by tax auditors.

Table 7.1 illustrates, for example, the situation in this respect in Jamaica with respect to the 81% of VAT taxpayers for which mark-ups could be calculated.<sup>205</sup> About 13% of these taxpayers reported mark-ups less than 1. Although this proportion does not appear to be particularly high in comparative terms,<sup>206</sup> the potential problems in this respect are by no means confined to small firms, since over 100 of the largest firms (those in the top decile) also reported mark-ups of less than 1, a result that appears to warrant further investigation.<sup>207</sup>

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<sup>203</sup> For a useful brief discussion of the issues involved, see Casanegra de Jantscher and Silvani (1991).

<sup>204</sup> There is a large relevant literature on audit design and implementation that is not discussed further here: for an earlier review see e.g. Bagchi, Bird, and Das-Gupta (1995).

<sup>205</sup> The remaining 19% mainly reported no taxable activity.

<sup>206</sup> Silvani (1992) reports comparable proportions of 29 and 25 percent of taxpayers with markup ratios less than 1 in two cases he examines.

<sup>207</sup> Perhaps the most startling result shown in Table 7.1, however, is the very large number of firms reporting very high mark-ups in Jamaica: business, it seems, is rather good for many firms subject to GCT To illustrate, in the two

**Table 7.1**  
**Mark-ups Reported on GCT Returns, 2002**

Mark-up Range (in percent)	Number of Firms	As Percent of Total
<50	722	5.2
50-75	555	4.0
75-100	1,220	8.8
100-110	1,157	8.3
110-120	1,032	7.4
120-130	1,761	12.7
130-140	665	4.8
140-150	512	3.7
150-160	442	3.2
160-170	413	3.0
170-180	297	2.1
180-190	270	1.9
190-200	282	2.0
200-210	219	1.6
>210	5,455	39.2
<b>Total</b>	<b>13,902</b>	<b>100.0</b>

Source: Edmiston and Bird (2004)

Another way to use such data might be to compare the mark-up reported by a firm with the average mark-up for other firms in the same line of business.

Auditing is also the main way in which taxable activities hidden within the large informal sector found in many DTE can gradually be brought within the tax net. Much better use can generally be made of the rich information already available in most countries not only to cross-check selected transactions within the universe of GCT registrants but also, by following the audit trail, to go out into the vast unknown land of those who are not in the system, but should be. In some countries, it may perhaps even be worth beginning to think about the possibility of introducing more formal cross-checking of invoices on a somewhat larger scale. While early attempts at widespread ‘matching’ of VAT invoices (e.g. in Korea) suggested that the results of this approach were not worth the effort (Choi, 1990), subsequent experience in a few countries (Taiwan and Singapore) appears to have been considerably more successful in using modern information technology as a prime tool of VAT administration by matching invoices of buyers and sellers as a way of auditing VAT returns.<sup>208</sup> While it is probably much too high risk a strategy for the already overburdened tax administrations in most DTE to follow this path in the

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cases studied by Silvani (1992) —one in Latin America and one in Europe—only 18% and 23% respectively reported mark-ups greater than 210 percent, or less than half the share found in Jamaica.

<sup>208</sup>Ebrill et al. (2001, 148-50), present the usual case against relying on such matching. For a more positive appraisal, see Jenkins, Kuo, and Sun (2003, 179). See also Das-Gupta and Gang (2001).

near future. Instead, what seems most needed right now in most DTE is simply to adopt and implement some of the standard methods for improving audit practices.

For example, as noted above, returns might initially be scanned to determine whether their mark-up ratios (or other parameters such as wage bills) fall within normal ranges for comparable firms, with those that fall outside these parameters being subjected to additional desk investigation (e.g. cross-checking information with customs and income tax for the period in question). Although it is bad practice to focus audits on refund cases or to audit all those claiming refunds, initial refund claims by new businesses should definitely be audited. When these or other ‘issue’ audits of any particular tax period (e.g. of sales of used automobiles between dealers, to mention the largest VAT fraud case uncovered to date in Canada) uncover potential problems, comprehensive audits—preferably encompassing all taxes—should be undertaken for a period of several years.

While a quick ‘pre-payment’ audit may be useful with respect to refund applicants judged risky, what seems much more critical are solid ‘post-payment’ audits selectively (including a random element) on all VAT registrants, large or small, refund claimants or not. Developing and implementing a good tax audit system is not easy, but it is essential to the achievement of sustainable good tax administration. Canada, for example, is generally considered to have a good tax administration. Indeed, a recent comparative study of administrations in a number of developed countries concluded that in many ways Canada’s administration was a ‘north star’ on which other countries might benchmark (Vazquez-Caro 2005). It is thus striking that over a decade after Canada adopted a VAT, the country’s Auditor-General (1999), in a review of the VAT system, still found it necessary to stress the necessity for the revenue agency to do more and better VAT (GST) audits. Achieving a satisfactory level of tax administration is not a once-and-for-all task: every country must continually strive to maintain performance at a satisfactory level in the face of the constantly changing real world in which the tax system operates.

### **7.2.5. Enforcement**

Arrears are a surprisingly important issue in some DTE VATs. In Jamaica, for example, total GCT arrears in June 2003 were J\$37.8 million, with roughly half of the total accounted for by only 93 taxpayers. Moreover, the level of outstanding arrears had been steadily increasing over time.<sup>209</sup> In principle, there should be no arrears at all with respect to imports, since all taxes due at import should be paid before goods are released for sale.<sup>210</sup> If this is considered unduly harsh for some exporters, consideration should perhaps be given to a limited ‘deferral’ scheme for a small number of bonded exporters.<sup>211</sup> For example, GCT might perhaps be suspended on imports by major exporters, defined as those where exports are more than 50 percent (or some higher proportion) of sales, who are in full compliance with all tax obligations, and who have

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<sup>209</sup> Some of the arrears (J\$7.1 billion) were accounted for by 42 delinquent excise taxpayers. In principle, of course, there should be no arrears on excise taxes since, under normal administrative practices for such high-rate excise taxes, tax should be paid before the goods are released for sale. This is not the case in Jamaica, however, where it appears that, because the excise tax has been bundled into the GCT law, excise firms are treated like any other taxpayers and hence are liable for tax only after sales are made.

<sup>210</sup> When this is not done, as in Ukraine for some years, the collection efficiency of VAT may be seriously impaired.

<sup>211</sup> See, for example, the system described in IRAS (2001); see also the discussion in section 8.4 below.

posted a meaningful financial guarantee. While information on such imports will of course have to enter the system in order to facilitate compliance audits, no tax will be imposed on such goods at the time of import, so of course no refund will have to be paid at the time of export.

When penalties are assessed, they should be enforced rigorously and at once. If payment is not made in a timely fashion, there must be a credible sanction (e.g. seizure of property or interception of cash flows). If penalties are considered to be too high to be properly enforced—a belief that obviously must exist in some DTE if one judges by the surprising number of waivers of penalties and interest and other relief that are granted in some countries to delinquent taxpayers—then they should be reduced. But if they exist they should be enforced, without exception.

It is important to understand that what is issue when it comes to VAT delinquency is not simply a matter of tax collection but in effect the embezzlement of public funds. Firms liable for paying consumption taxes have themselves collected those taxes from others. If they do not remit the funds to the treasury in a timely fashion, they have, not to put too fine a point on it, stolen the money. Rigorous penalties for such an offense seem quite appropriate. At the very least, interest should be charged immediately when a payment is delinquent. Moreover, taxpayers should not have the option of objecting to assessments and hence delaying payment, as they sometimes do. If they object, they can do so after payment. Such treatment may on its face seem harsh, but again it must be remembered that either the tax has already been collected from the public and is being improperly retained by the firm or, if the assessment objected to has been ‘estimated’ it is, under the rules now applied in most countries, in all likelihood very much on the low side. In the extreme case, for example, as mentioned earlier with respect to Jamaica, a firm may be assessed on the basis of a fraction of the (self-assessed) turnover reported on its initial registration form!

Given the relatively strong incentives in many DTE not to file and pay on a timely self-assessed fashion, it is not too surprising that there are, first, many estimated assessments and, second, that many of these are not paid in a timely fashion so that interest and penalties accumulate rapidly and soon exceed the initial (almost certainly low) assessment. In such circumstances, appeals to have such interest and penalties waived have no merit. Indeed, in principle there should be no waivers of VAT except in very exceptional cases of hardship such as instances in which, say, the tax proceeds have been stolen from the registrant. Again, it must be remembered that VAT collections in effect constitute treasury funds being temporarily held by a third party (the registrant). There should be no leniency when it comes to collecting from such parties what they have already collected from citizens.<sup>212</sup>

Nonetheless, and despite what has just been said, in some instances, when there has been considerable accumulation of accrued liabilities in recent years, it may perhaps be worth considering a ‘one-time’ amnesty of pre-2004 accrued ‘interest and penalties’ to clear the books of what are likely to be uncollectible debts. If this is done, however, it is critical that any such amnesty should be accompanied and preferably preceded by clear and credible tightening of

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<sup>212</sup> Of course, if what is at issue is a matter of law—e.g. should VAT have been collected on a transaction on which in fact it was not charged—treatment closer to that commonly applied to similar disputes about income tax would be appropriate.



payment, audit, and enforcement procedures to avoid ‘signalling’ future leniency and hence building up the moral hazard problem once again (Das-Gupta and Mookerjee 1998).

To sum up with respect to enforcement, if someone is caught cheating on VAT, the tax administration must first act quickly to stop the practice, then impose civil penalties (including e.g. intercepting income flows to delinquent taxpayers, seizing assets, and perhaps temporary business closures of the sort that have proved effective in some Latin American countries) as appropriate, and, finally, and only in especially serious cases proceed to the always lengthy and difficult level of criminal prosecution.<sup>213</sup> A simpler way to build credibility for a penalty system without going to the extreme of launching a criminal case may sometimes simply be to publicize the administration of penalties, including the names of the people or organizations penalized, through the media.<sup>214</sup>

### ***7.3. The Refund Problem***

In many ways, refunds are the Achilles heel of any VAT system.<sup>215</sup> When a VAT invoice is issued, in effect it constitutes a potential claim on the fiscal resources of the state. In the hands of a VAT registrant, such an invoice can be used in the first place as a deduction against any output tax due and in the final result it can become a direct claim for a refund. When refunds are due, they should clearly be paid. Government cash flow problems should be managed by better expenditure management, not by improperly withholding funds legally due to taxpayers. For example, in Jamaica, the government is supposed to pay interest at a rate of 2 ½ percent per month after 90 days on refunds that are not paid. Since it has reportedly been slow in paying refunds owing to lack of cash, it appears in effect to be borrowing from taxpayers at what seems to be a fairly substantial cost (Edmiston and Bird 2004). Jamaica is hardly alone in this regard.

Indeed in countries like Ukraine it has sometimes been argued that many of the problems with VAT arise from the refund system. In reality, this does not seem to be the case. In 2004, for example, new refund claims in Ukraine amounted to 41% of collections in that year. A recent study of 28 countries of refund levels for the 1998-2001 period found that nine countries had ratios in excess of 40%, with an average for the seven transition economies included in the study of 36.8%, so Ukraine’s ratio does not seem out of line.<sup>216</sup> Indeed, Harrison and Krelove (2005)

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<sup>213</sup> Again with reference to the UK with 1.4 million registrants, only a few hundred cases a year go to prosecution. On average, it takes 3-5 years of detailed investigative work (and considerable resources) to bring a case to trial. Such costly tasks should not be undertaken lightly.

<sup>214</sup> For example, the province of Québec in Canada, which administers its own VAT, now puts on its website the names of taxpayers who are under criminal investigation though to some this may seem to go too far; for a recent example, see <http://www.revenu.gouv.qc.ca/eng/ministere/communiqués/ev-fisc/2005/13sep.asp>

<sup>215</sup> China has a particular version of this problem because all export rebates are paid from the national budget while 25% of VAT proceeds go to local budgets. The usual ‘revenue pressure’ argument for holding back on refund payments is obviously exacerbated by this feature of the system, as well as by both the reduced rates applied to numerous activities in China and the apparent prevalence of fraudulent returns (Chi, 2003). To a considerable extent, however, China has attempted to cope with this problem more by scaling down the presumptive level of ‘rebates’ to exports than by simply accumulating refund arrears.

<sup>216</sup> Harrison and Krelove (2005). Interestingly, Ukraine, which was included in this study, had an average ratio in this period of only 24% in this period.

estimated a regression equation of ‘expected’ refund levels taking into account a variety of macroeconomic and other factors, such as the level of exports. Using 2004 data for Ukraine, this equation predicts that the refund level observed would have been over 46%, or significantly more than the level actually observed.<sup>217</sup> Moreover, although exports substantially increased in the first half 2005, the relative level of new refund claims was actually lower than it had been in the first half of 2004.

The annual level of refund claims in Ukraine does thus not in itself seem to be a problem. However, owing to the marked accumulation of refund arrears from prior years, the country has definitely had a ‘refund problem’ in the sense that it has not been paying refunds promptly, although much of this backlog has now been worked off.<sup>218</sup> One reason for the accumulation of this backlog was simply the fact noted above, namely, that all hard-pressed governments are reluctant to give money they have in hand back to taxpayers, however legitimate their claim. Another reason, however, is the widespread perception that some—perhaps many—refund claims, past and present, are fraudulent: the value of exports may be inflated, the exports may never have occurred, the input taxes claimed on exports may be inflated, or simply unreal. If such frauds exist, however, and they do, the problem is not with refunds per se but rather with the administration of the VAT in general.

There are many ways to cheat on any sales tax and in principle—and, with good administration, in practice also (as discussed further in section 8.1 below)—it is actually *more* difficult to do so with a VAT than with other forms of (non-cascading) sales taxes. VAT fraud may show up more explicitly in the budget than equivalent fraud with other forms of sales tax, since it (often) takes the form of explicit budgetary refunds rather than simply lower budgetary revenues as with other forms of evasion, but the net impact on the budget is the same in the end. Dealing with VAT refund fraud is no different than dealing with any other tax evasion. The correct treatment for VAT refunds is simply to pay legitimate claims promptly and not to pay fraudulent claims at all. The problem, of course, is how to distinguish the good from the bad. The answer is to be found not so much in special treatment of refund claims as in better administration of all aspects of the VAT system.<sup>219</sup>

Of course, it is critical to ensure that refunds are not only legitimate in the sense of being related to legitimate business inputs but also that the taxes for which reimbursement is being claimed have actually been paid. Even in countries with well-established and experienced tax administrations such as Germany so much fraud has been uncovered in the form of illegitimate

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<sup>217</sup> The estimated equation (adjusted  $R^2 = 0.8826$ ) is  $\text{Refunds} = 0.16 * \text{Exports} + 0.75 * \text{Growth} + 0.19 * \text{Literacy} + 0.90 * \text{Range}$ , where exports is share of exports in GDP, growth is average GDP growth in period, literacy is literacy rate, and range is difference between lowest (non-zero) and highest VAT rates. (A number of dummy variables are included in the original equation, but all these terms are zero for Ukraine.)

<sup>218</sup> During 2004, for example, Ukraine actually paid out 25.2 billion hryvnia (including ‘mutual settlements’ of another 11.3 billion) in VAT refunds—or more than it collected in VAT during the year! Of course, it makes no sense at all to relate this payment of past debts (overdue accounts payable) to the current accounts receivable (VAT liabilities) and accounts payable (VAT refund claims) accrued during the year.

<sup>219</sup> In the particular case of Ukraine, many of the refund arrears accumulated arose from inter-enterprise arrears connected largely with the energy sector and arising in part at least from the persistent under-pricing of energy (World Bank 2003). The solution to such problems lies in sensible energy policy, not in playing with the VAT refund system: for further discussion of the energy problem, see e.g. Shiells (2002) and Petri, Taube and Tsyvinski (2002).

invoices that it has recently been proposed that refunds should not be paid unless satisfactory proof that the input taxes claimed have been received by government (Sinn, Gebauer, and Parsche 2004).

Since 2002, Germany has made the buyer legally liable for tax not paid by the seller, but this has had little effect because it is virtually impossible to prove that the buyer had any knowledge of the seller's intention not to pay the tax for which the buyer was claiming input tax credit. Germany has also tried to deal with the common use of new firms to commit VAT fraud by demanding some form of guarantee from them, but this too has proved ineffective largely because firms can make claims and go bankrupt before the authorities get around to acting. To avoid such problems, Sinn, Gebauer and Parsche (2004) propose to ensure that all taxes claimed as input credits must actually have been paid by requiring banks to remit the tax directly to the government at the time of sale through the device of an intermediate 'trust' account, while at the same time issuing a receipt to the seller for VAT paid, with this receipt serving as proof of the input tax claim. Alternatively, for cash payments, sellers would be required to issue a tax receipt which demonstrates that the tax has been paid (either in the form of a verified credit-card like transfer to the government at the time of sale or by a prepaid 'tax stamp').

Short of such a system, which is likely for the present to be beyond the reach of most DTE (even if its obvious complexity made it advisable, which seems unlikely), there are several ways to curb the many possibilities of fraud under the GCT. One is simply, as we advocated earlier, restricting zero-rating solely to exports to limit the potential range of legitimate refund claims. In addition, export sales against which input tax claims are made should of course be adequately supported by verified export entry forms. Other methods of limiting fraud have been adopted in various countries, ranging from refunding to new registrants only after a mandatory six-month carry-forward of unused credits to limiting refunds only to firms in certain industries (as in China) or of a certain size (as in Québec, with respect to credits for capital goods).<sup>220</sup> Such methods may make fraud less likely or less attractive, but they also increase the degree of cascading in the tax as well as erect still more barriers to the creation of new formal-sector businesses, not least because interest is so seldom paid on carried-forward or deferred credits. In the end, the only real solution to the fraud problem is good tax administration and especially a strong sales tax audit program.

#### ***7.4. Strengthening VAT Administration***

It is of course little more than a cliché to say that tax administration should be improved. Like most clichés the statement is in fact correct since no administration is ever as good as it could be. Also as with many clichés, the statement hides some deeper truths. In particular, it is by no means clear that the public support needed to improve the administration of VAT really exists in many DTE. For example, the relatively few large formal-sector firms who currently account for most of the revenues—while of course supportive of measures to extend the weight of the tax to their relatively 'untaxed' competitors in the informal sector—are understandably likely to react adversely to any measures tightening up the system as it applies to them. There is

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<sup>220</sup> Harrison and Krelove (2005) provide a useful discussion of such methods.

no ‘magic formula’ to creating public support for better tax administration.<sup>221</sup> However, there are many established and workable ways to do this critical and difficult job better that are currently in use all around the world (Bird 2004a).

First, however, it should perhaps be emphasized that attributing problems with VAT in any country largely to administrative weaknesses does not necessarily imply that the tax administration is necessarily incompetent or corrupt. There may be (and probably are) some elements of both these factors at play to some extent but the real problems are often more fundamental. The creation and development of a modern tax administration is always and everywhere a difficult and time-consuming task. It took centuries for western countries to get to where they are today, although the experience of other such as Chile shows clearly that when the political conditions are right and the will is there, the process can be accelerated to at most a decade or so (Toro 2005). In most DTE, however, the process began with an unpromising legacy of state-private relations, with no trained officials, and in a very difficult political and economic setting. In the circumstances, it is not surprising that there is still much to do in most such countries. Moreover, all too often numerous developments over the years made the task facing even the most motivated, competent, and honest tax administration incredibly difficult: the lack of consistent support from political leaders, constant changes in tax legislation, fundamental problems with the legal and judicial system, the rapidly changing level and structure of private activity, and so on and on.<sup>222</sup> Nonetheless, there are always some things that can be done to improve VAT administration in almost in any country.

For instance, an obvious, but unduly neglected aspect of VAT administration, good tax administration requires serious analytical foundations, based on sound information and intelligent analysis. One must understand a problem in order to resolve it. Almost every DTE could make a major change and improvement in both tax policy and administration if a more systematic approach were taken to assembling and analyzing data.<sup>223</sup> The beginning point of wisdom, for example, is to identify the size and nature of problems as carefully and fully as possible, for example, by making estimates of the ‘VAT gap’ and then by decomposing that gap by, e.g., sector of economy (energy, agriculture, services etc) and the nature of the problem (non-registration, false registration, non-filing, under-reporting of sales, over-reporting of purchases, non-payment, etc.).<sup>224</sup> With hard budget constraints, the lesser evil is to contain the toughest problems. An example of this containment approach is our earlier suggestion that the best many

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<sup>221</sup> See the discussion in Chapter 9 below.

<sup>222</sup> Vazquez-Caro, Reid and Bird (1992) stress the importance of the ‘environment’ of tax administration: for further discussion see e.g. Bagchi, Bird, and Das-Gupta (1995) and Gill (2000).

<sup>223</sup> For a first-rate example of the kind of ‘forward thinking’ a good tax administration should conduct with respect to VAT, see Australia (2001). Of course, few if any DTE have the resources to carry out such studies but they can certainly learn much from this and the many other documents publicly available on sites such as

<http://www.itdweb.org/>.

<sup>224</sup> For excellent discussions of how to carry out such studies, see e.g. National Audit Office (2004), Gebauer, Nam, and Parsche (2003) on developed countries and, for some good examples from Latin America, Engel, Galetovic and Raddatz (1998) on Chile, Steiner and Soto (1999) on Colombia, Salim and D’Angela (2005) on Argentina and Cuba, Perelmuter and Tedesco, (n.d.) on Uruguay. The studies cited show that every country in the EU has some degree of VAT evasion, ranging from relatively low estimates in countries like the UK and the Netherlands to substantial evasion in countries like Italy and Greece which are similar to Argentina, Colombia and Uruguay, and greater than Chile.

DTE can likely do with respect to agriculture for now is to maintain the exempt treatment of the agricultural sector.

If done on an industry basis, as they should be, studies along these lines will also provide the basis for establishing industry ‘norms’ (e.g. refund claim levels), deviations from which should give rise to further examination of such firms. Such information is an essential element in determining the ‘risk profile’ (with respect to non-compliance) of taxpayers who are of different sizes, in different lines of business, and have different patterns of tax-relevant activity. Taxpayers in stable, well-established businesses with good compliance records are, by definition, much less likely to offend than those in new, variable businesses and no established record of good compliance. On the other hand, as noted earlier, care should be taken not to impose unnecessary and undesirable barriers to new businesses simply because they are new, although it should equally be recognized that ‘newness’ is definitely a risk factor from a fiscal perspective. A delicate line has to be walked in this respect. Of course, all such ‘risk profiling’ of taxpayers is simply a guide to the proper allocation of administrative resources (OECD 2001). It is an ingredient in good tax administration, not a substitute for it.

Even in the relatively few such countries in which detailed VAT data are available in an accessible form, two characteristics are noticeable. First, considerable effort is generally required to put such data to any useful purpose, whether to analyze and improve the effects of VAT structure or to monitor and improve VAT administration.<sup>225</sup> Secondly, most DTE have neither the resources nor, it seems, the desire to make such an effort. In many ways, this situation is curious. It is obviously important for any tax administration to keep a close watch on trends and changes in taxpayer behavior, for instance to be able to allocate administrative resources effectively and to develop appropriate audit strategies. Any good revenue administration surely needs at least some data gathering and analysis capacity. Yet not only do units devoted to such purposes seldom exist in DTE but even those most concerned with improving VAT administration seem seldom to put much emphasis on the need to improve matters in this respect, perhaps because they give higher priority to other, apparently more pressing needs such as dealing with issues concerning specific taxpayers or involvement in policy design. Or sometimes those in charge may hold the almost certainly mistaken belief that the presumed ‘best administrative practices’ observed elsewhere can simply be copied.

Good data are also needed to formulate good revenue policy: for example, surely quantitative assessment of the revenue forgone as a result of different exemptions and exclusions is essential in determining the revenue and distributive effects of various policy options (see section 5.3.3 above). Again, however, almost never is reliable information available along these lines in DTE, even though a regular reporting system with respect to such ‘tax expenditures’ is needed to ensure that revenues forgone through tax policy measures intended to achieve distributive or allocative goals are subject at least periodically to some form of monitoring.<sup>226</sup>

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<sup>225</sup> For example, see the Compendium of GST/HST Statistics recently released by the Canada Revenue Agency (<http://www.cra-arc.gc.ca/E/pub/gp/rc4376/rc4376-04b.pdf>). Not only does this appear to be the first such set of data made available in the 15 years the GST has existed in Canada, but the data included, while of interest, is not very useful for analytical purposes.

<sup>226</sup> For a recent brief discussion, see Messere, de Kam, and Heady (2003) and for an extended treatment, Bruce (1990).

In the absence of such estimates, once an interest group has received a tax concession it may often enjoy the results forever after without having to demonstrate to anyone that the benefits it receives warrant the costs incurred. Better data (e.g. on a sectoral and commodity basis) are also often necessary to address such critical issues as the substitutability and complementarity of tariffs and VAT. Our experience in many DTE is that the problem is less that such data simply cannot be obtained but rather that at present it is in no one's clear interest to make the effort to do so. The combination of the 'public good' aspect of data and the possible adverse effect better data might have on the interests of some groups has, it seems, been sufficient in most countries to ensure that an amazing number of tax policy decisions continue to be made more on the basis of faith than evidence.

Of course, such comments may be applied to any tax. Two features make them especially applicable to VAT, however. In the first place, one unfortunate consequence of the adoption of VAT in replacement of other indirect taxes in many DTE has been the virtual disappearance of any information on the composition of the effective base of consumption taxation. Most studies dealing with this important question infer the tax base indirectly from national income accounts or survey data.<sup>227</sup> Two simple examples of facts important to understanding how VAT really works in DTE that are surprisingly difficult to uncover in many countries are the real importance of imports in the VAT base and the importance of excise commodities in that base. Similar data gaps make it equally difficult to estimate the likely revenue consequences of base and rate changes in VAT. Such problems should not exist since almost all the needed information should necessarily be generated in the normal process of administering VAT. However, almost never are such data available in a usable form, let alone used.

Secondly, VAT is the only tax that involves the government not only in collecting substantial money from the private sector but also in paying much of it back to them in the form of input tax credits. Since any VAT invoice constitutes a potential claim on public funds, and falsifying such claims is perhaps the most common form of VAT fraud, it is critical from an administrative perspective to have a detailed knowledge of the 'normal' or 'expected' pattern of credits and liabilities for firms in all the different lines of business subject to VAT. Again, however, although the normal operation of an invoice-credit VAT generates such information (see e.g. Table 7.1), it is striking how seldom such data are either collected in usable form or used (e.g. for devising a risk management strategy). Perhaps even more surprising is that this whole question has apparently not as yet received much attention from the international community of VAT experts.<sup>228</sup> It should.

A final general observation is simply that, as with all taxes in all countries, no VAT in any DTE, however well designed and well administered it may be, will forever remain the same. Times change, and so must taxes. Keeping up in taxation requires an ability to read the winds—to detect important emerging tax issues, to work out in detail how best they may be dealt with, and to devote time and energy to changing tax design and administration to cope with changing circumstances. Life is more difficult in all aspects for those concerned with tax matters in DTE

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<sup>227</sup> For an interesting recent example, though still a rather simple one, of the information that can be drawn from VAT revenue data about the tax base for EU member states, see Mathis (2004).

<sup>228</sup> See, however, the many useful suggestions in Silvani (1992).

simply because, almost by definition, such countries are not only more likely to change, especially if they succeed in growing and developing, but they are also likely to be more vulnerable than most developed countries to winds coming from abroad—and of course they generally have much less capacity to cope with all these problems.

### *7.5. Dealing with the Small and Shadowy*

In chapter 3 above, we discussed briefly the treatment of the ‘informal sector.’ Many have expressed concern about the possible compliance costs VAT-like taxes would impose on small business. These concerns are legitimate. A recent study of Croatia, for example, found VAT compliance costs to average 31% of VAT revenues for businesses with less than six employees (Blažić 2004). Similar results have been found in many other countries (Cnossen 1994; Hanford and Hesseldine 2003). Such concerns have led most (but not all) VAT countries to introduce various forms of special treatment for small traders. As a rule, as discussed in section 5.2 above, this issue is discussed in terms of the appropriate ‘threshold’ at which to require firms to register for VAT (Keen and Mintz 2004). Thresholds range from none in some countries (Sweden, Spain, Italy) to over \$700,000 in Singapore. In addition, some countries impose simple presumptive (gross receipts based) levies on non-VAT sellers, with varying degrees of effort to ensure that the rates applied bear some relation to the VAT that should be collected.<sup>229</sup> Some differentiate by lines of business. Some permit voluntary registration of those below the threshold.<sup>230</sup>

A quite different approach to the perceived and real problems of dealing with small taxpayers is the so-called ‘VAT withholding’ found in some DTE. Argentina, for example, requires specified larger registrants to withhold at rates of 10.5% on goods and 16.8% on services, which in effect presumes that taxable inputs account for 50% of sales of goods but only 20% of services (Kaplan, 2004).<sup>231</sup> In effect, this practice assumes that VAT will not be reported properly by small firms and hence requires those selling to such firms to ‘withhold’ an additional VAT on such sales to make up for the VAT those firms are supposed to collect (but are expected not to remit even if they do collect) on their own sales. Such ‘dual price’ systems are usually imposed at arbitrary rates and make no logical or administrative sense; nonetheless, they are sufficiently common, and are suggested sufficiently often in countries in which they do not now exist, to call for closer examination than they seem so far to have received. For example, what is the best way to determine the appropriate ‘withholding’ rates (essentially presumptive taxes) in different circumstances? Are such ‘withheld’ VAT ever credited against

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<sup>229</sup> For example, in Korea self-employed taxpayers with less than about US\$50,000 in annual sales are taxed presumptively, with tax liability being estimated at sales in the taxable period times the average rate of value added to sales for the same type of business time the VAT rate of 10% (Korea National Tax Service 2005). See Table 5.1 above for further examples.

<sup>230</sup> Interestingly, many US states with retail sales taxes actually provide compensation for compliance costs to vendors, especially small vendors: see Due and Mikesell (1994, 294-95) as well as [www.taxadminis.org/fta/rate/sale\\_vdr.html](http://www.taxadminis.org/fta/rate/sale_vdr.html).

<sup>231</sup> The withholding rate for services is 8.4% with respect to services subject to a reduced 10.5% rate (e.g. farming, some construction, and some health services). There are all sorts of other special withholding regimes, as spelled out by Kaplan (2004). See also Evans (2003) on Venezuela.

VAT actually reported by the firms from whom they have been withheld? What is the net effect on revenue of such systems?<sup>232</sup>

Finally, most discussion of the appropriate treatment of small firms appears to assume that there is no difficulty in telling which firms are small. It appears that one is supposed to know one when one sees one. This assumption is probably wrong in many DTE. It is, of course, the very essence of the business of tax administration that the “clients” are not very willing customers and indeed often try to opt out of the system. Those who do so may include not only genuinely small businesses but also profitable large- or medium-sized businesses that only look small as well as firms that are losing money but can continue to function by not paying over taxes such as VAT with respect to which they act as withholding agents. Tax administrations in DTE are generally severely constrained in terms of resources and skills. Often, they have to choose whether to go after the larger firms who are already in the tax net (where potential tax revenue payback may be higher), or to pursue instead the less lucrative smaller taxpayers who are largely outside that net.<sup>233</sup> Many have chosen to attempt to cope with the latter and to some extent with the whole shadow economy issue by adopting some form of specific presumptive tax regime in lieu of VAT (and often other taxes as well). Indeed, the widespread existence of presumptions of various sorts even in many VAT systems may, we suggest, be interpreted as evidence of the inability or unwillingness of tax administrations in many DTE to rely on the self-assessment approach, which in turn signals a lack of trust and delays the development of the taxpayer culture necessary to support this approach.

A central problem with the presumptive approach is that all too often DTE have great difficulty in distinguishing between small firms who do not keep good books and records but are potentially (and legally) taxable and firms whose activities are clearly large enough to fall within the tax system but are tax evaders. Some in the latter group may be completely off the fiscal radar—the so-called “ghosts”—while others are more like “icebergs,” in that the portion of their activities visible to the authorities may be miniscule compared to the hidden reality (Bird and Wallace 2004).<sup>234</sup> In such circumstances, although special—simplified and presumptive—tax regimes may appear to be an attractive way to reach evaders, in the end this approach almost inevitably fragments the tax system and is hence inconsistent with good tax administration. Any time that a “disconnect” is created between a special tax regime and the general tax system, problems are likely to emerge. A country can no more long sustain two national tax regimes than two national currencies. The “Gresham’s Law” of taxation is that the availability of a low-tax alternative – and in reality (for reasons set out in e.g. Bird 1970) such special regimes are almost invariably favorable to taxpayers—will inevitably weaken the ‘normal’ regime. Each

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<sup>232</sup> Earlier informal studies by one of the authors of such systems and their precursors (in Argentina and Egypt) suggested that the answers to these questions were as follows: (1) the determination of withholding rates was not evidence-based but largely arbitrary; (2) in the relatively few cases in which such ‘withheld’ VAT was credited, the firms in question would almost certainly have filed and paid VAT in any case; (3) the net effect on revenue of withholding was therefore miniscule, so that this regime in effect amounted to little more than an arbitrary supplementary turnover tax on small businesses (and their—probably relatively lower-income—customers). It seems obvious that more serious empirical research is needed on this topic.

<sup>233</sup> As noted earlier (see the comment on Barbados in Chapter 1 above), a DTE may be making a perfectly rational allocation of its scarce administrative resources by chasing those in the system rather than seeking those who are hiding.

<sup>234</sup> Some of the following argument draws on the paper cited.



regime constitutes an integral part of the other and affects the entire system. Any ‘special’ tax regime, whether intended to supplement a ‘normal’ VAT by replacing its complexities with a simplified regime for small business or to extend the reach of the tax further out into the shadow economy, must therefore include explicit transition arrangements to link the special regime to the more general tax system, within the context of the prevailing tax administration constraints. Unfortunately, in practice little attention seems to have been paid to such critical problems.

Simplified special regimes usually have such goals as alleviating some of the compliance burden of complex tax systems and hence encouraging the growth of small business or educating taxpayers sufficiently so that they may eventually become members of the regular taxpaying population. Other plausible rationales for such systems may be to reduce opportunities for corruption and harassment of taxpayers, to reduce administrative costs of dealing with small taxpayers, and, by encouraging better record-keeping, to improve tax administration in general (Engelschalk 2004). A further important aim is often both to discourage the growth of the informal economy and to increase revenues from this sector, thus equalizing tax burdens between the formal and informal sectors to some extent.

A key problem in achieving any or all of these goals, however, is how to keep out of the (simplified) system large and medium enterprises that try to look like small enterprises and thus hide themselves from the taxman’s eye. Just as one must ensure that as the truly small become bigger they will graduate into the normal tax system, so one must also ensure that those who are in the normal system already—or who should be in that system—cannot easily migrate into the simplified system, taking on the disguise of smallness to shield themselves from taxation. The temptation to shelter from the fiscal blast within such systems is likely to be especially strong when, as experience suggests is usually the case, the effective tax rates applied to those who make it to the ‘safe harbor’ of the simplified system are considerably lower than those in the normal tax system.

An additional problem such systems impose for VAT is that since firms within such special tax regimes are generally not included in the VAT chain, the number of transactions legally outside the VAT system is increased, thus exacerbating the general administrative problem. Of course, since purchases from these taxpayers by regular VAT sellers cannot be used to claim input credits, they have an incentive voluntarily (or perhaps under pressure from their customers) to enter the VAT system. How effective such an incentive is likely to be, however, is far from clear given the general difficulties DTE face in policing the fringes of the VAT system. For example, other registered sellers—some of whom themselves may be conducting significant ‘shadow’ business—may agree to issue VAT receipts in their own name, a practice that seems not unlikely in the context of countries with large shadow economies and generally weak tax auditing capacity. In short, attempts to supplement a VAT by some kind of simplified system, whether intended to help small business or to bring ‘shadowy’ enterprises into the light, may end up making matters worse by creating the risk of migration to the less expensive system particularly when, as is too often the case, firms once safely ensconced in the ‘small’ sector are able to remain there almost indefinitely with little or no risk of audit or exposure.<sup>235</sup>

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<sup>235</sup> The evidence in Ukraine, for example, is that there has been substantial ‘migration’ into the simplified (and sheltered) system (World Bank 2003).

Many countries have engaged in a range of activities intended to chase ‘shadows’, small or otherwise, back into the fiscal light. At one level, tax officials may simply walk along the street, sweeping hawkers and peddlers into the tax net, entering premises and confiscating records, etc. A more sophisticated approach is to follow the audit trail, starting with those who are in the tax net and working outward, on the assumption that it is almost impossible even in the most undeveloped DTE never to have traceable contact with someone who is already known to the tax authorities. Alternatively, operating on the premise that even tax evaders must eat and drink, and perhaps even drive a Mercedes, the authorities may attempt to tap the tax potential of the shadow world through methods such as the introduction of presumptive taxes, that is, taxes imposed on bases determined by an official rather than the taxpayer.

Many more complicated schemes have been developed and introduced in many countries such as lotteries, allowing people to use VAT receipts to reduce other taxes, and encouraging credit card use.<sup>236</sup> Few such schemes seem to have been systematically evaluated, however, and when they have been, the results do not seem to be very promising. In Northern Cyprus, for example, Berhan and Jenkins (2005) found that the costs (notably the additional compliance costs) created by the particular ‘clever’ scheme used in an effort to reward VAT compliance appeared to be considerably larger than any additional revenue conceivably induced by the scheme. Similarly unpromising results are reported for Bolivia in the same study. If one reason for special treatment of small firms is in recognition of their high compliance costs, as many argue, then it is obviously important to be aware also of the compliance costs imposed on the economy as a whole by schemes intended in principle to increase VAT revenues and discourage operating in the cash and informal economy.

One reason special regimes have been created in some DTE, as noted above, is of course because the normal tax regime is considered—somewhat paradoxically, usually by those who established it in the first place—to be too complex and often also too harshly applied and perhaps also unduly prone to corruption, extortion, and harassment.<sup>237</sup> Insulating selected (indeed to a large extent self-selected) taxpayers from such problems does not make the problems disappear, however. On the contrary, it is likely to make them more difficult to deal with both by complicating tax administration as a whole and by reducing political pressures to fix more basic problems with tax administration. Taking potential registrants out of the VAT system is a particularly bad idea since information is the lifeblood of an effective VAT administration. Every effort should be made to avoid breaking the information chain, rather than encouraging firms to do so, as simplified systems in effect do.

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<sup>236</sup> For example, even a country as developed as Korea allows 20% of credit card expenditure to be deducted from taxable income and also has a lottery system based on VAT receipts (Korea National Tax Service, 2005). A somewhat similar system, in effect lowering the effective VAT rate on credit (and debit) card purchases, is used in Argentina (Kaplan 2004).

<sup>237</sup> See e.g. Engelschalk (2004), Djankov et al. (2002) and the annual “Doing Business” reports of the World Bank and International Finance Corporation (see e.g. <http://rru.worldbank.org/>). ‘Simplified’ systems may sometimes actually increase problems e.g. by increasing compliance costs—when options are provided, rational taxpayers can choose between them rationally only by calculating tax burdens under both the standard and the optional approach.

## 8. Is VAT Always the Answer?

In this chapter, we consider whether jurisdictions, whether national or regional governments, should consider introducing a VAT as compared to other forms of general consumption tax. Will the VAT continue to spread? We think so. In some cases, as in the case of many Canadian provinces and U.S. states and some other jurisdictions—for example, the case of Puerto Rico—a move to a VAT seems both to make clear economic sense and to be administratively feasible. In other instances, however, for example, with respect to relatively small jurisdictions which the combination of the ‘border problem’ and the relatively high cost of administering a consumption VAT likely outweigh any economic or revenue gain from doing so, it may not.<sup>238</sup> In others—for example a few small islands in which the entire tax base is effectively imported, it may also make no sense to introduce a VAT to do what a simple uniform import tax would do as well.<sup>239</sup>

As we discussed in Chapter 2 above, most major sales taxes found in the world today take the form of VAT. Is VAT likely to spread even further? We noted also in Chapter 2 that up to now, almost no jurisdiction that has imposed a VAT has reversed its decision. Recently, however, some transitional countries like Ukraine have been discussing the possibility of turning away from VAT to some other form of general consumption tax (e.g. Lanovy, 2005).<sup>240</sup> Is anyone likely to do this? To begin with, we shall first briefly consider this second question, to which our answer is clearly No: no jurisdiction with a VAT is likely to find it sensible to replace the VAT. We shall then turn to the first question raised and consider what the pros and cons of VAT are for a country (or region) still without one.<sup>241</sup>

### 8.1. If You Have a VAT, Keep It

There are essentially only three types of general sales taxes: a turnover tax, a single-stage sales tax, and a VAT.

A turnover tax is in some ways the easiest to administer: tell me your turnover, and I’ll tax you on it. Alternatively, such a tax can be levied on ‘turnover’ estimated by tax officials or even self-reported by taxpayers, as is often done with respect to local business taxes, for

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<sup>238</sup> As mentioned in passing earlier, a quite different kind of VAT may make sense even in these cases as a low-rate local business tax (Bird, 2003).

<sup>239</sup> A major question in some such cases, however, relates to the appropriate method and level of tourist taxation, already touched on earlier in passing, although again this issue cannot be further discussed here: for an earlier treatment, see Bird (1992).

<sup>240</sup> Russia has also recently considered replacing VAT by a sales tax

([www.taxanalysts.com/www/website.nsf/Web/FinancialReportingWatch?OpenDocument](http://www.taxanalysts.com/www/website.nsf/Web/FinancialReportingWatch?OpenDocument) [3 October 2005]).

<sup>241</sup> We do not discuss here whether U.S. states (or other Canadian provinces) should consider changing their retail sales taxes to VATs. Bird and Wilson (2004) discuss the case of Ontario in detail and conclude that such a change would definitely make sense, largely on competitive grounds, for that province. Dahlby (2005), while dealing with a far broader policy context, suggests that the Canadian provinces that currently operate retail sales taxes should do so following the model proposed by Bird and Gendron (1998, 2000, 2001). Bird (2005c) suggests that even if the U.S. considers to stand alone in not having a national VAT, it may nonetheless be ‘smart’ for many states to consider introducing ‘VAT-like’ elements into their retail sales taxes, essentially for the reasons set out in the present chapter.

example. In either case, the basic administrative problem is to determine and verify the turnover (sales) of a taxpayer and to collect the tax. Both components sound easier to do than they are, but the idea is simple. Similarly, the basic form of evasion with such a tax is simply to hide (under-report) sales. The primary form of avoidance is vertical integration since ‘within-firm’ sales are not taxed. The other side of the coin, however, is that the turnover tax is by far the economically most distorting form of sales tax. For example, sales of investment as well as consumption goods are taxed. Indeed, often (as in the former Soviet Union) even export sales were taxed. If one wishes to discourage exports and investment and to induce firms to integrate up and down the chain of distribution and production, one may perhaps like some of the allocative effects of such a tax. Even so, since the final tax burden borne by any particular transaction depends essentially on how many prior taxed transactions are embodied in its sales price, not many people are likely either to understand or to like its distributional impact. With a turnover tax, in other words, a government usually has little or no idea of what the real effects of its tax system are in either allocative or distributive terms.

All these problems may in principle be avoided by imposing a single-stage sales tax levied on the final sale to consumers (households, or non-registered firms). Investment goods purchased by registered firms, like other inputs purchased by such firms, would then in principle be free from tax, as are exports. The allocative and distributional effects of such a tax are much clearer than those of a turnover tax. The government can, if it is interested, see without too much difficulty what it is doing with its taxes. On the other hand, experience with such taxes even in countries with good tax administrations demonstrates that this approach has two fatal flaws. First, it is extremely difficult to ensure that inter-firm purchases used to produce taxable goods and services, and only those purchases, are exempted from tax. The ‘ring’ (or suspension) system used to achieve this result—under which tax is ‘suspended’ on sales by one registered firm to another and so on and on until there is, at last, a sale to someone outside the ring of registrants—has proven to be both cumbersome to police and easy to abuse. Second, and even more important in the eyes of most tax officials, with this form of sales tax the entire tax collection process rests on the least dependable link in the chain—the final seller to the public, or in other words, the fragmented, often small-business-dominated, retail trade sector, which is notoriously difficult to police in any country as we discussed in section 7.5 above.

So, turnover taxes are easy to administer but have bad economic effects, while single-stage retail sales taxes in theory may avoid the bad effects (but in practice are unlikely to do so very cleanly) and they are in general difficult to administer well. Enter the VAT, which in principle—and, properly set up and run, in practice also—combines the good features of both its competitors while avoiding the bad features for the most part. How does it do this? Essentially, through two features:

- First, VAT collects what is economically equivalent to a single-stage retail sales tax by withholding tax at each stage of the chain of production and distributive activities preceding the final sale to households. By doing so, it both achieves the goal of taxing only consumption and, if evaded at the final retail stage, forgoes only that part of the potential tax base consisting of the retail margin.

- Second, VAT avoids distorting economic choices with respect to production technology by crediting taxes on inputs, including capital goods, and avoids taxing exports by crediting taxes paid at prior stages.

With single-stage sales taxes (as with turnover taxes), the basic way to evade is simply to avoid reporting sales, by remaining in the shadow economy, by not keeping proper books, by not reporting correctly to the tax authority, and so on. It takes only one to evade. With VAT, one has essentially two ways to evade, by under-reporting sales in the ways just indicated or by over-reporting taxable purchases (thus claiming excess input tax credits and, in some cases, even refunds). On the other hand, with VAT it also takes two to evade—a seller and a buyer. Since the two sides of the transaction have to appear in the same terms in two sets of books, the task of the administration in detecting evasion should be easier as a rule.

Indeed, in principle the two players (buyer and seller) have conflicting reporting incentives (buyers want to overstate purchase prices to inflate credits and sellers want to understate sales to reduce output taxes) if they are truly separate. This fact even led some early writers to claim that VAT was ‘self-enforcing,’ which is certainly not literally true. Indeed, the major form of VAT evasion that has emerged in many DTE (and elsewhere) is when the two—buyer and seller—are really one, with what are really false inter-firm prices being reported as a basis for unduly high input tax credit claims. While it is easiest to get away with this when the supplier is in another country, many such instances have been found even within particular countries. For this reason, for example, some countries do not allow refunds to be claimed for capital purchases by new firms until a reasonable pattern of economic activity has been established (e.g. a year). Even without going this far, however, the simple fact remains that, regardless of the competence of the administration and the honesty of both officials and taxpayers, it should in both principle and practice be simpler to enforce a sales tax with a given base when that tax is applied in an incremental ‘value-added’ form than when it all stands or falls on honest reporting of a single transaction (the final sale).

The conceptual equivalency of a VAT and an RST (retail sales tax) has frequently been noted. Provided that the base of the two taxes is identical and that each is equally well administered, the two are essentially alternative ways of imposing the same tax.<sup>242</sup> The choice between the two is thus often said to turn largely on which can be better administered in a particular setting. This argument is obviously technically correct. If two taxes tax the same base equally effectively, they are indeed equivalent in an economically relevant sense. As already mentioned, however, it is also seriously incomplete. In reality the bases of a VAT and an RST are most unlikely to be equivalent. This point is critical, because the economic effects of a tax depend largely on the scope and nature of the tax base. The size of the tax base, for example, determines the tax rate needed to generate any given revenue, and the precise nature of that base determines how well the tax can be administered in any given setting.

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<sup>242</sup> For a rigorous comparison of a VAT and a retail sales tax (RST), as well as with a manufacturers’ level tax and a turnover tax in a simplified setting, see Das-Gupta and Gang (1996). While that article shows that such comparisons are sensitive to conditions in both intermediate and final goods markets, the consensus of professional opinion is unquestionably that VAT is on the whole a better way to tax consumption than an RST: see, e.g. Ebrill et al. (2001, 23-24).

## 8.2 *The Economics of Tax Choice*

The two most important and critical differences between the tax base of most VATs and the tax base of most RSTs are the extent to which services are taxed and the extent to which business inputs are ‘untaxed.’ In principle, as already mentioned, such differences need not exist. But in practice, they almost invariably do, and to a considerable extent for good reason. It is worth elaborating on these points briefly.

### 8.2.1. **Untaxing Business Inputs**

There are several factors to consider with respect to taxing business inputs under a consumption tax. First, there are a number of reasons, quite persuasive to most economists, for *not* taxing such inputs:

- The first, and in many ways critical, argument from an economic perspective, is simply that, by definition, only consumers, not businesses, consume, so presumably only consumers should be subject to tax. To the extent that some ‘consumption’ tax in fact falls on intermediate production inputs, the actual burden imposed on final consumption will vary in proportion to the extent such inputs are used in producing final consumption goods. The resulting uneven pattern of tax incidence is unlikely to accord with any policy intention and will also affect consumption choices, thus reducing economic efficiency.
- Secondly, input taxes also affect production efficiency by altering the choice of inputs and perhaps even the choice of production techniques, for example, by delaying new investment owing to the higher cost of capital equipment.<sup>243</sup> The result is clearly to reduce economic efficiency and in all likelihood investment and growth.
- Thirdly, since firms in most jurisdictions are too small to influence prices of goods sold to other jurisdictions, to the extent taxes on production inputs are not rebated on exports the relative profitability of exporting is reduced and consequently the export sector is smaller than it would otherwise be.
- Fourthly, because firms can generally avoid such ‘cascading’ taxes if they produce inputs themselves, an undesirable incentive is created to vertical integration. Even the size and structure of productive organizations may thus be affected by consumption taxes that are not confined to taxing consumption.
- Finally, as a final negative factor, firms in jurisdictions that impose relatively heavier taxes on business inputs are clearly penalized relative to firms in areas that tax such inputs less heavily. A recent study on the province of Ontario (Canada), for example, found that removing the ‘cascading’ effect of the provincial (retail) sales tax on business would have a larger marginal incentive effect on new investment than would lowering the provincial corporate income tax from its current rate of 12.5 percent to 8 percent (Chen and Mintz 2003).

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<sup>243</sup> Recall that China did not allow input credits for capital goods precisely to discourage investment!

On the other hand, there are also reasons—reasons that appear often to be persuasive in the political arena—as to why such inputs *should* be taxed:

- Perhaps the major such reason is simply because there is a lot of potential revenue in taxing business inputs. For example, many U.S. states and Canadian provinces collect between a third and half of all their sales tax revenues from such inputs (Ring 1999; Kuo, McGirr and Poddar 1988). Clearly, if these items are excluded from the tax base (as under a VAT) either the tax rate has to be higher or the tax base has to be expanded considerably, usually by including more services, as discussed below.
- Related to this argument is the simple political fact that it appears almost always to be politically attractive to tax something vague called ‘business’—usually understood to mean ‘the rich’ or at least ‘someone other than me’—rather than final consumption, which all too obviously means ‘me’ to most voters.
- Finally, in addition to these political arguments, it might also be argued that it is administratively complex to ‘untax’ business inputs—as indeed it generally is under an RST which is precisely one important main reason that so many countries have adopted a VAT in recent decades.

On the whole, from an economic perspective there is no doubt that business inputs should, in principle, be ‘untaxed’ under any decent consumption tax. With an RST, production inputs may be freed from tax in two quite different ways. First, the definition of ‘taxable sale’ usually excludes ‘sales for resale.’ While it is not always clear exactly what this term means, the usual interpretation appears to exclude from tax goods that are physically incorporated into other goods that are then in turn sold for final consumption—e.g. wood used to build a desk. There are, however, many borderline cases (consumables and fuel, containers, real property construction, etc.) and the tax treatment of many of these items varies widely under RSTs from state to state in the U.S., for example (Due and Mikesell 1994). Secondly, some products, notably machinery and equipment, may be specifically exempt from tax. The exemption approach is often applied to major agricultural inputs (feed, seed, fertilizer, agricultural equipment).

Such exemptions are generally administered under an RST by requiring the buyer to issue a certificate of exemption to the seller certifying that he is a registered vendor and showing his registration number. As a rule, the purchaser is held liable for any misuse of this exemption—for example, by making a tax-free purchase that is not for resale (or not physically included in a product that is sold) although it is far from clear how such provisions can be effectively enforced. Some U.S. states require similar certificates for purchases of industrial equipment and even in a few cases for tax-free purchases of agricultural inputs, although farmers are seldom if ever registered for sales tax purposes. The purpose of such certificates is of course to facilitate control by providing a more complete ‘paper trail’ for sales tax auditors. The efficacy of this system thus obviously depends entirely on the quantity and quality of sales tax audit, which, as Due and Mikesell (1994) demonstrate in detail, leaves a great deal to be desired in almost all U.S. states. Indeed, their conclusion (p.244) was that “most states need to at least double their audit staffs, increasing their audit coverage threefold to maximize revenue.”

An additional problem with the RST approach arises from the existence of a considerable group of ‘exempt purchasers’ in the form of a wide variety of both public sector and non-profit organizations. As we discussed in section 4.2 above, the tax status of non-profit entities is always a complex and difficult issue in VAT. It is no less so—indeed, arguably more so—under an RST. Ideally, for full audit control, exempt purchasers should be registered as such and their registration numbers quoted on the relevant invoices, but no U.S. state appears to do this. Indeed, some states do not even register non-retail enterprises (manufacturers and wholesalers) even if such entities—like some non-profit entities—make occasional taxable sales, although again such registration would appear necessary for better control over purchases for resale and of inputs as well as of use taxes. The theoretically correct solution, although not necessarily the most cost-efficient, would clearly be to register more, not fewer, entities. However, as Due and Mikesell (1994, 140) note, many states appear to be more concerned about ‘over-registration’ than ‘under-registration’, in part because of the ability of registered firms to purchase many items tax free.<sup>244</sup>

In any case, sales of taxable goods and services that take place within the ‘ring’ of those holding registration (or exemption) certificates obviously escape RST, which is applied only when sales are made to those outside this magic circle—that is, to final consumers or, perhaps (and by no means unimportantly) to unregistered or ‘informal’ producers, as discussed below. This approach is obviously potentially subject to abuse—e.g., using equipment such as vehicles or computers purchased for businesses for personal purposes. The so-called ‘use’ tax is of course intended to capture such personal use, but its effectiveness is obviously unlikely to be high.<sup>245</sup> In part because of the potential for abuse, in practice most RSTs restrict the operation of the suspension system in a number of ways—e.g. excluding certain products (such as vehicles or personal computers).<sup>246</sup> Interactions with income taxes often further complicate matters.

Interestingly, Due and Mikesell (1994, 260) note that “Hawaii...can enforce payment through importing firms” and also that (263) “at least four states make use of information from U.S. Customs offices at border points: Maine, North Dakota, Texas, and Vermont.” Moreover, since 1994, all states have been able to purchase computer tapes of Customs data on imports (including names, ID numbers, and details of imports into a state). On the other hand, the same study also mentions (327) that “Texas has a major problem with tax-free exports to Mexico, the good coming back into the state free of tax.” Such ‘border’ issues are discussed briefly further below (see also section 6.2 above).

All existing RSTs are thus much less than perfect in excluding all tax elements from the price of business inputs.<sup>247</sup> Of course, since most RSTs do not encompass many services (and also permit a wide variety of other exemptions and exclusions), many business purchases are not subject to tax in the first place. However, to the extent that the production of such services incorporates taxed elements—even accountants and consultants use computers, desks, and pencils that are taxed, for instance—even such ‘untaxed’ business inputs likely incorporate some

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<sup>244</sup> A similar concern, of course, is evident in our earlier discussion of VAT thresholds in section 5.2 above.

<sup>245</sup> Due and Mikesell (1994, chap. 10) discuss the ‘use tax’ in some detail, setting out the different ways in which it operates in different U.S. states and its widely varying importance in revenue terms.

<sup>246</sup> Due and Mikesell (1994, chap. 3) discuss state treatment of production inputs in detail.

<sup>247</sup> The most thorough recent study in the U.S. is Ring (1999).



tax element. The fee a firm pays for accounting services may thus be \$100 higher than it would otherwise be because the accountant is passing on the RST he has paid on various inputs. The firm in turn incorporates this additional \$100 in its cost base in determining the price it charges for its own product, assuming it can pass the tax on fully.

The tax that is really paid by the final consumer on any product thus depends not simply on the sales tax rate explicitly levied on the final price but also on the extent to which that price incorporates earlier taxes levied in the production process. Of course, depending on market conditions, in some instances the producer may have absorbed some of these tax costs, thus reducing profitability and making investment less attractive. If such costs impinge on the acquisition of new capital, business may then be put at a competitive disadvantage with respect to competitors located in other countries and regions.<sup>248</sup> If such costs reduce the profitability of exporting, the export sector will be disadvantaged. All in all, the extent to which and the manner in which such ‘hidden’ taxes echo down the production-distribution chain thus distorts both consumption and production decisions, alters the distributive impact of the tax in a complex way, and reduces economic efficiency, investment, and growth in the economy as a whole.

From the perspective of tax design, the principal reason for adopting a VAT is precisely that it avoids many—though certainly not all—the problems just discussed. At the end of the day, it is almost impossible to assess precisely the extent of multi-faceted distortions that the RST causes. With VAT, at least, there is some hope. In particular, the VAT approach essentially eliminates the taxation of business inputs, except to the extent that exclusions and exemptions (e.g. of financial services) produce cascading. Precisely because most inputs pay VAT, in general no additional tax element is included in the VAT levied on the sale to the final consumer. The reason, of course, is because the seller deducts the VAT he has previously paid on inputs (including the purchases of capital goods) before remitting the VAT due on his sales.<sup>249</sup> Indeed, from an economic perspective, the ability of a VAT to ‘untax’ business is one of its most attractive features, essentially because it removes virtually all of the distortions arising in both the incidence and effects of consumption taxes.

### **8.1.2. Taxing Services**

‘Services’ may take many forms. Some are ancillary or incidental to the production or supply of goods. Often, the line between goods and services is a thin one, and taxes that fall on ‘goods’ only can be administratively intractable. As mentioned in Chapter 6.1 above, the recent growth of digital technology has blurred such lines even more. An important virtue of the VAT approach is that VATs usually encompass a much wider range of services than RSTs, ranging from services associated with the purchase and use of goods (repair, transportation, insurance, consulting) to a wide range of other services provided more independently. Some of the latter—e.g. accounting, legal, and other professional services – are also consumed largely by firms and hence also enter into the VAT crediting system, thus avoiding cascading. It is arguably easier in principle—and experience suggests that it is indeed easier in practice—to adopt what may be called ‘the VAT approach’ and tax all such services, allowing credits to legitimate business users

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<sup>248</sup> See also the discussion of possible exchange rate offsets in Chapter 3.1 above.

<sup>249</sup> It is assumed here that the VAT would be of the conventional income-credit variety.

(registered VAT payers) rather than to follow what might be called ‘the RST approach’ and tax only certain specific services (dry cleaning, barbers, personal income tax return preparation) assumed to be provided mainly to consumers.

A survey a few years ago found that although 164 different named services were subject to tax in different states in the U.S. with RSTs, ranging from only one in Alaska (which has only a local sales tax) up to 157 in Hawaii (where the so-called general ‘excise’ tax is actually imposed on ‘turnover’ or gross receipts rather than just on ‘retail sales’ tax and hence has a much broader base than most state RSTs).<sup>250</sup> Unfortunately, since many of the services thus taxed are frequently used by businesses—e.g., credit reporting, advertising, printing, computer and data processing, maintenance and janitorial services, etc.—the result in many states of including more services in the RST tax base appears to have been to increase the extent to which the tax falls on intermediate rather than final consumption.<sup>251</sup>

In contrast, most VATs both tax a considerably wider range of services and clearly ‘untax’ services to the extent they are used by registered taxpayers for business purposes. Of course, as discussed in section 6.2 above, there are of course still many problems in taxing services under a VAT e.g. with respect to financial services and cross-border services.<sup>252</sup> Moreover, in principle exactly the same base could be reached equally well with a properly designed and administered RST. That most RSTs are defective in these respects does not mean that a consumption tax taking this form must inherently be similarly imperfect. In practice, however, the reality is that most such taxes do appear in practice to be considerably more economically distorting than most VATs. The relatively greater availability of administrative resources to US states and Canadian provinces than to most DTES may makes the waste from the web of exemptions more affordable. DTE do not have that luxury.

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<sup>250</sup> See State of Hawaii (2002). Although this document makes a lot of the difference between this ‘excise tax,’ which it alleges is imposed on business, and a sales tax imposed on consumers, the Hawaiian excise is of course only another variety of sales tax. Unlike most RSTs, however, it is imposed at three rates: 0.15% on insurance commissions, 0.5% on wholesale sales, and 4% on retail sales. The low rate on wholesale sales is of course intended to reduce cascading. In 2000, ‘wholesale sales’ were defined a bit more broadly to include e.g. certain telecommunications and transportation services in a further attempt to reduce cascading.

<sup>251</sup> Federation of Tax Administrators (1997) discusses the situation in the U.S. states. An update available on their website ([www.taxadmin.org.fta/pu/services/stat1.html](http://www.taxadmin.org.fta/pu/services/stat1.html)) indicates that there have been few changes in the situation in the last few years. For an interesting recent exploration of the extent to which RSTs might be extended to encompass services more successfully, see Hendrix and Zodrow (2003). As these authors note, there is a strong economic case for taxing more consumer services but none for taxing business services; they do not, perhaps, emphasize strongly enough the considerable administrative difficulties that may sometimes arise under the RST approach in distinguishing between the two. The ‘dual use’ system they suggest as a possibility, for example, combines the problems of the VAT approach—the need for refunds, etc.—with those of the RST—the need to distinguish ‘dual-use’ inputs.

<sup>252</sup> For a good general discussion of VAT taxation of services, see Kay and Davis (1990).

### 8.2.3. Other Economic Aspects

Turning more briefly to a few other economic aspects of the choice of consumption tax, on the whole perhaps the best conclusion is that, while the VAT still wins, there is probably a somewhat less strong case for the VAT approach than is often argued. For example, the revenue yield of any form of sales tax, whether a VAT or RST, is a function of base and rate, and there appear to be no matters of principle affecting tax choice in this respect. Abstracting from administrative issues, the size of the respective bases depends upon: (1) the extent to which business inputs are taxed under the RST and ‘untaxed’ under the VAT, (2) the extent to which services are taxed under the two forms of tax, and (3) the relationship between these two magnitudes for each tax. If, as suggested above, more services are taxed under the VAT approach than under the usual RST, then arguably the elasticity of consumption taxes should be higher since the share of services in consumption usually rises more quickly than the share of goods, although this is of course a rather long-term consideration. On the whole, however, VAT is in principle no more a ‘money machine’ than an RST.<sup>253</sup>

In the short run, it has sometimes been asserted that the VAT confers a short-term revenue advantage on government because it “gets the money earlier” (that is, in stages during the production process rather than only at the end with the final sale). This is true when one considers only a single VAT taxpayer, but it is not really true for the economy as a whole. Since at the end of each tax period, the government has to (so to speak) pay back input tax credits, the net revenue flow to government reflects entirely the taxes collected on the final sales taking place in the economy in that period.<sup>254</sup>

Similarly, it has sometimes been argued that RSTs are more prone to ‘erosion’ by a proliferation of exemptions than VATs. However, there is no a priori reason why this should be so, unless perhaps one believes that the administrative cost of particular exemptions is relatively higher than that of similar exemptions under a VAT. There appears to be no systematic exploration of this issue in the literature. What the literature on both forms of tax does show clearly, however, is that, as discussed in Chapter 5 above, governments introducing any form of tax should be very careful to establish as few exemptions and exceptions as possible because, once granted, such concessions are invariably extremely hard to reverse. Since an RST is (often, although not necessarily) more visible than a VAT, it may be more vulnerable in this respect.

Much the same is true of the common argument that the VAT is easier to administer because it is ‘self-enforcing’. No tax is literally self-enforcing. The common argument to the contrary turns on the obvious fact that one firm’s output tax payable is another’s creditable input tax, so that there are conflicting interests which, it might be argued, are likely to result in more accurate reporting. In principle, this might happen if sellers and purchasers were equally liable for each other’s accurate tax reporting and hence concerned to police each other’s honesty, but since as a rule they are not in fact liable for errors of either commission or omission by the other party in the transaction, it is not. While, as discussed below, the VAT definitely has some

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<sup>253</sup> See also the discussion in section 3.2 above. But see also the comment in section 9.5 below on ‘hiding’ taxes.

<sup>254</sup> For a clear numerical illustration of this point, see OECD (1988, 98). Note that ‘final sales’ in the text sentence is to be interpreted as ‘sales to others than VAT registrants.’

administrative advantages over an RST in many circumstances, it is not obvious in many cases that they are necessarily decisive.

Finally, while it has often been argued that VAT is a more effective way to reach the so-called ‘informal’ sector (see Chapter 3 above), this too is unclear. Essentially, as discussed in the next section, how effectively either form of consumption tax is at reaching this sector is a function of both design and administration. There is nothing inherent in either tax that gives it an obvious advantage in this respect in principle. In practice, it may often turn out that the VAT approach is a bit more effective, for reasons discussed in the next section, but an equally well-administered RST on the same base could presumably do as well.

Questions may thus be raised about some common pro-VAT arguments. Nonetheless, on the whole, as world experience suggests, VAT is definitely the economically preferable way in which to impose a broad-based consumption tax.

### *8.3. Administrative Aspects of Tax Choice*

The issue is by no means as clear cut when it comes to the important administrative dimension of tax choice, however. Some commentators seem to think that the major difference between a VAT and an RST is that the former requires dealing with a much larger number of taxpayers. While both forms of consumption tax would indeed require dealing with considerably more taxpayers than, say, a manufacturer’s sales tax, it is not true that imposing a VAT necessarily requires dealing with many more registered entities than an equally tightly-controlled RST. Discussion of this issue is sometimes confused by essentially irrelevant comparisons between the number of ‘retailers’ and the total number of firms in an economy. Since the former number is, by definition, smaller, the usual conclusion is that a VAT is therefore necessarily much more administratively demanding than a retail sales tax. One flaw in this comparison, of course, is that not only ‘retailers’ make ‘retail sales.’ Since manufacturers (e.g. Dell) and importers and other distributors (e.g. big ‘box’ outlets such as Wal-Mart) also sell directly to consumers, they too should be registered for RST purposes. In addition, as mentioned earlier, if a RST is to be administered as tightly as a VAT, it may well turn out that a substantial number of ‘non-taxpayers’ might also have to be registered to ensure adequate audit control of ‘tax-free’ sales.

Essentially, both forms of consumption tax operate by distinguishing between those who are determined to be ‘inside’ the system and those ‘outside’ the system. An RST ‘suspends’ tax on sales between those inside the system and taxes sales to those outside. A VAT taxes all sales but then credits taxes levied ‘inside’ the system (input tax credits) against taxes levied on those outside (output taxes). If the tax base is the same—same items taxed, same exemptions, etc. — and the two taxes are equally effectively administered, obviously exactly the same entities should be ‘inside’, that is, registered (or otherwise recognized) for sales tax purposes. In the case of the RST, some may perhaps be ‘registered’ as ‘exempt’ entities, but in principle they too have to be registered if the RST is to be applied as effectively as a VAT that does register them. In practice, as discussed above, most jurisdictions with RSTs do not follow this path but rather in effect ‘download’ the task of dealing with exempt purchasers (other than ‘tax-free’ sales to other

registered firms) to sellers, although since it appears that sellers seldom bear any liability for any mistakes, the efficacy of this way of operating a sales tax seems doubtful.

In principle, then, there would seem to be no big difference in terms of the number of firms that have to be dealt with under a VAT or RST form of consumption tax, *provided* the same level of administrative control is achieved under both systems. In practice, however, there are often important differences in the nature and scope of the tasks facing the tax administration, in part, paradoxically, because the VAT approach shifts much more of the burden of administration to the private sector. For example, under an RST if a registered entity purchases a product, no tax is collected. In order for the tax administration to determine if tax should have been collected, it has to go out into the field and determine the facts of the case: was the purchaser a legitimate (licensed) activity and did it put the product purchased to a legitimate use? If it finds some impropriety, it then has to chase down the guilty and attempt to collect any tax due. This is not an easy task, and it is not surprising that most RST administrations seem to do little along these lines. All the cost is borne by them, and the rewards are not easy to achieve.

In contrast, under a VAT, tax is collected on many more transactions, and the government keeps it unless a taxpayer demonstrates both that he is a legitimate taxpayer and that he has a legitimate claim to credit this tax against tax due on his sales. The onus is on the taxpayer, not the government, to act. If the government doubts the legitimacy of the claim for credit, it can demand documentation (invoices) that by law must be maintained by the taxpayer and can further, if necessary, go up and down the chain of invoices as necessary simply by using readily available documentation.

Life for tax administrators may thus in principle be somewhat easier under a VAT than an RST, but it is correspondingly more difficult for taxpayers, who must maintain more records and thus, so to speak, facilitate the hand that bites them. While it has been argued that anyone running a sound business needs to maintain VAT-like records in any case, and indeed that imposing a VAT may even have so-called ‘management benefits’ by encouraging businesses to do their job better (Sandford et al. 1981), such consolations seem unlikely to cut much ice with taxpayers faced with what will undoubtedly be perceived as a new and onerous fiscal obligation. Complaints are likely to be particularly great from smaller firms, where the fixed costs of establishing any required new accounting or reporting systems constitute a proportionately greater burden (Cnossen 1994). On the other hand, to repeat, if an RST were to be administered as well as a VAT, taxpayers would in principle also be required to keep accessible essentially exactly the same records, so this particular ‘anti-VAT’ argument should be regarded with some scepticism.

#### ***8.4. Border Issues***

Finally, an additional set of policy-cum-administrative issues that arise in choosing which form of general sales tax makes most sense in any particular context may be discussed under the general label of ‘border issues.’ It is obviously important to be very clear about how trade is treated under the VAT and RST alternatives. With respect to e-commerce, for instance, as argued in section 6.1.1 above there is no question that VAT is better than RST not because it can

tax direct sales to consumers (so-called B2C— ‘business-to-consumers’) more effectively—it cannot, but because, as discussed above, it is a much more effective device for ‘untaxing’ business inputs and thus reducing the economic distortions created by ‘consumption’ taxes that actually tax a considerable amount of production, as do most RSTs.

Even in the United States, where many seem to think that states have no alternative to the RST, two states (Michigan and New Hampshire) do in fact have a variety of VAT, although neither of them call it a VAT or seems very keen about it.<sup>255</sup> In addition, two other states, Mississippi and especially Louisiana have for years had clear ‘VAT-like’ elements in their RSTs. In the case of Louisiana, for example, ‘wholesalers’—a term that includes manufacturers, jobber and suppliers selling to anyone for sale at retail—are required to collect advance sales taxes from such purchasers. Retail detailers who make such advance payments can then deduct such payments from the tax they collect on their own sales, provided such deductions are supported by invoices from wholesalers showing the advance payment.<sup>256</sup> This is of course exactly the way a VAT works.

As Canadian experience shows (section 6.2.1 above), sub-national units can make a full-fledged invoice-credit VAT work well. Essentially, for domestic sales, provincial VATs in Canada work exactly like the Louisiana tax just mentioned. For cross-border sales (out-of-province), taxes are not collected on import, except for international imports, where most provinces have made arrangements with the Canada Border Services Agency to collect provincial sales taxes (whether imposed in VAT or RST form) on imports for final consumption.<sup>257</sup> For imports by final consumers (or non-registrants) from other provinces, essentially provincial sales taxes rely on provisions similar to, and probably no more effective than, the usual state ‘use tax.’<sup>258</sup> ‘Commercial’ imports made by registered importers are not subject to any provincial tax on import, however, whether they come from other provinces or from abroad. As noted earlier, tax on such imports is in effect ‘deferred’ until resale, so that even if a province has a VAT in effect its tax acts just like a ‘suspended’ RST in the sense that tax is deferred at import and collected on the first subsequent taxable transaction. Of course, this ‘deferred VAT’ procedure is exactly the way the VAT long worked with respect to cross-border transactions within the European Union.

An important argument in favour of VAT in DTE is often that this approach offers a more effective way to collect consumption taxes because, in effect, the first ‘chunk’ of the tax is collected at the border when goods are imported. If the country has no effective tax collection system other than at its borders, this is obviously an attractive argument. Indeed, it is so attractive that a recent IMF study actually goes so far as to say that “So central is the role of customs in relation to the VAT that Hong Kong, so committed to free trade that it currently has no customs administration, has been advised to consider creating one if it decides to adopt a

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<sup>255</sup> These taxes are variants of the income-VATs discussed in Bird (2003).

<sup>256</sup> For a recent description of the Louisiana tax, see U.S. Chamber (2004) [http://www.uschamber.com/sb/business/P07/P07\\_4947.asp](http://www.uschamber.com/sb/business/P07/P07_4947.asp)

<sup>257</sup> See Canada Border Services Agency at <http://www.cbsa-asfc.gc.ca/menu-e.html>. Provincial taxes are also applied by CBSA to goods delivered by courier or post, subject to a *de minimis* rule.

<sup>258</sup> Bird and Gendron (1998) argue, however, that this process is somewhat more effective in those provinces with VATs because the over-riding national VAT (the GST) and agreements between the federal and provincial authorities permit much more effective audits.

VAT” (Keen, 2003, 8). Such arguments can be overdone, however. As discussed in section 6.2 above, the way in which sub-national jurisdictions get around the fact they do not have border controls is simply—regardless of the form of their sales tax—by not even attempting to collect the tax at the border (since they cannot do so) but instead trying to collect it on the first taxable transaction after the border. Not only is this how an RST works in any case, it is a common practice with VATs (e.g. in Europe and Canada). Such a ‘deferred VAT’ is conceptually identical to a ‘suspended RST.’

In many respects there is thus essentially no difference either in principle or practice between how an invoice-credit VAT works with respect to cross-border transactions in a jurisdiction that does not control its borders and how an RST in the same jurisdiction works with respect to similar transactions. In both instances, no tax is imposed at the border. Hence, neither can be collected unless a subsequent ‘in-jurisdiction’ transaction comes to the attention of the authorities. Indeed, from this perspective, islands such as Puerto Rico and Hawaii are fortunate in being able to collect so much of their indirect taxes at the border. It is not clear why they should not follow the VAT option and make full use of the resulting potential administrative advantage that at least some of the onus of collecting the right taxes has been shifted to business purchasers.

Some countries also use what is essentially a ‘deferred VAT’ approach with respect to imports that are subsequently re-exported. While such treatment is most common with respect to export processing zones and similar ‘enclaves’, it is occasionally applied more widely to well-established exporters. In Singapore, for example, under what is called the “major exporter scheme” (MES), approved VAT registrants can import without paying tax at the time of import (IRAS 2003). The basic requirements to qualify are that over half of total sales should be for export and the firm is in good compliance with all tax requirements. In some instances, the tax authorities may require a letter of guarantee, at their discretion. MES status, once granted, is good for three years.

The rationale for this approach is that since exports are zero-rated any VAT collected on imports would in any case have to be refunded, and that it is less costly to all concerned simply not to collect it in the first place. In particular, deferral alleviates the cash flow disadvantage that would otherwise be faced by exporters who had to pay VAT on imports and then wait for the tax to be refunded after export. Such schemes are, of course, simply a variant of the usual ‘duty-free’ (‘bonded’) treatment common in many customs systems. They are hence subject to all the problems commonly found associated with controlling abuse, fraud and leakage in such systems.<sup>259</sup> The key to successful administration is a creditable system of ‘post-import audit’ - something that is far from easy to achieve in many DTE.

An interim approach to the same problem that might be considered in DTE concerned both to alleviate an undesirable barrier to new capital investment and to reduce always troublesome claims for refund would be to introduce a scheme for deferring VAT on imported capital goods in some circumstances. Specifically, any such system might apply only to low-risk VAT registrants who import large capital goods. Such imports (like domestic capital goods) would continue to be subject to standard VAT, and imports by non-VAT registrants (or by high-

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<sup>259</sup> For a recent detailed discussion of this problem, see Goorman (2005).

risk registrants) would still have to pay VAT before clearance of goods. ‘Qualified’ VAT registrants—those with good compliance records and, perhaps, financial bonds—would, however, be permitted to defer payment until next VAT return after clearance. In that return, they would have to report VAT liable on imported purchases as a liability; at the same time, however, they can claim an input tax credit for this amount (for 100% of VAT if equipment used exclusively for taxable activities).

A final ‘border’ issue that may be mentioned also relates to exports. Under an RST, goods exported from the jurisdiction are not taxed. Under a VAT, tax previously paid on inputs included in such goods is refunded. Both taxes require the administration to be able to tell what is ‘exported’ and what is not, which is not always easy even when one does control borders. The RST approach means that, to the extent there is any cascading, the region’s competitive position has been eroded. VAT avoids this problem but it does so, in most cases, by requiring the government to refund taxes previously paid. As mentioned earlier, because of the possibility of refund—indeed the likelihood of refund for firms that are primarily exporters—an ‘input tax credit’ is conceptually equivalent to a check drawn on the Treasury but issued by the private sector. Obviously, as discussed already in section 7.3 above, there may be potentially serious frauds arising from fraudulent (or over-valued) exports. Since a VAT is no more ‘self-enforcing’ than any other tax—although it is true that it does create a better ‘audit trail’ than does an RST—any sales tax administration always faces a difficult audit problem with respect to exports, regardless of the form of the tax.



## 9. The Political Economy of VAT

In this final chapter, the issues we consider are quite different than most of the previous discussion in this report. To a considerable extent the future of VAT in DTE lies more in the critical dimensions of political economy than in the economic and administrative aspects so far discussed. In the end, how VAT performs in any country inevitably reflects political factors and calculations as much or more than economic and administrative considerations. As a rule, of course, the critical political dimension of the policy process must simply be accepted as given by tax experts and others directly concerned with tax design and implementation. Nonetheless, it is obviously desirable that they are as fully aware as possible of the manner in which such factors may impact on, and are in turn affected by, such central elements of VAT design and implementation as exemptions. To be forewarned that a particular sector is politically ‘untouchable’ may, for instance, enable policy designers to be able to work around the problem in a way that does less damage to the tax as a whole than might otherwise be the case.<sup>260</sup> Somewhat curiously, however, despite the proliferation of real world examples available for study, few careful ‘political economy’ studies of VAT implementation appear to have been done in DTE as yet. As such studies begin to appear, they will in all likelihood often suggest still further questions calling for additional scientific (empirical and theoretical) research that may, in the long run, provide more useful advice than can yet be offered to those engaged in the precarious art of policy design and implementation in DTE.

To illustrate, in countries that already have a VAT, an important question is whether VAT revenues will continue rising in relative importance. It is obviously extremely difficult to give either a clear or a simple answer to this question not only because of the very different conditions prevailing in different countries but also because to do so requires a deeper understanding of the political and economic forces determining the level and structure of revenues than anyone commands. Essentially, what we argue in this chapter is that in the end the political factors shaping tax systems are generally more important than the economic and administrative factors stressed in this report. This is not to say that fundamental factors such as the increasing openness to trade and the income elasticity of many of the expenditures subject to VAT do not matter. Instead, the point is rather the level and the structure of taxation prevailing in any country reflect to a substantial extent more deep-seated factors that do not, as a rule, change quickly or abruptly in the absence of severe shocks.<sup>261</sup>

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<sup>260</sup> A common joke among development economists years ago was along the following lines: “What difference would it make to development policy in country X if all the political scientists in the world disappeared?” The expected answer, of course, was “No difference at all.” While no doubt serving its intended purpose of making economists feel perhaps a bit more useful (at least in relative terms), this joke is very wrong indeed. As we have begun to understand with the recent upsurge of the political economy literature, few things matter more for better policy design and implementation in any country than deeper understanding of how politics works in that country.

<sup>261</sup> An early version of the ‘model’ sketched in this section was developed in some respects with regard to government expenditures in Bird (1970a). For a detailed illustration of the changing configuration of political and economic factors that shape tax system evolution over time in any country, see the case of Britain discussed at length in Daunton (2001). Similar studies remain to be done for most DTE (though see e.g. Lieberman, 2003).

The last half century has been tumultuous for many DTE. Unsurprisingly, most have found it difficult to achieve a sustainable policy balance in the face of the often conflicting and frequently changing forces, external and internal, economic and political, that they have had to face. Both the facts that presumably should govern policy in principle and the intellectual fashions that too often seem to govern it in practice have changed markedly over the last few decades in most DTE. Unsurprisingly, their tax policies too have often changed considerably.

Sometimes, however, such changes have amounted to much less in either in level or in structure than might at first appear. Over the last few decades, for example, taxes have not gone up in Latin America.<sup>262</sup> Some rates have risen, especially for VAT, but many have declined, mainly for income taxes. Tax collections as a share of national income have, on average, actually declined a bit. In the world as a whole, Latin American countries continue to be below average in terms of the size of their public sectors relative to their levels of per capita income (IDB, 1998). But fiscal stability goes even further. Those countries that had relatively high taxes at the end of the 1970s were still above the regional average in the 1990s. The tax mix also changed little in most countries. To take two small examples, in 1980-82 Guatemala's tax ratio (taxes as a percent of GDP) was 9.8%, of which only 2.8% came from personal income taxes; in 1995-99, the comparable figures were 8.9% and 2.2%. At the other extreme, although Nicaragua's tax ratio rose from 23.6% in 1981-83 to 26.2% in 1995-99, the share of taxes on domestic consumption remained dominant, although declining a bit from 49% to 46%.<sup>263</sup>

Of course, tax *rates* in these countries did not necessarily change in the same way as tax *ratios*: for example, the VAT rate in Nicaragua rose from 6% to 15% over this period. But that is precisely the point: the reality of taxation in Latin America has, as a rule, changed little, as evidenced by the relative constancy in both tax levels and tax structures across and within countries. Nonetheless, many changes, some important, *have* taken place in tax policy across this complex region over the last few decades. Economic and political circumstances have changed dramatically at times in some countries, and sometimes tax systems have changed with them, though perhaps not always in the direction that one might expect. All of this calls for a closer look.

### ***9.1. The Case of Mexico***

In a recent analysis of Mexico, for example, Martinez-Vazquez (2001) notes that one of the most striking features of the various major tax changes that have taken place in that country in recent years has been how very little apparent effect they have had on Mexico's tax to GDP ratio, which has remained almost constant. He suggests several possible explanations for this constancy. The reforms in tax structure (1) may have been undermined by unrelated ad hoc measures, or (2) they may have been offset by administrative deterioration, or (3) one or both of the preceding may have occurred less by accident than by intention.<sup>264</sup>

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<sup>262</sup> For data and details, see Bird (2003a).

<sup>263</sup> The figures for the earlier period are from Tanzi (1987); the more recent figures are from Stotsky and WoldeMariam (2002).

<sup>264</sup> This section is based largely on Bird, Martinez-Vazquez and Torgler (2004).

In many ways, the performance of Mexico's tax system presents a paradox. An important problem facing Mexico, like many other DTE, is its inability to raise adequate revenues to finance basic public sector goods and services adequately. Tax policy and tax administration reforms over the last two decades have yielded a tax structure that is in many ways comparable to that in many developed OECD countries. Nonetheless, Mexico's tax system has continued to perform poorly in such fundamental ways as its ability to raise adequate revenues.<sup>265</sup> Indeed, Mexico's tax effort has not changed significantly for a quarter of a century. Tax yields have moved both up and down over the last two decades but have remained relatively stable overall, averaging between 15% and 16% for total federal revenues (which exclude social security funds and sub-national governments) and between 10% and 11% for tax revenues (which exclude oil and other non-tax revenues). From 1980 to 2003, tax revenues rose only from 10.9% to 11.3% of GDP, and total federal revenues only went up from 15.3% to 16.8%.<sup>266</sup>

This poor revenue performance is hard to explain given the changes in the tax system over this period, most of which should have made all the major taxes better revenue-collection instruments in addition to improving their allocative and distributive impacts (Martinez-Vazquez, 2001). At present, the tax rates for most taxes are quite similar or slightly below international averages. The VAT rate, for example, is 15%. It is thus surprising that Mexico's tax system has not been able to generate much more than 11% of GDP in tax revenues. It is even more surprising because the major objective of several major tax reforms over several decades has been avowedly to increase the revenue adequacy of the tax system in order to be able to improve the quality and quantity of public services.

Several factors seem to account for Mexico's enduring low tax effort. First, the country's tax effort performance can be explained in part by factors common to many other countries, including both supply factors, such as tax 'handles' (e.g. the share of more easily taxed imports in final consumption) and such demand factors as corruption, the quality of governance, tax morale, and so on (Bird, Martinez-Vazquez, and Torgler 2004). In addition, however, several country specific factors appear to have played an important role in Mexico's lackluster performance. For instance, the good fundamental structure of Mexico's tax system has, over the years, been undermined by sundry ad hoc policy measures. In the case of the VAT, for example, Mexico zero-rated (rather than exempted) a wide list of domestic goods and services, including agricultural goods, foodstuffs, medicines, and equipment used in agriculture, thus underlying revenue yield, complicating administration and, in all likelihood, increasing evasion as well as undermining the confidence of taxpayers in the fairness of the system and hence probably reducing voluntary compliance.

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<sup>265</sup> There is, of course, no absolute scale against which one can assess how good or bad a country's relative public sector size is. The share of government in GDP reflects, among other things, collective preferences of a country for public goods and services vis-à-vis private consumption and from an economic standpoint these preferences cannot be judged right or wrong. However, there seems to be a fairly general consensus in Mexico that the current level of revenues is inadequate.

<sup>266</sup> The overall adequacy of revenues can be further illuminated by examining the behavior of the government budget deficit. The sustained deficits during the 1980s (up to 10% of GDP) suggest taxes were too low to cover the level of expenditures desired by the government. As we suggest in the text, however, very small budget deficits since 1993 may suggest either that Mexico has reached some sort of equilibrium vis-à-vis its desired level of tax effort as we suggest below—or perhaps simply that other forces have been able to impose fiscal discipline in the federal budget.

Even more importantly, tax administration in Mexico has faltered. Some tax policy measures (such as the extensive domestic zero-rating just mentioned) did not take adequately into account the ability of the current tax administration to enforce complex tax issues.<sup>267</sup> Moreover, not only has the tax administration service largely failed to modernize but it may actually have gone backwards in the 1990s as earlier efforts to improve its efficiency were not sustained. Persistently high levels of tax evasion demonstrate that Mexico's tax administration is not capable of enforcing the current tax system at an acceptable level. In terms of VAT efficiency, for example, as shown in Table 3.5 above, Mexico is clearly one of the poorest performers in Latin America.

Most importantly in the present context, however, it seems clear that Mexican authorities, despite frequent statements about the need for higher revenue collections, have over the years pursued a policy—at times implicit but more often explicit—of keeping the ratio of revenues to GDP at a relatively constant level, for reasons discussed below. This constancy of tax effort has been achieved in two ways:

- Firstly, any marked increase in revenues—whether resulting from an elastic response of the tax structure to economic growth, enlargement of the tax base, or increased revenues from petroleum—was generally followed almost immediately by such discretionary tax policy measures as lowering tax rates, with the end result being to keep the tax ratio more or less constant. During the 1980s, for instance, when petroleum revenues went up, non-petroleum revenues were reduced, and vice versa. Moreover, the chronology of tax concessions parallels periods in which the automatic elasticity of the system would otherwise have produced an increase in revenue effort.<sup>268</sup>
- Secondly, if policy did not do the job, then administration did, in the sense that another noticeable reaction to changes in the actual ratio of revenues to GDP has been the discretionary relaxation or tightening of tax administration effort. Changes in the level of enforcement or effort by the tax administration, have been asymmetric: it is not so much that tax enforcement efforts were relaxed when government revenues were up, but more that high concentrated levels of enforcement were launched (in the form of “tax crusades” and so on) only when government revenues were dramatically down due to economic crises and business cycle downturns.

The implicit aim of keeping tax effort constant seems, in effect, to have resulted to some extent from “negotiated” tax burdens agreed upon by the government authorities and the representatives of the private sector. Tax policy (and tax administration effort) in Mexico in practice appear to be largely determined through periodic discussions and agreements between, on the one side, a willingly compliant compact of large taxpayers (with and without the state petroleum monopoly, PEMEX) and, on the other side, government authorities willing to compromise on the overall level of taxes demanded in order to reach political agreement.<sup>269</sup> If

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<sup>267</sup> Another example is the use of a kind of VAT up to the wholesale level to collect many excise taxes.

<sup>268</sup> Martinez-Vazquez (2001) suggests that it has been a common, although not explicitly stated, policy within the Ministry of Finance during much of the last two decades that any increase in revenues should be spent by the Ministry itself in the form of rate reductions of tax expenditures rather than on the expenditure side of the budget by line ministries and other budget units.

<sup>269</sup> For an extremely detailed account of similar (generally implicit) ‘negotiations’ in shaping British tax policy over the years, see Daunton (2001).

this analysis is correct, in order for Mexico to raise its tax effort, explicit agreement among the government and the private sector on the desirability and level of the higher tax effort would be needed. In other words, taxation, like any other political institution, in large part reflects the ‘equilibrium’ position reached by contending political forces.

## ***9.2. Balancing Equity, Efficiency, and Sustainability***

Similar relative constancy can be seen in other countries in Latin America (e.g. Colombia, McLure and Zodrow 1997) and elsewhere (e.g. India, Rao and Rao 2005) over the decades, with repeated tax reforms having little lasting effect. Such evidence perhaps suggests that a ‘good’ tax reform—one intended to raise more revenue in a more efficient and equitable fashion, for instance—may perhaps be something like a ‘good’ seat belt law. That is, if everything else stays the same, lives would be saved (the tax ratio would increase). However, things do not stay the same: some people drive faster when they are belted in, so death rates (tax ratios) show little change. In short, countries may tend to achieve an equilibrium position with respect to the size and nature of their fiscal systems reflecting largely the balance of political forces and institutions, and then stay there until ‘shocked’ to a new equilibrium.

Two alternative explanations may lie behind this process. Either, somewhat improbably, ‘supply’ (‘capacity’) factors alter over the period in such a way as to offset all attempts to raise tax ratios. Or, more plausibly, ideas as to what the ‘proper’ tax level should be have altered over time. The latter is certainly true to some extent. For example, the two main explicit aims of tax policy in the period after the Second World War in most countries were clearly, first, to raise revenue—and lots of it—in order to finance the state as the ‘engine of development’, and second, to redistribute income and wealth. Since then, as now, income and wealth were markedly unequally distributed in many DTE, especially in Latin America, the need for redressing the balance through fiscal means seemed obvious to all, and the ability of taxes to do the job was largely unquestioned. Indeed, both these goals—revenue and redistribution—could, it was generally thought, be achieved largely by imposing high effective tax rates on income, essentially because the depressing effects of taxes on investment and saving were considered to be small. Indeed, an extra bonus of high rates was sometimes argued to be that they made it easier to lead balky private investors by the very visible hand of well-designed fiscal incentives into those channels most needed for developmental purposes. In short, to exaggerate only a bit, the conventional wisdom at the time was essentially that all developing countries needed to do to solve their fiscal problems was to “learn to tax” (Kaldor 1963), which to most meant to tax in a properly progressive fashion.

Views on the appropriate role and structure of taxation began to change in the 1970s and 1980s, however. By 1990, in contrast to the immediate post-war era, most economists and policy-makers alike thought that high tax rates not only discouraged and distorted economic activity but were largely ineffective in redistributing income and wealth. Reflecting this new view, income tax rates on both persons and corporations were cut sharply and are now almost universally in the 20-30% range in Latin America, as elsewhere in the world (Shome 1999). On the other hand, reflecting—indeed, to some extent leading—world-wide trends, the VAT is now the mainstay of the revenue system in many DTE, as discussed in Chapter 2 above. Moreover,

the decline of taxes on international trade with liberalization and the WTO as well as increased competition for foreign investment have moved international concerns from the bottom to the top of the tax policy action list in many countries. At the same time, in many countries, a new issue has risen to prominence on the fiscal menu as decentralization made the question of setting up adequate sub-national tax systems an increasing concern, not least in Latin America (IDB 1997). The tax policy world is thus very different in many respects at the beginning of this century than it was in the middle of the last century.

Ideas do matter. As Blyth (2002, 274) says, "...neither material resources nor the self-interest of agents can dictate...ends or tell agents what future to construct. Ideas do this." Or, in the more colorful words of John Maynard Keynes (1936, 283-84): "practical men, who believe themselves to be quite free from any intellectual influences, are usually the slaves of some defunct economist...soon or late, it is ideas, not vested interests, which are dangerous for good or evil." Ideas about tax policy have clearly changed over time. Have institutions and interests also changed?

Some years ago Michael Best (1976) analyzed Central American tax policy in essentially a 'class' framework., arguing that in principle changes in tax level structure (e.g., the degree of emphasis on income taxation) reflected largely the changing political balance of power between landlords, capitalists, workers, and peasants. Shortly after his article appeared, the Sandinista government—perhaps the most explicitly leftist regime ever to have power in the region (apart from Cuba)—took over in Nicaragua. What happened to taxes? Three things. First, as Best (1976) would have predicted, the tax ratio rose very quickly, from 18 to 32% of GDP within the first five years of the Sandinista regime. Secondly, however, almost all the increased tax revenue came from (probably) regressive indirect taxes, not the (at least nominally) progressive income taxes that one might have expected. Third, and in many ways most interesting, once Nicaragua's tax ratio was increased, it stayed up there even a decade (and three subsequent governments) after the defeat of the Sandinistas.<sup>270</sup>

As this example suggests, politics matter in taxation, but do not necessarily dominate. Economic and administrative realities, like ideas, also matter. The fiscal reality found at any point of time in any country probably reflects a changing mixture of ideas, interests, and institutions. Certainly most actual tax structures do not seem to have been designed with any particular objective in mind. On the contrary, they often seem, like Topsy, to 'have just growed' in ways shaped by both the changing local environment and the changing external context. In the case of the United States, for example, as Weisman (2002, 366) shows, "economic crises and wars helped create a consensus for an income tax that falls most heavily on the wealthiest taxpayers. The consensus [was] forged in the period of 1860 to 1920...." The lengthy debate about taxes that took place over this period was, he says, not really about taxes at all but rather about "what kind of society Americans wanted." Since 1970 or so, the ideas on the relevant

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<sup>270</sup> Peacock and Wiseman (1961) many years earlier had explained a similar discrete jump in tax effort and public expenditure in Great Britain as a 'displacement effect': general perceptions about what is a tolerable level of taxation tend to be quite stable until these perceptions get shocked by social upheavals, and levels of taxation that would have been previously intolerable become acceptable and remain at that level after the social perturbations have disappeared.

balance between taxes and society that were forged over the first half of the 20th century seem to many to have changed; the reality, however, has changed much less and is not likely to change all that much in any case.

### *9.3. The State of Empirical Knowledge*

Since so little work has been done on this subject in DTE, we turn to some recent broader historical and comparative analysis of western countries to develop the argument a bit further.<sup>271</sup> Consider two recent analyses of how the western democracies got into the business of big government and fiscal redistribution in the first place. First, Alesina and Angeletos (2003) argue that two distinct ‘models’ of redistributive taxation exist in the developed countries. At one position is the U.S., with relatively low taxes and low redistribution. At the other extreme are countries like Sweden, with high taxes and high redistribution. Alesina and Angeletos (2003) attribute the difference essentially to self-fulfilling expectations. In the U.S., or so they argue, the general belief is that effort is causally related to income, so that those who make the effort, and consequently receive the income, are entitled to retain a goodly share of the fruits of their efforts. The resulting—and some argue, highly—unequal distribution of income is seen as a fair outcome since it reflects, so it is believed, differential effort to a considerable degree. On the other hand, since taxes are low so, they say, are tax distortions, with the result that high effort is indeed likely to yield high income, thus fulfilling initial expectations. In some European countries, on the other hand, Alesina and Angeletos (2003) suggest that the pervasive belief appears to be that high income reflects not so much high effort as good connections or even corruption. Since the high taxes resulting from this belief system so distort effort that the connection between high effort and high income is indeed greatly weakened, this belief too, they suggest, is strongly grounded in the prevalent social reality. In this approach, ideas thus take the lead role in shaping fiscal outcomes.

On the other hand, Lindert (2002, 2003) takes a quite different approach to the two distinct equilibrium fiscal states observable in modern democratic societies. His initial observation is the same: in some countries (such as the U.S.), the size of government is relatively low; in others (such as Sweden), it is relatively large. Lindert stresses, however, that the implications of these choices for tax policy are not at all what one might expect: low taxes need not mean low costs of taxation. Indeed, as Steinmo (1993) had earlier stressed, the U.S. actually has more progressive tax policies in many respects than does Sweden, and hence in all likelihood more distortionary taxes. Lindert explains this perhaps surprising result by arguing, in effect, that the larger the government share of economic activity, the more damaging bad tax policy choices can be and hence the more care democratic governments take to avoid such choices. Voters, he says, notice and react to such choices, in part by supporting more pro-growth (and less progressive) tax structures, with, for example, lower effective tax rates on capital income, lower property taxes,

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<sup>271</sup> One might perhaps question the relevance of historical or even comparative experience in analyzing and understanding the problems of developing countries today. As Messere, de Kam and Heady (2003, v) say, however, “Today’s industrialized countries were yesterday’s developing or transitional economies and for tax policy purposes the demarcation line between them is more likely to be the relative efficiency and integrity of the tax administration, rather than such economic criteria as GDP per capita.” Of course, as we noted earlier with respect to Mexico, how a tax administration functions is itself determined largely by more fundamental political factors.

and relatively higher taxes on labor income, on consumption, and especially on socially damaging activities (smoking, drinking, environmental damage, etc.). Low-budget countries, on the other hand, tend to have higher taxes on capital and lower taxes on wages and consumption, thus placing relatively more of the tax burden on more elastic factor supplies, with consequently more damaging effects on resource allocation and growth.

To some, this perspective—though nicely argued empirically in Lindert (2002, 2003)—may seem a bit far-fetched. Actually, however, it is strikingly similar to the conclusions reached in two recent studies of sub-national debt policy in the United States (Inman 2003) and Canada (Bird and Tassonyi 2003). Like Lindert (2002), these studies suggest strongly that democratic polities do learn from experience, and do, over time, tend to reward more those parties that follow more prudent economic policies. Those who think that populists who promise immediate delivery of the moon to the voters will invariably win should, it seems, consider more carefully the meaning of Abraham Lincoln’s famous dictum to the effect that one can fool all of the people some of the time and some of the people all of the time, but that one can never fool all of the people all of the time. Economic history appears to tell us that, at least in societies with the error-correction mechanism that we call “democracy” Lincoln was right, at least to some extent. Or, as Blyth (2002, 274) puts essentially the same point: “Political economies . . . are . . . evolutionary systems populated by agents who learn and apply those lessons in daily practice.”

As Jakee and Turner (2002) note in a somewhat different context, the critical point is to ensure that adequate feedback mechanisms are in place to warn when sustainable limits are being breached. Such mechanisms may take the form of the exit mechanisms favored by economists (as when over-taxed resources flee a jurisdiction) or the voice mechanisms stressed by political scientists (as when governments are changed to carry out more prudent policies), but they must exist. No government is always competent; none is omniscient; not all are always well-intentioned. Mistakes will be made. The key sustainability problem that all societies face is thus how to minimize the severity of such mistakes. In the story that Lindert (2002, 2003) tells, this is done in part by muting the anti-growth aspects of pro-redistribution spending policy by a more pro-growth tax policy and in part by ensuring that redistributive spending policy is itself largely ‘pro-growth’ (e.g. by focusing on developing human capital). Redistributive policies that in themselves might have been unsustainable in the long run because they would impose excessive distortionary costs on resource allocation are thus made sustainable in part by direct measures to reform the tax system to reduce such costs (and to spend in ways that encourage growth).<sup>272</sup>

All this seems rather neat. Still, there are some obvious problems in reconciling the Alesina-Angeletos and Lindert views. For example, how can the U.S. simultaneously both have low taxes (and hence high reward to effort) and high tax rates on more elastic factor supplies (thus less pro-growth policy)? Does this mean that the U.S. has, in effect, adopted low taxes to encourage effort (and growth), but it has done so in so inefficient a way that it may have

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<sup>272</sup> In the story told by Bird and Tassonyi (2003), much the same end is achieved by subjecting governments to constant pressures from both exit (market forces) and voice (elections). Macroeconomic policies (sub-national borrowing) that in themselves might have led to an unsustainable situation in the long run thus become sustainable over time by an evolution in both institutions (capital markets) and ideas (political rewards for conservative fiscal measures).



increased effort—and hence supported the self-fulfilling expectation that more effort and more income are positively correlated—while at the same time it has also discouraged growth owing to the exceptionally inefficient form of its tax system? Obviously, more work is needed to resolve such conundrums; such work, on the whole, seems to require more detailed studies of cross-country comparisons in the Lindert mold, focusing, for example, on meaningful issues such as the differential marginal tax rates applied to (say) male workers between the ages of 25 and 45, and so on. Not only the devil, but a more meaningful approach to the use of comparative international data appears to lie in much more attention to such critical details.

#### *9.4. Lessons from History?*

What does all this mean with respect to increasing tax effort in DTE? Weisman (2002, 366) concludes with respect to the U.S. that “...the search for the right balance is an endless process.... The consensus supporting the legitimacy of the income tax is likely to remain undisturbed. But its progressive nature will always be debated as long as we care about reconciling the competing demands of social equity, economic incentives and the need to pay for an expanding government.” Applying this thought to the case of Latin America, for instance, it seems fair to conclude that no real consensus on the ‘right balance’ appears yet to have been achieved in most countries. The fact that a few developed countries may have, as it were, moved on to a new, less progressive consensus does not imply that it is any less important for DTE to develop their own viable democratic social consensus on the right balance between equity and efficiency in taxation.

Developed countries have clearly reached different equilibrium positions. Lindert (2003) may be seen in large part as an extended demonstration of the continued viability of the so-called ‘welfare state’ model in most European countries. Similarly, Messere, de Kam, and Heady (2003) show that there has been essentially no convergence in either tax levels or structures among OECD countries in recent decades, and they argue there is little reason to expect such convergence in the near future. Equally, there is no reason to expect any one balance to be right for all countries developing countries, in Latin America or elsewhere. As always with public policy, no one size fits all. What is right, or at least feasible, in Chile or Brazil, for example, is likely to continue to differ from what may be sustainable in Colombia or Honduras.

What matters is not only how high taxes are (revenue adequacy), but also how the tax level has been chosen, how the taxes are imposed, and how the funds thus raised are used. The historical evidence appears to suggest that it is critical to ensure that the linkage between expenditure and revenue decisions is as clearly established as possible in the budgetary and political process.<sup>273</sup> As Wicksell (1896/1958) argued over a century ago, allocative decisions in the public sector will be made efficiently only if they are financed efficiently—that is, by benefit taxes, which may be broadly understood in this context as taxes deliberately chosen to finance specific expenditures in the full knowledge of the allocative consequences of both expenditures and taxes. Wicksell further argued that even such good taxes would really only be politically

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<sup>273</sup> The discussion here focuses on (non-benefit) taxation. To the extent public expenditures are financed from charges, non-tax revenues, and borrowing, other considerations may come into play but these issues cannot be discussed adequately here.

sustainable if the distribution of income and wealth accorded broadly with the politically acceptable “just” distribution of income, which, as Alesina and Angeletos (2003) demonstrate, may be very different in different countries.

In many ways, then, the central question of tax policy is how to make the “wicksellian connection” (Breton 1996) operational so that good decisions—that is, decisions that, as closely as practically feasible, reflect people’s real preferences—are made on both sides of the budget. The key to good fiscal outcomes lies less in any particular budgetary or financing procedure than in implementing a public finance system that, to the extent possible, links specific expenditure and revenue decisions as transparently as possible. The best that can be done to help the relevant decision-makers make the right decision is thus to ensure that they and all those affected are made as aware as possible of all the relevant consequences. In the end, then, for a country to implement a better tax system—better in the sense of giving the people what they want – it must have a better political system that transmutes citizen preferences into policy decisions as efficiently as possible. “Democracy,” as Churchill reportedly once said, “is the worst form of Government except all those other forms that have been tried from time to time.”<sup>274</sup>

Of course, taxation is always and everywhere what has been called a ‘contested concept’ (Sabates and Schneider 2003, 2003a). Some pay; some don’t pay. Some pay more than others. Some receive compensating services, some do not. Such matters are—and in democratic states, can be—resolved only through political channels. Indeed, history suggests that the need to secure an adequate degree of consensus from the taxed is one of the principal ways in which, over the centuries, democratic institutions have spread. No non-dictatorial government in this age of information and mobility can long stay in power without securing a certain degree of consent from the populace, not least in the area of taxation. State legitimacy thus rests to a considerable extent on citizens’ ‘quasi-voluntary compliance’ (Levi 1988) with respect to taxation. To secure such compliance, tax systems must, over time, in some sense represent the basic values of at least a minimum supporting coalition of the population.<sup>275</sup>

The central problem in many Latin American countries, for instance, is clearly inequality (de Ferranti et al. 2004). On the other hand, the key, and related, governance problem in most of the same countries is lack of accountability. A good tax system is critical to the solution of both problems. Reforms that link taxes and benefits more tightly for example, such as decentralization and more reliance on user charges may help accountability. The most important function of the tax system in most DTE, however, is simply to provide (non-inflationary) funding for pro-poor and pro-growth spending programs particularly in improving human capital, and the best way to do so is probably through a broad-based non-distortionary consumption tax like VAT, as has long been recognized (e.g. Heady 2004). What is actually done in any country will of course be determined in the political arena. Countries vary enormously in the effectiveness and nature of their political systems. Some may be close to ‘failed states’ in which institutions are so ineffective that it does not matter much what they attempt to do. It will not work. Others

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<sup>274</sup> As Lindert (2004) shows, this quotation actually had a somewhat different implication in its original context, but it is nonetheless largely right if one is concerned with growth: as Lindert (2004, 344), concludes, history tells us that “the average democracy has been better for economic growth than the average autocracy....”

<sup>275</sup> Daunton (2001) shows how very much attention was paid to precisely this task in the British case, with quite different tax levels and tax mixes being found most suitable to the ‘consensus-maintaining’ objective over the years.

may be ‘developmentalist’ and wish to use their fiscal systems as part of a dirigiste interventionist policy. Still others may be of a more laissez-faire disposition. Some may be more populist, some more elitist, some more predatory.

The dominant policy *ideas* in different countries (about equity and fairness, efficiency, and growth), like the dominant economic and social *interests* (capital, labor, regional, ethnic, rich, poor), and the key political *institutions* (democracy, decentralization, budgetary) and economic (free trade, protectionism, macroeconomic policy, market structure) thus all interact in the formulation and implementation of tax policy. This changing interplay of ideas, interests, and institutions over time affect both the level of taxation and its structure, including the prominence (or not) of the VAT. Indeed, taxation is probably one of the clearest arenas in which to witness the working out of these complex forces. While tax systems definitely affect both economic and political outcomes, on the whole, the evidence seems to suggest that they are more driven by, than drivers of, social and economic conditions.

Viewed from this perspective, most DTEs have yet to experience even the earlier parts of the cycle that produced the (more or less) redistributive and (more or less) growth-facilitating fiscal states now found in developed countries—the long preparatory period during which the idea of the desirability, and even necessity, of a larger fiscal system becomes established. Instead, bypassing as it were this ‘egalitarian’ period, some countries in Latin America seem to have moved directly from the feudal inequality of land-based maldistribution to the modern era of capital-based maldistribution. Warriner (1969) once said, despairingly, that Latin Americans did not seem to know what a good land reform means—probably because they had never seen one. Equally, one might perhaps speculate that, in most countries of the region, as Engerman and Sokoloff (2001) almost—but not quite—say, most people do not really know what moderate or justifiable inequality might mean, since they have never seen it.

Governments in many DTE, not just those in Latin America, are in dire straits. Even those who have reached relatively safe harbors politically, and have achieved a certain degree of legitimacy and stability, almost always feel—often correctly—that they are in an economically precarious situation. The budget is politically and economically constrained. Life is difficult. Nothing can be done. All this may be true to some extent, but it is also both too much a counsel of despair and too easy a way out. Even in the most hopeless situations, something usually can be done to improve matters. No doubt there will be much dispute over what should be done to improve tax systems. Unless and until an adequate degree of political consensus on what should be done is achieved, however, no significant tax changes are likely to be made.

In short, as Lledo, Schneider, and Moore (2003, 47) have stressed, much of the problem in Latin America (and indeed in most DTE) is that countries lack “...an (implicit) social contract between governments and the general populace of the kind that is embedded in taxation and fiscal principles and practices in politically more stable parts of the world.” What needs to be added to this bleak but accurate assessment is that history tells us that such principles generally do not become embedded either painlessly or quickly. The specific substantive suggestions that Lledo, Schneider, and Moore (2003) make to improve matters—such as better VAT administration on a broader base—are of course already the stuff of countless existing reports. But why has so little been done? From this perspective the most important conclusion of Lledo,

Schneider, and Moore (2003) is their wishful final recommendation that countries “... improve political institutions in ways that enhance legitimacy and capacity.” In other words, there can, so to speak, be no good taxation without good representation. To return from these ‘high’ levels of political economy abstraction to the ‘low’ level of the kinds of concerns to which most of this study has been devoted, the bottom line is simply that, in the end, if a country needs or wants better VAT policy or administration the answer—or lack of it—inevitably lies essentially in their own hands.

### *9.5. What’s in a Name?*

To drive this point home, we consider in conclusion one last, apparently minor, issue. Should VAT be quoted separately? RSTs are invariably imposed as a separate charge at the cash register. This familiar practice is obviously good for democracy, if one believes that citizens should be fully aware of the cost of government. However, it also obviously has the effect of making it very difficult to increase tax rates (or reduce exemptions) of a sales tax once it is established, because everyone is instantly aware of, and generally reacts adversely to, tax increases. In contrast, in most countries—Canada is a notable exception to this rule—VAT is not usually directly visible to the consumer at the point of sale. It is frequently said that it may not be worth imposing a VAT unless the rate is at least 10% owing to the relatively high administrative cost of this form of sales tax. While, as we noted earlier (section 5.1), this seems exaggerated—and there are a number of countries (e.g. Japan, Singapore) with well-functioning VATs at lower rates—another factor affecting tax choice in many countries appears to be the belief that it is not possible to impose retail sales taxes at rates of 10% or more without producing both substantial consumer resistance and, probably, increased tax evasion. While this is again somewhat of an exaggeration—in most Canadian provinces people pay combined and highly visible federal-provincial taxes of about 15% on consumer purchases—it seems more closely in line with world experience than the 10% minimum argument.

In any case, it is undoubtedly true that it is easier to introduce (or increase) a VAT if people continue to be unaware of its existence in their daily lives, as would be the case if the tax were not quoted separately. Such ‘invisibility’ would likely make it much simpler to have a broader base (e.g. taxing a wide range of services), which would presumably be desirable on both administrative and economic grounds. On the other hand, as mentioned above, there is of course a strong ‘democratic’ argument for separate quotation, and the resultant price of (probably) more exemptions and a lower rate might be considered worth paying. While deciding which way to go on this issue is entirely a political matter, it is striking that almost every country with a VAT has decided to hide it from the public. While understandable, this is clearly no way to build a democratic consensus in support of a higher level of fiscal equilibrium.<sup>276</sup>

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<sup>276</sup> The incentive to avoid separate VAT quotation on final sales to consumers is especially strong in countries with weak administrations which fear, probably with reason, that one result would be many false claims for input tax claims. One of the authors recalls being asked—in a country with a strong administration—for his gasoline receipts by an acquaintance who ran a farm and was entitled to refunds of the taxes on his gasoline purchases, supposedly for business purposes. Would-be tax cheats are everywhere, and all governments have to be concerned not to make their life too easy.

Finally, as the title of this subsection asks: “What’s in a name?” Does it matter what a sales tax is called? Many governments around the world have thought that it does, as indicated by the many taxes that have been named after expenditures considered politically attractive—the Education Tax, the Employer Health Tax, the Hospital Tax, the Security Levy, etc. Sometimes the revenues from such taxes are in fact earmarked to the indicated objective, but often this is not done.<sup>277</sup> In other cases, sales tax revenues have been dedicated in whole or part to popular expenditures such as highways or schools even if the tax has not been named accordingly. Perception obviously matters a lot in politics, and outward labels affect perception. The possible role of judicious labelling and even tying of VAT revenues to specific ‘desired’ activities would seem to be yet another issue that needs to be considered carefully as part of the necessary political ‘salesmanship’ needed to introduce serious reform in VAT policy or VAT administration in DTE.

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<sup>277</sup> For a recent detailed discussion of the theory and practice of earmarking, see Bird and Jun (2005).

## **Annex**

**Table A1**  
**VATs—When, Where, and How Much**

	<b>Date VAT Introduced</b>	<b>Standard Rate (%)</b>	<b>Other Rates (%) (Reduced or increased)</b>
Albania	1996	20	-
Algeria	1992	17	7
Argentina	1975	21	10.5, 27
Armenia	1992	20	-
Australia	2000	10	0
Austria	1973	20	10, 12
Azerbaijan	1992	18	-
Bangladesh	1991	15	0, 10-350 <sup>2</sup>
Barbados	1997	15	0, 7.5
Belarus	1992	18	10
Belgium	1971	21	0, 6, 12
Benin	1991	18	-
Bolivia	1973	14.943 <sup>3</sup>	-
Botswana	2002	10	0
Brazil	1967	17 or 18 <sup>4</sup>	7, 12, 25
Bulgaria	1994	20	-
Burkina Faso	1993	18	-
Cambodia	1999	10	-
Cameroon	1999	18.7	-
Canada <sup>5</sup>	1991	7	0
Cape Verde	2004	15	6
Central African Republic	2001	18	-
Chad	2000	18	-
Chile	1975	19	-
China	1994	17 <sup>6</sup>	6, 13
Colombia	1975	16	3, 5, 7, 10, 15, 20, 35, 45
Congo (Brazzaville)	1997	18	8
Cook Islands	1997	10	1
Costa Rica	1975	13	5
Côte d'Ivoire	1960	18	-
Croatia	1998	22	-
Cyprus	1992	15	0, 5
Czech Republic	1993	19	5
Denmark	1967	25	0, 5
Dominican Republic	1983	12	-
Ecuador	1970	12	0
Egypt	1991	10	5, 20, 30
El Salvador	1992	13	-
Equatorial Guinea	2005	15	6
Estonia	1992	18	5
Ethiopia	2003	15	0
Faroe Islands	1992	25	0
Fiji	1992	12.5	-
Finland	1994	22	0, 8, 17
France	1948	19.6	2.1, 5.5

	<b>Date VAT Introduced</b>	<b>Standard Rate (%)</b>	<b>Other Rates (%) (Reduced or increased)</b>
French Polynesia*	1998	10, 16 <sup>7</sup>	6
Gabon	1995	18	10, 25
Georgia	1992	18	-
Germany	1968	16	7
Ghana	1998	12.5	0
Greece	1987	18	4, 8
Guadeloupe and Martinique	n/a	8.5	2.1
Guatemala	1983	12	-
Guinea	1996	18	-
Guinea-Bissau	n/a	10	-
Haiti	1982	10	-
Honduras	1976	12	15
Hungary	1988	25	5, 15
Iceland	1990	24.5	14
India <sup>8</sup>	2005	12.5	1, 4, 15-40
Indonesia	1985	10	15, 20, 25, 35
Ireland	1972	21	0, 4.8, 13.5
Israel	1976	18	-
Italy	1973	20	4, 10
Jamaica	1991	15	0, 12.5 <sup>9</sup>
Japan <sup>10</sup>	1989	5	-
Kazakhstan	1992	15	-
Kenya	1990	16	0, 14
Korea (Rep.) (South Korea)	1977	10	-
Kyrgyzstan	1992	20	-
Laos	2004	-	3, 5, 10, 15
Latvia	1992	18	0, 5
Lesotho	2003	14	0
Lithuania	1994	18	5, 9
Luxembourg	1970	15	3, 6, 12
Madagascar	1994	20	0
Malawi	1989	17.5	0
Mali	1991	18	-
Malta	1995	18	5
Mauritania	1995	14	-
Mauritius	1998	15	-
Mexico	1980	15	10 <sup>11</sup>
Moldova	1992	20	0, 5, 8
Mongolia	1998	15	-
Morocco	1986	20	7, 10, 14
Mozambique	1999	17	-
Myanmar <sup>12</sup>	n/a	Multiple	Multiple
Namibia	2000	15	0
Nepal	1997	13	-
Netherlands	1969	19	6
Netherlands Antilles*	1999	5	3
New Zealand	1986	12.5	0
Nicaragua	1975	15	7, 11



	<b>Date VAT Introduced</b>	<b>Standard Rate (%)</b>	<b>Other Rates (%) (Reduced or increased)</b>
Niger	1986	19	-
Nigeria*	1994	5	-
Norway	1970	25	12
Pakistan	1990	15	-
Palestine Autonomous Areas*	1976	17	-
Panama	1977	5	10
Papua New Guinea	1999	10	-
Paraguay	1993	10	-
Peru	1973	19	-
Philippines	1988	10	0
Poland	1993	22	0, 3, 7
Portugal	1986	21	4, 5, 8, 12, 15
Romania	1993	19	9
Russia	1992	18	10
Senegal	1980	18	-
Serbia/Montenegro <sup>13</sup>	See note	18/17	8/-
Singapore	1994	5	0
Slovak Republic	1993	19	-
Slovenia	1999	20	8.5
South Africa	1991	14	0
Spain	1986	16	0, 2, 4, 7, 12 <sup>14</sup>
Sri Lanka	1998	12.5	-
Sudan	2000	10	0
Suriname*	1999	8, 10 <sup>15</sup>	0, 25
Sweden	1969	25	6, 12
Switzerland	1995	7.6	2.4, 3.6 <sup>16</sup>
Taiwan	1986	5	-
Tajikistan	1992	20	-
Tanzania	1998	20	0
Thailand	1992	7	-
Togo	1995	18	-
Trinidad and Tobago	1990	15	0
Tunisia	1988	18	6-10, 29
Turkey <sup>17</sup>	1985	18	1, 8, 26, 40
Turkmenistan* <sup>18</sup>	1992	15	0
Uganda	1996	17	0
Ukraine	1992	20	-
United Kingdom	1973	17.5	0, 5
Uruguay	1968	23	14
Uzbekistan	1992	20	-
Vanuatu	1998	12.5	-
Venezuela	1993	15	8, 25
Vietnam	1999	10	5, 20
Western Samoa*	1994	10	-
Zambia	1995	17.5	0
Zimbabwe	2004	15	0

## Table A1 (continued)

**Sources:** Anacondia and van der Corput (2005); *International Bureau of Fiscal Documentation* (2004), and PricewaterhouseCoopers, *Corporate Taxes 2003-2004: Worldwide Summaries*.

### Notes:

<sup>-</sup> A dash indicates that there are no rates other than the standard rate.

<sup>\*</sup> An asterisk denotes countries that are an exception to the rule that countries levying VAT-type taxes generally zero-rate exports.

<sup>1</sup> Rates are in tax-exclusive form (i.e., specified as a proportion of the net of tax price) except as otherwise noted (e.g. Bolivia). See *supra* note 3.

<sup>2</sup> Rates ranging from 10% to 350% represent supplementary taxes on luxury goods and services.

<sup>3</sup> The official listed tax rate of 14.943% applies to the taxable amount inclusive of IVA, which corresponds to 13% of the taxable amount exclusive of IVA.

<sup>4</sup> Depending on the state, the standard rate is 17% or 18%. State rates apply to intra-state supplies and, where the customer is a final consumer, to inter-state supplies.

<sup>5</sup> Some provinces have VATs while others have 'retail' sales taxes. For details on the Canadian system, including federal and provincial aspects, see Bird and Gendron (1998, 2001). For up to date rate information, see Gendron (2005). The 7% federal GST is the only VAT or sales tax in Alberta, Northwest Territories, Nunavut, and Yukon.

<sup>6</sup> VAT is imposed on the supply of tangible goods and specified services.

<sup>7</sup> VAT rates are 10% on services and 16% on goods. Exports of goods and services are exempt rather than zero-rated.

<sup>8</sup> Reduced rates of 1% and 4% apply to certain goods. Other goods, mainly petroleum products, are subject to an increased rate which, depending on the state, may range from 15% to 40%.

<sup>9</sup> Motor vehicles are subject to rates of up to 113.95%.

<sup>10</sup> Including 1% local tax.

<sup>11</sup> Rates applies in frontier zones.

<sup>12</sup> Standard and reduced rates include rates of 5%, 10%, 20%, and 25% that apply to goods, and rates of 5%, 8%, 10%, 15%, and 30% that apply to services. There are also increased rates of 30%, 50%, 75%, 170%, and 200%.

<sup>13</sup> VATs in Serbia and Montenegro were established on January 2005 and 2003 respectively.

<sup>14</sup> Spain has reduced rates of 4% and 7%, while the Canary Islands have a standard rate of 4%, reduced rates of 0% and 2%, and an increased rate of 12%.

<sup>15</sup> Rate of 8% applies to services and rate of 10% applies to goods.

<sup>16</sup> The reduced rate of 3.6% applies to the supply of accommodation.

<sup>17</sup> Rates of 26% and 40% apply to luxury goods.

<sup>18</sup> Certain exports to CIS countries are not zero-rated.

**Table A2**  
**VAT—Some Indicators**

Country	GDP per capita	Private Consumption	Sales, Turnover, or VAT	Total Revenue	Total Tax Revenue	VAT / TotalTax	VAT Efficiency	VAT Productivity
	(US\$ 1995)	(% GDP)	(% GDP)	(% GDP)	(% GDP)	(%)		
Albania	915.3	90.5	6.2	19.4	14.8	42.2	0.35	0.31
Algeria	1,588.0	49.4	1.4	32.4	30.3	4.7	0.17	0.08
Argentina	8,150.0	70.3	3.9	14.0	12.7	30.9	0.27	0.19
Australia	23,187.4	60.0	2.4	24.1	22.0	10.8	0.40	0.24
Azerbaijan	388.7	73.4	3.6	17.7	16.8	21.4	0.27	0.20
Belarus	1,358.2	58.6	5.9	29.1	26.8	21.9	0.50	0.29
Belgium	29,993.7	54.1	8.7	43.9	43.0	20.1	0.76	0.41
Bolivia	959.5	76.1	5.4	17.9	14.4	37.1	0.47	0.36
Brazil	4,539.7	61.7	2.0	25.9	20.6	9.9	0.16	0.10
Bulgaria	1,467.7	69.3	8.4	33.6	26.2	32.0	0.60	0.42
Cameroon	661.9	71.1	3.2	16.1	12.4	26.0	0.24	0.17
Canada	22,118.6	56.5	2.7	21.8	19.7	13.4	0.67	0.38
Chile	5,241.9	65.9	8.0	22.0	18.0	44.4	0.64	0.42
China	772.8	46.8	4.1	6.8	6.4	63.8	0.52	0.24
Colombia	2,319.8	63.9	4.5	12.2	10.6	42.3	0.44	0.28
Congo, Rep.	780.5	40.1	4.1	25.3	8.2	49.9	0.57	0.23
Costa Rica	3,851.9	66.9	4.6	20.4	18.2	25.2	0.53	0.35
Cote d'Ivoire	767.5	71.3	2.1	17.2	16.6	12.8	0.15	0.11
Croatia	5,025.3	58.4	14.8	43.1	40.9	36.1	1.15	0.67
Cyprus	13,509.0	67.2	4.8	31.4	25.0	19.2	0.48	0.32
Czech Republic	5,254.8	53.4	7.0	32.6	31.6	22.3	0.60	0.32
Denmark	37,586.6	49.2	9.9	37.8	33.0	29.9	0.80	0.39
El Salvador	1,748.6	86.6	5.6	11.4	10.6	52.8	0.50	0.43
Estonia	4,251.3	56.9	8.8	31.2	28.4	31.0	0.86	0.49
Ethiopia	111.5	77.8	2.1	20.6	13.3	16.1	0.18	0.14
Finland	30,511.0	49.7	8.4	32.1	27.8	30.4	0.77	0.38
Georgia	455.4	89.1	3.9	11.4	9.7	40.0	0.22	0.19
Germany	31,887.2	58.2	3.4	21.9	18.9	18.0	0.36	0.21
Greece	12,693.5	70.6	7.9	23.7	21.9	35.9	0.62	0.44
Guatemala	1,547.3	84.5	4.5	10.0	9.9	45.8	0.45	0.38

Country	GDP per capita (US\$ 1995)	Private Consumption (% GDP)	Sales, Turnover, or VAT (% GDP)	Total Revenue (% GDP)	Total Tax Revenue (% GDP)	VAT / TotalTax (%)	VAT Efficiency	VAT Productivity
Guinea	602.6	77.6	0.6	11.6	10.9	5.5	0.04	0.03
Hungary	5,138.4	63.2	8.3	37.7	33.8	24.6	0.53	0.33
Iceland	30,206.7	58.6	9.4	30.6	26.4	35.6	0.66	0.38
Indonesia	993.2	69.7	3.0	17.3	16.1	18.4	0.42	0.30
Israel	16,657.3	56.5	10.9	42.2	36.2	30.2	1.07	0.61
Italy	20,391.4	60.1	5.9	40.5	38.2	15.6	0.50	0.30
Jamaica	2,157.3	65.8	9.2	33.1	25.2	36.5	0.93	0.61
Jordan	1,609.7	75.5	4.7	25.6	18.4	25.8	0.48	0.36
Kazakhstan	1,375.0	69.2	4.0	12.6	9.6	41.6	0.36	0.25
Kenya	335.1	74.7	5.0	25.8	21.2	23.5	0.42	0.31
Kyrgyz Republic	385.0	77.2	5.4	16.1	12.7	42.2	0.35	0.27
Latvia	2,464.8	63.1	8.2	31.6	27.4	30.0	0.73	0.46
Lesotho	540.5	84.8	4.7	44.1	34.4	13.8	0.40	0.34
Lithuania	2,125.5	63.2	8.7	25.8	24.2	35.9	0.76	0.48
Madagascar	242.0	85.4	1.6	11.1	10.7	14.7	0.09	0.08
Malta	9,874.4	62.9	5.3	33.0	27.7	19.2	0.56	0.36
Mauritius	4,011.4	62.7	4.1	22.2	18.8	21.9	0.44	0.27
Mexico	3,657.2	67.2	3.3	13.9	12.4	26.5	0.33	0.22
Moldova	634.8	87.0	8.6	26.9	23.0	37.6	0.50	0.43
Mongolia	424.4	66.3	5.5	24.2	17.2	32.0	0.55	0.37
Morocco	1,384.5	63.0	5.6	29.1	24.4	23.1	0.45	0.28
Nepal	234.9	76.8	2.4	10.4	8.6	28.2	0.32	0.24
New Zealand	17,481.3	60.9	6.3	31.9	29.6	21.4	0.83	0.51
Nicaragua	437.4	88.2	9.3	31.9	28.7	32.5	0.70	0.62
Norway	37,509.9	46.3	9.0	41.5	33.9	26.7	0.81	0.38
Pakistan	507.8	74.1	2.7	16.3	12.8	21.4	0.25	0.18
Papua New Guinea	960.1	61.9	0.0	22.7	21.2	0.2	0.01	0.00
Paraguay	1,745.5	81.5	4.4	16.0	10.2	43.2	0.54	0.44
Peru	2,322.4	70.9	6.4	16.8	14.0	45.9	0.50	0.36
Philippines	1,135.2	68.4	1.7	16.3	14.7	11.9	0.26	0.17
Poland	3,536.8	63.3	7.8	33.2	29.8	26.2	0.56	0.35
Portugal	12,507.0	62.0	7.5	34.8	31.1	24.0	0.63	0.39
Romania	1,309.2	81.7	6.1	29.9	26.2	23.2	0.39	0.32
Russian Federation	2,285.6	53.1	4.7	21.8	18.7	25.0	0.44	0.23

Country	GDP per capita (US\$ 1995)	Private Consumption (% GDP)	Sales, Turnover, or VAT (% GDP)	Total Revenue (% GDP)	Total Tax Revenue (% GDP)	VAT / TotalTax (%)	VAT Efficiency	VAT Productivity
Singapore	26,478.0	39.1	1.4	31.0	15.1	9.4	0.90	0.35
Slovak Republic	4,191.8	54.5	7.3	36.3	32.0	22.9	0.67	0.37
South Africa	3,970.6	63.0	6.0	27.2	25.6	23.6	0.68	0.43
Sri Lanka	868.4	71.6	3.6	17.2	14.7	24.7	0.25	0.18
Sudan	300.4	83.7	1.1	7.7	6.3	16.7	0.13	0.11
Sweden	30,207.4	49.0	6.6	39.1	34.3	19.3	0.54	0.26
Switzerland	45,864.8	61.0	3.8	24.7	23.0	16.6	0.82	0.50
Tajikistan	362.5	76.2	5.5	10.0	9.6	57.5	0.36	0.27
Thailand	2,722.9	55.1	3.6	16.1	14.1	25.3	0.93	0.51
Tunisia	2,378.2	60.6	6.9	29.6	26.0	26.6	0.63	0.38
Turkey	3,096.7	66.9	6.1	26.1	21.2	28.7	0.51	0.34
Uganda	341.1	79.9	2.1	11.6	10.8	19.2	0.15	0.12
Ukraine	857.0	56.1	7.1	25.2	22.3	31.9	0.63	0.36
United Kingdom	21,684.5	65.4	6.7	36.5	34.6	19.3	0.58	0.38
Uruguay	6,270.1	73.1	7.8	28.8	25.9	30.2	0.46	0.34
Vanuatu	1,259.1	60.9	6.4	22.8	20.1	31.8	0.84	0.51
Venezuela	3,367.4	68.1	4.7	18.6	13.3	35.3	0.43	0.29
Vietnam	353.0	68.5	3.8	19.6	16.4	23.3	0.56	0.38
Zambia	389.8	83.6	5.4	18.7	18.1	29.9	0.37	0.31
All Countries (83 countries)	7,178.2	66.6	5.4	24.5	21.0	27.3	0.51	0.32
Western Hemisphere (15 countries)	3,221.1	72.7	5.6	19.5	16.3	35.9	0.49	0.36
Countries w/GDP between 1500 and 5000 US\$ (23 countries)	2,847.4	65.4	5.6	23.4	20.0	30.0	0.55	0.36

Sources: Government Finance Statistics, IMF 2003; World Development Indicators, World Bank.

Notes: Data are averaged for the period 1998-2000; data are for the central government only.

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