TAX HARMONIZATION IN FEDERATIONS A SURVEY OF THEORY AND PRACTICE

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1. Introduction

The federal form of governmental organization derives its rationale from the advantages it confers by way of strength in unity while allowing the constituent units to preserve their identity and autonomy in determining the level and content of public services in accordance with the preferences of the people - "the different advantages which result from the magnitude and the littleness of nations", as Tocqueville put it long ago.[1] The strength that unity confers is political as well as economic. The economic gains of joining together to operate within a common market allowing full play of competitive forces are so compelling that many countries which are reluctant to surrender their political sovereignty have come forward to form economic unions allowing free trade among themselves. The classic case is of course that of the European Community, now renamed European Union (EU). The formation of a trade block under the North American Free Trade Agreement (NAFTA) is another.

A prerequisite for the growth of a common market in a country or community of countries is free movement of goods, labour and capital. Because taxation often acts as a major hindrance to free flow of commodities and factors of production in various ways, abolition of fiscal frontiers and harmonization of taxes among member countries have figured prominently in the agenda of the EU as essential steps towards their economic integration. What exactly is implied by "harmonization" in the context of taxes is, however, not as obvious as might appear at first sight.

If the countries forming the block are not to surrender their sovereignty in tax matters completely, harmonization cannot be regarded as synonymous with absolute uniformity. Such uniformity is also not essential for removing the barriers to trade or achieving neutrality to the operation of market forces within the Union. Freedom of the member countries in the matter of taxation is not necessarily inconsistent with the functioning of a common market. Such freedom, however, cannot be totally unfettered since divergences in the tax levels, or for that matter, in the systems of taxation (as also the content and quality of public services) can distort the location of economic activity and cause commodities, labour and capital to move from one country to another, simply on tax considerations. Hence, the need for some harmonization

or restraint on the exercise of tax powers by countries seeking to derive the benefits of operating in a competitive, large market. How far can these restraints be carried without impairing the autonomy of the countries otherwise sovereign? In other words, how much of their autonomy should be sacrificed in the interest of efficiency?

Similar trade-offs and dilemma are confronted also in a federal polity in which the constituent units wish to function autonomously in the spheres assigned to them. For effective exercise of the influence of the people over decisions of the government affecting them, governments at subnational levels ought to be allowed to function with a measure of autonomy and if the autonomy is to be real, they must have some independent financial powers assigned to them along with functions that can be performed best by them. Accountability and, so efficiency in public spending, also predicate that assignment of functions and finance should go together, and, as far as possible, be matched.

The task would have been simple if taxation went only by the principle of benefit and governments taxed only their own citizens and that too for the services rendered to them. It is, however, rarely possible to confine the benefits of public services to an identifiable group or geographical area. Costs of generalized public services have thus to be realized by governments mostly from taxes that cannot be related strictly to benefit even though the benefit approach - in essence, the market principle - can be extended over a much larger area than is usually the case (McLure, 1993). This underlies the unavoidable need for taxes with broad bases having generalized incidence like the taxes on income and consumption.

Unfortunately, there are very few non-benefit taxes of any significance which do not have inter-jurisdictional ramifications and it is not easy to contain their economic effects within the jurisdictions levying them. Differentials in tax levels (net of benefits of public spending) as between jurisdictions whether because of differences in rates or in the very systems of taxation can distort trade and factor flows in the country and thus impede their efficient allocation. Where levels of development and endowment of physical resources among the constituents happen to be uneven, taxes can be exported by subnational governments to one another, depending on their relative competitive strength in respect of their products, to the advantage of the net exporting jurisdictions at the cost of others. In the process both efficiency and equity are impaired and growth of the economy suffers. Efficiency is affected because of distortions caused to decisions of producers and consumers and equity is offended as a result of encroachment into the tax space of one jurisdiction by another. If left unchecked, taxes levied by the constituent units can also go against the policies or aims of the federal government. All this calls for certain restrictions on the exercise of the tax powers which may be vested in the lower level governments.

The problems that a federal polity faces are thus similar to those in a group of countries in a economic union, and in fact somewhat more acute in that unlike in an economic union, the central government in a federal set-up carries substantial responsibilities and functions like defence, maintenance of economic stability, ensuring a minimum level of basic public services all over the country and so on, and is accordingly endowed with extensive financial powers to facilitate their efficient performance. In other words, the national government in a federation has to have substantial fiscal powers of its own. That in turn calls for harmonization between the federal and subnational taxes ("vertical harmonization"). Then there is the administrative dimension especially where, as in a federation, there are no fiscal frontiers or "border controls" to monitor the flows of trade within the country and the financial system is integrated with free movement of capital and labour. Thus, while there are advantages too flowing from the presence of a big central government, a federation has to contend with problems arising from the assignment of tax powers at two levels of government and address the task of harmonization in two dimensions, vertical and horizontal.

Devising systems or rules of taxation that provide adequate resources for the Centre to perform its designated functions and at the same time is consistent with the autonomy of governments at subnational levels, efficiency in the use of resources and equity in the allocation of tax bases among themselves as well as administrative feasibility, poses a formidable task. All federations where significant tax powers are vested in the lower level governments face intractable problems of tax coordination as the task of reconciling the goals of efficiency and equity, having due regard to the administrative constraints is not simple. Different countries have addressed these problems in different ways and there are no perfect solutions (Bird, 1994a). Economists and political scientists have been debating the issues involved for quite some time but no consensus seems to have emerged. One school of thought even questions the wisdom of insisting on harmonization instead of allowing competition among governments from the angle of welfare. This paper seeks to provide a flavour of the debate and review the practices in selected countries in order to draw lessons for India. The focus is on the question of horizontal harmonization, that is, among constituent units in a federation.

We begin by examining what tax harmonization in a multilevel governmental system connotes, its rationale and desirable scope (Section 2). Section 3 reviews the practices in large federations and fiscal unions with reference to some of the major taxes currently levied to finance governments. Section 4 appraises the current situation in India in this regard drawing lessons from theory and practice. Some concluding observations are put forward in Section 5.

2. Tax Harmonization - Connotation and Rationale

That assignment of significant tax powers to lower level governments in a federation can give rise to conflicts and inefficiencies calling for harmonization is generally acknowledged.[2] What precisely harmonization connotes in this context is however not always spelled out in discussions of the issues involved. Whether or how much of harmonization can be justified in principle is also not as obvious as might be supposed.

2.1 Connotation

In one of the earliest expositions of what harmonization implies in the federal context Oates defined it as "a co-operative effort to secure a system of taxation that minimizes excess burden and yields a desirable pattern of incidence" (Oates, 1972). While this view of harmonization might seem to contemplate uniformity (and, by implication, centralisation), harmonization need not be taken as synonymous with total uniformity.

A recent formulation by two leading experts on the subject defines harmonization as "any degree of coordination leading to an improvement in the allocative, administrative and equity impacts of the tax system in a federation" (Mintz and Wilson, 1991). The role of harmonization so defined is to reduce the spillover effects or "fiscal externalities" that may be caused by governments pursuing uncoordinated tax policies to maximize their own interest to the detriment of national welfare or the welfare of other jurisdictions. While not requiring uniformity in tax systems, this definition can embrace a variety of arrangements that serve to reduce differences across jurisdictions in effective rates of tax on bases that are mobile or which can have inter-jurisdictional implications.

More specifically, tax coordination has been defined, in the context of the European Community (now EU), "as any change in the tax systems of the Member States that is intended to forward the aims of the Community", and the aims include, "the creation of a single integrated market free of restrictions on the movement of goods, the abolition of obstacles to the right of establishment of businesses and employment and to the free movement of persons, services and capital and the institution of a system ensuring that competition is not distorted" (Cnossen, 1987). As spelled out by Cnossen (1987), fulfilment of these goals requires, apart from abolition of tariff barriers among member countries, the coordination of the major indirect taxes and the approximation of some direct tax laws to facilitate the proper functioning of the common market.

2.2 Forms of Harmonization

Depending on the flexibility allowed to the subnational authorities, harmonization in a federal context can take several forms. Mintz and Wilson (1991) put them under three categories, weak, strong and "similar form" or somewhere in-between.

A weak form of harmonization is one in which double taxation by different levels of government is avoided by allowing credit for the tax paid to one level of government in determining the tax payable to the other (e.g., where deduction is allowed for State sales taxes in the determination of tax base of business income tax levied by the national government).

Harmonization is said to be of the strong form when taxes though assigned to different levels of government are collected by agreement through a single mechanism with tax bases and/or rates determined largely by one authority and the base allocated among the lower level authorities through an agreed formula. Such harmonization presupposes agreement among the governments on either a tax rental arrangement or on the mechanism of tax-base assessment by a single authority leaving it to the parties to the agreement to fix the rates. A typical example of this is the agreement among the provinces in Canada with the federal government whereby the base of the personal income tax is assessed and the tax collected by the federal government on their behalf (barring one), even though the tax rate to be applied is decided by the provinces. With such harmonization the tax does not lose its local character as long as the rate is set by lower level governments while the objectives of harmonization are largely achieved.

Harmonization is defined to be of a "similar form" when the tax is levied by the different levels of government on a similar base and/or at a similar rate without a formal or explicit agreement. An example is the practice of levying corporate income taxes in three provinces in Canada on a base roughly similar to that of the federal tax. Such similarity also marks the capital taxes applied to assets of companies.

An extreme form of harmonization or coordination is one in which the levy of a tax is fully centralized, whereby the central government determines the tax base, prescribes the rates and collects the revenues although the proceeds are shared (as with income tax and Union excises in India).

There has been a trend towards strong harmonization and even centralisation in recent years in several countries (e.g., in sales taxation in Canada, income taxes in Australia and VAT in China vide Section 4 below). However, as noted in the section that follows, there are forceful arguments both for and against such harmonization, although the need for some measure of

harmony among different governmental levels is almost universally acknowledged.

2.3 Rationale : Arguments for Strong Harmonization[3]

The case for harmonization - indeed harmonization of the strong form - has been argued from several angles. The main strands of the arguments can be grouped under six heads, viz.,

* correcting spillovers - fiscal neutrality
* primacy of national aims
* efficiency in administration
* promoting distributional goals
* protecting government revenue
* greater credibility of higher level governments.

These are gone over briefly below.

a. Correcting the Spillovers

Whatever the form, the case for tax harmonization rests essentially on the recognition that assignment of tax powers to lower level governments can give rise to "spillovers" across jurisdictions in various ways. For instance, a relatively low level of taxation or incentive provisions in the tax laws in one jurisdiction can attract investments which otherwise might have gone elsewhere and conversely, thereby violating what has been designated as "cross-country fiscal neutrality" (Smith, 1993). A common market cannot grow unless the tax system is inter-jurisdictionally neutral within the country and internal neutrality is a precondition for neutrality in the external, that is, international market. While conscious departures from neutrality might be justified to correct distortions existing in the system, the principle of fiscal neutrality provides a useful tool - a healthy criterion - for appraising policies.

Spillovers occur also in revenue allocation among jurisdictions, e.g., when one jurisdiction taxes products sold to residents in other jurisdictions on origin basis, thereby encroaching on the tax space of the importing State (assuming that the tax is largely shifted forward). An example on hand is provided by the Central Sales Tax (CST) and octroi levied by State and local governments in India. Spillovers also take place when credit is given in one jurisdiction for taxes paid in another (as may happen in an origin based VAT without any compensating arrangement as explained later) or under a system of uncoordinated corporation tax.

The extent of spillover effect of taxation via impact on private sector decisions depends on the differences in the level and system of taxation among jurisdictions and the degree of integration of the markets for

labour, capital and products within the country and the degree of monopoly in each. Since these markets are usually highly integrated in federations and the competitive strength of the constituents sharply differs, spillovers and the likely welfare and equity loss can be considerable though often difficult to figure out quantitatively.[4]

Logically, existence of large externalities or policy spillovers calls for assignment of tax powers to higher level governments as, otherwise, the costs and benefits of particular policy choices which do not affect their own residents are unlikely to be taken into account by the constituent governments (Oates, 1972). The principle of "fiscal equivalence" propounded by Olson (1969)[5] helps to get over this problem by internalizing the fiscal externalities. Implementation of this principle in practice calls for extensive central intervention or a high degree of coordination. One school of federal finance theorists favours strong centralisation of major tax powers on the strength of this argument.

The case for centralisation of tax powers based on efficiency considerations has been put forward forcefully in the Canadian context notably by Thirsk (1980). Unless effective tax differentials exactly reflect the actual service differentials ("the fiscal residuum", as Richard Bird puts it), so the argument runs, a fully harmonized tax (which, logically ends up with a uniform national tax), is needed to ensure locational neutrality. This essentially was the reasoning underlying the recommendation of the celebrated Rowell-Sirois Commission of Canada for vesting the powers of income taxation exclusively in the federal government and asking the provincial governments to vacate the income tax field completely.[6]

b. <u>Primacy of National Aims</u>

A supporting argument for centralisation invokes the overriding role of the policies of the national government in a federation and a supposedly constitutional presumption that the federal policies "should not be thwarted by the actions of provincial governments, even if the former (<u>federal policies</u>) happen to be explicitly non-neutral among provinces." This argument was extended in the Canadian setting even to justify imposition of harmonization of provincial policies from above, if necessary, with the reasoning that if the country is to be regarded as one, efficient regional allocation of resources should be a matter for national concern. Federally imposed uniformity, it was further argued, is analogous to provincially-imposed uniformity on municipalities and so, should be equally acceptable. Not everyone would go along with this analogy since municipalities are usually the creatures of provincial governments (Bird, 1984) whereas provinces exist on their own right but the primacy of national concerns is generally acknowledged.

c. Efficiency in Administration

Another efficiency argument for centralisation of tax powers is provided by the economies of scale in tax administration. There are several administrative advantages in having broad based taxes levied centrally. National governments are often in a better position to organize and run large tax administering agencies that can specialize in particular fields like taxation of income and manage information systems more efficiently than if they are organized by different governments at lower levels. Central administration is often convenient also for the taxpayers because of uniformity of procedures for compliance which centralisation facilitates. While there can be diseconomies of scale too (stemming from problems of communication and control), in developing countries tax administrations of lower level governments often lack the resources in personnel and equipment to implement any major tax efficiently.

d. Promoting Distributional Goals

Independently of efficiency considerations, the case for harmonization has been advanced on equity grounds too. Properly defined, harmonization, according to a noted proponent of this view (Lemelin, 1983), is necessary not only for facilitating trade and factor movements but also promoting regional growth and distributional goals. While economic union might require mobility to be maximised, actual factor movements may have to be restrained in the interest of political union. Contradiction between the goals of economic efficiency and the political union - one favouring mobility, the other opposed to it - is resolved, in a federation, it is contended, through fiscal harmonization.

e. Protecting Revenue Levels

The need for harmonization derives its rationale further from the reckoning that tax competition can drive down tax levels below what the governments by themselves would like to maintain and thus render their functioning unsustainable. The impact of tax competition on the revenue growth of State governments in India driving them to desperate (and damaging) tax measures like turnover tax bears testimony to the strength of this argument.[7]

f. Credibility of Higher Level Governments

The advantage of central operation in areas of policy where there are large cross-jurisdictional externalities lies also in greater credibility of the higher level governments. A constituent country or State in a federation may not be inclined to be a party to any inter-State agreement where the monitoring of its implementation depends on information to be

supplied by others, as in a prisoner's dilemma type of situation. Central action is indicated where compliance with inter-country or inter-State agreements cannot be monitored easily and involves heavy information requirements (Gatsios and Seabright, 1989).

Economies of scale, revenue sustainability and the credibility question, would seem to strengthen the case for the strongest form of harmonization mentioned above, viz., centralisation or assignment of tax powers to the national government. However, as elaborated in the subsection that follows centralisation undermines the autonomy of the constituent units and goes against the principle of "subsidiarity" that enjoins government activities to be lodged at the level of government closest to people that can effectively discharge them - the principle that embodies the philosophy of decentralized governance. Happily, assignment is not the only solution. In several instances the problems can be tackled satisfactorily through policy coordination or harmonization by agreement and that indeed provides the rationale for the efforts towards tax harmonization in federations and fiscal unions. Many critics of centralisation are opposed even to harmonization and would much rather settle for coordination.

2.4 Tax Harmonization : Arguments Against

Harmonization in any form is disliked by those who feel that it does not take adequate note of the reality of federations where provinces have elements of sovereign status of their own. Harmonization by imposition, it is argued, is inconsistent with the federal principle and amounts to centralisation through the back door. Harmonization is also repugnant to those who believe that welfare is best promoted through competition including competition among governments. The main planks of the arguments opposing tax harmonization and favouring competitive federalism fall broadly under the following heads:

* the subsidiary principle,
* benefits of competition,
* public choice view of federalism,
* promotion of distributional goals, and
* organisation costs of harmonization.

a. <u>The Subsidiarity Rule</u>

Logically, one may argue, if decentralisation has any justification - as a way of achieving efficiency in delivery of public services according to people's preferences - there is no reason to whittle down the powers of the lower level governments in this way. The principle of "subsidiarity" enshrined in the Treaty on European Union to which a reference has been made above also follows this philosophy and thus enjoins that the (European) Community shall intervene "only if and insofar as the objectives

of the proposed action cannot be sufficiently achieved by the member States and can therefore by reason of the scale or effects of such actions be better achieved by the Community."

b. <u>Beneficial Role of Competition</u>

Those who question the axiomatic primacy of federal policies also assert that harmonization, if it is beneficial, will come about on its own by agreement among the constituents themselves through the market mechanism for if they persist with their inefficient policies the market will not permit them to pass on their cost to others. In other words, economic reality and self-interest will bring about harmonization. Otherwise, those who refuse to fall in line will suffer the consequences (Belanger, 1982).

c. <u>Public Choice Approach to Federalism</u>

Tax harmonization is anathema also to advocates of the public choice view of federalism whereby competition among governments within a federation is seen as beneficial and an essential ingredient of democratic governmental system. This view is put forward most forcefully by Brennan and Buchanan in the following words:

> "Tax competition is the fundamental ingredient in constraining the behaviour of local despots : tax competition among subnational jurisdictions, like price competition among firms, is basically beneficial, in that it reduces the extent to which citizens can be exploited by the intrinsically coercive powers vested in government." (Brennan and Buchanan, 1983).

Tax powers to the local governments, according to public choice theorists, are justified not as a means to enable them to garner more revenue but to make sure that the government as a whole take less from citizens. Measures like harmonization that reduce tax competition or help to maintain cartels of governments are, in this view, detrimental to welfare.

Breton points out that competition will not necessarily produce large differences in tax bases and rates. To the extent preferences are common, competition will eliminate differences in tax rates. But if there are differences, competition will ensure that these are not ignored. However, since such differences are not absolute, there is a natural limit to the extent of differences in tax bases and rates that competition would promote (Breton, 1987) and so conscious efforts towards harmonization are unnecessary.

d. Promotion of Distributive Goals

The case for harmonization that reduces the fiscal autonomy of lower level governments is questioned also on the ground that it rules out, on efficiency considerations, redistribution as a goal to be pursued at subnational levels. After all, it is said, these governments may have a different distributional preference pattern. The conventional approach that leads to centralizing distribution policy can perhaps accommodate this criticism by stipulating that each government will have "an individualistic social welfare function whose arguments are the social welfare functions of the governments immediately below it in the hierarchy of governments" (Tresh, 1981). But integration of the welfare functions of governments cannot possibly be taken for granted in all situations and harmonization can impede pursuit of redistributive objectives by subnational governments.

While the concern for "subsidiarity" implicit in this argument is understandable, in practice central governments usually do look below the level of the States in assessing welfare implications of policies and so it would be fair to say that this consideration alone cannot outweigh the case for harmonization on normative grounds.

e. Organisation Costs of Harmonization

The conventional approach to assignment of tax powers with a strong accent on centralisation has come in for criticism even on efficiency grounds for neglecting the "organization costs" while analyzing optimal distribution of powers among different levels of governments. Harmonization, it is pointed out, entails certain costs, e.g., in setting up coordination and also in "signalling", from people to governments and these costs may not be negligible (Breton and Scott, 1978). Signalling of citizen preferences, as the public choice theorists also argue, is facilitated by competition even if that results in duplication and overlap.

The arguments put forward above while serving to sound a strong note of caution against centralisation as a remedy for the ills of subnational taxation, do not quite demolish the need for harmonization. Indeed, the case for harmonization is put forward by some scholars by referring to the game theory that the outcome of non-cooperative behaviour on the part of the participants is usually inefficient. Breton contests this logic by pointing out that the analogy does not hold in the federal situation since the beneficiaries of competition, viz., the people, are not involved in the game (Breton, 1987).

However, competitive federalism to be welfare enhancing presupposes some parity in the capacity of the constituent governments to provide public services at a given level and at a given tax price. Another

precondition is that benefits are appropriated by those who pay the cost. These conditions seldom obtain in the real world. Moreover, even ardent advocates of competitive federalism like Breton acknowledge that "competitive behaviour is not unconstrained or anarchical behaviour. Competition would not survive if such behaviour was the rule. Indeed competitive behaviour is restrained and disciplined behaviour." All this argues overwhelmingly for a good measure of harmonization in taxation in federal countries of the major tax powers, though not unalloyed centralisation.

2.5 Case for Tax Diversity With Coordination

A via media between the two extremes - strong form harmonization and unrestrained fiscal competition - lies in seeking ways in which taxes are coordinated while permitting some diversity.

Paradoxical though it may look, harmonization need not be inconsistent with tax diversity. While harmonization in taxation is needed to remove barriers to trade by making the system neutral to economic decisions - and to pave the way to external neutrality - there can still be a case for permitting tax diversity among constituents of a federation or a fiscal block. It is possible to have diversity without jeopardising neutrality. The case for such diversity is put forward most cogently in Cnossen (1990). Although Cnossen's context is the EU, the arguments would seem to have general validity and can be extended equally to a federation.

Cnossen joins issue with the European Commission's interpretation of the Treaty of Rome that had led to the creation of the European Economic Community in 1958 as a mandate to pursue more or less complete equalization of the various taxes in the member States. Emphasizing that **coordination** rather than complete uniformity should be the aim, Cnossen contends that this would allow maximum flexibility to the member countries to arrange their tax systems without impeding the creation of an internal market.

Arguments advanced for diversity in taxation among member countries/constituents of an economic block federation or a federation which can be of general application are:

* Tax diversity allows room for differences in the preferences of the member States regarding choice of taxes to suit their situations, such as the size of the public sector and is thus in accord with the tenets of public choice theory.

* Taxes which might appear identical in form may diverge widely in practice, depending on their structure such as definition of taxable entities, the basis of assessment and efficiency in their enforcement. The impact of a given tax such as the tax on corporations would not be

the same in two countries if the nature of the entities covered and their relative significance differ, as for example, between Germany and Netherlands. In Germany incorporation is rare while in the Netherlands that is the rule.

* It is not taxes alone that interfere with the market. Non-neutralities can inhere in the expenditure side too. Services and subsidies as also policies on procurement and administrative rules can have a profound impact on the decisions of economic agents operating in the market. Hence, in evaluating the distortionary effects of government intervention one has to look at the **net** burdens and benefits and not of taxes alone for, so long as these persist, tax diversities may serve to correct them. (This is similar to the arguments put forward by Thirsk and the Rowell-Sirois Commission to support the opposite case, viz., for centralisation, vide subsection 2.3a).

* Differences in subnational tax systems are not necessarily incompatible with the functioning of a common domestic market, as the tax practices in several federal countries like USA, Canada and Switzerland show. Diversities in the tax systems at the subnational levels of these countries are quite marked but no one can claim that the market does not function reasonably efficiently in any of them.

Advocates of tax diversity and tax competition however acknowledge that while these are beneficial, there is also a price because of the spillover effects and these may be quite serious not only in the case of product taxes but also with taxes on capital. Even those who plead for allowing room for tax diversity thus agree that it is necessary to keep down the costs of competition and variety through coordination. The relevant question is, as Cnossen puts it, not whether coordination is called for or not, but how much coordination?

2.6 How Much Coordination?

What would be the optimal degree or form of coordination in a country or economic block will of course depend on the realities of the given situation and the extent to which the principle of subsidiarity is accepted for implementation. An attempt to find a conceptually satisfactory answer to the question posed above in a rigorous theoretical framework is made in a recent paper by Edwards and Keen (1994). The authors first take note of the fact that there are extreme views on whether tax competition is beneficial or harmful from the welfare angle, depending on how one views the government; as a pure Leviathan using up resources for her own benefit? Or as a "benevolent maximizer of their citizens' welfare"?. Using tax competition models for internationally mobile capital, they then show that in certain circumstances

defined by relatively well-specified conditions, the truth probably lies in between and so coordination can be useful if certain conditions are met.

Their finding is that when policy makers are neither wholly benevolent nor totally negligent of citizens' welfare, answer to the question whether tax coordination is a desirable response to the inefficiency of non-cooperative behaviour or an undesirable instrument of tax cartelisation, hinges on the balance of two effects. One, an income effect, that arises from the fact that a multilateral tax increase is like a lumpsum transfer to the local Leviathan, who will spend at least a part of this increase on the citizens' welfare (e.g., increasing the supply of a local public good or cutting other taxes). This effect obtains on a weak "normality condition" and does not depend on the relative weight given to the citizens' welfare in Leviathan's calculation of own welfare. The other effect is on the "relative price" as perceived by Leviathan between tax revenues available for her use on the one hand and the welfare of the citizens on the other. The net effect is in most situations ambiguous.

While precise conclusions on the final outcome would call for operating numerical simulations, and no **a priori** judgement seems possible, the models demonstrate that the central issue - the choice between two extremes - can be addressed by comparing two numbers for which one may perhaps rely on best guesses: one, the marginal excess burden of taxation (deadweight loss per unit of revenue at the margin); the other, the amount by which unproductive public expenditure would increase if Leviathan had additional revenue in lump sum. A measure of tax coordination would be justified only if the former (excess burden) exceeds the latter. For then, with coordination, efficiency gain would outweigh Leviathan's tendency to waste. The authors acknowledge that their conclusions can be used for policy purposes only with considerable caution as their models have several limitations, viz., the neglect of asymmetries between countries, the assumption of a representative consumer and a loose concept of waste. Their exercises, however, serve to show that the two perspectives on the tax-coordination question can be synthesized rather than being regarded as mutually exclusive.

Essentially the same message - viz., that there can be a compromise - comes through from the other writings on the subject reviewed earlier - though not in such precise terms. As theory is yet to provide a clearcut answer to the question - although one gains useful insights by looking at the literature - policy makers have of necessity to go by a broad judgement of how to balance the conflicting goals of efficiency, autonomy and equity.

An equally important consideration is administrative feasibility especially in a developing country context. A pragmatic approach would be to take the major taxes individually and see what are the likely spillover

effects and how best they can be avoided without taking away local discretion in taxing their own people as they desire. The manner in which different countries have gone about to address this task provides useful lessons for federations seeking to foster a common market and achieve internal neutrality in taxation without treading on the autonomy of their constituent units. The following section reviews in the light of theory the experience of a few leading federations/economic blocks with reference to three important taxes commonly used to finance governments, viz., personal income tax, corporation tax and taxes on consumption.

3. Tax Coordination in Practice

The major taxes which figure prominently in the context of harmonization are the taxes on income, capital and consumption (sales tax and excises). Each of these taxes when levied by subnational governments gives rise to problems of spillover. As noted, centralisation too has its problems such as diseconomies of scale, widening of vertical fiscal imbalance and thus weakening of the foundations of federalism. There are thus trade-offs and what would suit in a given context depends on the weights the people and policy makers attach to the objectives sought to be achieved.

3.1 Personal Income Tax

As noted at the outset, the problems of spillover in taxation could be avoided if taxes were levied on the principle of benefit. Even with non-benefit taxes spillovers and associated inefficiencies in resource allocation can be minimised if by and large taxes on bases which are immobile such as non-business real estate are assigned to subnational governments. By these criteria, taxes on immovable property can be assigned to local governments. If the incidence does not vary across jurisdictions appreciably, subnational personal income taxation (presuming that this pertains primarily to income from labour) should not give rise to spillovers if levied on residence basis.

Assigning personal income tax exclusively to provincial governments, however, may weaken the efficacy of the national government in its stabilization function, which, for reasons expounded by Musgrave in his classic treatise on Public Finance, has to be the responsibility of the Centre. The same applies to the function of redistribution. Hence, although in principle, local governments can legitimately have redistributional aims of their own, highly progressive taxation at the provincial level may not be practicable. Large variations or a high degree of progressivity in the rates of tax on labour income also induces high skilled workers to move out. Moreover, progressive income tax is difficult to administer at the subnational level when citizens derive income from sources located in more than one jurisdiction or when they do not live where they work, unless the tax base is

assessed centrally and the relevant information is passed on to the jurisdictions of residence. There are also economies of scale when income tax is administered centrally. The same applies to the progressive taxes on capital, the base being highly mobile and amenable to fragmentation. It may thus be administratively convenient and cost-efficient to centralize the legislation and administration of progressive taxes on income and capital for which the base can be mobile or fragmented across different jurisdictions.

Autonomy of subnational governments can still be honoured by permitting them to levy taxes on a centrally assessed base at rates to be decided at their discretion or as a surcharge on the tax levied by the Centre. However, the incidence of tax at the subnational levels should not vary by wide margins as otherwise there could be spillover effects. Where the tax rates are progressive this is necessary also to avoid providing an incentive to evade taxes by dispersing one's investments over several jurisdictions and withholding full information regarding global incomes.

McLure (1993) argues that personal income tax can be used to serve all the three functions of public finance designated by Musgrave - with (i) a single standard rate to finance generalized benefits (of both levels of governments), and (ii) graduated rates (leviable by the Centre only) applied to a base after allowing personal exemptions to secure the desired redistribution and provide built-in stability. Operation of such a model, however, requires harmonization of the base, preferably central assessment, on which the rates chosen by the two levels of government can apply. Among the PIT systems obtaining in large federal countries, only two - those of Canada and USA - would seem to be at least partly in line with the principles enunciated above. The Scandinavian countries also would seem to fall in this category but they are not comparable in size and diversity with federations like Canada or India.

In USA, governments at all levels have concurrent jurisdictions over all taxes other than those on international trade and property taxes, the former being reserved exclusively for the federal government and the latter, for State and local governments though, by and large, income tax is primarily federal while sales tax is primarily State (Bird, 1986). As many as 43 out of 50 States have their own PIT and only a few among those levying the income tax follow a common base with the federal government. For most States income taxes constitute a major revenue source (including corporation tax, over one-third of the total). The rates of tax are generally mild and roughly proportional, being kept in check, presumably by tax competition. For instance, in one of the eastern States, New Jersey, PIT originally had only two rates, 2 and 2.5 per cent. A third rate (3.5 per cent) was added in 1982. Two more rates were recommended by a recent State Commission, but the maximum proposed still did not go beyond 4.5 per cent (State of New Jersey, 1988).

The tax base is determined according to the State law, but some States prefer to go by the base assessed for the federal income tax.

In contrast, Canada's PIT system is much more harmonized although both federal governments and provinces have concurrent powers of levying the tax. By virtue of tax collection agreements formulated under an Act of 1962, the federal government collects income taxes on behalf of all provinces who signed the agreement and all except Quebec are party to this arrangement. Revenue collected by the federal government under these agreements is allocated among the provinces according to the taxpayers' residence. The tax base is determined by the federal government but the provinces set their own rate as a percentage of basic federal tax.[8] Provinces can also allow tax credits against income tax levied by them, provided they are non-discriminatory, easily administrable and do not distort allocation of resources across provinces. How far these constraints are observed in practice is open to debate and several forms of tax credits are in use in the provinces (Boadway and Hobson, 1993). Nevertheless, it is fair to say that the system is reasonably well harmonized and convenient for both compliance and enforcement.

In China, under the scheme of "tax separation" introduced as part of reforms towards a rational system of division of tax powers between the central government and the provinces, taxes assigned to the "local governments" (that is, provinces) include individual income taxes. The rates are progressive (5 to 45 per cent for wage and salary income; and 5 to 40 per cent for income from production and business). But the Centre defines the base and fixes the rates and so the system is harmonized in principle, although differences may arise in implementation because of uneven quality of administration. These arrangements might not be problematic in the present stage of China's development as income tax now forms a relatively small fraction of government revenues and the possibility of individuals dispersing their investments in different provinces may not be very high. But as China's economy develops - and it is developing rapidly - and capital becomes mobile, enforcement of progressive income tax may run into problems.

In Australia, although the State governments enjoy concurrent powers of taxation in all fields barring customs and excises, the role of the States in income taxes was taken away under the Uniform Taxation Act of 1942, eliminating any possibility of spillover or conflict.

In Germany too although the revenue accrues jointly to federal and State governments, legislation on all taxes is centralized. Assessment of the base for all taxes, though decentralised, is made according to the same national tax code and so uniformity is achieved. State governments have some discretion only in setting the rates of some taxes (Spahn, 1994). That

obviously takes care of spillovers and makes for a high degree of harmonization.

The constitution of Switzerland, the country with the oldest tradition of federalism, separates the tax powers of the central and local governments (Cantons) vertically but the bases of direct taxes on personal income and wealth are exploited concurrently by all levels of government. Originally, the income and wealth taxes were assigned to the Cantonal and municipal governments but driven by revenue needs, the confederation acquired powers in the field of income taxation also during World War I. The maximum rates of federal income tax (like those of the wholesale sales tax, also introduced as an "emergency measure" during World War II) are laid down by law and these taxes were to expire by specified "sunset" dates, viz., end of 1994. It is, however, unlikely that these arrangements will terminate in the foreseeable future.

It may thus be seen that the PIT is among the taxes that can be assigned both to the central as well as subnational governments. The problems of coordination can be contained if the tax is levied on the same base assessed centrally and the constituent governments are given discretion to set their rates but subject to a minimum or within not very wide bands (for theoretical arguments in support of floor rates, see subsection 3.4). The Canadian system, though not perfect, seems to provide a good example of how PIT can be harmonized. There are, however, dissenting views on the continued sharing of PIT tax base and federal dominance over the field. The main argument for dissent is that the present arrangements would not ensure stability in the vertical fiscal balance in a dynamic context as and when the expenditure responsibilities of the provinces multiply (Ruggeri, et. al., 1993). That underlines the need to keep the system under constant review rather than detracting from the merit of the current system.

3.2 Corporate Income Tax

Tax base assignment to subnational government for corporation tax (or for that matter income from capital) presents more problems than in the case of taxes on income from labour. If jurisdiction for corporate taxation is based on location of operation or of the registered office, unless the tax is uniform, companies will try to get their income taxed in the low tax States. Where a company operates in more than one jurisdiction, it can "shuffle" income among jurisdictions through various devices such as transfer pricing and financial arrangements (loans and leases from high interest States, etc.) between affiliates or branches. For these reasons, corporation tax is more appropriately levied centrally and the revenue, shared on an equitable basis.

If it is levied subnationally, the income of companies (and similarly, business enterprises) operating in more than one jurisdiction has to be apportioned on origin basis and, as the experience of USA and Canada shows, this is not simple. The situation is particularly chaotic in US as the States who have concurrent powers in the field can define their own base and apply different apportionment formulae based on the proportion of sales, property and payroll in the State to their respective aggregates.[9] Definition of entity also differs; some go strictly by a legal entity approach while others combine related companies as "unitary business", which in some States extends to all related entities worldwide. The net result of apportionment by payroll and property location is to attribute incomes on origin basis although the inclusion of sales serves to tilt it towards the consuming States. The only way out of such a mess is to have uniformity in the definition of the base, entity and variables in the formulae (McLure, 1993). The confusion cannot possibly be avoided unless the levy of corporation tax is centralized.

Alternatively, harmonization can be achieved by agreement, as in Canada. Although they have concurrent powers of taxing corporations, the provinces of Canada, barring three (Ontario, Quebec and Alberta) have their corporate taxes collected by the federal government. The base is determined by the federal government and the rates are fixed by the provinces. Even in provinces which do not participate in these arrangements, the base is largely the same as for the federal tax. Unlike in the case of PIT, the provincial rates are applied to the base itself and not the federal tax. Provinces fix their rates availing of the "tax room" ceded to them by the Centre. In determining the tax, the agreeing provinces follow the federal practice of applying differential rates to small businesses and profits from manufacturing and processing in Canada. Foreign tax agreements are also respected. As in the case of PIT, allocation of revenues from corporate income taxes collected by the federal government on their behalf under these agreements is made on the basis of a formula, going by their permanent establishments. The standard formula runs somewhat on the lines followed in USA but is simpler and more homogeneous.

In China, under the arrangements made under the reforms of 1994 the base of the business tax is assigned, in the case of State owned undertakings, to the Centre or the provinces depending on to which level of government the enterprise belongs. Tax on central government enterprises and those in operating in rail, road, banking and insurance sectors falls within the jurisdiction of the centre while "local" enterprise income taxes are assigned to the provinces. As in the case of PIT, the base and rates are laid down by the central government. These arrangements, while following the earlier practices, may encounter difficulties as and when businesses get privatised and start operating in several provinces.

A priori and also going by US experience it would seem that unlike the case of PIT or tax on labour income, taxation of income from businesses is best harmonized by having a central levy and the revenue shared according to an agreed formula.

3.3 Harmonization of Indirect Taxes : Value Added Tax

The spillover effects - tax competition and tax exporting with resultant distortions and inter-jurisdictional conflicts - are commonly associated more with indirect taxes than taxes on income or capital. Thus tax coordination in the EU has so far focussed mainly on harmonizing, or at least "approximating", the taxes on internal trade within the Community.

The first move towards tax harmonization in the EU was the abolition of internal customs duties and creation of a common external tariff for trade with third countries in 1968. Introduction of a destination based, invoice type value added tax with a largely uniform base mandated by the Sixth Directive of 1977 marked another major step towards creation of an internal market by harmonizing all taxes on domestic trade like the turnover tax and excises. The abolition of fiscal frontiers doing away with the system of border tax adjustments (BTA) from January 1, 1993 complemented the moves towards unification of the European market and harmonized operation of trade taxes within the Union.

Taxation of domestic trade need not give rise to conflicts or inequities if the tax is levied only on retail sales and inter-State trade among intermediate dealers is not subjected to tax (as is the practice largely in USA) so that inter-State sales get taxed only when they take place by way of cross-border shopping. Because of administrative problems, developing countries tend to rely more on trade taxes at the first point of sale or turnover type sales taxes. Growing recognition of the distortionary and cascading effects of such taxes and the need to improve the competitiveness of domestic industries has led to search for ways of taxing domestic consumption which do not interfere needlessly with market forces and is neutral both externally and internally. For this purpose, the destination oriented invoice operated VAT has turned out to be almost the universal choice. The destination based tax can be operated also through what is called the subtraction method and there are certain advantages in that method but there are disadvantages too (for a comparison of the two, see Bird, 1994b). Table 1 illustrates how the two methods operate with a uniform rate of tax at all levels of trade.

Operating a VAT in a large federal country is, however, not simple unless it is levied at the federal level. The main problem inheres in the question how to treat inter-State trade. Broadly, there are three alternatives for operating a system of destination-based VAT in a federal

country: (i) A National VAT, (ii) State VATs, or (iii) Concurrent or Dual VATs (see Poddar, 1990 and NIPFP, 1994).

After reviewing the experience of Brazil and the inherent difficulties in finding a satisfactory solution to the problem taxation of inter-State trade, McLure concludes, "For administrative reasons, it is not appropriate to assign the VAT to subnational governments or to allocate revenues from it (or a portion thereof) to such governments on the basis of where value added occurs." (McLure, 1993). Presumably, for administrative reasons (and also to meet the Centre's revenue gap) China has gone in for a national VAT from January 1 this year (1994), with 70 per cent of the revenue going to the Centre and 30 per cent to the provinces on origin basis.[10]

The main consideration that argues for a national VAT is that where the powers of taxing sales run concurrently (or are assigned exclusively to the States) and there are no fiscal frontiers (that is, customs documentation of movement of the goods), a destination based VAT with zero-rating of sales between States has to contend with high risks of evasion. Establishing procedures to minimise such risks is not simple.

The EU has been struggling with the operation of a harmonized system of VAT for three decades now and the system is still in the process of evolution. Originally, the system contemplated by the EU to ensure that taxation did not distort location of industries was based on the "restricted origin principle". Under this principle, exports to third countries would be zero rated but not when goods were traded within the Community. Where the trading takes place between member countries of the EU, the country of origin would levy the tax on its exports (now called "supplies" to distinguish them from export to third countries) at its own rate and no tax would be levied on the goods so imported (called "acquisitions") in the country of destination. Only the value added in subsequent stages would be taxed in the importing ("acquiring") State.

Under the restricted origin principle, the product, if exported to a country outside the Community (say from France to USA) would be zero-rated, that is, tax payable by the retailer (if he is exporting the product) would be zero and in the example given in Table 1, the tax paid on purchases at the earlier stages (say, French Francs 0-13), refunded. Thus, instead of having to pay 2 by way of VAT on his sales, the exporter would be entitled to a refund of 13, that is the tax paid by him on his purchases. So long as the exports go to a third country, the refund simply means that the government collects no tax on exports.

Complexities arise when the trade is between member countries and the invoice credit chain is extended across the country borders and there are no border controls (as in the case of States in a federation). To illustrate,

suppose the product goes from a manufacturer in France to Germany. By the restricted origin principle France would collect tax from the manufacturer and Germany would not levy any on the import nor would allow any credit for the tax paid in France. The value added at the subsequent stages (namely wholesale and retail) would of course be taxed in Germany. Thus, of the total VAT of 15, 10 would go to France and 5 to Germany. This system would have the advantage of doing away with the requirement of border tax adjustment on trade within the fiscal union but would not be neutral to location of economic activity unless the tax rates were uniform among member countries. Besides, border tax adjustment in some form would be unavoidable if a credit type VAT is used and there are more than one stage of production/trading. There is also the problem of tax base allocation among the countries concerned. For, under such a system, the net

TABLE 1

Modes of VAT Computation : Subtraction and Tax Credit Methods

		Manufacturer	Wholesaler	Retailer
1.	Sales	100	130	150
2.	Purchases (tax paid)	0	100	130
3.	Value added (2-1)	100	30	20
	VAT (@ 10%)	10	3	2

Total VAT payable computed by
the "Subtraction method" as above: 15
Final sale price of the product : 165

Computation of VAT by Tax Credit (Invoice) Method:			
VAT payable on sales	10	13	15
Minus VAT paid on purchases	0	10	13
Net VAT payable	10	3	2

Total VAT payable 10+3+2 = 15

exporters within the Union would gain at the cost of net importers while neutrality cannot be ensured unless credit is given by the importing country for the tax paid in the country of origin. It is difficult to devise an operationally feasible system whereby credit is given in the country of

destination for the tax paid in the country of origin. Besides, the problem of inequity in tax base allocation would remain.

Two alternative methods were suggested to get around these problems and facilitate shifting the border controls to books of accounts. One, a deferred payment system whereby no tax is levied in the country of origin and the exporter gets rebate on his exports while the tax is levied in the importing country on the first taxable person within its territory. The other method envisaged that the country of origin would levy VAT on exporters of goods within the Community and the importing country would allow rebate for the tax paid in the country of origin but claim reimbursement from the VAT administration of the exporting country. This system would require setting up a "clearing house" covering all countries of the Community to settle the net claims of the countries in respect of intra-community trade (Cnossen, 1983). Alternatively, the VAT system may be accounts based and follow the subtraction method as shown in the illustration, so that there is no need for giving credit as required under the invoice method. Some experts however feel that might undermine the "self-enforcing" character of VAT (Smith, 1993).[11]

Under the proposals mooted in the mid-1980s, the EU was to move towards the restricted origin principle. Presumably, because of misgivings about the administrative feasibility of the clearing house mechanism and lack of trust among the member countries the clearing house option has been put off in the EU (Smith, 1993), and the deferred payment system has been introduced to help operate the destination based VAT as an interim measure.

Under this arrangement, enforcement relies primarily on a computer based information system whereby dealers selling goods across their country borders but within the Union zero-rate VAT on such sales and ensure the authenticity of the registration particulars of the buyer through a computer network. Sales to unregistered dealers (or final consumers) irrespective of their location are taxed at locally applicable rates. The present system though described as "transitional" seems to have found favour with most the member countries and is likely to continue.

If VAT is to be operated at subnational levels in a federation there could be other options such as a "Butoir VAT" whereby inter-State trade is taxed by the exporting state at its local rate and the importing State decides the rate at which rebate is allowed.[12] Thus there are several ways in which a VAT levied at subnational levels can be operated on the destination principle in a federal system but there are administrative problems and also problems in revenue sharing among jurisdictions.

Considering the administrative problems, one would be inclined to think that a better alternative would be to have the VAT administered at the national level with surcharges (or tax at a separate rate on the same base)

levied by the States but collected by the Centre, in other words, a concurrent VAT but nationally administered. Table 2 illustrates how such a system would operate in a country like India. Under this system taxes on business inputs would be fully rebated and the state where final consumption occurs would get the tax. The central government would collect both the central as well as the State VAT. The returns would indicate the tax payable and the credits claimed as also the States of origin and of destination. Based on these information, the central government would remit the net amounts due to each state acting as a clearing house. This would have the same result as that of a destination based VAT.

In India, the States who already levy the sales tax would be reluctant to surrender their powers and will look upon any proposal for a concurrent VAT as an inroad into their tax territory and thus this option does not seem to be open.

It is pertinent to note that in 1991 Canada went in for a federal VAT (called the Goods and Services Tax or GST) and the provinces continued to levy their retail sales taxes independently (except Quebec, where the federal VAT is administered by the province and the base of the provincial retail sales tax is broadly the same as that of the GST). But the operation of GST and independent provincial sales taxes has given rise to acute public discontent because of problems in accounts keeping entailed by differences in the tax base of the GST and the provincial taxes. The high visibility of the tax - characteristic of a system where the base is tax exclusive - has been another factor underlying the public unhappiness. Ironically, the GST is believed to have spawned large scale tax evasion in Canada which was not in evidence earlier. A frantic search is on there currently for a suitable alternative, one of them being a national VAT. Another alternative proposed is the business transfer tax which is nothing but a VAT operated by the subtraction method (Bird, 1994b).

Brazil too has encountered acute problems in operating VAT at two levels - a manufacturer's VAT at the federal level and a more comprehensive VAT at the level of States (McLure, 1993 and Longo, 1993). Proposals under discussion contemplated withdrawal of the central government from VAT and a more harmonized system at the State level (Purohit, 1994). The final picture is yet to emerge. Experience of Canada and Brazil corroborates the observations of Bird (1994a) that "No one has yet managed to work out a technically acceptable system of levying independent sales taxes at two levels of government".

In this background, China's decision to go in for a national VAT seems eminently sensible although the sharing of 30 per cent of the revenue with the provinces on origin basis is not consistent with the rationale of a consumption tax which a destination based VAT is supposed to be. The

preference for a national VAT shown by the people of Switzerland in the recent referendum also may have been swayed by the experiences of other federations.

TABLE 2

ILLUSTRATION OF A CONCURRENT VAT

State VAT Levied on Price (including Central VAT)

A. All Transactions Within a State : Central VAT @ 10%, State VAT @ 5%

State	Dealer	Sales	Central VAT	State VAT	Sales incl. tax
X	Manufacturer	100	10	5.5	115.5
X	Wholesaler	160	16-10=6	8.8-5.5=3.3	184.8
X	Retailer	200	20-16=4	11-8.8=2.2	231
	Total tax		20	11	

Revenue to Centre: 20

Revenue to States:

State X: 11

B. Inter-State Sale by the Manufacturer : Central VAT @ 10%, State VAT @ 5%

State	Dealer	Sales	Central VAT	State VAT	Sales incl. tax
X	Manufacturer	100	10	0	110.0
Y	Wholesaler	160	16-10=6	8.8	184.8
Y	Retailer	200	20-16=4	11-8.8=2.2	231
	Total tax		20	11	

Revenue to Centre: 20

Revenue to States:

State X: 0

State Y: 11

(From NIPFP, 1994)

Looking at the problems many would be inclined to agree that there is no way in which a destination based VAT can operate smoothly in a federation unless it is levied at the national level. However, the system of VAT prevalent in the EU shows that it is possible to implement VAT at the States level in a federation. In many respects, the EU arrangements provide a good model for other federations like Canada (Hill and Rushton, 1992) and also India. The problems of coordination are indeed daunting but can be handled if there is understanding and cooperation among the States and the federal government. It, however, presupposes an efficient tax administration, particularly, a modern information system.

3.4 Rate Harmonization for Indirect Taxes

a. Need for Harmonizing Rates

A destination-based VAT alone may not suffice to remove the sources of tax induced distortions to internal trade in a federation and would call for coordination or central intervention. For, first, even though a VAT regime rules out discrimination in favour of domestic production by member-States through taxation, it may still be possible for a state to influence locational decisions by lowering the level of domestic taxation or by extending protection to its industries indirectly by, say, taxing through excise duties the domestic consumption of substitutes which are not produced by the State to any significant extent, at a relatively high rate. This is what is believed to have happened when U.K. taxed wine at a higher rate than beer, affording thereby covert protection to U.K. made beer.

It has been shown that a country with a monopoly power in international trade can improve its welfare at the expense of its trading partners through taxes on production or consumption that approximate the effects of an optimal tariff (Friedlander and Vandendorpe, 1968). Unless foreign demand for its exports is infinitely price elastic, a country can gain by taxing domestic production of exportables and subsidizing that of importables and conversely.

Then there is the possibility, noted earlier, of government revenues being pushed down to unsustainable levels even in a destination VAT regime if competition goes totally unchecked.

It is worthnoting that the proposals put forward by the European Commission in 1985 and 1987 towards completing the internal market had envisaged, apart from removing the "fiscal frontiers", substantial restrictions on the rates of indirect tax in the member countries. First, the VAT would have to be restricted to a two rate system; one, a standard VAT in the band of 14-20 per cent and the other, a reduced rate at 4-9 per cent to be

applied to a listed category of basic goods and services (food, domestic energy, public transport, books and newspapers). Secondly, member States would also have to conform to an average rate of excise duties which they commonly levy on petroleum, alcoholic and tobacco products. These proposals came in for extensive discussion among theoreticians as also the public (see, Lee **et. al.** 1988 and Smith, 1993). The upshot of the debate holds some lessons for product tax rate harmonization in federal countries too.

Regarding excises, the EU proposals did not address the problems arising from "covert protection". It was felt that excises, being levied mainly on consumer goods, did not distort the pattern of costs or competitiveness even if the tax levels varied significantly (with the exception of duties on fuel oils used in industry). However, concern was expressed at the likely distortions in trade flows in the absence of frontier checks and suggestions were put forward for bonded warehouse systems to counter such flows. The suggestion was that coordination could be achieved if excise frontiers were shifted from borders to factory gates or even retail outlets, combined with a community-wide system of transporting excisables in bond. The exact arrangements would, however, vary from product to product (Cnossen 1983, Lee **et. al.**, 1988). But ultimately it was recognised that some convergence in the rates would be required if distortions in trade flows in the commodities in question are to be avoided.

b. Case for Rate Convergence

A theoretical argument for co-ordination of tax structure of member countries of a fiscal union to eliminate covert protection is advanced by Keen, based on a model that shows that convergence of indirect tax rates towards the weighted average of all the countries/States can reduce the aggregate welfare cost of raising revenues in the union as a whole. The reason advanced essentially is that the welfare costs of raising tax revenue are non-linear with indirect tax rates and rise more than proportionately with higher rates. Thus, total welfare costs would get reduced if high tax States reduced the revenues raised by them, because the low tax States can raise the same revenue at lower aggregate welfare cost. Of course, the gains and losses may not be the same for each State but there would be an overall gain. In other words, it would be Pareto-improving (Keen, 1987). This argument is however unlikely to find any taker in a federation, although the possibility of a net gain should facilitate negotiations for moving to a higher welfare situation even if one rules out the feasibility of transfers from gainers to losers.

As for the proposals for putting restrictions on tax competition by laying down rate bands of VAT, there has been considerable theoretical discussion of their welfare implications mainly with reference to inter-State cross-border shopping (that is, purchases made by consumers residing in one

State from another). Where, as in a federal country, there are no border controls, such shopping cannot be monitored and so it is not possible to apply zero-rating in the selling State and tax the same in the State of purchase. The models set up to analyse the implications of cross-border shopping throw new light on the results of tax competition and help appraise policy alternatives. Path-breaking work in this field has been done by Mintz and Tulkens (1986).[13]

It hardly needs pointing out that the scale of cross-border shopping depends on the costs of travel and the tax differentials. Where the differential between tax rates is small, cross-border shopping will not be attractive while large differentials would induce the people of a high tax State living near or even well away from the borders to cross over to shop in the low tax State. In the intermediate range of these differentials, some cross-border shopping will take place in both the States. According to Mintz and Tulkens, decision of the countries as to in which situation they would like to operate will depend on two types of inter-jurisdictional fiscal externalities.

One, a "public consumption effect", felt by a State from an increase in the tax rate of its neighbour. This results from the likely gain to its revenue that can facilitate providing higher level of public goods. The other fiscal externality is a private consumption effect stemming from the real income loss that cross-border shoppers suffer as a result of the rise in the tax rate of their neighbouring State. The overall impact of the two effects (one being positive and the other negative) would depend on whether or not a State both produces and imports and on the relative weights in the utility function of the residents of the country facing the policy choices in regard to public and public consumption. For a country where the residents' preference for public consumption is strong, the positive externality from an increase in the other country's tax rate increase will dominate.

Mintz and Tulkens analyse the tax and spending decisions of the two countries in their model as set out above in a game theoretic framework and show that without "cooperation" no fiscal equilibrium (the equivalent of Nash equilibrium) may emerge. For the fiscal reaction function which reflects the best reply of each country to the tax-rate decision of the other country is discontinuous, with a downward jump. The jump is attributed to the likelihood of there being some level in the other country's tax rate at which the home country would be indifferent as between two choices. One, to levy a high domestic tax rate following an autarkic path (mixed equilibrium) in order to provide a high level of public services; two, to go in for a lower domestic rate putting the other country in a mixed equilibrium. The latter course serves to offset the welfare loss from a lower level of public services by increased revenue from cross-border shopping from other States and lessening of the distortions caused by domestic taxation. The result of such fiscal

competition will not be the same as under Pareto efficient fiscal choices: the tax rates under competition will always be lower than the Pareto-optimal level.

Kanbur and Keen (1991) show that the interests and strategies of the two countries in the rate competition will also depend on their relative size. A small country may not reduce its rates if that of the other countries is very low but they may find undercutting attractive if the tax rate in the other country is high. Because of discontinuity in the small country's fiscal reaction functions, no equilibrium may exist. But if an equilibrium exists, the small country will always be found to be undercutting. Thus with cross-border shopping, tax revenues of the larger country will invariably be lower than what would prevail had shopping across-border not been possible (as when customs barriers are put up).

The conclusion is that in the absence of restraints, fiscal competition will, in most situations, exert a downward pressure on tax rates levied by the constituent States undermining their ability to pursue their own tax and spending policies. All this argues for fixing floor rate of indirect taxes even when operated under a VAT regime and this is what has now been agreed upon by member countries of the EU (Smith, 1993).[14]

3.5 Natural Resource Taxation

Another area that has received considerable attention in the literature in the context of harmonization is the taxation of natural resources especially minerals. In many countries the right to tax minerals is vested in subnational governments (e.g., USA and India). For several reasons, the wisdom of leaving these powers to the States has come under doubt and these have accentuated with the sharp increase in energy prices. In the USA, non-federal taxation of the natural resource base is believed to have contributed to inefficiency in resource use and inequity in the distribution of income (Thirsk, 1983).

Going by the principle "assign immovable tax bases to local governments", taxation of natural resources like minerals should be at the subnational level. However, persuasive arguments have been put forward by many experts for centralisation of mineral taxes and royalties at the national level. Central taxation of natural resources is thought desirable mainly because these are invariably unevenly distributed spatially and since their taxation by subnational governments can cause misallocation of labour and capital in the country through their migration to the resource rich areas in order to secure a share in the rents. This is prevented by centralisation. Inter-jurisdictional disputes also can arise in the implementation of national policies for energy development unless the powers to tax and manage natural resources are in the hands of the central government (Mieszkowski, 1983).

Local taxation of resources which are unevenly distributed also tends to perpetuate regional disparities as central transfers can seldom correct such large disparities. High level of taxation of resources which local level governments might feel tempted to impose can also affect the entire domestic economy adversely. Besides, the prices of resources like minerals are subject to wide fluctuations and so resource taxes do not constitute a stable source of revenue for local governments. Experience shows that when prices shoot up, the local governments tend to raise their expenditures to unsustainable levels providing wasteful public services. Thus it is wiser for them to leave it to the Centre in exchange for assured transfer payments as an insurance against the vagaries of world market price fluctuations. Another way of looking at the issue is, both efficiency and efficiency criteria require that source related tax bases are assigned to the Centre and powers of subnational governments confined to taxes which are residence related (Thirsk, 1983).

Counter-arguments are advanced supporting the case for taxation of minerals by subnational/local governments invoking the need to recompense them for services provided and build a permanent fund to replace a depleting resource. These arguments raise questions of property rights and have been questioned by asking whether citizens who happen to reside in a territory where a natural resource is found have a special right to a fraction of its present value. More fundamentally, it is asked, does the government, whether provincial or central, have a special claim to mineral revenues beyond what is justified by the benefits provided by them? The weight of the arguments thus seem to go more in favour of centralised taxation. However, it is generally acknowledged that it would be quite appropriate for local governments to tax natural resources to cover costs of providing local services and so taxes in the form of royalties or fees may be assigned to local governments (Scott, 1978). Local governments would also be justified in levying taxes to prevent environmental degradation (Shah, 1994).

Co-ordination through central intervention in the sphere of mineral taxation would be called for also to promote environmental protection policies in certain situations as otherwise too little of protective action may take place while action by individual member countries/States may have negative externalities for others. This is a new area for central action engaging the attention of policy makers in federal countries as in the EU and will no doubt receive the attention of the national governments of all countries in the future. However, the issues involved in this policy area are not gone into further here.

4. Tax Harmonization in the Indian Context

Presumably to minimise the scope for conflicts, the Constitution makers of India allocated the powers of taxation between the Centre and the States on an "exclusive" basis, following the principle of "separation"

(Chelliah, 1983). The major revenue yielding taxes, viz., customs, excises other than on alcoholic liquor and non-agricultural income taxes (both personal and corporate) and taxes on capital value of assets are assigned to the Centre. Taxes assigned to the States include land revenue, taxes on agricultural income, lands and buildings, and mineral rights, taxes on sale or purchase of goods other than newspapers, octroi/entry tax, taxes on the consumption or sale of electricity, motor vehicles, on luxuries and on profession, trades, and callings. Residuary powers are assigned to the Centre. The expectation that this arrangement would help to avoid vertical or horizontal inter-jurisdictional conflicts, however, did not materialise.

While assignment of taxes on bases like lands and buildings and motor vehicles to the States was quite rational, in their operation the bases of some of the major taxes have overlapped and there is reason to think that in the absence of any effective arrangements for coordination the tax system has acted as a major source of distortion in resource allocation in the economy and given rise to inequities in the accrual of revenue among the States. Moreover, difficulties have been encountered in implementation particularly of commodity taxes because of lack of coordination and inherent flaws in the relevant entries that assign the tax powers to the two levels of government. The main problems and the underlying factors are briefly noted below.

* Assignment of income taxes to the Centre has been instrumental in avoiding the problems that arise when these are levied at subnational levels. But fragmentation of the base of the income tax into "agricultural" and "non-agricultural" incomes and their assignment to different levels of government has undermined the equity and revenue potency of the system of direct taxation and opened up an easy avenue for evasion. Unaccounted incomes which are otherwise liable can be camouflaged as income from agriculture and there are no easy ways to counter such claims. Problem also arise when income is derived through operations which are not entirely "agricultural", for instance, in the production of tea leaves in a plantation. Formulae have been prescribed to apportion the income assessable under the central income tax law but there have been disputes over such apportionment.

* The bases of income tax and taxes on property and professions, trades and callings have overlapped. The tax on professions, etc. which is in the States' field is essentially a residence based tax on incomes levied presumptively. To contain the overlap, the Constitution puts a limit on this tax (Rs 250 now raised to Rs 2500) and the tax is deductible against income taxable under the central law.[15] There is no arrangement for coordination in the levy of taxes on capital value of assets. Thus taxes are levied on real estate both by the Centre (through wealth tax) and the States (or local authorities empowered by them) as "house tax"

and at one stage, the cumulative burden went up to over 60 per cent of the income from house property.[16] This does not take account of the capital gains or the taxes thereon on transfer. The cumulative incidence of taxation is believed to have spurred evasion of all the taxes and inhibited the flow of investment into housing while distorting the housing market.

* Although experts advise that natural resource taxes should be centrally levied, in India, royalties on minerals were assigned to the States in the Constitution. The powers to realise royalties for minerals were, however, taken away by a law of Parliament - the Mines and Minerals (Regulation and Development) Act, 1957. But some States have been trying to realize a tax from minerals extracted from their jurisdiction by levying a "cess" on royalty under their powers of raising land revenue. The Indian Supreme Court held such impositions as unconstitutional.[17] Subsequently, the central government raised the royalty rates to compensate the affected States and a Parliamentary legislation has validated such levies. But the matter is reported to have gone to the Centre again for adjudication.[18] This is a glaring example of how wrong initial assignment of taxes in a federation can impede harmonization even with judicial intervention.

* Uncoordinated overlap in tax jurisdictions has been more damaging in the indirect taxes. Excise duties leviable by the Centre were meant to be a tax on manufacturing, covering selected commodities and sales taxes assigned to the States were supposed to be levied on retail sales. But over the years, the Union excises have come to cover virtually all commodities and, for administrative reasons, the States have moved the point of levy in sales taxation to the first point. In many States, there are turnover taxes too. Sales tax is levied on prices of commodities including excises and since taxes paid on inputs are not always relieved, the incidence has gone uncontrolled, in fact, virtually unnoticed,[19] resulting in unintended burden on producers and consumers.

* By virtue of the powers delegated by the Centre, the States can levy a tax on inter-State sales on origin basis under a law of Parliament (the Central Sales Tax Act). Although subjected to a limit of 4 per cent, this has enabled the States to export their taxes to one another distorting industrial location decisions, adding to costs and creating inter-jurisdictional inequity in the sharing of revenue. Four States which have barely 19 per cent of the population of the country and 30 per cent of State domestic product (SDP) appropriate 45 per cent of the revenue from CST whereas low income States with 44 per cent of the population and 33 per cent of the SDP get only 18 per cent of the revenue (Table 3). Of course in most States CST revenue forms a sizeable proportion of their total revenue from sales tax. This is

Table 3

Statewise Distribution of Population, SDP and Revenue from Sales Tax

(Per cent)

States		Population	SDP@	G.S.T*.	C.S.T*.
1		2	3	4	5
High Income States					
1.	Maharashtra	9.46	15.30	17.37	21.78
2.	Gujarat	4.95	6.81	9.57	11.89
3.	Haryana	1.97	3.12	2.13	6.19
4.	Punjab	2.43	4.72	3.09	5.22
	Sub Total	**18.80**	**29.95**	**32.16**	**45.08**
Middle Income States					
5.	Andhra Pradesh	7.97	8.31	8.82	5.07
6.	Karnataka	5.39	5.89	7.28	7.84
7.	Kerala	3.49	3.17	5.57	2.87
8.	West Bengal	8.15	8.73	6.75	8.82
9.	Tamil Nadu	6.69	6.86	11.47	9.71
	Sub Total	**31.68**	**32.95**	**39.89**	**34.31**
Low Income States					
10.	Bihar	10.35	6.01	4.25	5.22
11.	Madhya Pradesh	7.93	6.36	4.22	6.85
12.	Orissa	3.79	2.74	2.21	0.56
13.	Uttar Pradesh	16.66	13.27	9.88	4.15
14.	Rajasthan	5.27	4.85	4.39	1.32
	Sub Total	**44.00**	**33.23**	**24.95**	**18.10**
Special Category States					
15.	Arunachal Pradesh	0.10	0.12	0.00	0.00
16.	Assam	2.68	2.34	1.57	1.76
17.	Himachal Pradesh	0.62	0.67	0.37	0.25
18.	Jammu & Kashmir	0.92	N.A.	0.38	0.00
19.	Manipur	0.22	0.19	0.06	0.00
20.	Meghalaya	0.21	0.17	0.07	0.30
21.	Nagaland	0.14	0.11	0.08	0.00
22.	Sikkim	0.05	N.A.	0.02	0.03
23.	Tripura	0.33	N.A.	0.09	0.00
24.	Goa	0.14	0.26	0.36	0.17
25.	Mizoram	0.08	N.A.	0.00	0.00
	Sub Total	**5.51**	**3.86**	**3.00**	**2.52**
Total (25 States)		**100.00**	**100.00**	**100.00**	**100.00**

Sources: [1] RBI Bulletin, (various issues).
[2] Census of India, 1991.
[3] Indian Public Finance Statistics, 1992.

Abbreviations:
NA = Not Available, GST = General Sales Tax, CST = Central Sales Tax, SDP = State Domestic Product.

Note: Classification of the States is as per the Ninth Finance Commission Report.
@ = Quick Estimate of SDP at current prices for the year 1990-91.
* = Average for the years 1988 to 1991.

(From NIPFP, 1994)

because even States (in the low income category) like Bihar and Madhya Pradesh realise taxes on the sale of primary commodities like iron ore and coal going into inter-State trade. With restrictions on imports so long, this has encumbered Indian industries and undermined their competitiveness in the world market.

* The Constitution contains provisions to protect freedom of trade, commerce and intercourse within the territory of India (Part XIII) and these have served to prevent taxation by States which discriminate between domestic production and goods coming in from other States to some extent. Thus, the levy of sales tax on electronic items manufactured within a State at a rate lower than on those imported from other States was held unconstitutional by the Supreme Court by virtue of Article 304(a) of the Constitution. But this does not prevent one State from promoting local industries by subjecting inputs brought in from other States to discriminatory taxation indirectly.[20] Besides, tax competition and tax exporting are practised extensively.

* Tax competition among the States has served to keep the level of sales taxes in check but the results have been damaging for equity as well as revenue. In some States, cereals are taxed at a higher rate than automobiles.

* Attempts have been made to harmonize sales taxation within the country to some extent through agreements and central legislation. For instance, by a tax rental agreement, the States ceded their powers of levying sales tax on three commodities (textiles, tobacco and sugar) to the Centre and an additional excise duty is levied on them in lieu of sales tax which is passed on to the States. The CST Act has imposed limits on the level of tax on goods of importance to inter-State trade and commerce, equal to the tax on inter-State sales. But many States have been trying to circumvent the agreement by levying taxes on the commodities in question by exploiting other entries in their list (e.g., the entry tax, tax on luxuries and so on). The Centre too has used its residuary powers to levy a tax on posh hotels under the label of "expenditure tax" whereas in essence it is indistinguishable from the hotel tax levied by the States.

* It is now widely acknowledged that because of insurmountable difficulties in defining "manufacturing" and "valuation" of commodities at the manufacturers' level is not sustainable. The Union excises in India have generated interminable litigation over what constitutes "manufacturing" and so what should go into costs of manufacturing. Exclusion of services has been another hindrance to the levy of excises because several items of cost associated with the production and supply of goods can be shown as payments received for services or

post-manufacturing expenses. Similar problems have arisen in the levy of sales taxes also. The courts have held that goods sold in the course of execution of a composite works contracts cannot be subjected to sales tax. The Constitution was amended to permit the levy of sales tax in such circumstances but the tax can be applied only to the "goods" part and the labour component has to be excluded. Powers to tax services in general belong to the Centre by virtue of its residuary powers while tax on some of the services like entertainment and advertising other than in newspapers, radio and TV is assigned to the States. Such fragmentation of jurisdiction is scarcely conducive to either simplicity or efficiency.

These conundrums could be resolved if both excises and sales taxes were replaced with a value added tax levied at the national level going up to the final consumer, and covering both goods and services, and the States were allowed to levy a surcharge on VAT and excises on selected products. They could be compensated also by empowering them to levy a surcharge on PIT. Reforms on these lines are not possible within the existing constitutional framework. The States would also not like to give up their powers of a tax that raises more than half of their tax revenue from sources at their command. Nor would it be desirable from the "subsidiarity" angle. The Centre also cannot afford to forgo its revenue from excise duties altogether. A harmonized system of destination based value added tax within the country at the State level on the other hand would require an efficient information system to deal with inter-State trade. The experience of EU shows that though not impossible this is not an easy task. But that seems to be the only practicable course towards harmonization, given these federal compulsions. Harmonization covering the entire tax field and in all its dimensions - vertical and horizontal - would, however, call for changes in the Constitution to reassign the tax powers to the Centre and the States.

5. Concluding Observations

The programme of tax reform initiated by the Union Finance Minister since 1991 recognizes the need for moving over to a system of VAT to remedy the ills of the present system and orient the tax structure towards the basic thrust of the economic reforms under implementation, viz., promoting competition and efficient allocation of resources in the economy consistent with equity and revenue need of the government. The Tax Reforms Committee headed by Prof Chelliah also stressed the need to replace the existing taxes on domestic trade with a VAT. Restructuring the tax system towards greater reliance on a less oppressive, simple and better enforced regime of taxes on income and domestic consumption is required urgently in the interest of neutrality and equity, as also revenue. The task is formidable in a federal country, for the constraints of a federal polity cannot be wished away. Nevertheless, every attempt has to be made to strike a balance between

autonomy of the States on the one hand and efficiency, equity and simplicity on the other. Tax coordination is the avenue to achieve such a balance.

It should be stressed in conclusion that, as argued by Dafflon (1971), the essence of federalism lies not so much in providing a means for attaining economically efficient organization at any political cost as in furnishing a framework to evolve a system of governance that can maximize citizens' welfare through discussion among equals instead of being imposed unilaterally by a powerful Centre. This approach imparts a sense of realism with a positive advice on how to deal with tax problems in a federation (Bird, 1984a). For guidance in addressing the problem in a given situation, however, one has to turn to principles and practices. This paper is an attempt to draw attention to the main strands of the debate in theoretical literature on the subject and lessons from other large federations.

NOTES AND REFERENCES

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1. Alexis de Tocqueville in "Democracy in America", quoted in Oates (1977).

2. This is true even if one allows for compensating elements in a federal set up which may be absent in a union of independent countries.

3. The discussion in this and the subsequent subsections draws extensively on Bird (1984), Smith (1993), Cnossen (1990) and McLure (1993).

4. Studies for the European Community showed that the absence of a harmonized system of product taxes probably caused a loss of output growth by as much as 5 per cent of the potential (called "Cost of Non-Europe"). For an idea of the tax impediments to trade in India, see Rao (1993).

5. This principle enjoins that the governmental functions should be located in units of government to cover an area large enough to comprise all those affected by its actions.

6. Otherwise, the Commission argued, there would be:
"......increasing friction between governmental units, increasing double taxation, increasing arbitrary, discriminatory and confiscatory tax levies, increasing costs of tax compliance, increasing disparities in taxation burdens and government service levels between regions, and increasing disparities between burdens on and opportunities open to individuals" (quoted in Bird, 1984).

7. That this could be happening at the international level has been pointed out by Tanzi (1988). After reviewing the trends in tax reform in industrial countries he observes "The time has come for policy coordination among major countries to extend to tax reforms". Opponents of this view however feel that a measure of competition among governments may be beneficial to the people.

8. The pronvincial rates are fixed within the "tax room" (measured in terms of "points") vacated in their favour by the federal government in return for their opting out of various cost-sharing programmes thereby reducing the burden on the federal budget. (For a detailed description of these arrangements, see Boadway and Hobson, 1993; and Ip and Mintz, 1994.) There is, howerver, an asymmetry in the outcome if some provinces opt out of different programmes than others. (This was pointed out by Richard Bird in his comments.)

9. A typical formula for apportioning income tax paid by a company in the US runs as follows:

$T_i = t_i \times I\ [(W_i/W) + (P_i/P) + (S_i/S)]\ 1/3$

where

T_i denotes tax payable by the entity in State i,

t_i is the rate of tax in State i,

I is the company's taxable income,

W_i, P_i and S_i are payroll, property (assets) and sales in State i and W, P, S, denote aggregate payroll, property and sales, respectively. (McLure, 1993).

10. Sharing of VAT revenue on origin basis however offends the McLure rule.

11. According to Bird, the self-enforcing virtue of invoice method should not be over-emphasised. Japan seems to be managing VAT quite well without the invoices for the most part. However, as Bird himself notes, the possible advantages of the subtraction method from the point of view of administration and federal-provincial relations hinge on there being only one rate and no (pre-retail) exemption (Bird, 1993b).

12. For a lucid exposition of the various alternatives, see Burgess, Howes and Stern (1993). Briefly, these are: "zero-rating exports", "zero-rating imports", and "butoir". Let t_x be the rate of tax on the exporter and t_m and r, the rate payable and rebate that can be claimed by the dealer in the importing state, respectively, t_1 denotes the tax rate in the exporting state, t_2 in the importing state. Then:

a. Zero-rating of exports would mean: $t_x=0$, $t_m=t_2$ and $r=t_1$.

b. Zero-rating of imports: $t_x=t_1$, $t_m=0$ and $r=t_x$.

c. Butoir: $t_x=t_1$, $t_m=0$, $r=t_2$.

13. Experts familiar with the European scene like Cnossen are, however, of the view that businessmen and politicians tend to exaggerate the non-neutralities and revenue losses associated with cross-border shopping, while the problem really is small (Cnossen, in his comments on the paper).

14. Of course, opponents of Leviathan would like a ceiling on the VAT rate and not a floor!

15. Stamp duties (a State revenue) paid for obtaining probate of wills or succession duty on the passing of an estate on death were credited against the Centrally levied estate duty when the latter was in force. This was a good example of vertical tax harmonization.

16. Tax Reforms Committee, 1991, Interim Report.

17. India Cements vs. State of Tamil Nadu and others [(1990) 1 SCC 12] and Orissa Cement Ltd. vs. State of Orissa (AIR 1991 SC 1674).

18. The Cess and Other Taxes on Minerals (Validating) Act, 1992. The matter is awaiting decision by the Supreme Court in State of Madhya Pradesh vs. J.K. Cement Works Ltd., Special Leave Petition (Civil) No. 2109 of 1994.

19. Except in academic studies on incidence and some of the reports of expert bodies.

20. Associated Tanners vs. CTO [1986 Taxation Sec. VII-8(SC)].

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