IMF Working Paper

© 1999 International Monetary Fund

This is a *Working Paper* and the author(s) would welcome any comments on the present text. Citations should refer to a *Working Paper of the International Monetary Fund.* The views expressed are those of the author(s) and do not necessarily represent those of the Fund.

WP/99/165 INTERNATIONAL MONETARY FUND

Fiscal Affairs Department

Rethinking Subnational Taxes: A New Look at Tax Assignment

Prepared by Richard M. Bird[1]

Authorized for distribution by Vito Tanzi

December 1999

Abstract

The assignment of revenues in most developing and transitional countries to the central government has arguably facilitated irresponsible behavior by some subnational governments. One way to relieve this problem is to strengthen subnational tax regimes. The paper proposes two approaches to accomplish such strengthening in developing countries. The first—most applicable to large countries with important regional governments—is to establish subnational value-added taxes (VATs); the second is to replace the various unsatisfactory state and local taxes imposed on business by a low-rate value-added tax levied on the basis of income (production, origin) rather than consumption (destination).

JEL Classification Numbers: H7, H70

Keywords: Tax assignment; Subnational taxes, Local business taxes, Regional governments.

Author's E-Mail Address: rbird@mgmt.utoronto.ca

---

[1] International Tax Program, Rotman School of Management, University of Toronto. This paper was written while the author was a Visiting Scholar at the Fiscal Affairs Department of the International Monetary Fund. He is most grateful for the hospitality of the Department and for the comments made on an earlier version by Charles McLure, Michael Keen, Vito Tanzi, and various participants in seminars held at the Fiscal Affairs Department and the World Bank.

Contents

Page

I. Introduction ... 3

II. Models of Tax Assignment ... 4
- A. The Public Economics Approach ... 6
- B. The Public Choice Approach ... 7
- C. A Policy Perspective ... 9

III. Subnational Revenues: Realities and Prospects ... 10
- A. User Charges ... 11
- B. Property Taxes ... 12
- C. Excises ... 13
- D. Personal Income Taxes ... 14
- E. Payroll Taxes ... 14
- F. Sales Taxes ... 15
- G. Taxes on Business ... 15

IV. Subnational VATs ... 16
- A. Brazil ... 18
- B. Argentina ... 20
- C. India ... 22
- D. Canada ... 25

V. Subnational Business Taxes ... 31

VI. Conclusion ... 35

Appendixes
I. Sales Tax in Canada ... 38
II. Approaches to the Business Value Tax ... 41

References ... 43

I. Introduction

The conventional model of tax assignment in a multitier governmental structure assigns most productive revenue sources to the central government. Since this prescription accords with the needs and wishes of most central governments, it is not surprising that this pattern is indeed found in most countries. This centralized assignment of revenues combined with recent tendencies to decentralize increasingly important expenditures places increasing strain on intergovernmental fiscal transfers and, in some instances, has arguably facilitated irresponsible behavior by at least some subnational governments. Section II suggests that the conventional tax assignment model does not provide strong support for the high degree of tax centralization found in many countries.

An obvious way to relieve at least some of the problems that have resulted is to strengthen subnational tax regimes. Section III reviews briefly the usual measures suggested for this purpose and concludes that, while many of them have merit, on the whole they seem unlikely to do the job, for two quite different reasons. First, the revenues usually assigned to subnational governments are likely to prove inadequate to the task of financing the social services (education, health, social assistance) increasingly being assigned to such governments in many countries. Second, some of the conventional recommendations both underestimate the difficulty of increasing local revenues from some sources and overestimate the problems (and the undesirability) of using other sources. Fortunately, recent analysis suggests at least two potentially promising ways out of this dilemma.

The most immediately important issue is the need to develop a satisfactory revenue base for regional governments in a number of large countries. Section IV suggests that the most promising approach, at least in a few larger countries, is likely to be to establish subnational VATs. The problems that have long been thought to preclude such taxes seem now largely to have been resolved, at least in principle, and have actually been implemented in practice to a limited extent.

The second approach suggested here is less well worked out as yet but seems sufficiently promising to be worth considering. As discussed in Section V, the idea is to replace all or some of the various unsatisfactory state and local taxes on business that exist in most countries by a "business value tax" (BVT)—in essence, a relatively low-rate tax levied on an income type, value-added base. In contrast to the proposal discussed in Section IV, which is motivated mainly by the desire to provide more adequate "own" revenues to regional governments and hence to encourage greater fiscal responsibility and accountability, the proposal discussed in Section V is aimed primarily at improving the allocative efficiency of subnational revenue systems. It is therefore less likely to find a welcoming political audience. Nonetheless, it appears to offer a promising alternative to the proliferation of increasing, and increasingly distorting, subnational business taxes that otherwise seem likely to lie in the future of many countries.

Finally, Section VI concludes by considering how the family of VATs proposed might function in a fiscal world undergoing what might be described as almost a tectonic shift as a

result of the combined forces of globalization and decentralization. The time has come for serious rethinking of the conventional model of tax assignment, and the aim of this paper is to set out in broad terms at least some of the ways in which changes in "fiscal technology" may help countries to adapt to these new realities.[2]

II. Models of Tax Assignment

"Who should tax, where, and what" is how Richard Musgrave (1983) once characterized the question of tax assignment in a multilevel government. Although there sometimes seems to be depressingly little certainty in the world of taxation, one element of that world that has, until recently, seemed to be well settled, at least in theory, has been the answer to Musgrave's question. That answer, as restated recently by Wallace Oates (1996, p. 36), was essentially threefold:

> "(1) Lower levels of government...should, as much as possible, rely on benefit taxation of mobile economic units, including households and mobile factors of production. (2) To the extent that nonbenefit taxes need to be employed on mobile economic units, perhaps for redistributive purposes, this should be done at higher levels of...government. (3) To the extent that local governments make use of nonbenefit taxes, they should employ them on tax bases that are relatively immobile across local jurisdictions."

Similar recommendations emerge from most discussions of tax assignment. Such concerns as the maintenance of "integrated economic space"(Ter-Minassian, 1997a)—that is, the avoidance of "tax wars" and revenue erosion in the face of fiscally induced locational distortions—national redistributive equity (Musgrave, 1983), and administrative economies of scale in tax administration (Vehorn and Ahmad, 1997) have to be balanced against the "principle of fiscal equivalence" (Olson, 1969)—the desirability of linking expenditures and taxes to induce a higher level of "fiscal responsibility" (Ter-Minassian, 1997a). When weighed additionally by such factors as visibility (accountability), stability, and "evenness" (Norregaard, 1997) such assessments of tax assignment almost invariably tilt toward giving the benefit of the doubt to central taxes. As Ter-Minassian (1997a) recently summarized the conventional argument—in effect slightly expanding the criteria stated by Oates—the "best candidates" for subnational taxes are levies that are (1) on relatively immobile bases, (2) where the base is relatively evenly distributed, and (3) where yields are likely to be relatively stable.

In practice, what these principles amount to is that local governments are supposed to rely primarily on user charges and taxes on real property. Only central (national) governments

[2] The approaches discussed may also be relevant in some respects to national governments attempting to cope with some of the fiscal effects of globalization, but this issue is not discussed in the present paper.

should impose a corporate income tax (CIT) (McLure, 1983a), or tax unevenly distributed natural resources (Mieszkowski, 1983), or levy a progressive personal income tax (PIT) (Musgrave, 1983). As for intermediate (regional) governments such as states or provinces, the apparent professional consensus, if there was one, was, until recently, probably that the only acceptable general tax was a simple single-stage (preferably retail) sales tax (RST) levied directly on final (resident) consumers along with, perhaps, a few excise taxes (Musgrave, 1983).

The highly centralized tax assignment implicit in the usual principles of tax assignment has become even more marked in practice in many countries owing to the rise of the VAT, a new and improved form of sales tax that has swept the world in recent decades and replaced other forms of sales taxation. It has generally been assumed that a VAT can be imposed effectively only at the level of the central government[3]—and, with the sole exception of Brazil, which has usually been taken to be a horrible example that proved the point—VAT was indeed long imposed only as a central tax everywhere.

In terms of tax assignment, what the rise of the central VAT meant was that there was no longer any significant source of own revenue suitable for regional governments—certainly not in developing countries. Proposals to give such governments the right to levy excises (e.g., on fuel) hardly filled the need when the principal regional revenue responsibilities were in such income-elastic areas as health and education. In some developed countries, some balance was restored by allowing regional (and in some cases local) governments to "piggy-back" on national income taxes (e.g., by levying surcharges on the central PIT or the PIT base). But this option was not open in the many developing countries in which even the national government was able to secure little revenue from the PIT. As decentralization spread around the world (Litvack, Ahmad, and Bird, 1998), experts in intergovernmental fiscal relations began to spend more and more time and effort in designing ever more grand and convoluted transfer systems in an effort to bridge the resulting gap in subnational responsibilities and revenues.[4]

Such efforts are unlikely to suffice, however. It is time to rethink the principles underlying the conventional model of tax assignment and to attempt to reconcile principle with emerging practice in a more coherent and sustainable way. All normative models rest on assumptions, explicit and implicit, with respect to the world for which they purport to prescribe. Some of the assumptions underlying the conventional conclusions are no longer appropriate for developing countries, if indeed they ever were.

---

[3] See, for example, Norregaard (1997), pp. 65-66. Parenthetically, it should perhaps be acknowledged that in the past, I have myself taken this position (e.g., in Bird, 1993).

[4] For numerous country examples, see Shah (1994), Ahmad (1996), Ter-Minassian (1997b), and Bird and Vaillancourt (1998). The present paper does not discuss transfer systems in detail: for such discussions, see Bird (1999a, 1999b).

A. The Public Economics Approach

The conventional model of tax assignment in public economics has been set out in varying degrees of detail and formality by many authors.[5] That model has one overwhelming practical consequence, namely, that almost invariably most, if not all, subnational governments end up with less in "own revenues" than the expenditures for which they are responsible (or for which they should be responsible, in terms of the now conventional "subsidiarity" approach to assigning expenditures).[6] The resulting "vertical fiscal imbalance" is, in practice, almost invariably resolved by transfers (Bird, 1993c). Unsurprisingly, much of the effort and ingenuity economists have devoted to intergovernmental fiscal affairs in recent decades has thus been spent on designing ever newer and better transfers (Ahmad, 1996).

There are at least four problems with the conventional approach, however. First, it is not only assumed that the economy would function perfectly in the absence of taxes, so that all tax "wedges" are, by definition, undesirable but it is also in effect assumed that such distortions are so important that the principal criterion of tax design should be to minimize them. These propositions are by no means obviously correct in developing countries. While this approach is of course conventional in formal tax analysis, it is thus not clear that it is or should be persuasive, given the many other relevant policy objectives of government.[7]

Second, it is implicit in many discussions of tax assignment that governmental policy objectives are, in effect, arrayed in a strict hierarchy, with those of the central government taking precedence over those of "lower"—the terminology is suggestive—governments. The clearest example, perhaps, relates to income distribution, where central but not

---

[5] See, for example, Musgrave (1983), Gordon (1983), Oates (1996, 1998), Ter-Minassian (1997a), and Norregaard (1997). McLure (1993a, 1994a, 1997a, 1999a) has discussed this model in detail in a series of recent papers noting many of the problems that arise in applying it.

[6] For discussions of expenditure assignment, see Martinez-Vazquez (1994, 1999) and Ahmad, Hewitt, and Ruggerio (1997). An interesting treatment of the "subsidiarity" approach may be found in Breton, Cassone, and Fraschini (1998). Although Boadway and Keen (1996) have presented an interesting theoretical argument in which, under some circumstances, the "optimal" direction of fiscal flows should be from local to central governments, the applicability of this model seems limited and it has in any case as yet had no influence on policy.

[7] Arguments along these lines may be found in, for example, Head (1974), Gillis (1989), and Bird (1992).

subcentral governments are presumed to be entitled to impose their distributive preferences.[8] Whether or not one assumes a fully democratic system is in place, this assumption is, by definition, incorrect in a" truly federal" country. Indeed, it is suspect in any country in which subnational governments have any significant policy autonomy.[9]

Third, this approach assumes all that matters is economic. But governments are of course essentially political bodies with such legitimate political objectives as the management of conflict. It is incorrect to assume that such concerns are, or should be, necessarily secondary to the dictates of pure economic theory and the desirability of delivering public services efficiently and effectively.

Finally, since the conventional approach—as, for example, both Oates (1996) and Norregaard (1997) clearly recognize—is purely normative, it is not surprising that it provides at best a very poor explanation of the tax assignments found in the real world. Indeed, unless those who make such assignments fully share the norms implicit in this approach there is no reason why it should explain reality. To the extent the tax assignment observed in practice does tend to approximate that dictated by an approach that essentially puts all highly productive taxes at the central level) this result ensues not from close adherence to the dictates of theory but rather from the simple exercise of political power—something not taken into account in the conventional approach.

In short, the conventional public economics approach to tax assignment fails on most fronts. It does not explain reality. It does not provide a very helpful guide as to how to change reality. And application of the basic guiding principles it appears to offer will, as a rule, result in an imbalance in revenue and expenditure assignments among levels of government that seems likely, in the circumstances of most countries, to prove both economically undesirable and politically unsustainable.

B. The Public Choice Approach

Some of these problems are remedied by what may be called the "public choice" approach to tax assignment. This approach too has various manifestations. Starting from the basic

---

[8] Bird (1980) argues this case in detail and notes other instances in which the conventional approach in effect assumes that subcentral governments have no legitimacy as independent decision-making nodes of citizen preferences.

[9] This case is argued at length in Bird (1995a) and Bird and Chen (1998). The argument is not that democracy functions as well or better at lower than at higher levels of government. Rather, it is that unless preferences are identical everywhere, subnational governments that are in any way responsive to their constituents will in some instances behave differently than would equally responsive central governments. (Note that the extent to which subnational governments can make their policy differences "stick" in the face of market adjustments is not relevant here.)

statement of the principle of fiscal equivalence in Olson (1969), this approach has been perhaps most fully developed by Hettich and Winer (1984),[10] although the best-known manifestation of this general line of thinking may be found in Brennan and Buchanan (1980, 1983). In a sense, this approach also lies at the root of such well-known folk sayings in the field as "every tub on its own bottom" and "match revenue and expenditure responsibilities."

Hettich and Winer (1984), for example, make the obvious but important point that governments decide which taxes to impose in terms of a political rather than an economic calculus. Competition for tax base affects political decision making with respect to taxation only to the extent it is perceived to affect, for example, the probability of being reelected. What this implies is that the taxes assigned to lower governments—something which in most countries is essentially determined at the discretion of higher-level governments—will likely fall into one of three categories. Local taxes will be those that are too small to bother with—the minor nuisance taxes found at the local level in so much of the world. Or they will be those that are difficult or costly for central governments to administer and potentially politically troublesome—the property tax. Or, finally, they will be taxes that, so to speak, slip between the cracks—usually (technically rather bad) local business taxes of one sort or another. This approach provides a fairly accurate description of what one sees around the developing world in the way of local taxation (Bird, 1995b). But, of course, it provides no normative guidance as to what "should" be done.

In contrast, Brennan and Buchanan (1980) are crystal clear as to what should be done. In their model, in contrast to the prescriptions of the conventional model—which, they observe, can be interpreted as a revenue-maximizing model (subject to efficiency and, perhaps, equity constraints)—subnational taxes should be imposed on mobile factors precisely so that competition between such governments will limit the grasp of Leviathan. In this view, to cite McLure (1986) "What's good for the private goose is good for the public gander"—that is, competition is as healthy and beneficial between governments as between private economic agents.[11]

As numerous studies have shown, however, this conclusion is oversimple in the absence of market clearing forces equivalent to those at work in competitive private markets.[12]

---

[10] See also Hettich and Winer (1999) as well as Gillespie (1991). It should perhaps be noted that the public economics public choice split set out here is, of course, artificial to some extent since many authors (e.g., McLure, 1999a) might be placed in both camps in some respects.

[11] It should be noted, however, that McLure (1986) does *not* argue that subnational governments should therefore tax mobile factors, although he does note that if such governments do use origin-based taxes, competition may be beneficial. This point is discussed further in Section V below.

[12] See, for example, ACIR (1988) and Kenyon and Kincaid (1991).

Moreover, as Breton (1996) has demonstrated, governments in practice are much more competitive and much less monolithic and monopolistic leviathans than Brennan and Buchanan (1980) assert.[13] While there is much still to be learned about intergovernmental competition between governments at the same level (horizontal competition) as well as between governments at different levels (vertical competition) in the context of tax assignment, it seems fair to say that there is no great support for either extreme position in this debate. Neither the position taken by many practical people that all intergovernmental competition is bad nor the extreme public choice position that all intergovernmental competition is good dominates. How one assesses these arguments depends upon a variety of factors that need to be specified carefully with respect to each particular setting in which the question is considered.

C. A Policy Perspective

The inconclusive nature of most discussion of tax assignment in the literature is not surprising. That there is by no means full agreement on the many contentious issues involved in tax assignment is only to be expected. The tax assignment that actually prevails in any country inevitably reflects more the outcome of political bargaining in a particular historical situation than the consistent application of any normative principles. In these circumstances, perhaps, the most useful contribution economists can make to the debate is less to prescribe what should be done than to suggest how the institutional structure within which such prescriptions are determined might be adjusted in order to produce the best possible results (Dafflon, 1992).

Along these lines, McLure (1999a) offers what is perhaps the most useful practical formulation of the public choice approach to tax assignment. Indeed, the simple rule he proposes is, it may be argued, the key to unraveling the whole tangled mess of "what should be taxed and by whom." That rule is simply that (1) subnational governments need to control their own revenues in order to facilitate effective decentralized control of spending, but that (2) control in this sense simply requires that they can affect the volume of own revenues significantly at the margin through their own policy choices, in particular, by choosing tax rates. That is, if subnational governments are expected to act responsibly, such governments must be able to increase or decrease their revenues by means that make them publicly responsible for the consequences of their actions.

This simple approach suggests two useful guidelines for rethinking tax assignment problems. First, the importance of the problem depends very much upon the assignment of spending responsibilities. If, for example, local governments are responsible only for sweeping the streets and picking up the garbage, user fees, and some sort of low-rate general local tax such as a uniform tax on real property will do the job. In effect, the conventional prescriptions of the public economics model produce roughly the right results in this case. On the other hand,

---

[13] For further development of this point in the context of fiscal decentralization, see Bird (forthcoming).

if subnational governments are responsible for expensive social services such as health and education, the pressure on subnational revenues will be much greater and the conventional prescription is less likely to produce sustainable results.

Second, it is critical to be clear that meaningful tax assignment refers to the assignment of the ability (and responsibility) to determine own revenues in some meaningful way. Subnational governments may be fully financed from what they (and others) may consider their "own" taxes. But if, as is often the case in developing countries, they cannot decide which taxes they levy, what the tax bases are, what tax rates are imposed, or how intensively taxes are enforced they actually have no control at all over revenues and hence have really been "assigned" no revenue power at the margin—though perhaps much revenue![14] The single most critical variable from this perspective is control over the effective tax rate preferably—since most transparently—control exercised through the ability to determine the nominal rate.

III. Subnational Revenues: Realities and Prospects

The present assignment of taxes in most developing countries with important regional levels of government, such as Brazil and India, is deficient in several respects. The first, and in many ways the most important, problem is that there is a significant vertical imbalance between expenditures and revenues at all levels of government, with consequent implications for autonomy, efficiency, and accountability. The second major problem is that the present confused and confusing system results in significant costs of administration, costs of compliance, and costs arising from tax-induced inefficiencies in the allocation of scarce resources.

As a rule, even the richest intermediate or regional governments (hereafter referred to as "states") in most countries at present finance some of their expenditures from transfers, although the percentage thus financed often varies considerably from state to state. A significant flow of intergovernmental fiscal transfers is needed in order not only to maintain vertical fiscal balance (between levels of government) but also—to the extent this is a policy concern in the country in question[15]—horizontal fiscal balance (between units of government at the same level).

[14] This is consistent with the definition of "assignment" in Breton (1996) as "the authority to design and implement policy." As he explicitly notes, if one government appoints an agent—such as another government—to implement policy that it (the first government) designs, this is *not* an assignment of power and in no sense transfers political accountability to the implementing government.

[15] Concern for regional (interjurisdictional) equalization varies widely from country to country: compare, for example, Canada and the United States or Switzerland and Germany (Bird, 1986a).

As noted earlier, multitiered governments in principle work best when taxes and the benefits of public spending are as closely related as possible when, that is, the citizen-voter-consumers residing in a particular political jurisdiction both pay for what they get from the public sector and get what they pay for (i.e., benefit from the expenditures financed by the taxes they pay). Obviously, when citizens reside in several overlapping jurisdictions (local-state-nation) this so-called "principle of fiscal equivalence" (Olson, 1969) suggests that they should pay taxes to each level corresponding to the benefits they receive from each jurisdiction. When spillovers are significant—when, for example, benefits flow from one jurisdiction to another or (negatively) when taxes levied by one jurisdiction are in fact borne by persons residing in another jurisdiction—intergovernmental transfers are needed to restore this equivalence. Such "efficiency" transfers should in principle be horizontal, between provinces or municipalities, and not between levels of government.

In addition, however, considerations of administrative efficiency and feasibility may dictate that higher (or lower) levels of government impose certain taxes or carry out certain expenditures even when it would not be appropriate to do so on strict equivalence grounds. Vertical fiscal flows such as those that dominate the intergovernmental fiscal scene in most countries in principle are motivated largely by this consideration, at least, with respect to those flowing to richer jurisdictions. In contrast, if, as suggested here, more adequate subnational taxes are made available, this "fiscal gap" (Boadway and Hobson, 1993) argument for transfers disappears. There is then no case for universal intergovernmental fiscal transfers, since in this system the richest units of government at subnational levels should be essentially self-sufficient.[16] Any grants from higher levels of government made for reasons of regional equalization (net of spillovers) in this system should then be clearly inframarginal, so that, as argued by McLure (1999a), all subnational governments face the full marginal tax price of the spending decisions for which they are responsible.

Subnational taxes should thus in principle satisfy two main criteria. First, they should provide sufficient revenue for the richest subnational units to be essentially fiscally autonomous.[17] Second, they should clearly impose fiscal responsibility at the margin on subnational governments. As noted earlier, the simplest and probably best way to achieve this goal is by allowing those governments to establish their own tax rates.

A. User Charges

Perhaps the most obvious recommendation with respect to revenue structures at any level of government is that appropriate user charges should be employed whenever possible. Not only

[16] For extended discussion of this argument, see Bird (1984, 1993c).

[17] Of course, this needs not preclude intergovernmental fiscal transfers not only to offset spillovers but also, in some circumstances, in order to ensure the adequate provision of certain services to "national standards": for an example of such a system, see Bird and Fiszbein (1998).

does this accord with the conventional view of tax assignment, but it also has all the virtues usually associated with introducing market elements into the public sector decision process. User charges not only provide finance for what governments do. Properly designed, they also provide much-needed guidance as to what governments should do. Moreover, they accord with fairness in the sense that people pay for what they get. All this is true. Nonetheless, the sad truth in most countries is (1) that user charges are seldom employed to the extent possible or desirable; (2) that those charges that do exist are seldom well designed and consequently seldom produce any significant nonrevenue benefits; (3) that it is surprisingly difficult to design and implement good user charges; and (4) that as a rule even—or perhaps especially—good charges are not very popular with either administrators or citizens.[18]

In short, user charges are a good idea in principle, but one that is surprisingly difficult to implement well in practice. In any case, such charges are unlikely to provide anything close to adequate finance for subnational activities unless local governments are confined to a very limited range of service activities that may be properly so financed.

B. Property Taxes

For decades, local governments around the world have been told that the only appropriate general tax source for them is the real property tax (in effect as a sort of generalized user charge).[19] Unfortunately, such advice is not very helpful in the circumstances of many countries. The property tax is a difficult and costly tax to administer well. It is true, of course, that buildings cannot easily run away and hide from tax officials. But it is equally true that valuation is an art, not a science, and that there is much room for discretion and argument with respect to the determination of the base of the tax. Moreover, although the assessment and collection of property taxes can certainly be improved in most developing countries, it is difficult to administer this tax equitably in a rapidly changing environment and it is always difficult to increase revenues from this source very much or very quickly.[20]

---

[18] For extensive analysis and discussion of all these propositions in Canada, see Bird (1976) and Bird and Tsiopoulos (1997).

[19] The classic arguments for the property tax as a "user charge" may be found in Vickrey (1963) and Netzer (1973).

[20] As with the other brief reviews of alternative subnational revenue sources in this section, such statements may appear to be unsupported assertions. For the most part, however, they are grounded in decades of experience and dozens of specific examples. For further discussions of property taxes, for example, see Bird (1974 and 1995b). A more extensive discussion of various sources of subnational taxation may be found in Bird (1999c).

Undoubtedly, a low-rate-uniform property tax has an important role to play in financing local governments, whether rural or urban.[21] Nonetheless, on the whole, subnational governments in most developing countries are often doing well to finance "hard" services out of property taxes. Without disparaging the potentially more important role that property taxes should play in financing local governments in many countries, if regional governments in most countries are expected to play an important role in financing "soft" services (education, health), as a rule they need access to more elastic revenue sources.[22]

C. Excises

Among the more productive taxes that might be considered at the regional (as opposed to the local) level are excises, payroll taxes, corporate income taxes (CITs), PITs, retail sales taxes (RSTs), and VATs. McLure (1993b), for example, suggests that excise taxes are a potentially significant source of regional revenue, largely on administrative and efficiency grounds. The argument is essentially that such taxes are (1) politically acceptable, (2) easily administered by regional governments, and (3) lend themselves to regionally differentiated rate determination. Moreover, in terms of efficiency, such taxes, applied on a destination basis, would have little distortionary effect. Finally, it is sometimes argued that there is at least some benefit argument for some such taxes—for example, on alcohol and tobacco to the extent regional governments are responsible for health expenditures and on vehicles and fuel to the extent they are responsible for roads.

There is of course something in all these arguments, although in some instances not all that much. For example, the benefit case for "sin" taxes is weak in general (Bird, 1997), and it is not always that easy to impose regionally differential taxes without serious distortions as well as substantial administrative and compliance costs and dangers of evasion.[23] Indeed, although it is true that in countries such as the United States and Canada a significant proportion of state revenue comes from excises, it is not particularly desirable to tie state finances to such inelastic levies when the pressure on those finances for the most part comes from very elastic expenditure demands for health and education. Although the strongest economic and administrative case for regional (and perhaps local) excises is probably with respect to vehicle-related taxes (Bahl and Linn, 1992), and such taxes should certainly be exploited more fully than is commonly the case in most countries (Bird, 1999c), even in this case the

[21] In many countries, attempts to increase property tax revenues in practice often result in additional taxes on businesses, particularly those businesses where it can plausibly be assumed that some or all of the tax is "exported." See Section V for further discussion.

[22] Few countries have followed the example of the United States in financing local education to a significant extent from local property taxes, and few seem likely to do so given pressures of time and need. For further discussion of this point, see Bird and Slack (1993).

[23] See, for example, Canada's recent experiences with tobacco taxes (Bird, Perry, and Wilson, 1998) and Colombia's departmental tax on beer (Bird, 1984).

revenue is unlikely to be sufficient to meet regional government needs—assuming, of course, that such governments are responsible for important social expenditures.

D. Personal Income Taxes

Among the few countries in which subnational governments have large expenditure roles and are largely fiscally autonomous are the Scandinavian countries, in which the main source of local government revenue is an income tax levied in the form of a surtax on the national income tax base.[24] Somewhat similar results are achieved in Canada in the form of a provincial surtax on central income taxes—a system which seems likely soon to be changed to a more desirable "tax-on-base" system (Bird, 1993). A similar approach might well provide a more suitable base for subnational finances in a variety of other countries (Bird, Wallich, and Peteri, 1995; Zimmerman, 1998). Unfortunately, even in some of the more developed "developing" countries, such as the larger countries in Latin America, the national PIT is not in very good shape these days (Shome, 1999). The possibility of imposing regional (and perhaps in some instances even local) surcharges on personal taxes should certainly be explored, but it seems unlikely that this approach has much to offer for the near future in most developing countries.

E. Payroll Taxes

A related question concerns regional payroll taxes. Payroll taxes at the state level are currently important sources of state finance in Australia and, to a lesser degree, in a few other countries such as Mexico and South Africa. Such taxes have several merits and at least two demerits. Their merits are that they are clearly administrable, at least when imposed on large enterprises, and also relatively productive at relatively low rates. Their demerits are, first, the economic problem that they act as a tax barrier to employment in the modern sector and introduce distortions into the factor mix decision (Bird, 1992), and, second, the political reality that in most countries the payroll tax basis is already heavily exploited to finance social security systems.

Problems with commuters and migrant labor may make regional or local payroll taxes problematical. If they can be applied effectively, so can flat-rate state PITs, which are in practice levied on much the same base, without—at least in principle—the factor bias inherent in payroll taxes. Moreover, in principle, if not so clearly in practice, such PITs can be levied on a destination (resident) than origin (employment) basis, hence reducing the potential distortionary aspects of differential subnational taxes. On the whole, therefore, regional surcharges on a nationally uniform PIT base where feasible seem a more appropriate revenue source for subnational governments than payroll taxes.

---

[24] For a review of local finances in OECD countries, see Bird and Slack (1991). The Scandinavian systems are set out in more detail in Soderstrom (1991) and Mochida and Lotz (1998).

F. Sales Taxes

In the end, the search for a regional revenue source that is both economically respectable and administratively viable, particularly one with some reasonable elasticity, in the context of most developing countries often comes down to a general sales tax. Excises, yes...to some extent; but there is not always that much money, and even less elasticity, in this revenue source. Much the same can be said with respect to user charges and local property taxes: use them sensibly and as fully as possible but do not expect large and certainly not easily expandable tax revenues from these sources. Payroll taxes are in most countries heavily utilized to finance social insurance and not always a very sensible base for regional taxation. Regional—and perhaps even local—surtaxes on the central PIT make more sense, but are not very promising in the immediate future given the poorly developed nature of that tax in the context of most developing countries. This leaves only the general sales tax, as discussed further in Section IV below.

G. Taxes on Business

Those familiar with subnational tax systems around the world will have noted one conspicuous omission from the preceding discussion, namely, taxes on business.[25] Various regional and local business taxes—corporate income taxes, capital taxes, nonresidential property taxes, and such ancient levies as octroi, patente, and various forms of "industry and commerce" tax—are found in most countries.[26] Subnational business taxes are not only widespread but they are also generally popular with officials and citizens alike, for at least two reasons. First, they often produce substantial revenue and are more elastic than, for example, property taxes. Second, since no one is quite sure of the incidence of such taxes, it is easy to assume, or assert, that someone other than local residents pays them.

As McLure (1980) and others have shown in detail, the case for such subnational business taxes is very weak on efficiency grounds. Subnational corporate taxes have been especially strongly criticized for distorting location decisions (McLure, 1983b). Nonresidential property taxes, especially to the extent they exceed those imposed on residences, in effect sever the tax-spending link essential to sound local finance (Thirsk, 1982). More archaic forms of local business tax such as the patente have even less to be said for them. In short, there are many problems with existing subnational taxes on business.

---

[25] Taxes on natural resources are an important issue in some countries (see McLure, 1994b) but they are not further discussed here.

[26] To the extent payroll taxes are not shifted to workers, they also constitute taxes on business: recent estimates in Canada, for example, suggest that perhaps one-third of such taxes may impact on business (Dahlby, 1993). The share might be higher (or lower) in the conditions of some developing countries but there is undoubtedly some such impact.

As a rule, the scholarly and policy-advising worlds have looked at the distortions and problems arising from such taxes, shuddered, uttered some homily such as "don't do it," and passed on to things of more interest. Local governments facing pressing revenue needs and few other viable revenue-raising opportunities have understandably ignored such advice. Subnational business taxes thus not only continue to exist and flourish around the world but, in some instances, constitute the most rapidly expanding element of subnational revenue systems. It is thus more than time to look at this question more carefully. Section V of this paper therefore suggests a possible new approach to the troublesome issue of subnational business taxation.

IV. Subnational VATs

The general sales tax found in most countries is now usually a VAT. The RST once favored as a regional tax, and still in place in most U.S. states is now an aberration in world perspective. Its future seems dim. The dominance of the VAT poses a serious problem for the finance of regional governments. Most tax analysts have long thought that, so to speak, the only good VAT is a central VAT. In the words of McLure (1993a, p. 58), "...it is not appropriate to assign the VAT to subnational governments." Even in federal countries, in which it is especially clear that regional revenue needs often require subnational governments to have access to the VAT base, there has been a general consensus that, as Tait (1988, p. 165) put it: "the simplest practical way to run a federal-state sales tax system (including VAT) is to adopt a form of revenue sharing...."

The reasons why independent subnational VATs were considered to be either infeasible or undesirable varied (Bird, 1993). Some analysts emphasized high administrative and compliance costs. Others stressed the possible loss of macroeconomic control and the general reluctance of central governments to share VAT room. Still others emphasized the problems arising from cross-border (interstate) trade. Broadly, the argument with respect to such trade was that subnational VATs were, if levied on an origin basis, distortionary, and if levied on a destination basis, unworkable.[27] The apparent unanimity of professional opinion on this issue is troubling, however, for at least three reasons.

First, as already emphasized, there appears to be a worldwide trend toward decentralizing some important governmental expenditure functions. If so, it is desirable to decentralize some important revenues also in order not to break the "Wicksellian connection" (Breton, 1996) between the two sides of the budget. Second, as noted by Musgrave (1983), a sales tax is in principle a perfectly logical revenue source for regional governments. Indeed, in developing countries in which income taxes do not play a major role, it is not clear what

---

[27] It should be noted, however, that Poddar (1990) in the most thorough discussion of this issue demonstrated that the destination base was technically feasible, although the system of interstate crediting he discusses would be costly and difficult to apply and require a very high degree of mutual trust among governments.

other major revenue sources such governments might have. Third, and by no means least important, in a number of major countries, sales taxes of varying sorts already constitute the major source of finance of intermediate governments.

At first glance, however, international experience does indeed appear to suggest that, until recently, no one had managed to work out an acceptable system for taxing sales at two levels of government (Bird, 1993). Although several possible methods of dealing with the potential problems arising from two-level sales taxes exist, none seems entirely satisfactory.

First, sales tax may be collected only at the regional level, either as VAT or RST. Only the United States currently follows this path (with RST) and, as already noted, it seems unlikely to find many imitators. Few central governments, whether in developed or developing countries, seem likely to be able or willing to give up the revenue they now collect from sales tax. Moreover, in developing countries, RSTs are not generally considered feasible even at the central, let alone the regional, level, while the regional VAT option has, as noted earlier, generally been considered infeasible also.[28]

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 a formula basis with the states. Among other federal countries, Switzerland also has a VAT only at the central level, as does China since 1994. Australia also has only a federal sales tax (soon to become a VAT). Only Brazil, India, Canada, and Argentina currently attempt to tax sales at both state and federal levels and only Brazil and a few provinces in Canada attempt to levy a VAT at both levels.[29]

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 (Tait, 1988). For example, recent proposals for reform in Brazil (Silvani and dos Santos, 1996) and the European Union (Smith, 1997) have essentially taken this tack. This approach is certainly technically feasible, and appears to have substantial advantages in terms of administrative and compliance costs. It is thus a perfectly sensible way to finance regional governments in the circumstances of many developing countries. Nonetheless, such "tax sharing" in effect is simply a form of intergovernmental fiscal transfer, with the total to be transferred determined

---

[28] A system of independent subnational VATs is of course similar to the present situation in the European Union (EU). For discussion, and further references, see Bird and Gendron (1998).

[29] In Russia (and other countries of the former Soviet Union) the VAT is levied only at the national level, but some of the revenues are distributed to states on an origin basis a system which gives rise to problems, exacerbated by a weak tax administration, similar to those that arise in Brazil with its origin-based VAT system: see Baer, Summers, and Sunley (1996), and, for the latest developments in Russia, Mikesell (1999). These systems, and the many special problems of transitional countries, are not further discussed here.

by the designated share of VAT collections and the amount allocated to each state determined by a central formula.[30] Such revenues are not really subnational taxes. In federal countries with strong regions it is by no means obvious why either the central or the regional governments would be willing to accept such a system.[31]

Thirdly, although the VAT may be the best of all possible sales taxes in some general sense, there may still be an argument for maintaining two distinct sales tax bases in a federal state in which both levels of government tax sales. Such a solution is obviously both untidy and probably costly, but it may be argued that such costs are simply part of the price to be paid for a federal system which presumably has offsetting virtues such as respecting local preferences (Bird, 1993).

Fourthly, both levels of government could maintain independent VATs, perhaps, reducing costs through harmonizing bases and to some extent rates—as is now going on in the EU horizontally, between member countries, and has been proposed in India and Brazil (see below) while developing a more adequate system to deal with interstate trade.

Finally, the VAT could become a joint federal-state tax. Such a tax could be administered by either level of government on a jointly determined base but with each government determining its own tax rate. From the point of view of fiscal accountability, this solution seems clearly preferable to the German approach. As discussed below, a variant of this approach is now used in Canada.

The balance of this section first reviews briefly the present state of affairs in Brazil, Argentina, and India and then sets out how a variant of the currently employed in Canada may perhaps provide a way to establish viable subnational VATs in at least such large, federal developing countries.[32]

A. Brazil

The first country to introduce a full-fledged VAT was not, as is often thought, France (which had indeed pioneered with this form of taxation but did not initially carry it through the retail

---

[30] The German approach may be contrasted with Canada's HST (as discussed later in this section) which similarly imposes a uniform VAT but shares VAT revenues among participating provinces on the basis of estimated taxable consumption, thus, in effect, implementing a destination-principle VAT.

[31] 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, such as that now existing in Canada (see below) may thus become a more prominent feature of some countries.

[32] Much of the following discussion is based on Bird and Gendron (1997).

stage). Perhaps surprisingly, that country was Brazil (Guérard, 1973). Indeed, Brazil liked the idea of a VAT so much that it introduced not one VAT but several for the federal government (the IPI) and one for each of the state governments (the ICMS).[33]

All too soon, however, it became clear that Brazil's enthusiastic adoption of this new tax had resulted in a series of complex technical and administrative problems as to how to apply different VATs in different states—although all are levied at a uniform rate—in addition to a federal VAT. Over the years, these problems were in part resolved in various (and ultimately unsatisfactory) ways. For example, confining the federal IPI essentially to the manufacturing stage reduced the overlap in taxes. In part, the problems were simply ignored, perhaps because the resulting distortions in resource allocation seemed unimportant compared to those resulting from inflation; and in part, issues were fudged by various unsatisfactory administrative fixes such as the introduction of some border controls between states.[34] Nonetheless, the resulting patchwork quilt—perhaps a better analogy would be a blimp with a lot of chewing gum patches—has become increasingly unsatisfactory and sales tax reform has again risen high on the fiscal agenda in Brazil in recent years.[35]

At present in Brazil, the origin principle applies to interstate trade. Moreover, there is no meaningful conceptual or administrative integration between the federal and state versions of the VAT. Brazil thus has the worst of both worlds. Not only does it have all the problems of dealing with cross-border trade that have, for example, bedeviled the EU,[36] but it also exemplifies the ills of excessive compliance and administrative costs, location distortion, and tax exporting and competition often alleged to be inevitable accompaniments of such dual VAT systems. Moreover, since all state rates are uniform, this system does not really fulfill the criteria of good regional tax assignment discussed earlier. Some attempt has been made to alleviate the distortionary effect of the origin principle by imposing a standard rate (12 percent) on interregional trade (with the important exception of a lower rate of 7 percent on shipments to the poorer states). Nonetheless, it is unclear that in fact the poorer states

---

[33] IPI (Imposto Sobre Productos Industrializados) is levied by the federal government on industry and ICMS (Imposto Sobre Operacoes Relativas a Circulacao de Mercadorias e Servicios) is levied by the states on agriculture, industry, and many services. In addition, another tax, the ISS (Imposto Sobre Servicios) is levied on a gross receipts basis by municipalities on a variety of industrial, commercial, and professional services. There are also a number of other taxes on financial transactions, retail sales of fuel, and so on, that are not discussed here.

[34] For discussion, see Purohit (1994) and Shome and Spahn (1996).

[35] Recent proposed reforms are discussed in Afonso (1996), Shome and Spahn (1996), Silvani and dos Santos (1996), and Varsano (1995, 1999).

[36] See, for example, Cnossen (1983) and Cnossen and Shoup (1987).

benefit from this provision, and it is all too clear that there are significant administrative, revenue, and economic complications arising from the present system.

To replace this system, the federal government initially proposed replacing the IPI by a new federal ICMS which would be collected together with a revised state ICMS on the same base as a unified VAT at a uniform national rate consisting of a federal rate (set by the federal government) and a uniform state rate (Silvani and dos Santos, 1996). The allocation of the "state" part of the VAT collections was to be left open to the decision of the National Senate (in which state interests are strongly represented). The Senate could decide to allocate the revenue to the producer state (origin), the consumer state (destination), or to divide it between the two on some basis. After considerable debate, the state ICMS was substantially revised to eliminate significant elements of taxation on exports and investment in the existing system (Amorim, 1996), with the federal government guaranteeing that no state would lose revenue as a result of the change.

The two key questions of integrating the IPI and ICMS systems (vertical coordination) and developing a system for dealing with interstate transactions (horizontal coordination) were thus left for further discussion. Nonetheless, it is probably not too misleading to compare this federal proposal to the "common" VAT system recently proposed by the European Commission (Smith, 1997) or the "harmonized" VAT recently adopted in some Canadian provinces (Canada, 1996). As discussed later in this Section, an alternative proposal (Varsano, 1995, 1999) appears to offer a more promising approach not only in Brazil but more generally.

B. Argentina

Fear of difficulties similar to those arising in Brazil has perhaps been one reason for delaying desirable sales tax reforms in two other developing federal countries, India and Argentina. In Argentina, which already has a fairly satisfactory federal VAT, a 1993 federal-provincial agreement (the Pacto Fiscal) required the abolition of the provincial gross receipts taxes and their replacement by a proposed RST by 1996.[37] Although in the end the completion of this process was postponed, the ensuing discussion led to proposals from the most important province (Buenos Aires) for a provincial-level VAT and to considerable discussion on the merits and demerits of this approach.

The central government collects most taxes in Argentina, although a substantial share of these collections flows through to the provinces through the so-called coparticipación (revenue-sharing) system. The tax on gross receipts is by far the most important tax collected by the provinces themselves; 60 percent of all revenues from this source are collected in the province and (the separate) municipality of Buenos Aires, with most of the remainder being collected in a few other large provinces. This antiquated tax is levied at various rates and

[37] The discussion in this section relies heavily on World Bank (1996) as updated by subsequent discussions in Argentina: see also Fenochietto (1998) and Piffano (1999).

based on different activities as freely decided by the different provincial governments. As a first step in the process of changing the gross-receipts tax to a RST, most provinces abolished or reduced their taxes on primary and some industrial activities.[38]

This change is obviously desirable in principle as reducing economic distortion. From the point of view of strengthening provincial revenues, however, the effects of replacing the existing gross receipts tax were less clearly desirable. The national government estimated that a 3.5 percent rate on retail sales would produce the same revenue as the existing tax, but other estimates suggested that the required replacement rate on the feasible tax base may be as high as 6–7 percent on average, with the Municipality of Buenos Aires and some provinces requiring rates as high as 10 percent (Gaggero, 1994). Clearly, adding a provincial retail tax of this level to a federal VAT of 21 percent is not something that is either obviously desirable or likely to be politically or administratively feasible in Argentina.[39] Nonetheless, in principle the provinces as a whole should be able to implement the proposed new tax at relatively little revenue risk. Since in practice most of the revenue in any new provincial sales tax system, whether the tax takes the form of an RST or a VAT, will continue to be collected from established larger preretail firms, as now, there seems little reason to expect a dramatic change in either tax evasion or tax revenues as a result of this change.[40] Nonetheless, Gomez Sabaini and Gaggero (1997) suggest that it would be more

---

[38] As of 1995, for example, the tax on primary production had been eliminated completely in six provinces and reduced to rates of 1 percent or less in 20 of the 24 provinces, while the tax on industry had generally been lowered to 1.5 percent, compared to the general rates of 2.5 percent on wholesale trade and 3.5 percent on retail trade and services. The gross receipts tax, even simplified to the point it was in 1995, is not a simple tax: laying out the rates and exemptions for the 24 provinces takes 20 pages of small type!

[39] For example, Gomez Sabaini and Gaggero (1997) recently recommended that the maximum combined federal and provincial sales tax rate should be less than 20 percent, although they recognize that revenue needs may make this a medium rather than a short-term goal.

[40] Most Argentine sales taxes are collected at the preretail stage. Under the so-called percepción system, this is true even of that part of the VAT nominally levied on retail sales. A manufacturer or wholesaler whose ex-tax price to a retailer is, say, 100 pesos is required to charge not only the normal 21 pesos VAT on sales but also an additional amount, say, 3 pesos. The additional 3 pesos is then remitted to the government as a sort of "withholding" against the tax the retailer is in principle supposed to charge with respect to his mark-up when he sells to a final consumer. For example, if the ex-tax retail sales price is 120, and the ex-tax cost of inputs is 100, the net tax due on the retail sale at a rate of 21 percent is 0.21(20) = 4.2 pesos. The retailer is supposed to remit to the government 4.2 pesos less the 3 pesos already withheld or 1.2 pesos. If, as is all too likely, the retail sale does not come to the notice of the authorities, at least they have the 3 pesos. The mechanics of this system are
(continued...)

sensible from the point of view of reducing administrative and compliance cost to replace the independent federal (VAT) and provincial (quasi-RST) taxes by either independent provincial VATs or a more uniform joint federal-provincial VAT along the lines proposed by the federal government in Brazil. They further suggest that any such subnational VATs should be on a destination basis, with the problem of interprovincial sales dealt with by allocating revenues in accordance with some macrolevel-consumption indicators (as under the Canadian Harmonized Sales Tax (HST)). This solution would clearly be more feasible with the joint version of the tax and would in any case require a high degree of agreement between the federal and various provincial governments. The CVAT proposal set out briefly below both requires less such agreement and affords more provincial revenue autonomy.[41] In any case, however, since the main "producing" provinces (e.g., Buenos Aires) would clearly lose revenue if the provincial sales tax were shifted from an origin to a destination basis, a credible revenue guarantee would likely be needed to make any approach acceptable.[42]

C. India

Discussions along somewhat similar lines have been going on in India for years. In 1992, a Tax Reforms Committee (TRC) proposed that a VAT replace not only the present federal sales tax (the Union excise) but also the state sales taxes, with the revenue being shared between the levels of government.[43] As an intermediate stage, the TRC suggested extension of the (proposed) central VAT forward to the wholesale stage, with the "wholesale" component of the VAT being administered by the state governments. The idea was to have this new extension of the VAT (basically, to large traders) administered by the state sales tax administrations, with the state governments keeping the revenue. The main reason the TRC report suggested state administration of the tax on the wholesale margin was a Constitutional

similar to a VAT, and as with the VAT in comparison to an RST, one rationale for it is to avoid losing revenue on hard-to-control retail sales.

[41] See Piffano (1999) for a detailed critique of both proposals.

[42] Revenue gains (or losses) to particular jurisdictions from tax substitutions are unlikely to have the same magnitude—and may even have different signs—than real economic changes. Nonetheless, it is clearly the visible revenue effects that dominate discussion of these issues even in developed countries (see, e.g., Keen and Smith, 1996), although this important question is not discussed in detail here.

[43] Actually, the proposal included the replacement of the municipal transactions tax (the octroi) and the sharing of the revenues between all three levels of government but (as in the Brazilian case) the local sales tax is not discussed in the present paper nor is the peculiar legal nature of the "sales tax" at the central level in India (Purohit, 1997). The TRC (India, 1992) report was of course concerned primarily with central taxes and dealt only superficially with intergovernmental issues. This and the next few paragraphs are in part based on Bird (1993b).

provision limiting the power of the central government to go beyond the production stage in levying excise taxes.

In addition to central and state sales taxes, India has a special tax—somewhat confusingly called the "Central Sales Tax" (CST) although all the revenue goes to the states —which is levied by exporting states on interstate exports at a uniform 4 percent rate set by central law.[44] The TRC suggested a clearinghouse arrangement under which the CST collected would be paid into a central fund and then shared—apparently 50-50, although this was not entirely clear—between importing and exporting states, combined with the extension by importing states of credits for the tax levied by exporting states. Since even the EU has not been able to set up such a clearinghouse arrangement (Smith, 1997), the TRC's fall-back position of cutting the CST rate back to its original 1 percent level appears to be a more promising approach to reducing the cascading inherent in the present system.[45] As in Argentina, however, any reduction in the role played by origin-based taxes would obviously not be popular with states that gain considerable revenue from the present CST.[46]

More generally, while there is obviously much to be said in favor of the TRC report's "ideal" solution of a comprehensive VAT with the proceeds shared between all levels of government, this ideal seems unlikely to be soon attained. A solution that requires, in effect,

---

[44] An important distinction from the superficially similar system in Brazil is that there is no provision in India for rebating the CST in the importing state.

[45] Rao and Sen (1996) estimate that tax exportation may be over 40 percent in some states, although this estimate is perhaps on the high side.

[46] It should perhaps be noted that the usual assumption in Indian discussion that exporting states always gain from being able to tax their exports seems a bit odd in the context of proposals for a VAT, one key argument for which is that it "untaxes" exports. If removing taxes from (international) exports is good, can taxing (interstate) exports be good? Although this is not the place to discuss the point in detail, the complete forward shifting assumed in the usual discussion of cross-border taxation seems unlikely to occur in practice whether within a country or between countries. Presumably, the degree of shifting of commodity taxes depends upon market conditions.

If, for example, the demand for exports is somewhat elastic, the residents of the exporting state in one way or another will actually pay part of the export tax. Indeed, in the extreme case of a small open-price-taking economy, all the revenue nominally collected from exports actually comes from the residents of the taxing jurisdiction in one way or another. For example, Indian states with surplus cereals sell mostly to the Food Corporation of India, a semimonopolistic purchaser, at a fixed purchase price. Export taxes imposed on such sales would appear to fall fully on farmers. Even if some taxes are shifted forward, depending upon the elasticity of demand, the state as a whole may be worse off although its government budget may be better off.

complete restructuring of the intergovernmental finance system would be hard to achieve in most countries. Moreover, without a long and considerable effort of analysis and persuasion, it is difficult to envisage any formula distributing the VAT proceeds that would likely prove acceptable in the absence of a much greater degree of homogeneity than prevails, or seems likely to prevail for decades, in India. India is not Germany and a neat "German solution" of the sort recommended by the TRC report seems unlikely.

Subsequent to the TRC report, considerable discussion on these issues has continued in India.[47] One outcome of this discussion was a recommendation (National Institute, 1994) for a system of independent dual VATs but with the central VAT being levied only on manufacturers. Subsequent discussions between the states on replacing their sales taxes by VATs centered to a considerable extent on the issue of what to do with the CST as part of a move to a destination-based sales tax.[48] Bagchi (1996), for example, suggested the CST be reduced to 2 percent, with the exporting state keeping half the revenue and the remainder being pooled and distributed "on an equitable basis" basically to finance a full rebate of the exporter's tax by the importing states.

More broadly, Burgess, Howes, and Stern (1995) proposed a dual VAT as an intermediate option on as harmonized a base as possible. They were unclear, however, on the critical issue of whether a deferred-payment system, a clearinghouse system, or some other method was the best way to deal with interstate trade.[49] In the long run, they suggested that the VAT should become purely a state tax, thus, in effect, replicating the EU situation.

In a discussion of the same problem, Bagchi (1996) suggested that the long-run solution should instead be a concurrent or dual VAT with a nationally determined base but independently set federal and state rates. Again, however, he was uncertain as to how to handle interstate trade, suggesting three possible variants: (1) the deferred-payment system, (2) a reduced and pooled CST distributed by formula, and (3) zero-rating (for state VAT only) on interstate sales. In practical terms, he argued that the second of these solutions is most likely to prove workable. In fact, however, it is the third of these solutions—basically

---

[47] See, for example, Burgess, Howes, and Stern (1995), National Institute of Public Finance (1994), Purohit and Purohit (1995), Bagchi (1996, 1997, 1998), and Shome (1997).

[48] For a review of the earlier discussion, see Purohit (1995).

[49] Under a deferred-payment system, exporting states zero-rate interstate exports and importing states do not tax interstate imports but rather rely on the tax-credit mechanism of VAT to ensure that taxpayers in the importing state pay tax (because they receive no offsetting credit). Under a clearinghouse system, exporters pay tax to the exporting state on interstate sales and importers receive credit for the tax from the importing state. At the end of the tax period, accounts are balanced off and the exporting state compensates the importing state for any net credit balances.

that which is used in the province of Quebec in Canada—which seems to be the most workable, as discussed below.[50]

On the whole, in India, as in Brazil and Argentina, the way forward to a decent VAT system with two levels of government applying independent VATs requires both a way to implement the destination principle on interstate trade and some means of compensating "losing" states for revenue losses implied by the transition. Interestingly, as noted immediately below, although they have not been neglected, neither of these problems has had a very high profile in the case of Canada, the only developed country with a similar two-tier sales tax system.

D. Canada

At the present time, Canada is perhaps the most interesting country in the world for sales tax aficionados. The country has several distinct sales tax systems. There is a federal VAT, the Goods and Services Tax (GST), that applies throughout the country. In one province (Alberta), the GST is the only sales tax. In four provinces, in addition to the GST, there is a separate RST applied to the GST-exclusive tax base. In one small province (Prince Edward Island), the provincial RST is applied to the GST-inclusive tax base. In three other small provinces (Newfoundland, Nova Scotia, and New Brunswick), there is a joint federal-provincial VAT called the HST and administered by the federal government at a uniform rate of 15 percent. Finally, in one province (Quebec) there is a provincial VAT, the Quebec Sales Tax (QST), applied to the GST-inclusive tax base. The QST is administered by the provincial government, which also administers the GST in the province on behalf of the federal government.

Canada thus offers a variety of interesting situations: separate federal and provincial VATs administered provincially, joint federal and provincial VATs administered federally, and separate federal VAT and provincial RSTs administered separately. A few salient points with respect to the QST and GST are set out in Appendix I.[51]

As shown there, the QST and GST as they now exist constitute an operational dual VAT system—with apparently none of the problems usually associated with such systems. The rates of the two taxes are set quite independently by the respective governments. The tax

---

[50] Several Indian states have recently adopted forms of "state VAT" but with little success in the absence of an adequate framework (Khadka and Shukla, 1999). Although some useful work on this subject has been done—for example, the drafting of a "model" state VAT law (National Institute of Public Finance, 1998)—it seems most unlikely that much progress on this problem can realistically be expected in the Indian situation "from below," as it were.

[51] This discussion is largely taken from Bird and Gendron (1998).

bases are also determined independently, although they are essentially the same.[52] From the beginning, both taxes have been collected in Quebec by the Quebec Department of Revenue. [53]

Taxes on interprovincial sales from one business to another are basically handled by a deferred-payment system very similar to that now applied in the EU allegedly as a "transitional" regime (Commission of the European Communities, 1996). Exports from Quebec, whether to another province or another country, are zero-rated. Imports into the province from other provinces, or from abroad, are taxable but the tax is assessed on interprovincial imports only when there is a sale by a registered trader to an unregistered trader or consumer in the province.[54] Although special regimes apply to automobiles and a few other cases (Canada, 1996), in general there is no attempt to collect tax on interprovincial purchases made directly by final consumers.[55]

The principal difference between this system and that in the EU is the existence of the overriding federal GST as an enforcement mechanism. The federal government establishes audit priorities for GST but a final audit plan is agreed with the Quebec government, with the latter actually carrying out the audit in the province and reporting the results to Revenue Canada. Since the QST is applied to a GST-inclusive base, Quebec has some direct incentive to monitor the GST as well as the QST. Although Quebec cannot directly monitor out-of-province sales, the normal process of GST audit (carried out interprovincially by Revenue Canada) serves as a cross-check to ensure that QST has not been evaded. In effect, the existence of a federal sales tax on a more or less uniform base provides some control over

[52] It is perhaps not unimportant that a precedent existed for this under the long-standing Quebec PIT, the base for which is also almost identical to the federal PIT—although in this case, unlike the QST/GST case, the two taxes are collected independently.

[53] The federal share is turned over to the federal government after deducting an agreed (per registrant) administrative cost. No problems have arisen from such intergovernmental collection arrangements, which are quite common in Canada (although the revenue flow has invariably been the other way in the past, that is, from the federal to the provincial governments).

[54] Note that the federal government does not assess QST on imports at the customs point. This is one of the major differences from the HST system discussed briefly below. Since the federal government has recently agreed to collect the RST of some other provinces (Ontario, British Columbia) at the border together with the GST, it appears that this issue is being resolved more on political than on technical grounds.

[55] Apart from a very few cases, Canadian provinces have traditionally not worried too much about this problem since geography ensures that most major population centers are not close to borders with other provinces. The advent of electronic commerce, however, is likely to lead to more concern with this issue in Canada, as elsewhere (McLure, 1997b, 1998).

interjurisdictional sales for purposes of both provincial and federal taxes. Reportedly, the system is working quite well at the technical level, despite the well-known political differences between the governments in Quebec and Ottawa.

Nonetheless, the federal government in pursuit of its aim of developing a more uniform national sales tax system recently adopted a totally different approach. In 1997 the federal government and several small eastern provinces introduced a so-called HST. The key elements of the HST include the replacement of the previous federal and provincial sales tax systems with one harmonized VAT base; a combined federal-provincial rate of 15 percent in the three participating provinces; and federal administration of both federal and provincial sales taxes. The new combined rate consists of the 7 percent GST and an 8 percent provincial tax (applicable to a base excluding the GST).[56] HST revenues are shared on the basis of province-specific consumption patterns, in accordance with allocation formulae developed jointly by the federal government and the provinces.[57] Interprovincial trade will be handled as under the QST.

Although the HST is superior in some ways to the initial agreement between the federal government and the government of Quebec, it is by no means superior to the QST-GST system as currently operated. In principle, harmonization should minimize compliance and administrative costs and related efficiency losses. One way to achieve this aim is to have a single agency administer and collect the tax for both levels of government. In addition, harmonization should respect provincial autonomy by allowing provinces to choose a sales tax rate that may differ from the federal sales tax rate.

The harmonization agreement with Quebec respects provincial autonomy and single administration but initially failed to achieve simplification. Now, however, Quebec's sales tax is more or less fully harmonized with the GST, so the principles stated above are more or less satisfied. In contrast, the HST agreement achieves simplification but at the expense of

---

[56] The combined rate was significantly lower than the previous combined rates of 19.84 percent in Newfoundland and 18.77 percent in the other two provinces. This is important because the federal government is providing assistance to the participating provinces by assuming some of the costs incurred by provinces in restructuring their sales tax systems. To be eligible, provinces must experience a revenue shortfall in excess of 5 percent of their current provincial sales tax collections. For qualifying provinces—which retrospectively excluded Quebec and prospectively exclude the large rich provinces of Ontario and British Columbia—adjustment assistance will offset 100 percent of the revenue shortfalls in excess of 5 percent of current RST collections in years one and two, 50 percent of this amount in year three, and 25 percent in year four. The total cost of adjustment assistance for the three participating provinces is estimated at close to $1 billion.

[57] The data are gathered by Statistics Canada, a federal agency, but any possible "game-playing" with the data is considered so remote a prospect that no one in Canada has even bothered to raise the possibility.

provincial autonomy. The federal government's apparent objective in the HST system is to have minimal variation in rates. The justification advanced is that a common sales tax rate reduces compliance costs for business and administration costs for governments. It is unclear, however, that the HST is any better in these regards than the GST/QST system, while the HST clearly hinders provincial autonomy in the sales tax field.[58] The revised QST/GST arrangement seems much closer to an ideal solution: there is a single administration; there is basic conformity on all important aspects of the dual VATs that might affect compliance costs; and there is complete autonomy in rate setting—and, to a limited extent, even in granting exemptions to final consumers, if desired.[59]

Canada's present system, with some provinces harmonized and others not, is of course far from perfect. There remain administration and compliance costs when businesses engage in cross-border trade. The same is true of shopping and trade between provinces with different regimes (such as Quebec and New Brunswick). But 80 percent to 90 percent of taxable trade in most countries takes place between registered firms and Canadian experience demonstrates that a subnational jurisdiction can impose a destination-basis VAT on this trade without needing any clearinghouse mechanism.

The CVAT solution

What are the lessons of Canadian experience for countries such as Brazil, Argentina, and India? If the general level of tax administration is sufficiently high, it is feasible to implement destination-principle subnational VATs at different rates. To a limited extent, while not particularly desirable, even different treatments of certain final sales to consumers may be feasible without incurring significant new administrative or compliance costs or risking significant revenue. All this is true, provided there is an overriding central VAT and adequate exchange of information between central and subnational tax administrations.

The basis for such a subnational VAT system is a well-designed and comprehensive national VAT.[60] In this respect, Argentina seems better positioned than either Brazil or India. Both of

---

[58] The HST agreement also ties the federal government's hands since it cannot change either the base or the rate of the tax without the unanimous agreement of the provinces.

[59] Moreover, as the 1998 Quebec budget demonstrated by maintaining restrictions on input credits for large businesses, there is even room for bad but politically popular tax policy without damaging the general system. This may not be good news for tax experts but governments will no doubt welcome it.

[60] Bird and Gendron (1998) argue that in the case of the EU it might be possible to create a "virtual" EU VAT (one that would yield no revenues to the EU) to enable a QST/GST system to function. Extending this idea to the CVAT discussed below, it might equally be possible to envisage a CVAT functioning without a central VAT in place since all that is really needed is a separate account into and out of which CVAT revenues flow. Neither of

(continued...)

the latter countries need to improve their existing central government sales tax before attempting to reform their subnational sales tax regimes.[61] The key to the Canadian solution is the existence of an adequate degree of (justified) trust in each other's competence by both levels of government. That the system works between two such bitter political opponents as the federal government of Canada and the current provincial government of Quebec suggests that the level of trust required may not be all that high. Nonetheless, it is perhaps asking too much to expect an equivalent relationship (or quality of administration) to exist soon in many developing countries.

Of course, not all cross-border problems can be resolved by even the best dual VAT system. As Keen and Smith (1996) note with respect to the EU, under any possible system special arrangements such as those that now exist for direct cross-border sales to final consumers for mail order sales and perhaps also for very high rate excise items included in VAT systems will have to continue.[62] Nonetheless, at the very least the QST experience suggests both that there is no need to be excessively pessimistic about the possibility of decent subnational VATs and that the most workable solution to the problems of cross-border trade in the absence of fiscal frontiers may lie in the creation of a parallel tax structure for the country as a whole.

In short, Canada demonstrates that with good tax administration, it is perfectly feasible to operate a VAT at the subnational level on a destination basis, at least, for large regional governments.[63] Such a system will, it seems, work best when there is an overriding central VAT on approximately the same base and either (and preferably) both taxes are operated by the same administration or else there is very close cooperation, particularly in audit. In principle, it is immaterial whether there are two separate administrations or one; or, if there is one, which level operates it. Clearly, a single central administration and a common base (as in Canada's PIT system) would probably be most efficient but this degree of convergence is not essential. What is critical is either a unified audit or a very high level of information exchange. Most importantly, from the perspective of good tax assignment, each taxing government should be able independently to determine its own VAT rate.

What can be done when there is no realistic prospect of good tax administration and especially not at the subnational level, in the near future? As Varsano (1995, 1999) and

---

these approaches, however, would provide the underlying enforcement power arising from the audit function of a real central VAT.

[61] For clear recognition of this point in the Indian context, see Bagchi (1998).

[62] Incidentally, most of the same problems also arise with state RSTs; see Fox (1992).

[63] Canada also demonstrates that it is perfectly feasible to have several different types of relationship (or nonrelationship) between central and subnational sales taxes but this point is not pursued here.

McLure (1999b) have demonstrated, one promising approach is to impose what is in effect a supplemental central VAT, which McLure labels 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 far from well developed. Specifically, it reduces the risk that households (and unregistered traders) in any state can dodge state VAT by pretending to be registered traders located in other states.

How might such a CVAT work? Briefly, assuming that states can levy their own independent VAT rates—a central objective 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, 1999b).[64] States would zero-rate not only international but interstate sales. Interstate sales would be subject to the central CVAT as well as the central VAT. Domestic sales would thus be subject to central VAT and either state VAT (for local sales) or central CVAT (for out-of-state sales). 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.[65] Registered purchasers in the other state would 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.[66] Second, the state VAT applied to 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 described above—a destination subnational VAT is applied—but the CVAT now acts to protect state revenues from some obvious frauds.

This simple system seems to make subnational VATs feasible and potentially attractive—especially 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 cannot be expected to be up to Canadian standards.[67] Indeed, over time, as with respect to earlier changes in tax administration such as the introduction of income tax withholding and indeed the VAT form of sales taxation itself, this new idea in fiscal technology may prove to be one of the key innovations in tax thought of the century. Not only does it appear to provide a

---

[64] For a more complete discussion of how CVAT might work, see Varsano (1999) and McLure (1999b).

[65] This assumes that state VAT rates are lower than the central rate. If, as in Brazil, 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 an insuperable problem if, as would seem generally advisable, there is central administration of state VATs.

[66] Presumably, as in Canada, the central government would receive an agreed—per registrant—fee for its services.

[67] As emphasized earlier, on the whole more homogeneous or smaller countries would likely be better advised on the whole to follow the HST approach to sharing VAT revenues.

sounder fiscal base for decentralization than would otherwise be possible in many developing (and transitional) countries, but it may also offer a promising approach to maintaining not only subnational but also national sales taxes in the era of electronic commerce, although this topic cannot be developed here.[68]

V. Subnational Business Taxes

No matter how well a subnational VAT may function from both a revenue and efficiency perspective, it is unlikely to satisfy adequately the obvious desire of political leaders at all levels of government to impose taxes on business. Whether or not there is an economic case for subnational business taxes, the political realities of governing in a democratic society are such that virtually any subnational government will in any case wish to impose such a tax.[69] Since such taxes are likely to continue to exist, no matter what conventional wisdom implies, it is important to consider whether the problems arising from subnational governments taxing business are with the very idea or rather with the way in which they now generally do so. This section argues that not only is there a good economic case for subnational taxation of business but that many of the problems arising from the existing taxes may be resolved by the adoption of a form of business taxation that best satisfies that economic case.

The economic case for subnational business taxation is simply as a form of generalized benefit tax. The idea is an old one, and, indeed, as noted in Section II of this paper, such benefit taxes are not only allowable at the subnational level even in the strictest "tax assignment" formulation but they are essential to the attainment of the efficiency objective that motivates that formulation. Where possible, specific public services benefiting specific business enterprises should of course be paid for by appropriate user charges. But where it is not feasible to recoup the marginal cost of cost-reducing public sector outlays through user charges, some form of broad-based general levy on business activity may well be warranted. Kitchen and Slack (1993) have estimated, for example, that on average about 40 percent of local (noneducational) expenditures benefit nonresidential properties in Canada, although the share is less than 20 percent if education is taken into account.[70] Similarly, Oakland and Testa (1995) have estimated the business-related share of combined state and local expenditures in the United States to be about 13 percent.[71] There is thus clearly a case for

---

[68] McLure (1999b) notes this prospect in passing; he has elsewhere (McLure, 1997b) discussed in more detail the problems posed for sales taxes by the advent of electronic commerce. (Similar problems of course arise with respect to income tax, as noted, e.g., in Bird and Wilkie, forthcoming.)

[69] For discussion, see Bennett and Krebs (1988) and Pola (1991).

[70] For similar estimates for a specific metropolitan area, see McKay (1995).

[71] A critical element in these calculations is of course the treatment of education and health, the most important subnational expenditures in many countries. The studies cited above

(continued...)

subnational governments to impose some generalized benefit tax on business, just as a similar argument has often been used to justify the residential property tax (Netzer, 1973).

Levying subnational taxes on the basis that benefiting businesses should pay for the benefits they receive from local public services would minimize both horizontal and vertical spillovers.[72] Horizontal spillovers may result in excessive levels of taxation since nonresidents in effect pay for services enjoyed by residents to the extent "excess" business taxes are exported. Alternatively, the result may be that too low a level of taxation is imposed, for fear of loss of tax base to other jurisdictions. Vertical spillovers may arise from the interdependence of taxing decisions when different levels of government tax the same base. For example, such spillovers occur if taxes at one level are deductible or creditable at another level or if taxes imposed by one government—on, say, labor income—decrease work incentives and hence increase demands on another level for certain types of expenditure, such as social assistance. All such spillovers reduce governmental accountability. Although it has often been suggested that intergovernmental tax competition may usefully limit the taxing power of governments,[73] it is equally possible that such competition may lead to governments that are "too small." What is certain is that such spillovers make it highly unlikely that the "right" level of taxation and expenditure will be found in any jurisdiction.[74]

It is difficult to find any support along these lines for taxing any one input, whether labor (payroll tax) or capital (capital tax or CIT). Instead, what this line of reasoning suggests is that a broad-based levy neutral to factor mix should be imposed, such as a tax on value added. Indeed, as Sullivan (1965) has documented, the original conception of the VAT (by Adams (1918) Studenski (1940)) was as a business benefit tax.[75] More precisely, as Allan

---

assume that no direct benefits are received by business from such expenditures, which seems arguable.

[72] The following argument is based largely on Bird and Mintz (1999). For a more analytical discussion of horizontal spillovers, see Mintz and Tulkens (1986); on vertical spillovers, see Boadway and Keen (1996) and Dahlby (1996).

[73] See, for example, Brennan and Buchanan (1980), McLure (1986), and Edwards and Keen (1996).

[74] Intergovernmental transfers may make matters better or worse (Smart and Bird, 1997) but this complex issue cannot be explored further here.

[75] See also Colm (1955). It is probably not an accident that Colm, Studenski and even Adams were very familiar with the German gewerbesteuer, which, as noted in Appendix II, in its original form was very close to the BVT discussed below. It is also interesting to note that the first formal VAT proposal by the Shoup Mission (1949) to Japan was for a subnational (prefectural) "business tax" close to that suggested here. The fate of this proposal is discussed in Ito (1950).

(1971) and Meade (1978) suggested, admittedly from rather different perspectives,[76] the most appropriate form of VAT for this purpose would really be a VAIT—a "value-added income tax" or a VAT levied on the basis of income (production, origin) rather than consumption (destination).[77]

Compared to a conventional VAT, such a tax—which shall henceforth be referred to as a "BVT" to reduce acronymal confusion—has three important distinguishing features. First, it is levied on income, not consumption: that is, it is imposed on the sum of profits and wages, or to put it another way, on investment as well as on consumption.[78] Second, it is imposed on production, not consumption: that is, it is imposed on an origin not destination basis and hence, in effect, taxes exports and not imports. Third, it is assessed by the subtraction (or addition) method on the basis of annual accounts rather than on a transaction or invoice-credit method.

Those who think taxes on exports and investment are intellectual anathema will no doubt reject this proposal out of hand. But those who think either that there is at least some justification for local business taxation or that, whether we like it or not, there will in any case continue to be such taxes should not be so hasty. This form of business taxation is less distorting than such existing subnational taxes as the CITs and capital taxes—not to mention archaic levies such as the patente, the octroi, or even the nonresidential property tax (which is in practice often levied at a much higher effective rate than the corresponding tax on residential properties). The danger of beggar-my-neighbor tax competition suggests that it may be advisable to place a floor on any BVT. In addition, to limit the possibility of tax exporting, there might perhaps also be a ceiling, on such taxes. But there should definitely be some room for local rate differentiation.

As a replacement for existing subnational business taxes, a BVT would improve subnational tax systems in several ways. First, it would be more neutral and would not favor certain forms of investment over others. Second, it would be less susceptible to base erosion especially relative to CITs, since, for example, the tax rate would be lower and the base would be unaffected by such matters as the extent of debt financing. Third, although more stable than CIT in revenue terms, a BVT should nonetheless be more sensitive to cyclical

---

[76] Allan (1971) suggests that the CIT be replaced by a flat tax on "factor cost." Meade's (1978) proposal excluded investment goods and was thus for a consumption-type VAT on an origin basis (something like the Michigan SBT discussed in Appendix II).

[77] See also Bird (1979) who cites variant proposals along roughly similar lines made by different authors in Australia, Canada, and Sweden as well as Bird (1996) and Bird and Mintz (1999). The last of these papers makes a detailed proposal along these lines for Canada.

[78] While an "income" basis can be applied to gross or net (of depreciation) income, the net income basis is the most logical.

realities than most other forms of business tax (e.g., capital taxes, property taxes). If the rate were set to match roughly the benefits-received basis suggested above, the tax would have the additional important advantages of eliminating inefficient spillovers and encouraging more responsible and accountable subnational governments.

Moreover, these arguments are by no means solely theoretical, since there is already some important real-world experience with such taxes, as discussed in Appendix II.

The apparent oddity of, in effect, imposing two different taxes on value added resides largely in the similarity of the names. As Meade (1978) argued, if it makes sense to have taxes on consumption and on income in a country, as it may, it may equally make sense to levy all or part of one or both taxes indirectly in the value-added form at the business level. This argument is equally applicable in the context of subnational taxation. As argued in Section IV above, for example, subnational VATs in the traditional (invoice-credit, consumption-type) form seem both viable and desirable as taxes for large regional governments. In addition, however, it may equally make sense to levy a different form of VAT—the income-type, annual accounts-based variety labeled here the BVT—at a low rate as a generalized tax on business activity (probably levied, as with Italy's IRAP, on a subtraction basis). Moreover, while it would not be either feasible or desirable to impose a traditional VAT at the local level, it should be perfectly feasible to impose a BVT at the local as well as the state level.

Assume, first, that there is no state BVT: would a local BVT make sense? It might in larger municipalities, which could reasonably be expected to assess and collect such a tax, and would have the incentive to do so because of the size of the local tax base that could be tapped. More generally, however, a local BVT would likely make most sense if there were already a state BVT in place, on which a (limited) local rate could be "piggy-backed" to some extent. Many countries already have some form of local business taxation such as Germany's gewerbesteuer or Japan's enterprise income tax.[79] Others, following the United Kingdom tradition, rely primarily on (often differentially heavy) taxes on business real property. A local BVT, imposed as, say up to a 1 percent surcharge on the BVT base reported for state tax purposes (which is essentially just sales less cost of goods purchased or wages plus profits) by entities physically located within the taxing jurisdiction would seem to be a considerably more desirable form of local business taxation than any others now available.

As noted earlier, rate limits should likely be imposed on local surcharges in order to prevent excessive locational distortion.[80] The only other tax for which such local rate freedom, even restrained, might be possible and advisable would be a surcharge on a state (or national) PIT.

---

[79] On the latter, see, for example, Bird and Slack (1991).

[80] Another option might be for a state to levy a local BVT at a "common" rate with the proceeds distributed in accordance with some formula (like the German VAT), but this would clearly be less desirable in terms of local fiscal accountability.

In this case, however, it is likely that the commuter problem would make such a tax unwieldy and require some kind of revenue-pooling and formula-sharing system, which would substantially reduce the accountability of local decision makers.[81] More importantly, as emphasized earlier, the PIT approach to subnational fiscal salvation appears unlikely to be viable in the context of most developing countries.

VI. Conclusion

The approaches suggested here to resolve at least some of the existing problems of subnational taxation in developing countries rest on three simple principles: (1) more attention should be paid to matching expenditure and revenue needs; (2) more effort should be made to ensure that all governments bear significant responsibility at the margin for financing the expenditures for which they are politically responsible; and (3) subnational taxes should not unduly distort the allocation of resources.

If regional governments have significant expenditure responsibilities, there are really only two ways these criteria can be met in most countries—through a surcharge on PIT or a surcharge on VAT. Although there was originally much opposition to the former suggestion outside the context of developed countries—for example, when first put forth in Bird and Wallich (1992) for transitional countries—the possibility at least of such local income tax surcharges now seems to be broadly accepted in a variety of countries. Unfortunately, few if any developing countries have sufficiently robust central income taxes for subnational governments to derive much revenue from this source. The answer for subnational revenues, as for national revenues, in many countries thus seems to be to rely on the VAT. Following the model already in operation in Canada (Bird and Gendron, 1998), strengthened by application of the compensating feature suggested by Varsano (1995) as developed further by Varsano (1999) and McLure (1999b), the road seems open for the adoption of subnational VATs in at least a few developing countries in the near future—for example, in one of the larger Latin American countries with federal features, such as Brazil, Argentina, or Mexico. Given a relatively well-structured and functioning national VAT and the apparently increasing need for substantial subnational revenues to be raised in a politically responsible way, this path now seems to be open. It should be further explored.

A second feature of subnational taxation that has been emphasized here is the importance of developing a less harmful form of subnational business taxation. Subnational CITs, trade taxes, business taxes, nonresidential property taxes, octroi, and even so-called "retail" sales taxes (which are usually in practice levied on some estimate of gross receipts) in many countries can introduce serious economic distortions in a variety of ways. Nonetheless, there is both an economic (benefit) case for some regional and local taxation of business and, it

[81] Some "formula" approach would still be needed to prorate the tax base of multijurisdictional enterprises under a BVT (see, Appendix II and Bird and Mintz, 1999).

seems, often an overwhelming political need for local leaders to impose such taxes. The approach to this problem suggested here has been the introduction of what is in effect another form of VAT—called here the BVT. Variants of such taxes already exist in some countries (Appendix II). The theoretical case for such levies has been argued for decades (Sullivan, 1965; Bennett and Krebs, 1988; Bird, 1996) and concrete proposals along these lines have recently been made in some developed countries (Oakland and Testa, 1998; Bird and Mintz, 1999). The practical case for replacing the present mish-mash of taxes imposed on business by such a tax seems even stronger in the context of many developing and transitional countries.

Suppose that both these proposals were accepted in any given country. The result would then be a family of VATs, with a standard invoice-credit, destination-principle, consumption-type VAT imposed at the central government level, a CVAT and corresponding state VATs imposed at varying rates on the same base by regional governments, and a BVT (essentially an income-type VAT imposed by the subtraction or the addition method) levied on all VAT registrants by regional and perhaps larger local governments at relatively uniform rates.[82] In addition, of course, all levels of government should apply appropriate user charges (Bird and Tsiopoulos, 1997), some excise taxes—particularly perhaps those related to vehicles (Bahl and Linn, 1992)—might appropriately be levied at the regional level, there is of course a strong case in most developing countries for more effective local taxation of residential property, and the central government may continue to levy both a CIT and a progressive PIT, perhaps with regional governments imposing flat-rate PITs on the same base.

Much more work of course remains to be done to develop the details of the scheme sketched here. Myriad details of design and administration need to be settled, the relation between different levels of subnational government needs careful thought, the role and design of intergovernmental fiscal transfers needs to be reconsidered, as does the appropriate and tolerable level of asymmetry in the application of the suggested principles to subnational governments of vastly differing size and competence. Nonetheless, even this preliminary survey suggests that at least three of the long-accepted principles governing subnational taxation need to be rethought and largely discarded:

First, the conventional model of tax assignment, which in effect assigns all significant revenue sources to central governments, is clearly inappropriate for countries in which subnational governments, for whatever reason, account for a significant proportion of public sector spending (unless, of course, such governments are simply acting as administrative

---

[82] Since the BVT is imposed on the same base as the gross income that should be reported for income tax purposes, its introduction might also provide an appropriate occasion for the introduction of a uniform and unified tax administration encompassing both VAT and CIT plus business PIT at all levels of government. Such administrative elaboration must, however, be left for a later date.

arms of the center). If such governments are to be big spenders, they must, in the interests of fiscal responsibility and accountability, also be much bigger taxes than this model permits.

Second, the VAT is the key to central government finance in most developing and transitional countries. The central governments in such countries are obviously most reluctant to lose any control over this tax. This understandable reluctance has, until now, been supported by the conventional wisdom that subnational VATs are not technically feasible. Contrary to what has long been thought, however, such taxes are feasible. The subnational VAT (supported by something like the CVAT discussed above) thus seems likely to become the most important source of subnational revenue in at least some larger federal countries.

Third, admirable as the usual user charge and property tax package recommended for financing local governments is in many ways, thirty years of experience has made it clear (1) that it is very difficult to implement in many countries, (2) that it does not provide an adequate fiscal base if local governments have major spending responsibilities in the social area, and (3) that property taxes on businesses are conducive to political and economic misuse. The combination of these factors in many countries has led to the proliferation of a variety of bad local (and regional) taxes on business. Recognizing these pressures and the fact that there is a good case for at least some benefit taxation of business by subnational governments, it has been suggested here that a feasible answer may lie in the introduction of a so-called "BVT" at a low and uniform rate. While such a tax might first be considered as a replacement for clearly undesirable subnational CITs, it might also be extended in some instances to replace local nonresidential property taxes, with local supplemental rates imposed on the same base as a regional BVT.

Such a package will certainly not solve all the problems of establishing sound and workable subnational tax regimes in all developing countries: but it should move matters closer to this goal than is now the case.

SALES TAX IN CANADA

For many years, Canada struggled along with an archaic federal manufacturers' sales tax and uncoordinated and independent provincial RSTs. Impatient with years of fruitless wrangling, in 1991, the federal government finally introduced the GST, an up-to-date version of the VAT, most analysts' sales tax of choice. This sparkling new tax quickly ran into heavy political and popular opposition, however, not least because of its federal provincial implications (Bird, 1994).

Canadians were of course well aware of the potential problems in this respect. When the GST was first proposed by the federal government in 1987, the variant preferred by the federal government was the so-called "NST," which would have been administered federally on a uniform base and at uniform rates, with the proceeds being divided between the federal and provincial governments and among the provincial governments in accordance with some formula. As noted earlier, this is essentially how the VAT works in Germany. Such a centralist solution was never likely to be acceptable in Canada, however. If the base and rates of the NST are both set federally, the fact that some of the proceeds are paid to the provinces has no significance. The same results would be obtained if the NST were entirely federal and then, in a separate step, some of the amount thus collected were paid to the provinces in accordance with some formula. If the tax base, the tax rates, and the distributive formula were all determined by joint federal-provincial agreement, matters would of course be different. But if such agreements were easy to come by, Canada would be quite a different country than it is.

Considerations of the cost and difficulty of arriving at such a joint tax design suggested an alternative approach to sales tax reform. Instead of trying to devise some form of "dual" (same base, different rates) or "joint" (same base and rates, with a formula distribution) form of NST, why not turn over the entire sales tax area to one level of government or the other? The "German" version of the NST proposal just discussed amounts to turning the sales tax over to the federal government, albeit perhaps with some provincial input into the decision-making process. In contrast, the Royal Commission on Taxation (1966) had recommended that the federal government should turn over sales taxes to the provinces. Others have recently made similar recommendations. Ip and Mintz (1992), for example, argued that the federal government should take full responsibility for corporate taxes while at the same time the federal GST should be replaced by appropriately augmented provincial (retail) sales and excise taxes.

The argument for such changes was twofold. First, replacing two sales taxes by one would reduce the administrative and compliance costs of taxation substantially.[83] Second, this change would give more revenue discretion to provinces and make them more responsible

[83] On the other hand, as emphasized by Poddar (1990), there would be increased compliance costs from firms engaged in interprovincial trade. This complex question cannot be discussed further here. For a useful early discussion in Canada see, Hill and Rushton (1993).

for financing more of their own spending on health or education.[84] Moving all sales taxes to the provincial level seems most improbable, however. Such a change would have required the provinces to apply very high RST rates—for example, 19 percent in the case of Newfoundland. No country has been able to apply such high RST rates successfully. Moreover, moving from a GST to a provincial RST would in effect shift tax to business inputs,[85] thus reversing the clearest economic gain from moving to a VAT. No province was likely willingly to shift taxes explicitly onto its citizens to the extent that would be required to avoid this problem.[86]

It is thus not surprising that the evolution of the sales tax system in Canada followed quite different lines to the point where, as noted in the text, variants of almost all the systems that have been proposed now operate in one province or another. Both the VAT imposed by the province of Quebec, the QST, and Canada's federal GST are broad-based taxes on consumption. There are some differences between them, although much less now than when the two taxes were initially imposed in 1991 (Gendron, Mintz, and Wilson, 1996). The GST, for example, is imposed at a single rate of 7 percent, which applies to most taxable goods and services consumed in Canada. The QST now has one general tax rate of 7.5 percent, which is applied to the price of the good or service including the GST, so that the combined rate is 15.025 percent. Although the QST initially imposed different rates for goods and services and had several differences in base from the GST, most significant differences between the two taxes have now vanished.

In view of the insistence of some (e.g., McLure, 1999a) that "a uniform federal and state tax base...[is] absolutely essential," it is perhaps worth noting that there remain differences between the two tax bases. For instance, giving an instant rebate following payment of the tax eliminates the QST on books. While the administration of this rebate clearly adds some complexity, this approach permits the preservation of a uniform VAT base for both federal and provincial taxes while allowing (in effect) differential treatment at the final consumer level. A more important, and troublesome, issue arises with respect to input tax credits.

---

[84] Of course, different provinces would gain and lose different amounts through any such shift. Equalization grants could presumably be adjusted as desired to prevent unduly penalizing the poorer regions of the country. The important question of the interdependence of tax assignment and the design of transfer systems cannot, however, be discussed in the present paper.

[85] Kuo, McGirr, and Poddar (1988) estimated that from one-third to one-half of provincial RST revenues came from business inputs.

[86] The degree to which the QST initially diverged from the GST, for example—see Mintz, Wilson, and Gendron (1994)—was probably largely explicable on these grounds. The QST levied a lower tax on services than on goods and made up for the loss of revenue by disallowing input tax credits on a variety of items. Although this policy was subsequently reversed in part, there still remain restrictions, as noted below.

Under the QST, input tax credits were at first not provided for certain goods and services (such as fuel, electricity, and automobiles). In 1996, however, although there remained minor differences with respect to a few matters such as the tax treatment of financial services and certain tour packages and, as mentioned above, books, on the whole the QST incorporated the same rules as the GST regarding input tax credit claims. Nonetheless, there are still certain "temporary" restrictions on input tax credits for large firms in effect under the QST apparently for revenue reasons. Such base differences are in principle not particularly desirable but the Canadian example shows that, for better or worse, they may nonetheless be tolerable within a dual VAT system.

APPROACHES TO THE BUSINESS VALUE TAX

Approaches to the BVT concept set out in the text may be found in the states of Michigan (the former BAT, or business activities tax, from 1953 to 1968, and, since 1976, the SBT, or single business tax) and New Hampshire (the business enterprise tax, or BET) as well as in Italy (the new regional business tax, the IRAP) and Germany (the old "local trade tax" or gewerbesteuer).

The SBT in Michigan is basically a modified VAT computed through the addition method on a consumption base. Originally introduced (in a slightly different form) to replace the state CIT and some other taxes on business, the main virtues of this approach appear to be increased revenue stability and the extension of taxation to noncorporate forms of business. Its major problems arise from its excessive complexity (due in part from its use to provide investment incentives) and—perhaps reflecting deeply embedded views about the "correctness" of taxing income—from taxpayer resistance to paying SBT when there would be no CIT liability.[87]

The more recent BET in New Hampshire, introduced in 1993, differs in a number of important respects. First, the base of the BET is essentially net income (Kenyon, 1996). Second, the tax is levied at a much lower rate—0.25 percent compared to a rate of 2.5 percent in Michigan. Third, and related, the BET did not replace the CIT in New Hampshire but is instead seen as a complement for it. On the other hand, the two taxes are also alike in some important respects. Both are levied on value added by the addition method, and both were intended to provide a more stable, efficient, and simple source of state revenues. Kenyon (1996) argues that the BET has indeed increased stability, that it is less distorting than an equivalent increased CIT would have been, and that it is a relatively simple tax.[88]

Even more interesting is the 1998 reform in Italy, in which an existing regional income tax levied essentially on business income (at a rate of about 16 percent), a tax on dividend distributions by corporations, a small net worth tax, and payroll contributions levied to

---

[87] See Ebel (1972) on the original BAT in Michigan. The current SBT is described more briefly in Kenyon (1996).

[88] The main technical problem with the tax relates to its application to multistate (or multinational) businesses. Obviously, many of the familiar issues arising with CIT arise in this case also, and the best solution would similarly appear to be to establish clear (and uniform) nexus rules (Bird and Wilkie, forthcoming) and a simple uniform apportionment formula (Bird, 1986b). Although all these matters need much further exploration, Bird and Mintz (1999) illustrate how such a system might work in Canada, using alternative apportionment rules.

finance a national health scheme were all replaced by a new business tax, the IRAP.[89] The IRAP is essentially an income-based VAT levied by the subtraction method (the difference between gross receipts and purchases from other firms, including depreciation) on an origin basis. Most firms are subject to IRAP at a rate of 4.25 percent, although regional governments can levy an additional percentage point if they so choose.[90]

Finally, the grandfather of all "value added" local business taxes is the German gewerbesteuer.[91] As originally conceived, this tax was levied on the income of all factors of production, although not in a very coherent fashion. In recent years, the scope of the tax base has been reduced substantially—for example, by abolishing the payroll component of the base in 1980 and by deducting (since 1984) 50 percent of interest on "long-term" debts—thus diminishing its initial logical coherence. In addition, the tax has been largely removed from all but larger enterprises. Although local authorities still have considerable discretion with respect to tax rates, these changes substantially reduced their revenue autonomy, and it is therefore not surprising that for the most part they supported a federal proposal in 1982 to introduce an explicit form of local value-added taxation, at an estimated rate of about 3 percent, on top of the federal VAT although on a net income origin basis and preferably collected by the addition method (i.e., on the sum of payroll, interest, rents, and net profits). Although this proposal in the end was not accepted owing largely to business opposition, it is almost exactly equivalent to that made in the text.

[89] See Maisto (1997) and Dell'Anese (1997) for further discussion.

[90] As with all attempts to reform business income taxes—witness the cash-flow tax (McLure and Zodrow, 1998)—the attitude of the U.S. Internal Revenue Service is important. With respect to the IRAP, interestingly, the IRS has agreed that a "portion" of the tax which may be calculated roughly as the tax rate (4.25 percent) times net income (the IRAP base minus labor costs and interest expense), may be creditable for U.S. tax purposes (Smith and Gann, 1998, 1999).

[91] This brief account is based largely on Bennett and Krebs (1988).

References

Adams, Thomas S., 1918, "The Taxation of Business," paper presented at the Eleventh Annual Conference on Taxation of the National Tax Association (New Haven, Conn.), pp. 185–94.

Afonso, Jose Roberto, 1996, "Reform of the State VAT in Brazil," (Rio de Janeiro: Fundaçao de Assistencia e Previdencia Social do BNDES).

Ahmad, Ehtisham, ed., 1996, *Financing Decentralized Expenditures: An International Comparison of Grants* (Cheltenham, U.K.: Edward Elgar).

Ahmad, Ehtisham, Daniel Hewitt, and Edgardo Ruggiero, 1997, "Assigning Expenditure Responsibilities," in *Fiscal Federalism in Theory and Practice,* ed. by Teresa Ter-Minassian (Washington: International Monetary Fund).

Allan, C.M., 1971, *The Theory of Taxation* (London: Penguin Books)

Amorim, R., 1996, *Impacts of ICMS Exemption on Primary and Semi-Finished Goods Exports and Machinery, Equipment and Production Input Purchases on the Brazilian Economy* (Rio de Janeiro: Banco Fenicia).

Baer, Katharine, Victoria P. Summers, and Emil Sunley, 1996, "A Destination VAT for CIS Trade," *MOCT-MOST, Economic Policy in Transitional Economies,* Vol. 6, pp. 87–106.

Bagchi, Amaresh, 1996, "A State Level VAT? Harmonizing Sales Taxes: A Comparison of India and Canada," in *Value-Added Tax in India,* ed. by P. Shome (New Delhi: Centax Publications Pvt. Ltd.)

———, 1997, "Tax Assignment in the Indian Federation: A Critique," (New Delhi: National Institute for Public Finance and Policy)

———, 1998, "Towards A Generalized Central VAT?" *Money and Finance,* July–September.

Bahl, Roy W., and Johannes Linn, 1992, *Urban Public Finance in Developing Countries* (New York: Oxford University Press).

Bennett, Robert J., and Gunter Krebs, eds., 1988, *Local Business Taxes in Britain and Germany* (Baden-Baden: Nomos Verlagsgesellschaft).

Bird, Richard M., 1974, *Taxing Agricultural Land in Developing Countries* (Cambridge, Massachusetts: Harvard University Press).

———, 1976, *Charging for Public Services: A New Look at an Old Idea* (Toronto: Canadian Tax Foundation).

———, 1979, *Taxing Corporations* (Montreal: Institute for Research on Public Policy).

———, 1980, *Central-Local Fiscal Relations and the Provision of Urban Public Services* (Canberra: Center for Research on Federal Financial Relations, Australian National University).

———, 1984, *Intergovernmental Finance in Colombia* (Cambridge, Massachusetts: Harvard Law School International Tax Program).

———, 1986a, *Federal Finance in Comparative Perspective* (Toronto: Canadian Tax Foundation).

———, 1986b, "The Interjurisdictional Allocation of Income," *Australian Tax Forum*, Vol. 3, pp. 333–54.

———, 1992, *Tax Policy and Economic Development* (Baltimore: Johns Hopkins University Press).

———, 1993a, "Federal-Provincial Taxation in Turbulent Times," *Canadian Public Administration*, Vol. 36, pp. 479–96.

———, 1993b "Tax Reform in India," *Economic and Political Weekly*, Vol. 28 (Dec. 11), pp. 2721–26.

———, 1993c, "Threading the Fiscal Labyrinth: Some Issues in Fiscal Decentralization," *National Tax Journal*, Vol. 46, pp. 207–27.

———, 1994, *Where Do We Go From Here? The GST in Canada* (Toronto: KPMG Centre for Government Research).

———, 1995a, "Fiscal Federalism and Federal Finance," in *28 as Jornadas de Finanzas Publicas* (Cordoba: Facultad de Ciencias Economicas, Universidad Nacional de Cordoba).

———, 1995b, *Local Finance: Problems, Perspectives, and Possibilities*, Major Report No. 31 (Centre for Urban and Community Studies, University of Toronto).

———, 1996, "Why Tax Corporations?" Technical Committee on Business Taxation Working Paper 96–2 (Ottawa: Department of Finance).

———, 1997, "Analysis of Earmarked Taxes," *Tax Notes International*, Vol. 14, pp. 2095–116.

———, 1999a, "Intergovernmental Fiscal Relations in Latin America: Policy Designs and Policy Outcomes," (Washington: Inter-American Development Bank).

———, 1999b, "Transfers and Incentives in Intergovernmental Fiscal Relations," paper at ABCD-LAC Conference, Valdivia, Chile, June.

———, 1999c, "Subnational Taxes: Realities and Prospects," paper at ABCD-LAC Conference, Valdivia, Chile, June.

———, (forthcoming) "Fiscal Decentralization and Competitive Governments," in *Essays in Honor of Albert Breton,* ed. by Gianluigi Galeotti, Pierre Salmon, and Ronald Wintrobe (New York: Cambridge University Press).

Bird, Richard M., and Duanjie Chen, 1998, "Federal Finance and Fiscal Federalism: The Two Worlds of Canadian Public Finance," *Canadian Public Administration,* Vol. 41.

Bird, Richard M., and Ariel Fiszbein, 1998, "The Central Role of Central Government in Decentralization: Colombia," in *Fiscal Decentralization in Developing Countries,* ed. by Richard M. Bird and Francois Vaillancourt (New York: Cambridge University Press).

Bird, Richard M., and Pierre-Pascal Gendron, 1997, "Dual VATs and Cross-Border Trade: Review of International Experience," International Centre for Tax Studies Discussion Paper No. 13 (Toronto: University of Toronto).

———, 1998, "Dual VATs and Cross-Border Trade: Two Problems, One Solution?" *International Tax and Public Finance,* Vol. 5, pp. 429–42.

Bird, Richard M., and Jack M. Mintz, 1999, "Tax Assignment in Canada: A Modest Proposal," paper prepared for the Institute of Intergovernmental Relations, Queen's University, Canada, April.

Bird, Richard M., and Enid Slack, 1991, "Financing Local Government in OECD Countries: The Role of Taxes and User Charges," in *Local Government: An International Perspective,* ed. by Jeffrey Owens and Giorgio Panella (Amsterdam: North-Holland).

———, 1993, *Urban Public Finance in Canada* (Toronto: John Wiley and Sons, 2nd ed.).

Bird, Richard M., and Thomas Tsiopoulos, 1997, "User Charges for Public Services: Potentials and Problems," *Canadian Tax Journal,* Vol. 45, pp. 25–86.

Bird, Richard M., and Francois Vaillancourt, 1998, *Fiscal Decentralization in Developing Countries* (New York: Cambridge University Press).

Bird, Richard M., and Christine I. Wallich, 1992, "Financing Local Government in Hungary," Country Economics Department WPS 869 (Washington: World Bank).

Bird, Richard M., and J. Scott Wilkie (forthcoming) "Source or Residence? The Wrong Question," in *Taxing Capital Income,* ed. by Sjibren Cnossen (New York: Cambridge University Press).

Bird, Richard M., David Perry, and Thomas A. Wilson, 1998, "Canada," in *The Tax System of Industrialized Countries,* ed. by Ken Messere (London: Oxford University Press).

Bird, Richard M., Christine I. Wallich, and Gabor Peteri, 1995, "Financing Local Government in Hungary," in *Decentralization of the Socialist State,* ed. by Richard M. Bird, Robert Ebel, and Christine Wallich (Washington: World Bank).

Boadway, Robin W., and Paul A. Hobson, 1993, *Intergovernmental Finance in Canada* (Toronto: Canadian Tax Foundation).

Boadway, Robin W., and Michael Keen, 1996, "Efficiency and the Optimal Direction of Federal-State Transfers," *International Tax and Public Finance*, Vol. 3, pp. 137–55.

Brennan, Geoffrey, and James Buchanan, 1980, *The Power to Tax: Analytic Foundations of a Fiscal Constitution* (New York: Cambridge University Press).

———, 1983, "Normative Tax Theory for a Federal Polity: Some Public Choice Preliminaries," in *Tax Assignment in Federal Countries,* ed. by Charles E. McLure, Jr. (Canberra: Centre for Research on Federal Financial Relations, Australian National University).

Breton, Albert, 1996, *Competitive Governments: An Economic Theory of Politics and Public Finance* (New York: Cambridge University Press).

Breton, Albert, Alberto Cassone, and Angela Fraschini, 1998, "Decentralization and Subsidiarity: Toward a Theoretical Reconciliation," *Journal of International Economic Law* (Philadelphia: University of Pennsylvania), Vol. 19, pp. 21–51.

Burgess, Robin, Stephen Howes, and Nicholas Stern, 1995, "Value-Added Tax Options for India," *International Tax and Public Finance*, Vol. 2, pp. 109–41.

Canada, 1996, *Harmonized Sales Tax*, Technical Paper issued jointly by the governments of Canada, Nova Scotia, New Brunswick, Newfoundland and Labrador (Ottawa).

———, 1966, Royal Commission on Taxation, 1966, *Report* (Ottawa: Queen's Printer).

Cnossen, Sijbren, 1983, "Harmonization of Indirect Taxes in the EEC," in *Tax Assignment in Federal Countries,* ed. by Charles E. McLure, Jr. (Canberra: Centre for Research on Federal Financial Relations, Australian National University).

Cnossen, Sijbren, and Carl S. Shoup, 1987, "Coordination of Value-Added Taxes," in *Tax Coordination in the European Community,* ed. by Sijbren Cnossen (Deventer: Kluwer).

Colm, Gerhard, 1955, *Essays in Public Finance and Fiscal Policy* (New York: Oxford University Press).

Commission of the European Communities, 1996, *A Common System of VAT: A Program for the Single Market* (Luxembourg: Office for Official Publications of the European Communities)

Dafflon, Bernard, 1992, "The Assignment of Functions to Decentralized Government: From Theory to Practice," *Government and Policy,* Vol. 10, pp. 283–98.

Dahlby, Bev, 1993, "Payroll Taxes," in *Taxing Business,* ed. by Alan Maslove (Toronto: University of Toronto Press).

———, 1996, "Fiscal Externalities and the Design of Intergovernmental Grants," *International Tax and Public Finance,* Vol. 3, pp. 397–412.

Dell'Anese, Luca ,1997, "Italy Introduces New Regional Tax," *Tax Notes International,* (November), pp. 1589–90.

Ebel, Robert D., 1972, *The Michigan Business Activities Tax* (East Lansing, Michigan: Michigan State University).

Edwards, J.S.S., and Michael Keen, 1996, "Tax Competition and Leviathan," *European Economic Review*, Vol. 40, pp. 113–34.

Fenochietto, Ricardo, 1998, "El IVA 'compartido'" (unpublished; Buenos Aires).

Fox, William, 1992, *Sales Taxation: Critical Issues in Policy and Administration* (Westport, Connecticut: Praeger/National Tax Association).

Gaggero, Jorge, and others, 1994, "Sustitución del Impuesto sobre los Ingresos Brutos; una propuesta para la transición," *27as Jornadas de Finanzas Públicas* (Córdoba: Universidad Nacional de Córdoba).

Gendron, Pierre-Pascal, Jack M. Mintz, and Thomas A. Wilson, 1996, "VAT Harmonization in Canada: Recent Developments and the Need for Flexibility," *International VAT Monitor*, Vol. 7, pp. 332–42.

Gillespie, W. Irwin, 1991, *Tax, Borrow and Spend* (Ottawa: Carleton University Press).

Gillis, Malcolm, ed., 1989, *Tax Reform in Developing Countries* (Durham: Duke University Press).

Gómez Sabaini, Juan Carlos, and Jorge Gaggero, 1997, "Lineamientos para una Reforma del Sistema Tributario Argentino," CITAF No. T-37, Centro Interamericano de Tributación y Administración Financiero (Buenos Aires).

Gordon, Roger H., 1983, "An Optimal Taxation Approach to Fiscal Federalism," in *Tax Assignment in Federal Countries,* ed. by Charles E. McLure, Jr. (Canberra: Centre for Research on Federal Financial Relations, Australian National University).

Guérard, Michele, 1973, "The Brazilian State Value-Added Tax," *Staff Papers,* International Monetary Fund, Vol. 20, pp. 118–69.

Head, John G., 1974, *Public Goods and Public Policy* (Durham, North Carolina: Duke University Press).

Hettich, Walter, and Stanley Winer, 1984, "A Positive Model of Tax Structure," *Journal of Public Economics*, Vol. 24, pp. 67–87.

———, 1999, *Democratic Choice and Taxation* (New York: Cambridge University Press). [changed from 1998].

Hill, Roderick, and Rushton, Michael, 1993, "Harmonizing Provincial Sales Taxes with the GST: The Problem of Interprovincial Trade," *Canadian Tax Journal*, Vol. 41, pp. 101–22.

India, Ministry of Finance, Department of Revenue, Tax Reforms, Committee, 1992, *Final Report,* Part I (New Delhi).

Ip, Irene, and Jack M. Mintz, 1992, *Dividing the Spoils: The Federal-Provincial Allocation of Taxing Powers* (Toronto: C.D. Howe Institute).

Ito, Hanya, 1950, "The Value-Added Tax in Japan," *The Annals of the Hitosubashi Academy*, Vol. 1, pp. 43–59.

Keen, Michael, and Stephen Smith, 1996, "The Future of Value-added Tax in the European Union," *Economic Policy*, Vol. 23, pp. 375–411.

Kenyon, Daphne A., 1996, "A New State VAT? Lessons from New Hampshire," *State Tax Notes* (December), pp. 1605–15.

Kenyon, Daphne A., and John Kincaid, eds., 1991, *Competition among States and Local Governments* (Washington: Urban Institute Press).

Khadka, Rup, and G.P. Shukla, 1999, "Domestic Indirect Taxes in India: Present Status and Future Prospects," *VAT Monitor*, Vol. 10, pp. 107–16.

Kitchen, Harry M., and Enid Slack, 1993, "Business Property Taxation," Discussion Paper Series 93–24, Government and Competitiveness (Kingston, Canada: School of Policy Studies, Queen's University).

Kuo, C-Y, T. McGirr, and S. Poddar, 1988, "Measuring the Non-neutralities of Sales and Excise Tax in Canada," *Canadian Tax Journal*, Vol. 36, pp. 655–70.

Litvack, Jennie, Junaid Ahmad, and Richard Bird, 1998, *Rethinking Decentralization* (Washington: World Bank).

Maisto, Guglielmo, 1997, "Italy Introduces Regional Tax on Productive Activities," *Tax Notes International*, (March), pp. 1029–31.

Martinez-Vazquez, Jorge, 1994, "The Challenge of Expenditure Assignment in Russia," *Environment and Planning C: Government and Policy*, Vol. 12, pp. 277–92.

———, 1999, "The Assignment of Expenditure Responsibilities," paper presented at the Seminar on Intergovernmental Fiscal Relations and Local Financial Management organized by the National Economic and Social Development Board of the Royal Thai Government and the World Bank, Chiang Mai (Thailand), February 24–March 5.

McKay, Stuart, and others, 1995, "Study of Consumption of Tax-Supported City Services," KPMG Project Report prepared for the City Council, Vancouver, March 17.

McLure, Charles E., Jr., 1980, "State and Federal Relations in the Taxation of Value Added," *Journal of Corporation Law*, Vol. 6, pp. 127–39.

———,1983a, "Assignment of Corporate Taxes in a Federal System," in *Tax Assignment in Federal Countries*, ed. by Charles E. McLure, Jr. (Canberra: Centre for Research on Federal Financial Relations, Australian National University).

———, ed., 1983b, *Tax Assignment in Federal Countries* (Canberra: Centre for Research on Federal Financial Relations, Australian National University).

———,1986, "Tax Competition: Is What's Good for the Private Goose Also Good for the Public Gander?" *National Tax Journal*, Vol. 39, pp. 341–52.

———, 1993a, "The Brazilian Tax Assignment Problem: Ends, Means, and Constraints," in *A Reforma Fiscal no Brasil* (Sao Paulo: Fundaçao Instituto de Pesquisas Economicas).

———,1993b *Vertical Fiscal Imbalance and the Assignment of Taxing Powers in Australia* (Stanford, California: Hoover Institution, Stanford University).

———, 1994a, "The Tax Assignment Problem: Ends, Means, and Constraints," *Australian Tax Forum*, Vol. 11, pp. 153–83.

———, 1994b, "The Sharing of Taxes on Natural Resources," in *Russia and the Challenge of Fiscal Federalism,* ed. by Christine I. Walllich (Washington: World Bank).

———, 1997a, "Topics in the Theory of Revenue Assignment: Gaps, Traps, and Nuances," in *Macroeconomic Dimensions of Public Finance,* ed. by Mario J. Blejer and Teresa Ter-Minassian (London: Rutledge).

———, 1997b, "Electronic Commerce, State Sales Taxation, and Intergovernmental Fiscal Relations," *National Tax Journal,* Vol. 50, pp. 731–49.

———, 1998, "Electronic Commerce and the Tax Assignment Problem: Preserving State Sovereignty in a Digital World," *State Tax Notes* (April).

———, 1999a, "The Tax Assignment Problem: Conceptual and Administrative Considerations in Achieving Subnational Fiscal Autonomy," paper presented at the Seminar on Intergovernmental Fiscal Relations and Local Financial Management organized by the National Economic and Social Development Board of the Royal Thai Government and the World Bank, Chiang Mai (Thailand), February 24–March 5.

———, 1999b, "Protecting Dual VATs from Evasion on Cross-Border Trade: An Addendum to Bird and Gendron," in process.

McClure, Charles E., Jr., and George Zodrow, 1998, "The Economic Case for Foreign Tax Credits for Cash Flow Taxes," *National Tax Journal,* Vol. 41, pp. 1–22.

Meade, J.E., 1978, *The Structure and Reform of Direct Taxes,* report for the Institute for Fiscal Studies (London: Allen & Unwin).

Mieszkowski, Peter, 1983, "Energy Policy, Taxation of Natural Resources, and Fiscal Federalism," in *Tax Assignment in Federal Countries,* ed. by Charles E. McLure, Jr. (Canberra: Centre for Research on Federal Financial Relations, Australian National University).

Mikesell, John L., 1999, "Structure of the Russian Federation's New Regional Sales Taxes," *Tax Notes International,* (March), pp. 1059–68.

Mintz, Jack M., and Henry Tulkens, 1986, "Commodity Tax Competition between Member States of a Federation: Equilibrium and Efficiency," *Journal of Public Economics,* Vol. 29, pp. 133–72.

Mintz, Jack M., Thomas A. Wilson, and Pierre-Pascal Gendron, 1994, "Canada's GST: Sales Tax Harmonization is the Key to Simplification," *Tax Notes International*, Vol. 8, pp. 661–78.

Mochida, Nobuki, and Jorgen J. Lotz, 1998, "Fiscal Federalism in Practice, the Nordic Countries and Japan," CIRJE-F-28 Discussion Paper (Tokyo: Center for International Research on the Japanese Economy, University of Tokyo).

Musgrave, Richard A., 1983, "Who Should Tax, Where and What?" in *Tax Assignment in Federal Countries,* ed. by Charles E. McLure, Jr. (Canberra: Centre for Research on Federal Financial Relations, Australian National University).

National Institute of Public Finance and Policy, 1994, *Reform of Domestic Trade Taxes in India: Issues and Options* (New Delhi: NIPFP).

———,1998, *A Model State VAT Law* (New Delhi: NIPFP).

Netzer, Dick, 1973, *The Property Tax* (Washington: The Brookings Institution).

Norregard, John, 1997, "Tax Assignment," in *Fiscal Federalism in Theory and Practice,* ed. by Teresa Ter-Minassian (Washington: International Monetary Fund).

Oakland, William H., and William A. Testa, "1995,Community Development-Fiscal Interactions: Theory and Evidence from the Chicago Area," Working Paper-1995/7 (Chicago: Federal Reserve Bank of Chicago).

———, (1998, "Can the Benefits Principle be Applied to State-Local Taxation of Business?" Research Department WP-98-16 (Chicago: Federal Reserve Bank of Chicago).

Oates, Wallace E., 1996, "Taxation in a Federal System: The Tax-Assignment Problem," *Public Economics Review (Taiwan)*, Vol, 1, pp. 35–60.

———, 1998, "Federalism and Government Finance," in *The Economics of Fiscal Federalism and Local Finance,* ed. by Wallace E. Oates (Cheltenham, U.K.: An Elgar Reference Collection).

Olson, Mancur, 1969, "The Principle of Fiscal Equivalence: The Division of Responsibilities Among Different Levels of Government," *American Economic Review*, Vol. 59, pp. 479–87.

Piffano, Horacio, 1999, "El IVA subnacional," Buenos Aires (unpublished; Buenos Aires).

Poddar, Satya, 1990, "Options for a VAT at the State Level," in *Value-Added Taxation in Developing Countries,* ed. by M. Gillis, C.S. Shoup, and G. Sicat (Washington: World Bank).

Pola, Giancarlo, ed., 1991, *Local Business Taxation: An International Overview* (Milano: Vita e Pensiero).

Purohit, Mahesh C., 1994, "Value-Added Tax in Brazil," (New Delhi: National Institute of Public Finance and Policy).

———, 1995, *Structure and Administration of Sales Taxation in India* (Delhi: Gayatri Publications, 2nd ed.)

———, 1997, "Central Excise Duty and Modified VAT in India," *Tax Notes International*, Vol. 14, pp. 1709–13.

Purohit, Mahesh C. and V. Purohit, eds., 1995, *Commodity Taxes in India: Directions for Reforms* (New Delhi: Gayatri Publications).

Rao, M. Govinda, and Tapas Sen, 1996, *Fiscal Federalism in India* (Delhi: Macmillan India).

Shah, Anwar, 1994, *The Reform of Intergovernmental Fiscal Relations in Developing and Emerging Market Economies* (Washington: World Bank).

Shome, Parthasarathi, 1999, "Taxation in Latin America—Structural Trends and Impact of Administration," Working Paper 99/19, (Washington: International Monetary Fund)..

———, ed., 1997, *Value-Added Tax in India: A Progress Report* (New Delhi: Centax Publications).

Shome, Parthasarathi, and Bernd Spahn, 1996, "Brazil: Fiscal Federalism and Value-Added Tax Reform," Working Paper No. 11 (New Delhi: National Institute of Public Finance and Policy).

Shoup Mission, 1949, *Report on Japanese Taxation* (Tokyo: Supreme Commander for the Allied Powers, 4 vols.).

Silvani, Carlos, and Paulo dos Santos, 1996, "Administrative Aspects of Brazil's Consumption Tax Reform," *International VAT Monitor*, Vol. 7, pp. 123–32.

Smart, Michael, and Richard M. Bird, 1997, "Federal Fiscal Arrangements in Canada: An Analysis of Incentives," *Proceedings of the National Tax Association 1996* (Washington).

Smith, Stephen, 1997, *The Definitive Regime for VAT* (London: Institute for Fiscal Studies).

Smith, Paul A., and Jennifer Gann, 1998, "U.S. IRS to Allow Partial Credit for New Italian Local Tax," *Tax Notes International*, Vol. 16, pp. 1114–15.

———, 1999 "New U.S.-Italy Treaty Reduces Withholding Rates, Expands LOB Provision," *Tax Notes International*, (September), pp. 877–78.

Söderström, Lars, 1991, "Fiscal Federalism: The Nordic Countries' Style" in *Public Finance with Several Levels of Government,* ed. by Rémy Prud'homme (The Hague/Koenigstein: Foundation Journal Public Finance).

Studenski, Paul, 1940, "Towards a Theory of Business Taxation," *Journal of Political Economy*, Vol. 47 (October), pp. 621–54.

Sullivan, Clara K, 1965, *The Tax on Value Added* (New York: Columbia University Press).

Tait, Alan A., 1988, *Value-Added Taxation* (Washington: International Monetary Fund).

Ter-Minassian, Teresa, 1997a "Intergovernmental Fiscal Relations in a Macroeconomic Perspective," in *Fiscal Federalism in Theory and Practice,* ed. by Teresa Ter-Minassian (Washington: International Monetary Fund).

———, ed., 1997b, *Fiscal Federalism in Theory and Practice* (Washington: International Monetary Fund). [switched this entry with thepreceding one, since author as editor comes after author of his own work----Fund style]

Thirsk, Wayne R., 1982, "Political Sensitivity vs. Economic Sensibility: A Tale of Two Property Taxes," in *Tax Policy Options in the 1980s,* ed. by Wayne R. Thirsk and John Whalley (Toronto: Canadian Tax Foundation).

United States, Advisory Commission on Intergovernmental Relations (ACIR), 1988, *Interjurisdictional Tax and Policy Competition: Good or Bad for the Federal System?* (Washington: Urban Institute).

Varsano, Ricardo, 1995, "A Tributaçao do Comercio Interestadual: ICMS versus ICMS Partilhado," Texto para Discussao No. 382 (Brasilia: Instituto de Pesquisa Economica Aplicada), Setembro.

———, 1999, "Subnational Taxation and Treatment of Interstate Trade in Brazil: Problems and a Proposed Solution," ABCD-LAC Conference, Valdivia, Chile, June.

Vehorn, Charles L., and Ehtisham Ahmad, 1997, "Tax Administration," in *Fiscal Federalism in Theory and Practice,* ed. by Teresa Ter-Minassian (Washington: International Monetary Fund).

Vickrey, William, 1963, "General and Specific Financing of Urban Services," in *Public Expenditure Decisions in the Urban Community,* ed. by Howard G. Schaller, (Baltimore: Johns Hopkins University Press).

World Bank, 1996, *Argentina: Provincial Finances* (Washington).

Zimmerman, Horst, 1998, *Strengthening Local Finance* (Eschborn: GTZ).