

What Do (and Don't) We Know about the Value Added Tax? A Review of Richard M. Bird and Pierre-Pascal Gendron's *The VAT in Developing and Transitional Countries*

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The VAT has taken the tax world by storm over the last fifty years, but left little trace in the academic literature. Bird and Gendron provide an impressively informed and informative account of the VAT experience in lower income countries, largely vindicating the tax and standard advice for its design. But they rightly stress too that dominant "expert opinion" on the VAT remains troublingly uninformed by serious analysis and evidence. This article focuses on some of these gaps and recent attempts to start filling them.

1. Introduction

If economists were to vote for their favorite tax, the value added tax (VAT)—along with such easy picks as carbon taxes and other externality-correcting devices—would surely be high on the list. Governments evidently agree: since its spread began in Europe and Latin America sixty years ago, around 140 countries have adopted the VAT, commonly raising 20 percent or more of their revenue in

this way. Since the early 1990s, remarkably, more than three-quarters of all countries in sub-Saharan Africa have adopted the VAT; and the former states of the Soviet Union all did so in the first hectic months of their existence. Focusing on these latter developments, Richard M. Bird and Pierre-Pascal Gendron have produced a witty and lively book on the VAT (not an oxymoron, it turns out)—*The VAT in Developing and Transitional Countries* (Cambridge University Press 2007)—that brings a wealth of experience and good sense to bear on key issues in the design and (to a lesser extent) implementation of the VAT in lower income countries. In the process, they raise wider questions as to what we know about the VAT, and what we

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need to know in order to make better VAT choices.

2. *What's New?*

This is not the only book on the VAT.¹ *The Modern VAT* by Liam Ebrill et al. (2001), now starting to show its age, is also focused on the experience of developing countries,² and was in turn something of a successor to Alan A. Tait's *Value Added Tax* (1988), written before the new wave of VAT adoptions of the 1990s.³ The broad structure and content of Bird–Gendron is similar to these earlier books. Starting with an account of the spread of the VAT, it covers such questions as the comparison between the VAT and other types of general commodity tax, the equity impact of the VAT, the appropriate number of rates, alternatives to the exemptions commonly found under the VAT, problems of administration and compliance, and a range of special issues (such as the challenges from e-commerce). So what is new in Bird and Gendron?

One of the book's great potential advantages is that the authors, unlike Ebrill et al. and Tait, are not full-time employees of the IMF. This matters because the spread of the VAT in developing countries has been closely associated with the Fund: it has, as Bird and Gendron note, ". . . been the leading 'change agent' in tax policy in many developing and transitional countries" (p. 16). And indeed there is a (strongly significant) positive correlation between participation in a Fund

program and the probability of adopting a VAT (Ben Lockwood and Michael Keen forthcoming). While both Ebrill et al. and Tait boast the same disclaimer as does this review, they have come to represent a "Fund view" that, for better or worse, has been highly influential. Not being so associated with the IMF allows the authors, perhaps, to be more candid on crazinesses of policy design and implementation in particular countries—or rather, given their admirable inclination to presume governments to have some idea of what they are doing, to seek some sense in that apparent craziness. The thoughtful and informed country examples are one of the pleasures of the book: explaining, for example, how the refunding to exporters in China of presumed rather than actual VAT paid on inputs and the denial of credits on capital goods were not ill-informed deviations from obvious best practice but rather deliberately served, respectively, to subsidize exports and to restrain investment. Still more important, however, is that the authors are well-placed to provide a critique of the Fund view of the VAT (which, it should be said, matches a wider "expert opinion").

The elements of that supposed view—much more nuanced in practice than often supposed—are few and simple. They start with a strong belief in the capacity of a well-designed and applied VAT to raise substantial revenue in a reasonably fair, efficient, and practicable way. The tax should avoid zero-rating other than for exports, and have minimal exemptions, a single positive rate, a

¹ Some essentials: The defining features of the VAT—more precisely, of the invoice-credit type that is the only one applied at national level (barring Japan)—is that it is charged on all sales by firms registered for the tax, but registered traders are able to credit against the liability on their own sales any tax that has been charged on their own purchases (with refund of any excess credits). "Zero-rating" means that no tax is payable on sales, but any tax paid on inputs can be refunded; "exemption" also means no tax on sales, but without credit or refund of tax paid on inputs. The "threshold" is the level of enterprise size (generally measured by turnover) at which it becomes compulsory

to register for the VAT.

² That is also the real focus of Bird and Gendron (as it will be of this review). They give a number of examples from transition economies, but there is little discussion of the distinctive issues that arose there, or of the subsequent divergences of experience: some transition countries have progressed very much further on VAT issues (several having migrated to the standard EU VAT) than others.

³ There are others, including Mahesh C. Purohit (2006) and, from a legal perspective, Alan Schenk and Oliver Oldman (2007).

fairly high threshold (perhaps in the order of \$100,000 per annum for many low income countries), rely on self-assessment (meaning that taxpayers declare and pay tax due, subject to audit and penalty) and structure the tax administration along functional or taxpayer-segment lines to accommodate the requirements of the VAT.

Those who hope to find in this book a withering assault on these principles are in for a disappointment. As the authors make clear at the outset, “. . . on the whole we conclude that much of the conventional wisdom about VAT design is sound.” (p. 2). And while they stress the divergence between the conventional wisdom and much conventional practice, notably in the massively inadequate audit capacity in many developing countries, that too is something that is widely recognized, not least in Ebrill et al.

If there is a crack of light between Bird–Gendron and the Fund view, it is in their argument that, for distributional reasons, it may be appropriate in many developing countries to set a reduced rate on some items. But here the difference is less than it may seem. This is only partly because “. . . it may often be good ‘gamesmanship’ for those . . . willing to end up with two rates to begin by insisting on the virtues . . . of a single rate” (p. 115). More fundamentally, even VATs that have only a single positive rate generally include a range of statutory exemptions, commonly for basic foodstuffs. And a high threshold in itself implies *de facto* exemption for smaller enterprises, whose sales often loom particularly large in the budgets of the relatively poor: using a household data set for the Dominican Republic that, unusually, differentiates households’ purchases by the nature of the establishment where they are made, Glenn P. Jenkins, Hatice Jenkins, and Chun-Yan Kuo (2006) show that a high threshold substantially increases the progressivity of the tax. Thus the practical choice is not simply, or even mainly, the number of rates. Rather it

turns on such muddier matters as the level at which the threshold is set, whether those below it are subject to some replacement tax, and the relative ease for taxpayers and tax authorities of exemption and taxation at a reduced rate. These, however, are issues about which we have relatively little useful theory and almost no systematic evidence. Indeed the lack of both theory and evidence on a wide range of VAT issues is one of Bird and Gendron’s central themes.

3. *Wider Themes and Broader Issues*

3.1 *Obstacles to Understanding the VAT*

One of the pleasures of this book is its extensive and easy scholarship, the referencing being vast, accurate and appropriate. This makes even more compelling the authors’ central conclusion that “. . . much more . . . work is needed before the many countries around the world currently facing critical VAT issues have anything to turn to other than ‘expert opinion’—biased as it inevitably often is by the particular experience of the experts in question—in formulating policy decisions” (p. 222). Much the same point is made by Keen (2007), and I agree. Taking the single rate issue, for example, the few empirical studies that have addressed the question firmly reject the weak separability condition of A. B. Atkinson and Joseph E. Stiglitz (1976) under which rate differentiation is unnecessary when—perhaps a reasonable first approximation for developed countries, though evidently not for developing—an optimal nonlinear wage tax can be deployed (Martin Browning and Costas Meghir 1991; Ian Crawford, Keen, and Stephen Smith 2008). But we know very little about the precise form such differentiation should take, and even less about the additional costs of administration and compliance against which any gain from optimal differentiation would need to be weighed.

Similar examples abound throughout the book.

One reason for the relative lack of research on the VAT is surely the relative lack of interest in the United States, though perhaps this will change. But there are intellectual obstacles too. A particular block for empirical work on VAT in developing countries, Bird and Gendron note, is lack of data. Even reliable numbers for total VAT revenue in non-OECD countries over a reasonably long period can be hard to find, let alone information on its breakdown (the importance of various exemptions, for instance) or on quite basic aspects of implementation: all too often the weakness of tax administration is reflected in (and reinforced by) simple failure to collect and analyze information on crucial detail.

Some progress can be made with zero/one dummies for the presence of a VAT. One obvious question, for instance, is whether countries with a VAT tend, all else equal, to raise more revenue than do those without. Lockwood and Keen (forthcoming) report evidence that they do, though this is less marked in sub-Saharan Africa than elsewhere.

Such a dummy variable, though, is a very noisy indicator. Many VATs have developed not as an entire break with the past but as a natural development from turnover tax systems whose cascading effect has been mitigated by the emergence of ad hoc devices for selective crediting or suspension of the tax. It is largely a matter of judgment as to when such crediting become systematic enough for the tax to be labeled a VAT: there is at least one case in which Fund conditionality called for the adoption of a VAT in a country that was listed internally as already having one. And as Bird and Gendron stress more generally, VATs differ enormously amongst themselves: in the extent of exemptions, threshold, number of rates, ease of obtaining refunds, treatment of services, nature and availability of simplified schemes . . .

There are also intellectual obstacles to VAT research. A well-functioning VAT is just a tax on consumption like any other, and so formally is nothing special. The most important VAT issues concern what happens when some taxpayers or commodities are excluded from full operation of the tax, whether intentionally or through noncompliance, so that the chain of taxing and crediting breaks down. Modeling that breakdown is messy. One argument sometimes made for the VAT, for example, is that it can help to propagate compliance: if one firm is registered for the VAT, then anyone supplying to it will also want to register and become VAT compliant (because then they can themselves reclaim any VAT they have been charged, whilst the VAT they have to charge the final seller will simply be credited or refunded by the latter). And then of course their suppliers will want to register, and so on back down the chain. But, as analyzed formally by Áureo de Paula and José A. Scheinkman (2006) (who also report evidence on the empirical importance of the point), one can also imagine “bad” VAT chains emerging: those supplying a firm that is not registered will not want to register either (because their customer will get no credit for the VAT they will then have to charge). Understanding the endogenous formation of such good and bad chains is neither easy nor elegant.

Progress is, however, being made on some key issues. The Bird–Gendron book gives a flavor of this.

3.2 *Better Than What?*⁹

Bird and Gendron rightly and repeatedly stress that VATs differ quite fundamentally. This makes statements about the merits or otherwise of “the VAT” relative to other taxes (which of course show similar variety) dangerous: a bad VAT may be worse than a good tariff, and a bad tariff worse than a good VAT. While broad comparisons across tax instruments can thus be an overly simplistic guide

to policy making—no tax is perfect—thinking them through can help understand the instruments' intrinsic strengths and limitations.

In this spirit, and like the previous books, Bird and Gendron argue early on that the VAT is presumptively superior to either a turnover tax or a retail sales tax (RST), these being the leading alternative forms of general consumption tax. Compared to the former, the argument goes, the VAT wins because it avoids cascading and the taxation of business inputs that risks violating production efficiency. And the VAT beats a sales tax because it secures revenue by collecting it throughout the production chain: if a retailer somehow escapes tax, everything is lost under an RST but only tax on the retailer's value added under the VAT.⁴ There is a tension here: the first argument says the VAT is good because it does not tax inputs, the second that it is good because it does. This may not be too troubling: it has been known since David M. Newbery (1986) that production efficiency ceases to be desirable when some final sales cannot be taxed, and the VAT seems well targeted at plugging such gaps close to where they arise. Even this though needs to be qualified by recognizing the potential for the formation of "bad" VAT chains noted above, though the circumstances under which this could make an RST or turnover tax superior to the VAT remain unknown.

On the practical side too, while the VAT is sometimes seen as a complex tax to administer and comply with, predecessor taxes in many developing countries have rarely been simple: as in the case studies of Ebrill et al., they have often been multiple rate turnover taxes with cumbersome crediting or suspension arrangements. A simple VAT, on the other hand,

requires no more than keeping track of sales and purchases, which anyone in business will do (though they may be reluctant to share that knowledge). And a high threshold simply removes from the VAT the smaller traders for whom compliance, with its significant fixed cost element, is likely to be most burdensome. But here too hard information is scarce: data on administration and, especially, compliance costs in developing countries remains scandalously sparse.

Still more controversial is the comparison between the VAT and tariffs.⁵ Many developing countries still derive much of their revenue—often a quarter or more—from trade taxes, so that continued trade liberalization requires some strategy to recover this revenue from domestic sources. Here the VAT (along with excises on a few key commodities) has been seen as having a key role. The argument, for a small competitive economy, is straightforward. Offsetting each \$1 tariff cut with a (slightly less than) \$1 increase in the corresponding consumption tax reduces (slightly) the price paid by consumers, moves producer prices closer to world prices, and increases government revenue (since domestic production, as well as imports, is then taxed). This seems a rare example of a practicable prescription for an unambiguously welfare-improving reform.

But what if—as is evidently the case in most developing countries—there is a large informal sector, so that a big chunk of sales for final consumption cannot be taxed? John Piggott and John Whalley show that in such circumstances increasing the tax on the formal sector can lead to such a worsening of the distortion between the two that welfare

⁴ There are other and more practical elements in the comparison. Services may be easier to tax under the VAT, for example, and RSTs in practice typically do to a considerable degree tax business inputs.

⁵ Issues naturally also arise concerning the appropriate balance between the VAT and both taxes on labor income (including social contributions) and (much less studied) the corporation tax, but these (especially the former, given the weakness of the personal income tax in developing countries) are of more concern to developed countries and so not addressed here.

falls. For developing countries, M. Shahe Emran and Stiglitz (2005) point out that one merit of tariffs is that they at least reach informal operators on their imports, and derive a series of results establishing conditions under which shifting from tariffs to a “VAT”—characterized as a tax on formal sector sales—is welfare-reducing. These results need to be interpreted with care, however, since that is not what a real-world VAT is. A key feature of the VAT, as noted above, is precisely the possibility of taxing the inputs of those who for some reason are not fully captured in the tax system. But this feature is simply not present in the “VAT” of Emran and Stiglitz. A central part of this input-taxing feature of the VAT is that it is levied on imports (with this commonly accounting for more than half of all gross VAT collections in developing countries). And for an informal operator, who, being out of the system, will not claim any credit for VAT paid on imports, the import VAT is precisely equivalent to a tariff. Thus the VAT is no less effective in taxing informal sector imports than are tariffs. Of course in this respect the shift to a VAT should hardly count as trade liberalization, but that is not a criticism of the VAT in itself.

That the VAT encompasses this feature of tariffs does not mean, however—other than in the most trivial sense (the two are equivalent if one does not bother to enforce the inland part of the VAT)—that it is, or can always be designed to be, superior. This is for several reasons.

First, there are practical aspects to the comparison.⁶ It is widely presumed that tariffs are simpler to administer and comply with than is the VAT, but this is far from obvious as a general truth. Multiple rate tariffs with multiple exemptions, often

related to end-use, are much more complex than would be a single rate VAT with a high threshold. And of course the VAT is trying to do much more than are tariffs: services like telecoms, for instance, increasingly important in low income countries as elsewhere, are simply not subject to customs duties. More generally, the introduction of a VAT is often intended to mark a fundamental change in the way of doing tax business, moving away from administrative assessment and toward generalized reliance self-assessment, not least in relation to import control. It is worth remembering that the feature of customs administration most conducive to simplicity—its basis in the physical control of goods—is precisely what makes it in many countries one of the most corrupt parts of government.⁷ One can certainly question how far these supposed benefits of the VAT in terms of improved implementation of the wider tax system have been realized, as Bird and Gendron do; Emran and Stiglitz (2007) also note that much the same used to be said of developing the income tax, without great success. Clearly too the VAT is far from corruption-proof (including not least for those trying to get their VAT refunds). Without more data and modeling implementation aspects less mechanically, however, it is too easy simply to assert that tariffs are preferable to VAT on practical grounds.

The VAT has weaknesses relative to tariffs, however, even leaving practical issues of implementation aside. Boadway and Sato (2009) explore some of these, taking careful account of the input-taxing feature of the VAT. They note, for instance, that tariffs can indirectly tax formal sector profits in a way that the VAT cannot (since such firms would obtain credit or refund of any input VAT

⁶ Robin Boadway and Motohiro Sato (2009) and Knud J. Munk (2008) begin to incorporate these into the formal comparison between VAT and tariffs; see also Ebrill et al. (chapter 16).

⁷ Some argue too that the record-keeping obligations of the VAT can actually benefit firms by easing their access to credit, though if that were so it is not clear why they do not keep such records in the first place.

paid), which can be useful if these profits cannot be taxed directly. And the VAT clearly is not the perfect device for handling informality, especially in its single rate form. There is no reason, for instance, why one would want to tax informal sector purchases at the same rate as formal sector sales: the net effect of doing so may be to increase informality (as shown in Keen 2008). And a number of low income countries do indeed seek to charge a differentially high rate on the former, including by levying withholding taxes on imports: creditable (in principle) against income tax, these are intended to function much as an additional tariff charged only on informal operators. In a very simple context, deploying such a tax alongside a single rate VAT reestablishes the conventional result that the best tariff for a small economy is zero (Keen 2008). More generally, developing countries use a wide range of withholding devices to reach informal operators, some of them embedded in the VAT: large taxpayers may be required, for instance, to remit VAT on their purchases, with these amounts then being available as a credit for the seller. Bird and Gendron draw attention to these devices, stressing the practical problems that give many tax administrators palpitations: the difficulties of ensuring that credits actually get credited, and of managing the excess credits that withholders may build up. Such withholding taxes have attracted little analytical attention, no doubt in part because OECD countries do not use them. Whether they can be designed and applied so as to make a real dent on informality remains yet another open question.

What is clear, however, is that with VAT rates now fairly high in many developing countries, at 15 percent or more, so that room for substantial increases without exacerbating informality problems seems limited, and with trade liberalization still far from complete, these issues are likely to be central concerns in the coming years.

3.3 *Is the VAT Regressive—and Does it Matter?*⁸

Anyone advocating the introduction of a VAT, or restructuring an existing one closer to the conventional wisdom—which generally means raising the rate on some sensitive items—has to face the charge that this will have an adverse distributional impact.

Bird and Gendron dutifully run through the standard counter-arguments: looking at the impact of any single tax, ignoring offsetting changes in other taxes and/or public spending, gives a false picture of overall distributional impacts, which is what really matters; a VAT looks less regressive relative to an income tax when viewed in a lifetime context than it does over the snapshot of a year;⁸ and while a reduced VAT rate on, say, food provides a larger proportional benefit to the poor, it provides a larger absolute benefit to the rich. They also provide an overview of empirical studies on the issue for developing countries, concluding that the VAT is generally found to be mildly progressive or mildly regressive relative to current income, but commonly more progressive than the tariffs and/or excises that it replaces.⁹ These findings may though provide only limited comfort for the conventional view, since they will reflect any departures from the (nuanced) “single rate” prescription (discussed further below).

But there is a more fundamental point. A perfectly functioning VAT is exactly equivalent to any other tax on consumption, such as a perfectly functioning retail sales tax

⁸ However, a lifetime context may be less appropriate in developing countries than elsewhere, since borrowing opportunities are more limited.

⁹ They also generally reflect a presumption that the VAT is fully passed on to final purchasers—an issue, as with so many other incidence questions where little is in fact known. Imperfect competition, informality and imperfections in the refunding of VAT on exports all make this assumption more questionable in developing countries than elsewhere.

(RST), including in the ability to tax different commodities at different rates. So none is intrinsically more or less progressive than any other. If there is anything distinctive about the equity impact of the VAT, it must be rooted in distinctive features of its practical implementation. What might those be?

One set of issues concerns the treatment of small and informal traders (by no means necessarily the same thing). Here the distributional impact of the VAT is complex and less than fully understood. The (usual) exemption of smaller traders under the VAT, deliberately so when a relatively high threshold is set, seems likely to reinforce the progressivity of the tax, not to reduce it. This is true both on the purchases side (as in the study for the Dominican Republic mentioned above) and, at least to the extent that these enterprises tend to be owned by the less well-off and compete with (rather than buy from) formal sector firms, on the income side too, since the effect is to place small firms at a competitive advantage.¹⁰ But the extent of that competitive edge clearly depends on the degree of substitution between the products of these firms and those fully subject to tax; and it may be viewed less benignly when the beneficiaries are informal operators remaining outside the tax illegally. The same is true of the feature of the VAT that it taxes the inputs of firms not registered for the tax. And all this is further complicated by the potential endogenous formation of chains.

Rather than address such tough issues, much of the discussion has focused on that of rate differentiation, which is at least easier to grasp. Here the first question is whether such differentiation is harder to administer and comply with under a VAT than under a retail sales tax. Perhaps it is—less because of any differentially high reporting and

monitoring burden (borderline disputes on the classification of particular items into distinct rate bands would arise under either, for instance) than because reduced rates on final products under a VAT may entitle producers to refunds, and hence create additional control risks. But many countries do operate two or more rates of VAT, so any difficulties are evidently not insurmountable. The real question is whether such rate differentiation is desirable.

As Bird and Gendron note—and as do Ebrill et al.—there is a presumption that (implementation issues aside) the case for differential rates of commodity taxation is stronger in developing countries than elsewhere, given the lesser availability of other instruments to address distributional concerns. In the United Kingdom, for example, it is fairly straightforward to design a restructuring of the tax and benefit system which, combined with elimination of the reduced and zero rates applied to large parts of consumer expenditure, would leave most lower income households no worse off and at the same time free substantial additional revenue for some other good use (Crawford, Keen, and Smith 2008). In low income countries, however, such explicitly income-related offsets are commonly not available. So, while reduced taxation of some commodities may be a very poorly targeted way of redistributing toward the poor, it could nevertheless be the best available. Account also needs to be taken, of course, of other spending measures, such as on health and education, which are not directly income-related but may nevertheless particularly benefit the poor, and indeed whose strengthening is, after all, a main reason for having any tax in the first place. Bird and Gendron doubt whether such devices are commonly strong enough in lower income countries to outweigh the case for applying reduced VAT rates, and there is clearly much plausibility in that. They also refer, however, to a study for Ethiopia by

¹⁰ Piggott and Whalley (2001) show how a tax on formal sector sales can lead to an expansion of informal activity that is inefficient, as noted above, but also pro-poor.

Sonia Muñoz and Stanley Sang-Wook Cho (2004), who use micro data to conclude that “. . . even very poor countries can sometimes deliver the expenditure goods more effectively than poorly targeted exemption.” (Bird and Gendron, footnote 13, p. 77). If Ethiopia can do it, the reader might wonder, why not others?

There is, in any event, less disagreement on the design implications of equity concerns for the VAT in developing countries than there may seem. Few advocates of a single rate would think a VAT fatally undermined by the preferential treatment of some items important for the poor (but, in the manner of experts, might get heated on whether this is best done by exemption, zero-rating, or a reduced but positive statutory rate); and few would argue for much more than that. These concerns certainly point to more coherence in advice on tax and spending policies. Potentially adverse equity implications of VAT design should not be dismissed with vague references to dealing with them on the spending side: precision is needed as to exactly how, if at all, that can be done, and this has often been lacking—reflecting, once again, a lack of serious academic work.

3.4 *The Political Economy of the VAT*

While politicians also seem to have the VAT high in their list of preferred taxes, it seems often to be the one they inherited. No one keeps count of the opposition politicians who promise to remove a VAT if elected but then find that, unfortunately, circumstances prevent their doing so just yet.¹¹ Improving an inherited VAT, moreover, can be politically difficult. This is true, not least, in the European Union, where the prevalence of

multiple rate structures—in precisely the kind of country for which the distributional argument for differentiation addressed above is weakest—is one of the features that marks them out as “old” VATs, deviating from the practice that new VATs should aspire to (the “*Modern*” in the title of Ebrill et al. being a dig in this direction; see also Sijbren Cnossen 2003). Few economists would seriously argue, for example, that the extensive domestic zero-rating in the United Kingdom makes much sense. Removing it, however, would require considerable political bravery. Progress in introducing a VAT—and, now more to the point in most countries, in improving an existing one—is often less a technical challenge than a political one.

So it is a welcome departure from previous VAT books to find in Bird and Gendron a chapter on the political economy of the VAT. Informative though that is, however, this turns out to relate more to taxation in general than to the VAT in particular, and so leaves many questions unaddressed.

Why is it, for example, that the introduction of the VAT has been so unpopular in so many countries? This clearly ties in with the distributional issues discussed above, but the story may be more complex. In some cases, resistance to the VAT seems largely to have been resistance to strengthening the income tax by use of information acquired from the VAT. This led at least one country to accompany introduction of the tax with a commitment that information acquired from the VAT would not be cross-checked against past income tax declarations.

Are there lessons to be learnt on how opposition to sensible VAT reforms can be overcome? In Ghana, for instance, a main difference between an initial, failed VAT and a subsequent, successful one was a substantial increase in the threshold, removing many small firms from the tax base. Packaging with compensating measures is evidently also important, though even this

¹¹ Only five countries have removed a VAT once implemented (Belize, Ghana, Grenada, Malta, and Vietnam), and all have since either reintroduced it or (in Grenada's case) plan to.

may not be enough: Eng-Hin Poh, Jeffery Pope, and John Hasseldine (undated) show how this packaging enabled domestic zero-rating to be avoided in Singapore but not in Australia. And what of earmarking, which Bird and Gendron touch on (and Bird 1997) has discussed thoughtfully elsewhere)? While generally frowned on as a potentially costly constraint on expenditure policies, perhaps this can in some circumstance help break resistance to desirable VAT reform. It may be one way in which the links between the VAT and the public expenditure it finances can be made clear, and a reasonably credible device for assuring taxpayers that the impact on the most vulnerable will be addressed.¹² Ghana, for example, has raised the standard VAT rate from 10 to 15 percent in recent years by earmarking the additional revenue to education and health spending. Strict earmarking—dedicating proceeds to some specific fund—is clearly dangerous. It remains an open question, however, whether some cloak of earmarking can be a reasonable political last resort.

The fear that the revenue raised by the VAT would be wasted has loomed large in the U.S. debate, dating back to Geoffrey Brennan and James M. Buchanan (1977), and is prominent in the report of the Presidential Panel on tax reform in 2006: “Some panelists were . . . concerned that introducing a VAT would lead to higher total tax collections over time and facilitate the development of a larger federal government—in other words, that the VAT would be a ‘money machine.’”¹³ The first issue this raises is empirical: What exactly is a money machine, and has the VAT proved to be one? One approach, explored in Keen and Lockwood (2006), is to ask whether the adoption and growth of the VAT is best

thought of as a supply side development—the exploitation of a tax innovation that reduces the marginal cost of raising revenue—or as a response to an increased demand for public spending. In the former case, increased revenue from the VAT would be associated with reduced revenue from other sources. In the latter, one would expect it to be associated with increased revenue from other taxes, as government spreads the load of an increased tax burden across the range of instruments at its disposal. For the OECD, Keen and Lockwood find that, controlling for other influences on tax revenues, the revenue raised by the VAT has been partly offset by reduced revenue from other taxes. Perhaps surprisingly, the money machine thus emerges with some support.

Whether a money machine in this sense is a bad thing—as the Presidential panelists appear to presume—is by no means clear once one moves beyond a view of government as simply a revenue-maximizing leviathan. If policymakers attach some value to citizens’ welfare, for instance, they will tend to share with them some of the surplus that access to a more efficient tax instrument creates. And in the two-term electoral model of Timothy Besley and Michael Smart (2007), access to a more efficient tax instrument has the beneficial effect of disciplining incumbent first-term leviathans (who want to behave well in order to be reelected) but by the same token makes it harder for voters to identify and eject bad incumbents. The overall outcome is thus unclear. What is important, however, is that one does not need to take a naively rosy view of government in order to suspect that the technical strengths of the VAT can be harnessed for the wider social good.

3.5 *Lessons for the United States*

The United States is the final frontier for the VAT: all other OECD countries now have one. Naturally, given their focus on developing and transitional economies, Bird

¹² Craig Brett and Keen (2000) explore the underlying theory in more detail.

¹³ President’s Advisory Panel on Federal Tax Reform (2005), p. 192.

and Gendron do not focus on the distinct prospects and problems for a VAT in the United States. Their book nevertheless carries a range of lessons. Some are technical. The conventional wisdom that they broadly endorse applies a fortiori to such advanced economies as the United States. They also provide an excellent introduction to sharp edge design issues such as the incorporation of public sector and nonprofit activities into the VAT, and alternatives to the usual exemption of financial services—issues which, they ultimately conclude, should not be priorities for low income countries, but which certainly should be in designing a VAT for the United States. Bird and Gendron also give a useful overview of experience and intellectual advances on how to implement lower level VATs in federal systems: how best to coordinate any federal VAT with the states' established presence in sales taxation (should there be state-level VATs too?) would be a central issue for the United States, and one that has as yet been little discussed.

There are more general lessons too to be drawn from Bird and Gendron, and the VAT experience more widely. One is the political difficulty of making sensible changes to a VAT once it has been introduced: mistakes made at introduction are hard to undo. Another—given the unusual feature of the U.S. debate in often presenting the VAT as an alternative to the income tax—is that a strong case can be made that optimal policy is likely to require deploying both a VAT and an income tax, both as a way of diversifying compliance risk¹⁴ and through the ability of each to provide distinct information that can help the enforcement of the other. Bird and Gendron would be quick to point out

that evidence on the practical importance of these considerations is scarce. Clearly too the relationship between the VAT and corporate taxation deserves more attention than it has typically received: border adjustment aside, a VAT, after all, is equivalent to the combination of a cash flow corporate tax and a tax on labor income. But there is surely pause for thought in the simple fact that no other country has felt that adopting a VAT enabled it to eliminate its personal income tax.

4. Conclusions

This is a rich and elegant book on a rich and (if we are to understand it properly) inellegant topic. So quiet (in terms of its research impact) and so complete has been the success of the VAT that some revisionism is long overdue. That is not what this book provides,¹⁵ and indeed there is more here of comfort to the conventional view than the opposite. But it does set out some key issues and challenges in what remains a largely untrodden area. Perhaps the VAT is finally starting to get the attention it deserves.

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¹⁴ Boadway, Maurice Marchand, and Pierre Pestieau (1994), for instance, show that if compliance is imperfect it may be optimal to deploy both a consumption tax and a wage tax—taking both the uses and the sources of funds—that would otherwise be equivalent.

¹⁵ And it provides much more than has been discussed here. It considers, for instance, the links between the VAT and the taxation of small and medium-sized enterprises more generally, which is emerging as a key issue in many countries (as discussed in *International Tax Dialogue* 2007).

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