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Value-Added Tax Options for India

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Abstract

The pressures of aggregate revenue, the requirement of a reduced role for customs duties for the liberalization of the economy, and the complexity and strains of the current system together point clearly toward the desirability of tax reform in India. Since domestic indirect taxes provide the major source of revenue, they deserve special attention. This paper argues that India would benefit from moving toward a system of value-added taxation (VAT) and focuses on the way in which a VAT (or VATs) can be best introduced into India given the country's federal structure. Three different options are distinguished: a central VAT, dual VAT, and states' VAT. We argue that the first is politically infeasible, that the second represents the best way forward in the short term, and that the third deserves consideration as a long-run option. Special attention is paid to the problems that would arise under either a states' or a dual VAT with regard to taxing interstate trade.

Key words: value-added tax, indirect taxation, fiscal federalism, India

1. Introduction

India's ratio of tax revenue to GDP—17 percent in the early 1990s—is average by developing country standards (Burgess and Stern, 1993). What is striking, however, is India's pronounced dependence on domestic indirect taxes for revenue generation: 62 percent of India's taxes come from this source, compared to an average of 28 percent for all LDCs. India's heavy reliance on domestic indirect taxation indicates the need for special attention to reform in this area. The inadequacies of India's indirect tax system are widely recognized. Moreover, as the role of import duties is reduced in the process of liberalization, a substantial additional burden will fall on domestic indirect taxes. The question naturally arises whether India would benefit from moving toward a value-added tax (VAT). The VAT has spread from the developed to the developing world and is generally recommended as the indirect tax of choice (see Gillis, Shoup, and Sicat, 1990; Khalilzadeh-Schirazi and Shah, 1991; Purohit, 1993; and Tait, 1988, for useful surveys). However, few economies have faced the political and economic constraints that India's federal structure imposes in the area

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of taxation. The central purpose of this paper is to provide an analysis of the benefits from and problems of introducing a VAT in India, particularly given its federal structure.

India's tax system has been the subject of numerous official reviews. Of most relevance to this paper are the Jha (GOI, 1978), Chelliah (GOI, 1991a, 1992, 1993a), and Bagchi (NIPFP, 1994) reports. Thanks to the Chelliah report, the reforms required for direct taxation and customs are now clear: the former will be simplified and its administration improved; the latter will be subjected to progressive rate reduction. The Chelliah report also made recommendations in the area of indirect domestic taxation, including that India should move toward a VAT, but this was not its main focus. The VAT question was taken up in greater detail by the Bagchi report, initiated by the current Minister of Finance (GOI, 1993b) to focus precisely on this issue and referred to frequently throughout this paper. Though this paper was initially drafted prior to the Bagchi report, it is comforting to note that our conclusions are very similar, at least for the short to medium run. Our focus is of necessity more restricted than that of Bagchi—we concentrate on the more analytical issues—and we also have the luxury of not writing a report and so of being able to be more concerned with desirable directions for the tax system over the long run.

The plan of the paper is as follows. We provide in Section 2 a description of the existing system of indirect taxes. VAT options for India, as both a developing and federal economy, are given in Section 3. Value-added taxation in a federal context raises as a basic issue the treatment of cross-border trade. This is discussed in Section 4. Section 5 concludes.

2. The existing tax system: its evolution and its weaknesses

2.1 Evolution of the indirect tax system

The division of taxing powers between the central and state governments in India is set out in the Seventh Schedule of the Constitution of India, which takes the form of Union, State, and Concurrent Lists of major taxation and expenditure responsibilities (GOI, 1991c). The major taxes assigned to the central government are the personal income and corporation tax, customs duties, and excises. The major taxes assigned to the state governments are alcohol excises and sales tax. The constitution also assigns to the states major expenditure responsibilities, such as for health, education, and agriculture. Whether it is due to the inadequacy of the tax handles assigned or to a lack of tax effort or both, states have been unable to generate sufficient revenue to meet their expenditure responsibilities. The constitution contains provision for the downward sharing of union tax revenues to make up for these shortfalls. It is the task of the Finance Commission, meeting every five years, to recommend the transfer of resources from the center to the states to bridge the expenditure-revenue gap. The Finance Commissions distribute the net proceeds of personal income and excise tax between the union and the states, and they establish the guidelines for the distribution of grants to the states from the centre (see Lakdawala, 1967; Bhargava, 1982; Lizy, 1990).

Figure 1 plots the shares of (combined center and state) trade, domestic indirect and direct taxes in India in the period 1950–1951 to 1992–1993. Most striking is the rise in the share of domestic indirect taxes and the almost monotonic fall in the share of domestic direct taxes since Independence. In 1950–1951, indirect taxes raised 38 percent of total tax revenue and direct taxes raised 37 percent; by 1992–1993, the share of indirect taxes

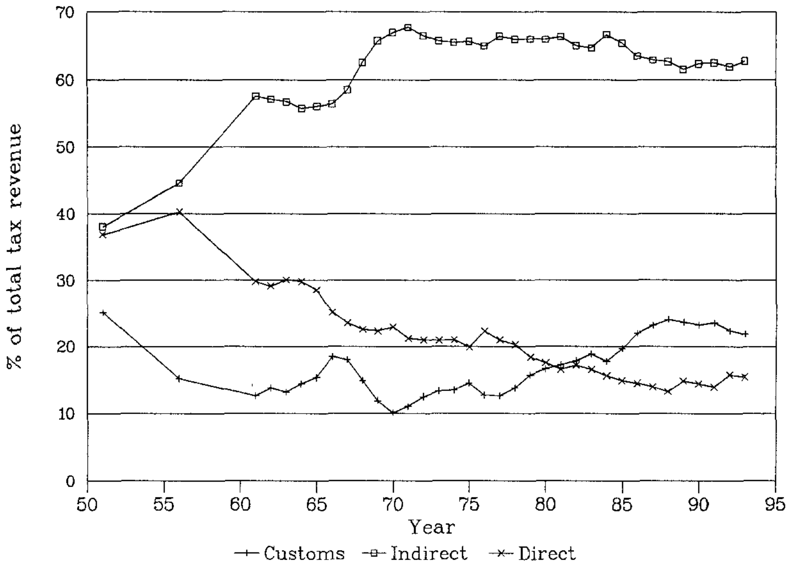

Figure 1. Share of customs and indirect and direct taxes in total tax revenue.

Sources: Burgess and Stern (1992) and GOI (1993c); most recent years estimates.

had risen to 62 percent while that of direct taxes had plummeted to 15 percent. The share of trade taxes fluctuates but has been trending upward since 1970. The last few years have shown a welcome reversal of these disconcerting trends with a slight rise in the share of direct taxes and a slight fall in customs.

Figure 2 traces the evolution of the major domestic indirect taxes: the union excise, given by the top line, and the state sales tax, the bottom line. We can see that, in terms of shares of total (center and state) revenue, excises rose from 10 percent in 1950–1951 to reach a peak of 37 percent of total tax revenue in 1968–1969. There has been a decline since then, but union excises remain, at 27 percent, the largest single source of government revenue.

The rising importance of union excises is the result of the constitution assigning sales taxes exclusively to the states. At independence, union excises were levied on about a dozen articles, but since then the base has been extended to cover the bulk of domestic industrial production (Purohit, 1992a). In other countries, excises are typically applied only to a few goods that have inelastic demand, exert negative externalities, and have physical output that is easy to measure, such as tobacco, petroleum products, and alcohol (Cnossen, 1977). Such goods are subject to excise in India (alcohol to a state excise tax), but so too are very many other goods that do not exhibit these qualities. Due to the constitutional restriction on the center to the taxation of production, all these goods are, however, taxed only up to the factory gate.

The evolution of state sales taxes has to some extent mirrored that of union excises. Their share of total tax revenue has increased from 9 percent in 1950–1951 to 21 percent in 1991–1992. Over time and in response to revenue demands, sales tax coverage, which varies from state to state, has been widened to cover most manufactured products including inputs

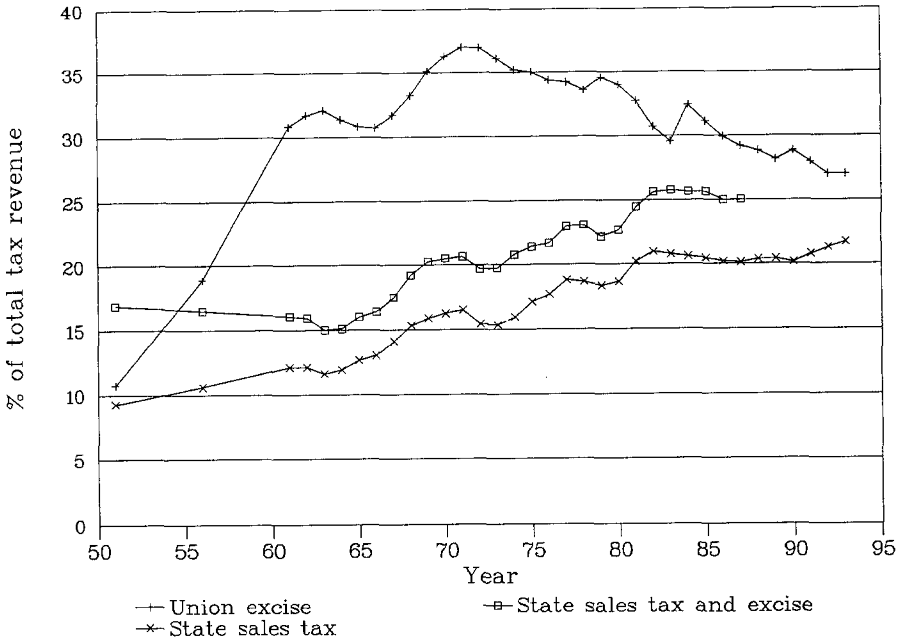

Figure 2. Central and state indirect taxes in total tax revenue.

Source: Burgess and Stern (1992); most recent years estimates.

and capital goods. The point of levy has also been gradually shifted to production (first-point) mainly because collection at this stage places fewer administrative demands on the system.[1] Although the tax net includes a wide array of producers and wholesalers, it tends to be a small number of industrial producers that provide the bulk of the revenue.

As a result of the buoyancy of the sales tax, states have become increasingly dependent on it. As Figure 3 (in Section 3) reveals, the value of taxes collected by the states as a percentage of total tax take has remained more or less constant since independence (at 30 to 35 percent). The proportion of this contributed by sales taxes, however, has been consistently rising from less than a third in 1950–1951 to almost two-thirds currently. The main other significant source of revenue for the states is also an indirect tax: the excise on alcohol. Its value—given by the difference in Figure 2 between the middle and bottom lines—has remained fairly constant at around 5 percent of total tax take.

It is notable that the two taxes that have risen most strongly over the last two decades are two that are not shared between the center and the states: sales taxes and customs. By contrast, the two taxes that have been declining in share since then—union excises and direct taxes—are both shared taxes. Both are collected by the center, but 85 percent of personal income tax revenue and 45 percent of excise revenue is transferred to the states.[2] What these trends may imply is that, from the perspective of the central authorities, the fact that large proportions of excises and income tax are transferred to the states acts as a disincentive to the development of these revenue sources.[3]

2.2. Weaknesses of the current tax system

India's indirect taxation system is vitiated by a number of factors, chief among which are: a multiplicity and large dispersion of rates; overlapping, fragmented, partial, and, in the case of excises, difficult-to-administer bases; the taxation of inputs; the erection of barriers to domestic trade; and administrative weaknesses. These are discussed in turn below.

2.2.1. Multiplicity and dispersion of rates. Indirect taxation in India is typified by a maze of different rates, which are the result of numerous ad hoc modifications to tax legislation. There are currently some 350 specific excise duty rates and forty ad valorem rates, the highest of which is 105 percent (Purohit, 1992b; GOI, 1993a). Most states have at least twelve rates of sales tax ranging from 1 percent to 25 percent (Purohit, 1988, p. 272). This rate differentiation has little economic rationale. It is associated with distributional judgments and views on the kinds of goods that should be encouraged in production and is the outcome more of lobbying than of logic.

2.2.2. Fragmented and overlapping bases. The base of both taxes is also fragmented on account of the large number of exemptions and concessions in union excise and state sales tax laws, introduced again partly as a result of political lobbying and partly in the name of progressivity. This fragmentation differs widely between systems and states and results in effective rates for commodity groups differing substantially from statutory rates. The result is a loss of revenue (forcing the government to impose very high rates on nonexempt goods), transparency, and equity. This fragmentation, together with the complex rate structure, also leads to an increase in the scope and incentive for evasion as well as for classification disputes and litigation, both of which represent a substantial drain on administrative resources in the case of both the union excise and state sales tax systems.[4]

The spread of union excises and the increasing reliance on first-point taxation by state sales tax authorities have led to both taxes being imposed on a similar base. (Sales tax is often a tax on a tax as it is levied on a price inclusive of excise tax.) Due to the complexity of each system, this overlapping makes it very difficult to calculate the combined tax burden and incidence. More important, producers have to be familiar with two complex tax systems and must deal with two independent authorities.

The largely industrial production base of both taxes also implies that much value added in the economy goes untaxed. Again this pushes up tax rates on the limited base. Two large sectors of the economy are by and large untaxed. The first is the wholesale and retail stages of the industrial sector. The second is the service sector, which, with a few exceptions, such as transport for the center and entertainment for the states, remains untaxed.

2.2.3. Taxation of inputs. The evolution of the tax structure in India has led to the taxation, under both the sales tax and the central excise, not just of final goods but of inputs into the production process. This has led to cascading. Both central and state authorities do provide some tax relief on inputs. The center has introduced MODVAT—a (very) modified form of VAT regulations, which now governs much of its excise collections. And the states have various concessions and exemptions on inputs. However, as Section 3.2 details, both of these are limited in scope and partial in value.

2.2.4. Taxation of trade. As we discuss in greater detail in Section 4.3, trade across state borders is often subject to both the centrally regulated central sales tax (CST) and the local sales tax of the importing state. This gives a bias against interstate trade, since domestic sales will be subject only to the local sales tax. In turn, this prevents India from being a single market and exploiting to the full all the advantages that would bring. In addition, it has given firms an incentive to integrate vertically across state boundaries as intrafirm transactions across state boundaries (as opposed to interstate sales) are not taxed.[5]

2.2.5. Administration. Aspects of Indian central and state indirect tax administration remain highly backward and problematic. As the Chelliah Committee notes in relation to the central excise tax: "There must be very few countries indeed in the world where now the collection of a broad-based domestic indirect tax requires prior approval of valuation and classification and clearance of every separate consignment of goods out of the factory is on the strength of a preauthenticated gate pass" (GOI, 1992, p. 139). Some of the administrative complexities arise from the nature of the tax system. This is particularly true of the federal excise tax. For example, because the excise tax is a tax on production rather than sales, manufacturers are entitled to certain postproduction deductions, such as for transport, on the prices of their goods when calculating assessable value. This of course gives rise to enormous scope for abuse, delay, and litigation. Things are little better, or even worse, on the states' front. Although some states do much better than others (Maharashtra would seem to have one of the most efficient sales tax administrations), Chelliah, Rao, and Sen (1992, p. 29) report that the administration of the states' sales tax is "in general in an abysmal condition with complicated procedures, out-dated methods and harassment co-existing with large-scale evasion."

2.2.6. Summary. Despite the recommendations of the various enquiries into taxation since independence, Indian indirect taxes remain highly complex. There are two sources of this: first, the complexity of each of the excise and the sales tax regimes; and second, the multiplicity of regimes (both across states and between the states and the center). In the short run at least, the multiplicity of regimes cannot be changed. However, simplification of each regime would not only greatly improve the efficiency of the separate systems. It would also pave the way toward greater harmonization between the different systems since it is easier to harmonize simple than complex systems. Indeed, unless the rate structures, valuation methods, administrative procedures of central and state authorities are simplified, it is unreasonable to expect closer harmonization between the two systems. The general thrust of the simplifying and rationalizing measures required is well known: reduction in the number of rates, switch from specific to ad valorem rates,[6] base broadening including the removal of exemptions, and computerization.[7] Implementation of these measures should proceed *irrespective of whether* a VAT is adopted. The fact that we focus on the introduction of a VAT in the remainder of this paper does not mean that we underestimate the importance of these other measures.

3. Options for a value-added tax (VAT) in India

We begin by very briefly outlining the way in which a VAT works (Section 3.1) and comparing this to the current tax regime in India (Section 3.2). We then consider the problems that would arise in the introduction of a VAT on account of India being both a developing country (Section 3.3) and a federation (Section 3.4). Three different federal VAT options are presented in Section 3.4. Their revenue consequences are illustrated in Section 3.5.

3.1. The value-added tax

A fully fledged VAT is, in essence, an ad valorem tax on domestic final consumption levied at all stages between production and the point of final sale. At each stage the tax is confined to value added (market value of sales minus purchases). This is typically achieved by taxing each firm on its gross output and then providing a rebate to it on the taxes paid on its inputs. In practice, and especially in developing countries, the VAT does not always extend in all sectors to final consumption. Rather VATs work on a fundamental division of agents into VAT-registered and non-VAT-registered. The VAT falls on the final sale from a VAT-registered agent to a non-VAT-registered agent, either a consumer, in which case the VAT is a tax on final consumption or an exempt (typically small) firm or government entity. Hence the incidence of a VAT is identical to that of a final-point sales tax (a consumption or retail sales tax if that final-point sale is to a consumer). To qualify as a VAT, as against a manufacturing or wholesale VAT, the final point should be chosen as close to consumption as possible subject to administrative constraints. Firms in taxed sectors should only *not* be subject to VAT if they are below a certain size, not because they are located at particular stages in the economic chain, such as wholesaling or retailing.

The basic decisions that need to be made by any country when designing a VAT are relatively straightforward:

- The base is usually taken to be consumption. Capital goods are treated as intermediates.
- The tax-invoice method (subtracting from taxes liable on outputs the taxes indicated on invoices to have been paid on inputs) is typically used to calculate liability.
- The destination principle (with exports zero rated and imports taxable) is almost invariably applied to foreign trade.
- More variation is present in the choice of tax rates and structures, but typically a single rate is chosen at which most goods and services are taxed. A lower rate or zero rating for other goods is sometimes used for distributional reasons.
- Exemption of particular goods and sectors is often allowed for social reasons (such as health), for distributional reasons (essentials), or on administrative grounds (as with agriculture).

The last point is particularly important for a developing country and is discussed further in Section 3.3. A federation such as India also has to decide which level or levels of government will implement the VAT. This is analyzed in Section 3.4.

The VAT's treatment of international trade is determined by the fact that it is a sales tax and so gives the same tax treatment to goods produced domestically and abroad. If a government has no special reason for wanting to tax imports, a VAT will supersede entirely the tax-raising role of customs. For India, however, customs is likely to remain an important source of revenue. Hence, as at present under MODVAT, a distinction will be required between that part of the total tax levied on an import that is a nonrebateable tariff and the part that is the rebateable sales tax. The likely relationship between VAT and customs in India in discussed further in Section 4.

In India, extra tax revenue will come from base-broadening and administrative reform rather than a VAT per se. The case for a VAT lies rather on efficiency grounds. Here it is useful to distinguish between two sets of reasons. The first gives advantages that would arise whichever of a VAT or a retail-type sales tax were chosen relative to other indirect tax systems. The second relates to the advantages of a VAT over a retail-type sales tax.[8]

The advantages of a VAT or retail-type sales tax over any other form of indirect taxation (say a manufacturing VAT or sales tax or a turnover tax) are well known. By shifting the tax base as far as possible toward final consumption, these taxes maximize the neutrality of the indirect tax system in relation to production decisions. Either by rebating taxes on inputs (VAT) or not taxing them at all (retail-type sales tax), both ensure, to the extent possible, a zero rate of taxation on inputs. Firms will then produce as efficiently as they can, rather than in a way that is less efficient but that minimizes taxation. In particular, firms will not be faced with incentives to integrate vertically in order to avoid taxation on the sale of inputs. Also because of the zero rate of taxation on inputs, the effective tax rate on the final good is given by its nominal tax rate. This makes for a transparent and simple tax system with clear rules. For example, no awkward decisions have to be made about whether a firm is engaged in production or distribution, or whether one good has been transformed into another good or is the same good passing down the production chain. Neutrality in relation to trade decisions is also provided since neither tax gives special protection to import substitutes or special penalties to exportables.

The argument for introducing a VAT as opposed to a retail-type sales tax is compelling in the developing-country context. Witness the fact that, while many LDCs have VATs, none have retail sales taxes. Typically, the lower down the production chain, the easier it is to tax: hence the move by the state authorities in India over time toward taxing production rather than consumption. A retail-type sales tax, however, puts the entire burden of collection as far up the production chain as possible. The VAT, by contrast, taxes the easy-to-tax production levels and then just taxes the value added (rather than gross value) at later stages. A VAT is particularly attractive for countries, such as India, currently taxing mainly at the production level. Unlike a retail-type sales tax, tax administrators do not need to find a completely new tax base (in the distribution rather than the production sector). Instead, they can keep their existing tax base and simply add to it.

There is no intrinsic reason why a VAT should be any more broadly based (in terms of sectors rather than stages) or have any simpler a rate structure than any other type of indirect tax. Nevertheless, inspection of cross-country experience shows that the introduction of a VAT is typically accompanied by major simplifications in terms of both bases and rate structures, such as advocated for India in Section 2. Introduction of a VAT evidently provides a focus for simplifying the tax system.

3.2. India's current tax regime from a VAT perspective

The main way in which India's current tax regime falls short in comparison to a VAT is in its taxes on intermediates. This makes the effective tax rates on a final good dependent on the tax rates imposed by both the center and the states on the inputs used to produce it as well as on the good itself. India's current tax system, again in contrast to a VAT, also provides special protection to import-competing sectors at the expense of the export sector. Not only are there high tariffs on imports, but, although exports themselves are not taxed, taxes are often imposed on the inputs used to produce them, resulting in a loss of international competitiveness.

Although the introduction of a VAT system in India would constitute a major reform, it is important to stress that there are already significant VAT-type elements in India's current indirect tax regime. The two main ones are the central MODVAT and the concessionary treatment for inputs provided by many states' sales taxes.

MODVAT allows producers to claim rebates on excise paid on inputs—or on countervailing duties on imported inputs[9]—provided that neither the inputs nor the output are excluded from MODVAT (Narayana, Bagchi, and Gupta, 1991, p. 12). MODVAT was introduced in 1986 and now covers eighty-six chapters (categories of goods) out of a total of ninety-one to which basic excise duties apply. The exemptions are significant, including as they do petroleum products, textiles, and tobacco products (Purohit, 1992b). The existence of exemptions per se is not a concern. One would not want all goods to be taxed just by a VAT. Goods, such as petroleum products and tobacco, which generate negative externalities or which have a particularly inelastic demand, should be taxed more heavily. Applying nonrebateable excises to them is an appropriate way of achieving this end. More serious is that excises on capital goods cannot be rebated within MODVAT (GOI, 1991a, p. 86). In addition, the excise base is in itself a narrow one, ending as it does at the factory gate.

Many of India's states and territories have sales tax systems that provide concessionary treatment for inputs. Inputs are allowed total exemption from tax in Punjab, Haryana, Manipur, Himachal Pradesh, Jammu, Kashmir, and Delhi. With the exception of these last two, these exemptions are granted only if the inputs are used to produce goods that are taxable and not exported out of the state. Most other states give concessional rates (ranging from 1 to 4 percent)[10] but typically only on the same conditions as above (for goods that are taxable and not exported) (Purohit, 1988, p. 78). The Bagchi report estimates that net taxes on inputs still account for about 30 percent of total sales tax revenue (p. 38). A VAT would convert the existing partial concessions and exemptions—regardless of the destination of the good produced—into taxes on which full rebates were allowed.

3.3. VAT options for a developing country

In designing a VAT for a developing country, the limited capabilities of the accounting systems of both government and firms must be taken into account. If care is not taken, this feature could lead to the administration and compliance costs of a VAT being particularly high and to widespread evasion whether either a VAT or a fortiori a final-point sales tax is used. To avoid such deleterious effects without resort to a limited base tax, it is necessary

to keep the VAT simple by having as few rates as possible, for example. Substantial cost savings and improvements in enforcement can also be achieved by exempting smaller firms from the VAT. Larger firms are more easily monitored and are themselves better equipped to comply with the VAT.

In fact, even in developed countries exemption of small firms is the norm. Firms can be exempted in either of two ways. In developed countries, firms are typically exempted from VAT (or not) on the basis of size. In the United Kingdom, for example, firms with taxable turnover below approximately £32,000 for goods and £15,000 for services are exempt.[11] Certain sectors are also exempted in toto on administrative grounds: insurance, for example, in the United Kingdom.[12] In developing countries, both criteria—size and sector—are also used, but more use is made of sectoral exclusions. For example, in Africa the agricultural sector is sometimes exempted and in some countries also the retail or even the wholesale sector (see Purohit, 1993, Table 1.1).

Exempt sectors, however chosen, can be treated in one of two ways. The practice in the United Kingdom and northern Europe is to completely relieve them of their tax responsibilities. This means they pay VAT on their purchases but that they are neither entitled to claim rebates nor obliged to pay tax on their sales. In other countries, the cut-off point is set higher. Again the exempt firms are excluded from claiming rebates, but now they are taxed, though at a rate much lower than the VAT rate and more easily calculated. Typically, this alternative tax is proportional to turnover (as in Korea or Italy) or is decided by negotiation between the firm and government with reference to a range of indicators (as with the French system of *forfeit*). Both methods can work well (see Due, 1990, for a survey and EBRD, 1993, on the use of these methods by the newly established VATs in Eastern Europe), though for less developed countries complete exemption from tax at least for very small companies is likely to be sensible. But the main point to keep in mind is the need for exemption. A study of the U.K. VAT found that "40 percent of the compliance costs and more than 50 percent of the administrative costs involved those traders—about 69 percent of the total [traders subject to VAT]—... who together generated less than 5 percent of the revenue" (Sandford and Godwin, 1990, p. 208).[13] Almost certainly, any VAT introduced into India would exempt a large number of agricultural goods. In addition, the suggestion has been made, for example by the Chelliah Committee, that the entire retail sector should be exempted and that only manufacturers and wholesalers above a certain size should be made subject to VAT. In a country as large and varied as India, however, care should be taken in introducing additional sectoral exemptions. Since retail firms add value, we would like to be able to tax them. If they are large, there is no reason why they should be made VAT-exempt. This suggests that, as argued by the Bagchi report, size of unit rather than sector should be the main determining criterion of VAT exemption. Note that the same comments would apply to firms in the service sector, who currently by and large do not have to pay indirect taxes. In relation to retail firms, there is the additional problem that any shortening of the VAT chain gives an incentive to collude and underprice at the end of the shortened chain so as to reduce one's tax liabilities.

3.4. VAT options for a federation

As has already been stressed, one of main problems besetting indirect taxation in India is the existence of two uncoordinated indirect tax regimes. The introduction of VAT, as

well as bringing an end to the taxation of inputs and providing the opportunity for simplification of each regime, would also provide the opportunity to address this important problem. It must be recognized, however, that the introduction of a VAT into a federation is no easy task. Although there are many federations that do have VATS, it is striking that the only two OECD countries that do not have VATs are both federations (Australia and the United States).

The replacement of the central excise and state sales taxes by a VAT regime might be done in a number of ways. The VAT might be the responsibility of either the central government or of the state governments or both. Each of these three options is explored in the subsections following.[14]

Our allocation of the VAT to a level of government is done on the basis of the right to receive (or reallocate) the revenue collected (as distinct from collection itself). Hence, a VAT regulated entirely by the center, and so completely harmonized across states, but collected by the states with 100 percent retention would be regarded by us as a (harmonized) states' VAT. This is not to rule out the possibility of a central VAT with downward revenue sharing. However, to remain a central VAT, allocation between the states should not be, or not just be, on the basis of VAT collected. Nor is it to say that there are not other important powers in relation to the VAT, apart from the right to receipt of revenue, which need to be allocated to one or another level of government. These include the rights to set rates and decide on exemptions. However, to distinguish these, we refer to the extent of uniformity between VATs in relation to them as describing the harmonization of the overall VAT system, rather than its centralization. We assume, quite reasonably, that any central VAT would be fully harmonized across states, but that state VATs may be more or less harmonized both with each other and with any central VAT in existence.

With all three options, it is reasonable to assume that the VATs, if introduced, would not render the current system of excises completely redundant. Standard practice is for VAT-based systems to be complemented by a small number of high-revenue-yielding excise taxes, such as on tobacco, alcohol, and fuel. It would certainly be appropriate for India to retain nonrebateable excises on these goods, whether they are imposed by the center or the states.

Finally, in presenting the three options of a central, state, and dual VAT below, we leave open, for Section 4, the question of whether the VAT is or should be of the destination or origin type.

3.4.1. Central VAT. This is the most popular option among federations. The VATs of Argentina, Austria, Germany, and Mexico, for example, are all centrally controlled, with collection by the states and revenue sharing (see Mintz, Wilson, and Gendron, 1992, p. 20).[15] The advantages of this option are clear. A central VAT would have the advantage of ensuring a single rate structure across India, thereby avoiding all the complexities that would arise if different states had different VAT rates. Firms and tax collectors would need to be familiar only with a single set of VAT rules. Part of the introduction of the VAT would involve a simplification of rates so that the current total of hundreds of rates would be replaced by a comparatively tiny single-figure number. A centrally run VAT would also ensure a unified administration. This would maximize information-sharing across India and limit the occurrence of tax evasion.

Introducing a single VAT would, however, have significant consequences for the distribution of revenues between the center and the states. In particular, it would deprive the states of their main source of revenue and make them even more dependent on central funding, thereby accentuating a historical trend (see Figure 3). The Indian states currently raise one-third of total revenue but have, after tax sharing and grants, three-fifths of total revenue, almost twice as much. Whether one thinks that states should be raising a larger or smaller proportion of the funds they spend, it is unlikely that the states themselves would agree to the weakening of their fiscal independence which the introduction of a centrally run VAT would entail. This is particularly the case since the sales tax, which would have to be given up by the states, is their single most buoyant source of revenue, on which they have become increasingly dependent (again see Figure 3). Without the states' agreement to voluntarily exit the indirect tax field, a constitutional amendment would be required to transfer away from the states the right to impose sales taxes. The center could not carry such an amendment in the face of opposition from the states.

This is not to say that the states would necessarily lose revenue from the introduction of a central VAT. A revenue-sharing arrangement between the center and states, such as currently exists in relation to excises and income tax, could be used to protect the states' overall revenue but would still have to overcome three obstacles.[16] First, revenue-sharing would not alter the fact that the states would lose their freedom to set and vary indirect tax rates. Second, if the revenue-sharing arrangements were to retain the center's and states' current shares of domestic indirect taxes, then the states would have to receive the bulk of revenue raised (see the next subsection). The high share required (above 50 percent) may not leave sufficient incentive for the center to exploit the VAT's revenue potential.[17]

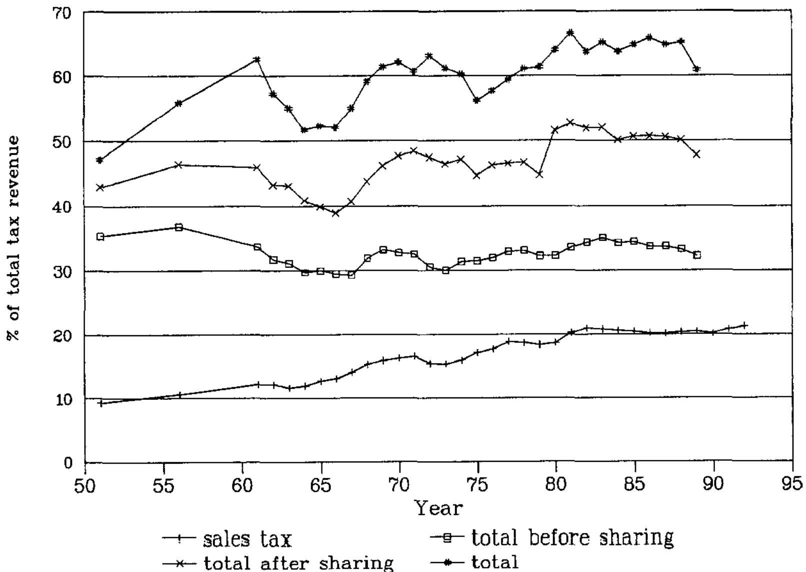

Figure 3. Share of state taxes in total (combined center and state) tax revenue.

Source: Burgess and Stern (1992).

Third, the history of the states giving ground to the center in indirect taxation is not a particularly happy one, at least as they see it. In 1957, the states entered into a tax rental agreement with the center by which they agreed not to impose sales taxes on tobacco, textiles, and sugar in return for the center imposing additional excises on these goods and passing the revenue on to the states. States were guaranteed the amount then raised by sales taxes on these goods as a minimum. Any excess was to be distributed per the recommendations of the Finance Commission.

The states frequently express the complaint that the center has not put sufficient effort into raising revenue for them through the additional excises. But it is now difficult for the states to leave this arrangement, which they entered voluntarily. The center has included sugar, tobacco and textiles on its list of "essential" goods, thereby bringing them under Central Sales Tax regulation, which limits the rate at which these goods can be taxed (to 4 percent) (see Section 4.3).[18] The extent to which the states have in fact lost from the rental arrangement, if in fact they have, is unclear (see Purohit, 1990). But the perception that they have lost cannot be denied. Recently, the central government requested the Ninth Finance Commission "to examine the feasibility of the merger of additional duties of excise in lieu of sales tax with basic duties of excise and evolve a suitable formula for allocating a part of the duties of excise [to the states]' (Purohit, 1990, p. 5). However, "the states vehemently opposed this idea," persuading the Finance Commission to drop it. The history of additional excises gives some indication of the states' likely reaction to any more far-reaching proposal toward the unification of the current center and state tax systems in a direction perceived as moving power in favor of the center.

3.4.2. System of state VATs. A system of state VATs, such as described in Purohit (1992b), would be characterized by the center retreating from the indirect tax field and each state converting its present system of sales taxes into a VAT. A total retreat by the center from indirect taxation does not seem feasible from the perspective of central revenue. A small number of high-revenue-yielding central excises would remain. In addition, the center would probably retain control of customs. But beyond this, the center could (as we show in Section 3.5) quite feasibly rid itself of its current collection and transfer responsibilities in the indirect tax field by handing the VAT over to the states.

Varying degrees of harmonization would be possible. At one extreme one can consider the completely unharmonized case in which each state chooses its own base and rate structure and collects its VAT itself. At another, one can consider the fully harmonized case in which a common base, rate structure (or even rates) and adminstration are chosen. All sorts of intermediate positions or halfway houses between these two extremes are possible. Obviously, harmonization would have a number of advantages. One attraction of the states' VAT proposal is that it may provide states with an incentive to give ground on this issue: the center may be able to insist on harmonization in return for increasing the tax take available to the states.[19] Even with complete harmonization, problems would still arise to do with the tax management of interstate transactions. These can be complex and are considered separately in Section 4.

Brazil, the only federation in the world where both the center and the states impose VATs, has recently had on the table a proposal similar to the above. Currently, the Brazilian central government has a VAT (the IPI) quite similar to India's MODVAT: it applies to manufac-

tured goods only and excludes the wholesale and retail stages (Longo, 1990, p. 122). The reform proposal would reduce the IPI into an excise on five important goods. The state VATs (ICMS) would then be left with a broader base and greater revenue-raising potential (Mintz, 1992, p. 15). In return, the states would get less by way of federal grants. There seem to be two main arguments behind this proposal. First, it fits in with broader goals of decentralization. Second, the central VAT is seen to be badly administered and poorly designed. Whether Brazil will actually adopt the proposal remains to be seen. Though it was originally a federal government proposal, fears on the part of the federal government concerning loss of revenue as well as the general political and economic uncertainty have led to its postponement, at least for the time being.

The European Union can also be considered a system of state VATs. Over the years, the center—here the Commission—has worked toward increasing the level of harmonization. The first step was to ensure that all EU members had a VAT.[20] Since then, restrictions on both bases and permissible rates, as well as legal definitions and procedures, have been and are being introduced (Lee, Pearson, and Smith, 1988).

This proposal should be more attractive to the states than the first. However, it must be recognized that it would create both gainers and losers among them. If the center vacated indirect taxation, it would have to bring nearly all grants and revenue-sharing to an end (see Section 3.5). This would undoubtedly hurt the poorer states. As shown in appendix of Burgess, Howes, and Stern (1993), current downward sharing in the form of tax sharing and grants is strongly progressive. For example, the richest state Punjab raises almost 80 percent of its own revenue; the poorest, Bihar, only 30 percent. Downward sharing also benefits the smaller states, some of which, such as Mizoram, receive almost 100 percent of their revenue from the center. It is true that poorer states would gain from a states' VAT if the current "origin" distribution of revenues from interstate trade (CST), which benefits the richer more industrialized (so-called "producing") states, was changed to a destination one (see Section 4). However, this gain would be dwarfed by the loss of central revenue for the poorer and the smaller states, since the latter is currently their major source of revenue.

Compensation would be necessary and could come, for example, through a levy on states imposed by the center for redistributive purposes. This could be related to income per capita or to total taxes raised (see Burgess, Howes, and Stern (1993, Appendix) for details on the need for such a scheme and how it could work). To the extent that this was financed through the VAT, and it would have to be to at least some degree, states would obviously not be able to keep all their VAT revenue.

However attractive, the proposal to introduce a states' VAT can only be seen as a long-term one. Apart from the serious problems of compensation, no VATs currently exist at the state level, and one cannot expect the central government to pull back from the indirect tax arena on the premise that state VATs will be successfully established, especially given the poor administration of many of the current state sales taxes (see Section 2.2). Rather, the states would have to begin by demonstrating their capabilities and replacing their sales taxes by VATs.

3.4.3. Dual center-state VAT. It is likely that, at least in the short run, the centrally run VAT and the state-run system of VATs would be unacceptable to, respectively, the states

and the center. If so, some type of dual VAT system, operated by both center and states, might be the most fruitful option for reform.

Again a spectrum of possibilities from the completely unharmonized to the completely harmonized exists, where the degree of harmonization is now taken to characterize the relationship between the central and state VATs as well as that among the state VATs themselves. In all cases, states would retain all revenue raised within their borders under their VAT.

The advantage of a dual system is that it could be gradually introduced over time. States could convert their current sales tax systems into VATs. As mentioned, this would involve conversion of current concessions and exemptions for inputs into taxes on inputs for which full rebates would be allowed regardless of the destination of the goods produced using them. Such a reform would also, one hopes, coincide with a review of rate structure and administration and with substantial base broadening, in line with the recommendations of Section 2. The center could provide valuable encouragement and help in this regard, for example, by the issuing of standard guidelines and by the provision of incentives to the states to move in the direction of a VAT.

The center, for its part, could further extend rebating within the base of MODVAT. The Chelliah Committee Final Report contains a number of recommendations along these lines. In particular, it provides suggestions on how to include the textile sector—India's second largest employer—under MODVAT and recommends that MODVAT be extended to provide rebates to capital goods, but, so as to prevent immediate revenue loss, in installments over a number of years after the date of purchase (GOI 1993a, p. 88).

There are strong arguments for extending the base of the union excise tax by bringing in services and, more important, the wholesale and retail sectors. However, given the constitutional restriction of the center's tax base to production, this latter would require constitutional amendment (NIPFP, 1994, p. 86). Most likely, the states would see this as incursion into their domain and would be opposed. Moreover, their opposition would be decisive. It was considerations such as these that led the Chelliah Committee Final Report to suggest incorporation of the states in the extension of MODVAT to the wholesale stage by making the states (1) responsible for collection at this final stage and (2) able to keep all net revenue (gross revenue owed minus rebates) collected at it.

This proposal could face several problems, however. First, it would give the center an incentive to distinguish between goods at the production stage and goods at the wholesale stage and set high tax rates for the former group knowing that the rebate bills for them would have to be met by the states. This could lead to a rate war if the states set the rates at the wholesale stage and the center at the production stages. If the center set rates at all stages, it would always have the incentive to place relatively low taxes on goods used relatively intensively in wholesaling (such as packaging and transport). Second and more important, the suggested dual administration of MODVAT (by the center up to the factory gate and by the states thereafter) could lead to considerable complexities and loopholes. Unless there were very good lines of communication, it would be easy for a firm to overstate to its state administration taxes paid to the central government and thereby gain an overly generous rebate. A unified administration would be far superior. However, if the center were to collect the extended MODVAT, it would have little incentive to collect it at the wholesale stage if all revenues were to be handed over to the states. Third, it is not clear that the states would agree to limit themselves to only taxing at the wholesale stage. If

they were to administer with their own sales tax (or VAT), as well as administer the central VAT at the wholesale stage, India would have in effect three levels of administration responsible for the collection of indirect taxes.

While we would therefore welcome an extension of MODVAT to the wholesale stage and beyond on the grounds of base broadening, we are doubtful that this should be done either with administration by or with revenues going to the states. If MODVAT cannot, for constitutional reasons, be extended past the production stage without the involvement of the states in either of these ways, then it may be better simply not to extend it and to encourage the development of comprehensive state VATs that would tax at all stages of production and distribution. This leads to the reform process endorsed by the Bagchi report, namely the replacement of state sales taxes by VATs and the reform of MODVAT to become a full-fledged *manufacturing* VAT.

This is a much less ambitious goal than the full harmonized dual VAT advocated by Podder (1990),[21] under which a single administration would collect, according to a single set of rules, a VAT with two components: one federal, one state. Even leaving aside questions of states' antagonism to an expansion of the center's base, sufficient state autonomy would have to be sacrificed to achieve this degree of harmonization to bring the option into question. While states would still be able to choose their rate levels, they would lose control, for example, over the number of rates and their base (including exemptions and zero ratings). State loss of control over administration would also be opposed, and, since there is always room for administrative discretion in any tax system, multiple administrations would inevitably mean multiple VAT jurisdictions.

Although a nonharmonized dual VAT would be a considerable improvement over the current state of affairs, it would be far from perfect. Taxpayers would have to deal with multiple administrations, and by retaining a manufacturing-base tax at the center one would be retaining the source of many of India's current tax problems. This raises the question of whether a states' VAT, though implausible as a short-term option, might not be desirable as a long-term goal. We return to this question in the conclusion.

As mentioned, the only example of a dual VAT in existence is Brazil. It is interesting that, rather than attempting to harmonize the currently unharmonized systems, Brazil is instead opting for a states' VAT. Canada has in recent years been trying to move in the opposite direction. As in India, both major levels of governments in Canada impose indirect taxes. In 1987, Canada's central government suggested the introduction of a fully harmonized dual VAT in which all governments would use a single administration to tax a common base but be allowed to choose their own rate. The central government was, however, unable to convince Canada's provinces to join a dual VAT. Some provinces were suspicious of the very idea of a VAT, while all seemed to resist the loss of autonomy implicit in the center's proposal. In 1989, the central government was forced to announce that it would be going it alone with a center-only VAT. Since then, there have been some moves toward harmonization, especially with Quebec, the only state to have a VAT. However, according to Mintz, Wilson, and Gendron (1992), these have been very minor and, in some respects, counterproductive on account of their complexity.

Note finally that, if a dual indirect tax system was favored, one might still argue against a dual VAT. As argued by Mintz, Wilson, and Gendron (1992) it may be easier, at least if bases and administration are unified, to piggyback a retail-type sales tax on the central

VAT. The monitoring of the central VAT should be sufficient to prevent evasion of the state-level sales tax. This was in fact the option preferred by the Jha Committee (GOI, 1978). However, again this begs the question of whether the necessary agreement could be achieved. Given, as the Bagchi report puts it the states' "unhappy experience with the retail sales tax" (p. 88), the possibility of being able to persuade the states to do an about-face and move their base from production to retail seems remote to say the least.

3.5 The revenue consequences of different VAT options

In this subsection, we provide a very simple analysis of the revenue consequences for the center and the states of adopting each of the three types of VAT outlined in Section 3.4. The analysis is deliberately conducted at a high level of aggregation. Much more detailed study would of course be needed before any decisions could be made, and what follows is only intended to give an idea of orders of magnitude.

It is assumed that any tax reform is neutral with respect to combined revenue but not necessarily to that of the center and states. Table 1 begins with benchmark figures (using 1989 data) showing the value of tax sources as a proportion of GDP. It can be seen that the center currently collects some two-thirds of total tax revenue. After the sharing of central excises and income tax (worth 2.6 percent of GDP), the center and the states both have about half each of total revenue. A further 2.2 percent of GDP is transferred to the states in grants raising their final share in combined tax revenue to 60 percent.

In all three options, it is assumed that state excises remain as a separate tax and that union excises continue in a scaled down form, raising half of their current level of revenue.[22] Direct taxation, though not necessarily its sharing, is also unchanged. Protective (nonrebateable) tariffs remain, but these are also scaled down so that, it is assumed, only half of current customs revenue is raised. The loss of customs revenue is assumed to be made up by the VAT. In the case of a dual VAT, it is assumed the central VAT makes up half the loss and the states' VAT the other half.

The central VAT option gives the center-state revenue breakdown in the hypothetical case in which a central VAT is adopted. It is assumed that most union excise taxes and all state sales taxes are combined into a single VAT. The center then shares out the proceeds from both the VAT and excises (on top of, as currently, 85 percent of income tax revenue) to keep the states' share in after-sharing tax revenue at its current level. The key result to note here is that the residual central share would be approximately 50 percent of the central VAT and excises (compared to 55 to 65 percent of central excises at present).[23] Given the evidence that the center has put less effort into "shared" taxes (see Section 2.1), one must raise the question of whether a share of 50 percent would give it sufficient incentive to go in enthusiastic pursuit of VAT revenue.[24]

The state VATs option assumes that the state sales taxes are expanded into state VATS. The center retains excises on a small number of high-yielding revenue items but operates no VAT. In return for largely vacating the indirect tax field, all revenue sharing is brought to an end. These reforms would increase the states' total tax take to 9.8 percent of GDP and reduce that of the center to 7.2 percent.[25] A further 0.5 percent of GDP would need to be transferred from the center to match current postgrant revenue shares. This shows that the proposal to make VAT a state responsibility is feasible from a central revenue perspective.

Table 1. The revenue implications of different VAT options.

	Current					Reform					
		Before Sharing		After Sharing		Central VAT		State VATs		Dual VAT	
	C&S	C	S	C	S	C	S	C	S	C	D
Total tax	17.0	11.6	5.4	8.9	8.1	8.9	8.1	7.2	9.8	8.9	8.1
Direct	2.4	2.4	0	1.5	0.9	1.5	0.9	2.4	0	1.5	0.9
Personal	1.1	1.1	0	0.2	0.9	0.2	0.9	1.1	0	0.2	0.9
Other	1.3	1.3	0	1.3	0	1.3	0	1.3	0	1.3	0
Customs	4.0	4.0	0	4.0	0	2.0	0	2.0	0	2.0	0
Domestic indirect	10.6	5.2	5.4	3.4	7.2	5.4	7.2	2.8	9.8	5.4	7.2
Union excise	4.8	4.8	0	3.0	1.8	1.2	1.2	2.4	0	2.1	0.3
Union VAT	0	0	0	0	0	3.8	4.0	0	0	2.9	0.5
State excise	0.8	0	0.8	0	0.8	0	0.8	0	0.8	0	0.8
State sales/VAT	3.4	0	3.4	0	3.4	0	0	0	7.8	0	4.4
Other	1.6	0.4	1.2	0.4	1.2	0.4	1.2	0.4	1.2	0.4	1.2
Shared taxes			0		2.6		6.1		0		1.7
Grants required			4.9		2.2		2.2		0.5		2.2

Source: Burgess and Stern (1992) and GOI (1993c).

Note: All figures are as a percentage of GDP. Numbers may not add up precisely due to rounding. *C* stands for center; *S* for states. *Shared taxes* gives the total amount of taxation collected by the center but allocated to the states under tax sharing arrangements. *Grants required* gives the amount required to be distributed from the center to the states after tax sharing to bring state revenues up to the base-year postgrant allocation of revenue.

The figures under the heading *Current* refer to actual taxes raised and distributed. *C&S* gives the total tax revenue of center and states combined. *Before sharing* gives the taxes received by the center and states respectively prior to any sharing of taxes. *After sharing* gives the taxes allocated taking into account the various tax sharing arrangements (but not including grants). 85 percent of income tax is allocated to the states. The proportion of excise duties assumed shared is in fact calculated to be slightly less than 45 percent (it comes to 37.5 percent). It is calculated to give the sum of *after sharing* components equal to the given total, given the other taxes and the income tax-sharing arrangement. This is consistent with the fact that a small proportion of central excises is not shared. *Other* indirect taxes are divided between center and state to ensure the *before sharing* components add up to the totals. The *current* data are for 1988–1989, except for the state excise figures, which are given for 1987.

All three reforms considered assume that

- The total tax take and direct tax take are both unchanged;
- Customs revenue is cut by half: the loss in customs revenue is made good by the VAT; in the case of a dual VAT, each VAT makes up half the loss in customs revenue;
- State excises remain at their current level;
- Union excises are cut by half (this represents center's retention of excises on a few high-revenue-yielding goods).

A central VAT assumes that

- State sales taxes are merged with most excises to become a central VAT, which raises current sales tax revenue plus half of current excises and half of current customs;
- Sharing of income tax remains; central excise and VAT are shared to give current after-sharing fractions of tax revenue.

State VATs assume that

- Apart from a small number of goods on which excises are retained, no central domestic indirect taxation;
- State sales taxes are expanded into state VATs, which raise current sales tax plus half of current customs revenue and half of current union excises;
- Sharing of excise and personal income tax revenue ended.

A dual center-state VAT assumes that

- Most centrally excised goods taxed under central VAT and state sales taxes become state VATs;
- Sharing of personal income tax continues; sharing of union excises and VAT continues to give current after-sharing allocation of revenue;
- States' VAT raises current sales tax revenue plus one-quarter of current customs revenue; central VAT raises half of current central excise revenue plus one-quarter of current customs revenue.

The dual VAT would see half of current union excise revenue raised as a central VAT and state sales taxes transformed into state VATS. Income taxes continue to be shared as before. The union excises and VAT are shared to maintain the current after-sharing revenue allocation. Less than 20 percent of these central indirect taxes need to be transferred to achieve this goal.

4. Tax regimes for interstate trade

It is unlikely that, in the foreseeable future, a single VAT structure, uniform across all states, could be introduced into India to replace the currently existing mix of federal excise and state sales taxes. It is more realistic to assume that any VAT adopted in India will be one in which (1) states retain at least some share of the revenue raised in their state and (2) rates possibly differ across states.

One of the chief problems facing any such federal VAT would be how to treat trade between the units of the federation. If the VAT were purely a central one, the issue would not arise. Since there would be a single VAT jurisdiction, no distinction would be required between interstate and intrastate trade. But if there was a states' VAT then, even if rates were perfectly harmonized across states, problems of coordination would nevertheless arise in relation to the distribution of revenues from interstate sales. Should revenue go to the producing state (under the "origin" principle currently in place) or to the consuming state (under the "destination" principle)?

If a dual VAT were to come into existence, the center, as well as the states, would have a VAT and it is in any case unlikely that the center would hand over customs as well as indirect taxation to the states. Problems of coordination between the center's VAT and customs and the states' VAT regimes would then arise that were very similar in nature to those among the different state VATs themselves. These are also discussed in this section.

We first set out a simple accounting framework which can be used to understand different types of mechanisms for taxing interstate trade (Section 4.1). This is followed (in Section 4.2) by an analysis of the pros and cons of these mechanisms. Section 4.3 places India's current arrangements for interstate trade in this context and considers how they might be reformed. Section 4.4 looks at the need that would arise for coordination between the state VATs and central VAT and customs.

4.1. Mechanisms for taxing interstate trade

Any mechanism for taxing goods that are traded interstate will combine a particular choice of rates with a set of rules for distributing revenue among the trading states. Although these choices are not independent, it is useful to present them separately.

4.1.1. Choice of rates. Consider a good whose journey, from initial production to final consumption, takes place entirely within a single jurisdiction (VAT zone). If its price at some stage of production is p, the tax paid by the seller is $p.t$, where t is the VAT rate for that particular good (expressed as a fraction).[26] If the good is transacted as an input

(bought by a VAT-registered agent), the rebate claimable by the purchaser is also $p.t$. Note that within a single jurisdiction only sellers are responsible for collecting VAT.

Now consider a good that is being exported from one VAT jurisdiction to another. In such a case, it is possible that both the seller (exporter) and the buyer (importer) will have to pay tax to the authorities. Let t_x be the rate paid by the exporter and let t_m and r be, respectively, the rate paid and rebate claimable by the importer. Then the total taxes paid are $p.t_x$ (by the seller) and $p(1 + t_x)t_m$ (by the purchaser). The rebate claimable by the purchaser if the good is transacted as an input is $p.r$. Let the exporting (importing) state be state 1 (2) and the rate prevailing in that state for the type of good under consideration t_1 (t_2). There are many possibilities, but it will be sufficient to consider only three.

1. *zero-rating exports*: $t_x = 0$, $t_m = t_2$, $r = t_2$. Exports are zero-rated. Imports are taxed and rebated at the going rate of the importing state.
2. *zero-rating imports*:[27] $t_x = t_1$, $t_m = 0$, $r = t_x$. Exports are taxed. Imports are zero-rated and rebated at the going rate of the exporting state.
3. *butoir*:[28] $t_x = t_1$, $t_m = 0$, $r = t_2$. As with 2, imports are zero-rated, but now the exporting state determines t_x and the importing state r. Each is set equal to the going rate in the respective state.

With both the first two options, the tax falls purely on consumption (or, more generally, the final taxed sale), though possibly at different rates in different states. With the butoir arrangement, the tax falls partly on intermediate goods unless $t_1 = t_2$. This third case can in fact be characterized as a consumption tax at rate t_1 if the good is a final good and a sales tax, equal to $t_1 - t_2$, if an intermediate good.

4.1.2. The distribution of revenues. The revenues raised from interstate trade could be divided up in any number of ways, but only two are analyzed here. Since we are assuming that at most one of t_x and t_m is positive, define the gross revenue rate to be the maximum of the two (that is, whichever one is positive), and the net revenue rate to be the gross revenue rate minus the rebate if the good is an input. The two ways of dividing up the revenue are then (1) destination (no revenue to exporting state government; net revenue to importing state government) and (2) origin (gross revenue to exporting state government; rebate, if applicable, from importing state government). The destination and origin classification is well known from the international trade literature. A destination (origin) tax is one in which tax revenue is distributed according to where value-added is consumed (produced) (Shoup, 1990). Under the destination principle any revenue raised from the taxation of trade goes to the government of the consuming state. With the origin principle, the importing government taxes only the value added subsequent to import. Tax on the value-added imported goes to the exporting government.

Any of the three choices of rates is, in principle, compatible with any of the two rules for distributing revenue, giving a total of six candidate mechanisms. However, it will be useful to draw a distinction between those combinations that require interstate transfers and those that do not. Those that do not are those in which the exporting firm pays tax to the exporting state and the importing firm pays tax to and claims its rebate from the importing state. Without interstate transfers, the zero-rating exports VAT is a destination VAT, while the zero-rating imports and butoir VATs are both origin VATs.

4.2. The pros and cons of different mechanisms

One can think of at least eight criteria by which the six possible combinations of choices of rates and distribution rules can be judged. These are desirability of the distribution rule itself; the degree and nature of tax competition generated; the incentive-compatibility of the chosen mechanism regarding both the firms being taxed and the government collecting the revenue (alternatively, the likelihood of evasion by firms and enforcement by government); compliance costs to firms; administration costs to governments; neutrality regarding production decisions; the extent of change to the current system that adoption of the mechanism would require; and the extent to which the mechanism is tried and tested.

To assess each of the six options by each of the eight criteria would be difficult. Fortunately, we can narrow down the field by distinguishing, as at the end of the last subsection, between those mechanisms that require interstate transfers and those that do not. We begin with the three in the latter category.

4.2.1. Mechanisms without interstate transfers.

1. *Butoir VAT* In the absence of harmonization, any butoir VAT introduces nonneutralities (see Section 4.1.1). In addition, again if harmonization is absent, it can be a VAT with high compliance costs. Firms calculating rebates owed on imports cannot simply claim the tax indicated on their invoice; rather they have to recalculate the tax that would have been paid if domestic rates were prevailing. On the other hand, the butoir VAT has the advantage of preventing the exporting state raising t_x on inputs without suffering a competitive disadvantage (as the rebate is fixed at t_2) and so is advantageous from this tax competition perspective. The butoir VAT is also incentive compatible for firms since the tax paid and rebate owed is invariant to the destination and origin of the good, respectively. Exporters are indifferent from a tax perspective between selling interstate and domestically and likewise importers in relation to buying.
2. *Zero rating imports VAT* The most serious drawback of this arrangement is that exporting states will try to import revenue by raising t_x knowing that the rebate, footed by the importing state, will raise automatically. Hence this mechanism can only work with a centrally imposed upper bound on t_x. This mechanism could also have the drawback of being informationally complex. Unless rates are harmonized, firms will be claiming differently valued rebates for the same purchase from different states. State tax authorities will need to be well informed about the systems prevailing in other states to prevent evasion. Although exporters will be indifferent about taxes between selling domestically and selling interstate, importers of inputs will have an incentive to claim that they imported from a high-tax state.
3. *Zero rating exports VAT* This system has strong elements of simplicity. Unlike the case in which imports are zero rated, rebates in each state are based on only one rate structure. Unlike the butoir system, no recalculation of rebates is required. Admittedly, unlike both of these systems, exporters must distinguish between exports and other sales, but since there is only a single exporting rate—zero—this is not informationally demanding. The zero rate, though administratively simple, does, however, give firms the incentive to evade: firms will have an incentive to claim they are exporting when in fact they

are selling domestically. Governments will need to guard against this, either by physical checking at border crossings or by information sharing across states. Zero rating of exports is also only appropriate if the importer is VAT-registered in its state. If not, the traded good will go untaxed (unless it re-enters the VAT chain by being sold on to a VAT registered agent). For trade between countries, all exports can be zero rated since all imports will be taxed. But this will not necessarily be true for trade between states of a federation. Where it is not, a positive tax rate on exports is required.[29] This distinction between exports to VAT-registered and non-VAT-registered importers introduces complexity into the zero rating of exports VAT. The taxing of exports to non-VAT-registered agents also turns this option into a destination VAT only far exports to VAT-registered agents. For exports to non-VAT-registered agents (the only transactions that raise net revenue for either government), the option becomes an origin VAT. Since most interstate trade will probably be between VAT-registered agents, we will call the resulting VAT a modified-destination VAT.

For the reasons given above, if t_x is bounded from above by the center, then the zero rating imports VAT becomes workable and resort need not be made to the cascading butoir VAT. In India, it is realistic to assume that an upper bound can be placed on t_x (see Section 4.3). This narrows the choice of mechanisms without interstate transfers down to two. Option A is the modified zero rating of exports VAT. Under this, for interstate exports to non-VAT-registered agents,[30] $t_x = t_1$ (and $t_m = 0$); for other trade, $t_x = 0$ and $t_m = t_2 = r$. This gives a modified destination distribution of revenue (according to the destination principle for registered trade and the origin principle for nonregistered trade). Option B is the zero rating of imports VAT with controlled rates. Under this, $t_x > 0$ and $t_m = 0$ for all goods, with t_x (or an upper bound on t_x) set centrally and $r = t_x$. This gives an origin distribution of revenue.

Option A is basically the system that was introduced to govern EU trade on January 1, 1994 (see H.M. Customs and Excise, 1993; Coopers and Lybrand, 1992). The EU moved from the previous system in which all exports were zero rated and all imports taxed to the current one in which only exports to VAT-registered companies are zero rated.[31] Option B is basically the system currently in place in Brazil (see Longo, 1990), though, as part of the reform package referred to earlier, there are proposals on the table for a change to an option-A-type mechanism (see Mintz, Wilson, and Gendron, 1992, p. 20). At present, full rebates are provided by the importing state and export rates are set centrally to prevent their inflation by exporting states. In addition, the tax on interstate exports is not in fact that prevailing in the exporting state (17 percent for all states), but some fraction of that (either 12 percent or, for exports from the producing to consuming—northern, northeastern, and middlewestern—states, 9 percent). The limit on the interstate export tax results in revenue sharing, as it is equivalent, for inputs, to the exporter charging the full 17 percent and the rebate being shared between the importer (12 or 9 percent) and exporter (5 or 8 percent).[32]

There are three main differences between options A and B. First, in the absence of harmonization, option A is simpler, since it subjects all trade between registered agents to a single rate—namely, zero.

Second, the two options have different evasion potentials. Under option A, sellers will want to claim they have exported. Under option B, buyers will exaggerate their rebates

owed on goods claimed to be imported. And sellers, in the knowledge that checks on cross-border trade will probably be weak, will minimize their reports of quantities exported. Probably the evasion potential of option A is more serious in this regard, at least if interstate rates are roughly harmonized. For then, the only gains that can be made are to exaggerate the quantity imported and underplay the quantity exported. Claims regarding imports can always be verified by inspection and claims about exports can always be compared with estimated total production levels.

Third, options A and B give different distributions of revenues with option B favoring the richer, more industrialized producing states. Which distribution is preferable is a political question, but also an economic one if the distribution of revenue can also give rise to incentives for tax competition. Interestingly, however, the two options give the same incentives in this regard. A VAT automatically limits the scope for tax competition to final sales out of the VAT chain (cross-border shopping). And options A and B both treat cross-border shopping in the same way.[33]

4.2.2. Mechanisms with interstate transfers. Since the introduction of interstate transfers will add complexity to any mechanism for taxing interstate trade, it requires justification. What can the introduction of interstate transfers add to either option A (modified zero rating of exports) or B (zero rating of imports with controlled rates)? We have seen that the strength of option B relative to A is that it gives less incentive for firms to evade. However, one might object to the origin distribution of revenues that option B implies. Utilizing interstate transfers means that one can combine the antievasion advantages of B without being forced to accept its distribution of revenues. Adding on a system of interstate transfers to option B creates a third option under which exporting states would become responsible for any rebates owed on imports by VAT-registered agents. This would imply a modified destination distribution of revenue, identical to that under option A. If, in addition, importing states were to have transferred to them the tax paid by exporters to non-VAT-registered importers, a full-blown destination distribution of revenue would result. Both possibilities are allowed for under what we will call option C.[34]

Although option C removes option A's incentive for firms to claim they are exporting when in fact they are selling domestically, the introduction of interstate transfers would bring with it its own serious problems.

The interstate transfers could either be government-to-firm or government-to-government. In the former case, the transfers would be undertaken directly between firms in one state and the government of another. For example, a firm in state 2, due a rebate on an input it has imported from state 1 and paid tax on to the exporting firm, could submit its rebate claim directly to state 1's government. But this would impose serious compliance costs on firms that could end up submitting numerous rebate claims. It could also make evasion easy unless there was very good information sharing between states.

The alternative is to establish a clearing house. Firms would claim from their own government the rebates they were owed on interstate imports or submit to their own government the tax they had been paid on interstate exports. They would distinguish these claims and payments either on a state-by-state basis or aggregated up to two categories: domestic and arising from interstate trade. States would then redistribute this revenue through the clearing house in line with the desired distribution of revenue. To the best of our knowledge no such clearing house currently exists, but the EU Commission has proposed that one

be established for intra-Community trade in conjunction with a switch from zero rating exports to zero rating imports. That is to say, the Commission's long-term VAT goal is the implementation of option C; the current implementation of option A is seen only as a transitional measure.

This second way of carrying out the necessary interstate transfers obviously imposes far lighter compliance costs on firms. However, as Lee, Pearson, and Smith (1988) argue, the clearing house may introduce serious enforcement problems in relation to state governments. Firms will always have an incentive to overstate the rebates owed to them and understate the tax owed by them. If the domestic government is neither the ultimate beneficiary of tax payments nor the ultimate funder of rebates, it will have little incentive to check the claims made by firms. One way to control this problem would be to increase information sharing between state governments. Cross-checks between exports and imports could then be made at the state level. Alternatively, the center could announce, on the basis of sample surveys, required net payments (some positive, some negative) into the clearing house. This would remove the incentive problem, and could be handled as an extension of current downward-sharing revenue arrangements but could generate fierce conflicts between the center and the states and would be difficult to obtain agreement on.

The enforcement problems associated with a clearing house, the compliance costs and evasion opportunities associated with government-to-firm interstate transfers, the administrative costs associated with both and the fact that no VAT currently operates with interstate transfers (the EU is showing no signs of moving toward implementation of its plan) make us reluctant to recommend the use of interstate transfers as part of any mechanism for taxing interstate trade.

4.3. India: The current system and possible reforms

India, of course, does not have a VAT currently in place, and so its mechanisms for taxing interstate trade can be characterized by none of the above options. Nevertheless, the arrangements in place can still be usefully understood in terms of the accounting framework of Section 4.1. The tax payable in state A on a good imported by state B is t_x, the central sales tax, the upper bound of which is set by the central government. This is currently 4 percent if the interstate sale is to an importer registered under its state's sales tax regime. If the importer is not thus registered, the bound rises to 11 percent. If the good is sold on within the state, t_2, the going sales tax rate in the importing state must be paid on sale, an obligation that goods bought within the state are not subject to on account of the prevailing first-point nature of the states' sales tax regimes. Hence current arrangements bias registered traders against importing from another state goods that they will sell. (Assuming the trader adds no value, the good imported and sold on faces a tax rate of $t_x + (1 + t_x)t_2$, whereas the goods bought locally and sold on face a tax rate of only t_2.) On the other hand, current arrangements will bias unregistered traders as well as those registered firms importing and not selling on factories importing inputs for own-use—against interstate trade only if t_2 is less than t_x (11 percent in the former case and 4 percent in the latter), and in favor if the inequality is reversed. In practice, one beneficial impact of the CST has been that it has exerted pressure on states to set rates on inputs of no greater than 4 percent to prevent trade diversion.[35]

Although the CST is often condemned for its systematic bias against interstate (registered) trade, it is potentially a very useful tool for ensuring the success of any mechanism for taxing interstate trade under a VAT. For all three of options A to C, the current bound of 11 percent (or something like it) could be retained for interstate exports to non-VAT-registered importers. Option A could be implemented as part of a VAT by setting the CST upper bound for registered trade to zero. Option B could be implemented by unifying the bounds on trade to registered and nonregistered agents and forbidding states to charge VAT on interstate imports. Option C would, in addition to the option B reforms, require a clearing house.[36]

Whichever option was chosen would likely be an improvement over current arrangements. The very fact of VAT introduction, by pushing taxation back to the final point, would greatly reduce scope for tax competition and would remove the current taxation on inputs that CST imposes. Option A, however, does have the distinct advantage of being closest to what is already in place in India. Its main requirement, as mentioned, is simply a new CST rate for registered trade of zero.[37] Option B however requires agreement on a new, positive upper bound and the ending of taxation of interstate imports. Since states currently have the constitutional right to tax interstate imports, this may not be easy.[38] Alternatively, t_m could remain positive, as long as it was also made rebateable. However, this would introduce the complexity that each registered interstate transaction would be subject to two taxes and two rebates, one of each subject to CST regulations and one of each to local state regulations. Option C would, of course, in addition, require agreement on the clearing house. One advantage of both options A and B is that, since neither requires a clearing house, both are compatible with a gradual introduction of VAT at the state level. Any single state will be able to go ahead and introduce its own VAT without having to wait for agreement among all states. Option A would also reduce cascading compared to B if only some states introduced VATs (and thus rebating).

Since the so-called consuming states tend to be the poorer, more rural states, one has to favor a distribution of revenue in accordance with the destination principle. However, since the producing states are powerful, compromise might be necessary. For example, with option A one could initially reduce the CST to 1 or 2 percent rather than zero; with option C one could require that exporting states only partially fund rebates, leaving the importing states to make up the difference. Equivalently, with option B, one could, as in Brazil, set the CST for registered traders below the generally prevailing VAT level. Alternatively, a compensation package might be necessary as part of the introduction of a VAT.

Taking into account all three of ease of implementation, simplicity and the distribution of revenue, option A emerges as the preferred option. However, we have noted that option A would be susceptible to evasion. Note that the fact that the CST is already below the average sales tax rate means that the incentive to evade already exists and that border checks to combat it are already in place. The current system may not work well (NIPFP, 1994, p. 102), but at least there is something already in place to build on. The Bagchi report also argues for zero rating of exports and suggests exemption for taxation for interstate exports should be conditional on proof of payment of taxation by the importer. In other words, there would be no deferral of payment of VAT on interstate imports as there is in the EU (see note 31). This would not remove the incentive of the exporting firm to exaggerate its interstate sales. However, it would give both the exporting-state and importing-state

governments incentives to monitor interstate trade since both would have a financial stake in it. More detailed analysis of the enforcement question is required, but the above may provide the basis for a solution.

4.4. State VATs and central VAT or customs

All of the above analysis has been in relation to the incentives facing and distribution of revenue among states. But the role of, and problems facing, the center as a tax collector must also be considered. The center may or may not operate its own VAT, and it is unlikely it would agree to relinquishing control of customs. If the center and state bases were coincident, problems of rebating across the two tax systems would not arise, as all taxes on inputs would be rebated by the authorities responsible for imposing them. But this is unlikely. For example, even if the center retained control of only trade taxes, decisions would have to be made about rebating VAT on international imports against state sales taxes. If the center retained a production-level MODVAT, a decision would have to be made about rebating taxes paid at the production stage to the center against those paid at the wholesaling stage to the states.

At present, partial rebates on import taxes are allowed within MODVAT (see note 9), but tariff payments cannot be set off against sales taxes. The CST regulations forbid the imposition of sales taxes on exports. However, states can tax inputs used to produce exports. As mentioned in Section 3.2, states often provide exemptions for inputs, but these commonly apply only when the final good is consumed within the state. The suggestion has been made by two tax committees—the Mudaliar and the Sariya—that rebates on exports should be available (with the center compensating the states as necessary). However, difficulties in determining the amount that should be rebated have inhibited action (Purohit, 1988, p. 169).

We assume that the center would retain the right to set customs duties and export taxes, and that any revenue accruing from these would flow to the center. In addition to customs duties, imports would also be subject to VAT (see Section 3.1). If the center is collecting customs duties, it might make sense for it to administer VAT on imports as well. In a dual VAT, this VAT on imports would have two components: one earmarked for the center, one for the state of import. In a system of state VATs, the import VAT would be entirely state revenue. If state VAT on imports was collected by the center, the center would also need to arrange for, or compensate the states for, rebates on this tax. To avoid the complications that this would entail (see Section 4.2.2), the states' VAT rate on international imports to VAT-registered-agents could be set to zero.[39] This would cover the great bulk of imports, and the center would be left with collecting, on behalf of the states, only VAT on imports to non-VAT-registered agents. This could be done at a uniform rate structure agreed between the center and the states. No rebating on this revenue would be required and the small amount collected could be distributed by the center to the respective states of import.

If, as considered in Section 3.4.3, the center retained something akin to MODVAT (that is, a production-level VAT) and the states introduced VATs, it would be possible for the center to fund rebates to offset central taxes paid at the final MODVAT tax point (the factory gate). This would ensure that the tax burden fell at the final state-VAT-level point.

However, given the complexity of MODVAT, this would introduce significant administrative and enforcement problems. In addition, very significant transfers of revenue could be involved, as all centrally taxed goods sold to registered wholesalers would generate claims to rebates. This would make the VAT system essentially a system of state VATs, but with tremendous scope for evasion and complexity between the production and wholesale stages. In general, excluding international trade, cross-system transfers between the central and state VATs should be avoided.

With rebates for taxes on inputs used to produce goods that are exported abroad and therefore subject to a central rate, the problem arises that, since input tax rates are set by the states, if the center is obliged to meet claims for offsetting rebates, states will set very high rates resulting in large revenue transfers from the centre. A further problem with exports arises in the case of a firm that produces both traded and nontraded goods. The total amount of rebate owing to this firm will be clear from its invoices on purchases, but the division of this rebate between center and state will depend on how inputs are divided between the traded and non-traded output. It is precisely this difficulty that has hindered action on this issue. It would probably be sensible to avoid this problem entirely by requiring states to provide rebates on all inputs used by firms located in their territory—that is, by regarding the state VAT as extending all the way to the export stage, with exports being zero rated by all states.

5. Conclusion

The pressures of aggregate revenue, the requirement of a reduced role for customs duties for the liberalization of the economy, and the complexity and strains of the current system together clearly point towards the desirability of tax reform in India. Since domestic indirect taxes provide the major source of revenue, they deserve special attention. It is helpful to distinguish between two broad types of reform: those that may be feasible in the short or medium term and those that deserve consideration as a long-term option. Agreement, at least in principle, is more likely to be forthcoming on the former than the latter.

Of the many short- to medium-term reforms required, we would highlight the following:

- Rate simplification and compression,
- Base widening,
- Improved administration,
- Extension of crediting arrangement within MODVAT, and
- Conversion of state sales taxes into partially harmonized but separately administered VATs, linked by the zero rating of interstate exports.

Many of these reforms—in particular, rate simplification and base broadening—as well as being valuable in their only right would also need to be implemented either before or as part of a program of VAT introduction. Moreover, the extension of crediting arrangements under MODVAT and the conversion of state sales taxes into VATs would in themselves significantly shift India's indirect tax system in the direction of a VAT. This short-term agenda is itself a demanding one, whose implementation would require significant effort on the

part of both center and states. In particular, encouragement by the former and cooperation among the latter would be needed and might be facilitated by the establishment of a VAT Council of States, as recommended by the Bagchi report, which could establish guidelines for administration, rate structures and so on.

The dual VAT that would be the fruit of all these reforms—all of which indeed are advocated by the Bagchi report—would be likely to represent a considerable improvement over the current state of affairs. We have also argued, however, and here we go somewhat beyond the time span and arguments of the Bagchi report, that a dual VAT may well not be suitable as a longer-term goal for India. A dual VAT would only work well if it was well harmonized between the center and the states. In the absence of such harmonization, a dual VAT would be complex to operate and comply with and would offer scope for game playing between governments and evasion among firms. But harmonization would require a loss of state autonomy, which is likely to be opposed by the states. Nor would the states be likely to agree to any proposal to simplify the dual system by running only a retail-type sales tax—and with good reason, since, at least in the absence of complete harmonization of bases and administration, evasion would be a serious problem in collecting such a tax. Hence, although one would welcome any attempt to move both the center and the states' indirect tax systems in the direction of a VAT, a longer-term goal should be to have either one or the other primarily responsible for the VAT.

International experience with VATs in federations reveals widespread usage of central VATs, with collection by states (under the supervision of the center) and revenue sharing. However, it is difficult to avoid the conclusion that, from the point of view of federal politics, this option is a nonstarter for India.

An alternative is to have the center reducing rather than expanding its role in indirect taxation. Under this option, recently under consideration in Brazil, the center would retain only a small number of high-revenue-yielding excises. The states would then administer their own VATs to replace not only the current system of sales taxes but also union excises on many goods. We have suggested that it should be possible to design versions of this proposal that are broadly revenue neutral between the center and the states. The center could be expected to take advantage of the center's withdrawal from excises by substantially increasing its indirect tax take.

This option of a system of state VATs is likely to be politically attractive to the states as a whole since most states can be expected to prefer to collect the tax revenue themselves rather than be dependent on the center.[40] However, there would be winners and losers among the states, and some compensation from the center would be required. This, in turn, would require some transfer of VAT revenue from the states to the center, so the states would not be able to retain all revenue collected. Although the outcome would not be a pure states' VAT, the resulting tax arrangements would nevertheless involve a significant shift in autonomy in favor of the states. In return for decentralizing in this way, the center should be able to negotiate a number of binding agreements with the states in relation to the harmonization of bases and the simplification of rate structures.

The central government might understandably be reluctant to reduce its indirect tax role in the way suggested. In particular, it might be argued that it would be unwise for the center to cut itself off from access to what in most other countries has proved to be a buoyant source of revenue. Against this, though, the center would gain from an end to the current

revenue-sharing arrangements, which would increase its incentives to fully exploit the revenue potential both of the key excises it would retain and of direct taxation. The latter in particular would be a welcome development since it is desirable that income tax revenue grow rapidly in India.

The proposal that the VAT should be a state tax might seem to be at odds with the prescriptions that the central MODVAT should be further developed and that the center should assist the states with the transition from sales tax to VAT. But there is no contradiction here since, as we have stressed, a state-run system of VATs can be considered only as a long-term option. In the short run a dual VAT is almost certainly the only way forward in the development of value-added taxation in India. If this proceeded well and close harmonization emerged as a feasible goal, then no change of tack would be required. An ultimate goal in this case could be a single administration, with centrally or jointly controlled rates, and state governments retaining a fraction of revenues raised in their state. But if, as seems likely to us, close harmonization were not to emerge as a feasible goal, then the goal of a states' VAT should be actively pursued. If the VAT were to become a states' tax, the MODVAT administration could be transferred to the states. The simpler and more streamlined the tax regimes in place, the easier this would be.

The challenge of indirect tax reform in India is interesting enough, but there are also lessons for other federations contemplating similar changes. The first is the need to have a sense of what is possible, both constitutionally and politically. In India, political realities rule out a central VAT and, in the short run, at least, a states' VAT. The second is that if the various federal players will not, for whatever reason, fully integrate their tax systems, complicated schemes involving partial integration may be worse than simpler, uncoordinated schemes that may seem ad hoc but that give rise to less scope for evasion, confusion, and game playing. The reader will recall our arguments against a dual VAT divided between center and state by stage in the production-distribution process. Third, unless a central VAT is being contemplated, attention needs to be paid to the taxation of interstate trade. A variety of options is available, and initial conditions are again likely to be decisive in the choice between them. For India, we have argued in favor of a system of zero rating of exports on grounds of both its simplicity and its closeness to existing arrangements for interstate trade. The fourth and final lesson is the need to distinguish between the short run and the long run. In the short run, there can be no doubt that India should head down the road toward a dual VAT. Once it does, it may become appropriate to revisit the long-run option of a system of state VATs.

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Notes

1. According to Purohit (1992b, p. 4), most states now "yield between 70 and 90 percent of revenue from the first-point tax." See Purohit (1988) and NIPFP (1993) for details on the evolution and structure of the state sales tax.
2. As a result of the sharing of excises, customs is the largest single postsharing source of central revenue.
3. Discussions with the central tax authorities reinforce this impression.
4. Jain (1993, p. 5) notes the existence of "some seven hundred exemption notifications" in relation to the union excise and reports a seven-year backlog of excise tax cases before the courts.
5. Althougth our focus is on central and state taxes, it should also be mentioned that many local governments impose *octroi* taxes—that is, taxes on the movement of goods across municipal borders. Needless to say, these cause further barriers to trade, including increases in transport costs due to delays. Their removal, with compensation for the loss of taxing power, would certainly be a step forward. Compensation might be provided, for example, through a share of sales taxes.
6. Although specific rates are more commonly used for excise purposes around the world, it is normally only for a small number of items (such as tobacco and alcohol). Since each good requires its own specific rate, in India simplification demands the use of ad valorem rates. The use of the latter does introduce the question of valuation, which can be problematic for production taxes, but see the references in the note below for how progress can be made on this front.
7. For more detail, see the Chelliah Committee reports (GOI, 1991a, 1992, 1993a), the Bagchi report (NIPFP, 1994), and Purohit (1988).
8. We refer to a *retail-type sales tax* to refer to taxes that rely mainly on collection at the retail stage but that may also, at least in some sectors, tax partially at the wholesale stage if retail entities are so small as to be exempt.
9. That is, customs duties—levied on the c.i.f price plus the other customs duties—which equal the excise duties which would be due if the good were produced locally (Purohit, 1992b, p. 31). This definition of countervailing is specific to the subcontinent. Elsewhere, the term is used to describe tariffs put in place to counter dumping by exporting nations.
10. Compared to a general rate of sales tax between 5 and 12 percent (Purohit, 1992b, p. 35).
11. But note exemption is optional. Despite VAT compliance costs, firms can benefit from opting in since they then become liable for rebates. There may also be signalling benefits (regarding a firm's quality and longevity) from having a VAT registration number. Finally, firms selling to VAT-registered agents have an incentive to register themselves. Although this will increase their tax burden on any volume of sales, this will be more than offset by the reduction in tax burden faced by their registered buyers, who will therefore want to buy from a registered seller (see the Bagchi report, NIPFP, 1994, p. 105).
12. If the aim is to minimize administrative and compliance costs, exemption rather than zero rating is appropriate, since the latter only sets the VAT rate at zero and does nothing to reduce the reach of VAT.
13. Cnossen's (1994) international survey of compliance costs confirms that "compliance costs of the VAT, as a percentage of sales, fall with exceptional severity on small businesses" (p. 1666).
14. The Bagchi report uses the same tripartite distinction into central, dual, and states' VAT (see NIPFP, 1994, pp. 73 ff). As we do, it also distinguishes between various systems of dual VATs that differ in relation to degree of harmonization between the central and state VATs (see main text below and note 21).
15. In Argentina, the states also operate a gross receipts tax. Its harmonization or amalgamation with the centrally run VAT is currently under active consideration.
16. This downward sharing of revenue could be in part dependent on the amount of revenue collected by each state as is the case, for example, in Mexico, where each state can keep 30 percent of the VAT it collects (Burgess and Stern, 1992, p. 37). However, as mentioned, using our classification, the greater the dependence of sharing on revenue collected greater the extent to which the VAT becomes a states or dual VAT.

17. This problem could be avoided by changing current tax-sharing arrangements, as recommended by the Chelliah Committee Interim Report (GOI, 1991a, pp. 100–101), to give the states a right to a certain share of *aggregate* tax revenue, rather than to shares of particular tax sources. Though an attractive proposal, this would require further constitutional change.
18. Moreover, if a state does tax some good within the three broad categories which is not taxed by the center, it will lose its share of the additional excises (Purohit, 1990, p. 76).
19. Note that the current system is not one without any harmonization. Interstate sales tax rates are harmonized through the CST. In addition, five zonal councils have been formed to increase uniformity in rates and administration (Purohit, 1988, p. 175).
20. For some EU countries, the introduction of a VAT was a desirable reform on its own account, given the complexities and cascading of the turnover and wholesale sales taxes which it replaced. In others, the United Kingdom for example, the VAT replaced a retail sales tax.
21. The Bagchi report refers to this as a "concurrent" dual VAT to distinguish it from an 'independent" or less harmonized dual VAT system, which it recommends.
22. The center would need to keep excises on around a dozen goods to be able to raise half the current level of revenue (see Reserve Bank of India, 1991, Statement 87). The number of goods it in fact would choose to subject to excise would in fact be dependent on whether the center or states were responsible for VAT, with a smaller number of goods expected to be excised in the former case.
23. The official figure is 55 percent remaining with the center, but not all central excises are shared. The assumptions used to calculate Table 4 give an actual share of 62.5 percent remaining with the center: see the notes to the table for further details.
24. Even if the amount of VAT revenue each state received was in part dependent on its collection of VAT, an "unenthusiastic" center would still cause problems, as it would be responsible for the choice of rates and other ground rules.
25. Alternatively, some excises could be transferred from the states to the center—for example, alcohol. This would further protect the revenue position of the center.
26. The purchaser pays a tax-inclusive price of $(1 + t)p$ and $p.t$ is added to the seller's tax liability.
27. This choice of tax rates is also known as a *restricted origin* VAT or a credit-system VAT (since importers are given credit (a rebate) for the tax they paid to their exporter).
28. See Terra and Kajus (1992). A *butoir* is literally a buffer. A butoir or notational credit VAT is one in which, as in this case, VAT rebates are never allowed to exceed VAT taxes. Although we are not aware of a butoir VAT ever being used for the taxation of interstate trade, the French VAT, for example, used to be a butoir VAT for domestic transactions.
29. Alternatively, one could require that non-VAT-registered interstate importers register as traders and be liable to a tariff. This is how international trade is run. However, in the context of a single country it would be easier to tax those companies already registered for tax purposes. Trade between two unregistered traders will, of course, go completely untaxed, whether intrastate or interstate.
30. Here and throughout, what matters is whether the importing agent is registered in its own state.
31. Note too that a system of deferred payment now applies in the EU. VAT is not due until the time of the first sale subsequent to import. This reduces costs since firms that import are not obliged to pay a tax (t_m) that they could subsequently claim back as a rebate.
32. Note that these are rates on prices inclusive of tax. Also, the text describes the situation prior to the 1989 constitutional changes, which gave the states greater freedom to set rates. In fact, however, this newfound freedom has not been much utilized, though new lower rates for necessities and higher rates for luxuries have been introduced.
33. With regards to exports to VAT-registered agents, option A sets a rate of zero and so gives no scope for competition. Option B either gives no scope or scope up to an externally imposed upper bound. States will always be at that upper bound unless, possibly, if the same goods are being exported both to VAT-registered and non-VAT-registered agents. In this case, the two options could give slightly different incentives. However, the outcome of this is unclear, and, as most trade will be between VAT-registered traders, its importance does not seem to be great.
34. The Chelliah Committee Interim Report (GOI, 1991a, pp. 294–298) advocates a mechanism similar to C. It has t_x positive, paid to the exporting government and transferred on to a clearing house (see text below)

where it would be used to compensate importing state governments for their payment of rebates (equal to t_x). However, there are two differences. First, t_x is well below t_1. A rate of 2 percent is suggested, which could give rise to evasion. Second, the Committee's proposal has t_m also positive. The mechanism is not advocated as part of a VAT so the question of a rebate for t_m does not arise.

35. Trade diversion is not unknown however. See GOI (1978, pp. 115–116) for examples.
36. We assume that a clearing house is preferable to interstate government-to-firm transfers.
37. Alternatively, one could simply remove central controls on the rate on interstate exports to non-VAT-registered entities.
38. Entry 52 of the State List in the Indian Constitution empowers states to levy "taxes on the entry of goods into a local area for consumption, use or sale therein".
39. That is, a deferred payment system would be used of the type now in place in the EU (note 31).
40. Certainly this is the impression we gleaned from conversations with tax officials at the state level in India.

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