The Political Economy of the Indian Fiscal Federation

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Abstract: This paper performs three empirical exercises to determine the patterns and properties of fiscal flows and mechanisms in the Indian federation as they affect subnational state governments, who carry the major public expenditure responsibility for education and health. Statutory flows from national level to states, defined in both aggregate and distribution between states, were exceeded or equaled in magnitude by non-statutory Plan flows that were variable in aggregate quantum and degree of subordination to distribution by formula. The non-formulaic bargaining margin within these flows is quantified for each year of the period 1951-2007, and estimated to have varied inversely with an index of political fractionalization in the federation. This uncertainty in the predictability of annual transfers provided an unfavourable fiscal environment for enhancing steady expenditure commitments of the kind required for provision of primary education and health. The consolidated fiscal imbalance aggregating across national and state levels is shown to have responded to the national (distinct from the non-synchronous sub-national) electoral cycle, in contrast to the imbalance at national level which did not. Thus, the control constitutionally vested at national level over aggregate state borrowing from financial markets was subject to opportunistic temporal distortions. Finally, the paper examines the major debt dismantling initiative starting 2005 with fiscal correction conditionalities, to reduce the large stock of debt owed by states to national government consequent upon the high loan content of the non-statutory flow. The paper quantifies the extreme variation across states in the fiscal adjustment distance required, as a result of imposing uniform targets on states with widely varying initial conditions. States lacked control over their fiscal environment in the absence of a standing platform whereby the *de facto* functioning of fiscal arrangements might have been open for continual examination and monitoring by all partners to the federation.

JEL Numbers: D72, E62, H62
Key Words: political economy, fiscal federation, developmental outcomes, bargaining margin, political fractionalization

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THE POLITICAL ECONOMY OF THE INDIAN FISCAL FEDERATION

Introduction

Federal fiscal structures offer economies of scale for national-level public goods, and accommodate diversity of preferences at the sub-national level. They thus carry a compelling economic logic for developing countries.[1] But what matters for developmental outcomes is the statutory fiscal framework, and the incentive structure implicit in both the *de jure* and *de facto* structures. What also matters is whether there is a standing platform open to all partners where actual fiscal functioning is open to continual examination for conformity to the formal framework, and potential correction of either if not.

In the hierarchy of terms differentiating unitary nations with a single paramount government from federal systems, India is labeled a quasi-federation, not classically federal,[2] and is not called a federation in the Constitution. The country however has all the characteristics of a fiscal federation, in the sense of Constitutionally demarcated spheres of fiscal powers for independently elected governments at the national (Central) and sub-national (state) levels.[3] The fiscal powers at the local government level of what after 1993 is a three-layer structure, are likewise demarcated legislatively at the level of the states.[4]

The focus in this paper is on the top two layers of the Indian federation, Centre and states, and on the fiscal aspects of their interaction. The assignment of economic functions across Centre and states conforms to the classical prescription of stabilization and redistribution at the national layer, with allocation of responsibility for public goods divided broadly in accordance with degree of spillover.[5] Taxation rights likewise conform in essence to the prescription of more mobile tax bases at national level.[6] However, both

[1] The major developing countries with a federal structure are India, Pakistan, Malaysia, Nigeria, Mexico and Brazil. The major country without a federal structure, but with many federal features in its fiscal arrangements, is China.
[2] The classical cases being the United States, Switzerland, Canada and Australia, formed between 1787 and 1900, with degrees of federality among the less classical (Davis, 1978). The label for India by Wheare, 1953, is supported by provisions under the Indian Constitution which give emergency powers to the national government over subnational governments in financial emergencies (article 360, never invoked), and instability (article 356, invoked more than a hundred times in the last sixty years).
[3] The national government is called the Union government in the Constitution, but is popularly known as the Centre. There are 28 States with separate fiscal accounts, and 7 Union territories, whose accounts are merged with those of the Centre except for two which have separate legislatures of their own. The local body structure itself is three-layered in the rural areas; there are now roughly a quarter of a million elected local bodies in place.
[4] These tax powers are very limited, especially in rural areas (see Rajaraman, 2003).
[5] Recent reviews of the principles governing vertical and horizontal competition (both mobility-based and yardstick) are to be had in Breton, 2006 and Salmon, 2006.
[6] Musgrave, 1983 is the standard reference, for what carries a longer intellectual history.

functional and taxation assignments have acquired an overgrowth of tedious departures over time.[7] Because the principles underlying revenue rights and expenditure responsibilities in any federation originate from independent considerations, there will be a gap (at usually lower than national level), where its magnitude is not necessarily indicative of incomplete or unfair allocation of taxation rights. In India, there is a vertical gap at state level. It is argued in this paper that what matters is not the magnitude of the gap, but how it is filled.[8]

The Constitutional provision for closure of the vertical gap in India could in a very broad sense be said to have been informed by the normative principles governing intergovernmental transfers.[9] It provided for both unconditional transfers, required by the diversity of preferences that fundamentally underpins fiscally federal structures, and any other flows deemed necessary, including (implicitly) shared cost programmes for inter-jurisdictional spillovers. The formulae governing the correction of vertical inequity were reset every five years by independent Finance Commissions, so that there was a provision for revision of both the procedure for estimation of the vertical imbalance itself, and the allocation formulae used so as to accord with international best practice and precept, in principle at any rate. Finance Commission were also completely free, again in principle, to prescribe transfers carrying no adverse incentives for cost escalation, but a (small) portion of their provisions have indeed carried such incentives (see section on fiscal flows to states).

The point of departure in this paper is the statutory framework for fiscal transfers, juxtaposed against the actual functioning of the inter-governmental transfer system. This is an important developmental issue since it is state governments which carry the major expenditure responsibility for health and school education. There are related issues having to do with political encroachments in the Indian federation, which are not addressed.[10] The focus is on the fiscal variables in the first instance.

The issue of reform in federal settings has attracted some attention in recent years (Watts, 2001, Wallack and Srinivasan, 2006), and in India in particular, where the reform process begun in 1991[11] was the single biggest directional change in Indian economic policy in the last sixty years. If reform is defined as improving access to both product and factor markets, a clear demarcation of powers of national and subnational governments is necessary for the overall speed and direction of movement not to be obstructed by disputes over the legitimate spheres of operation of each. Thus reform

[7] The most egregious of these, now scheduled for phased elimination over 2005-10, was a Central Tax on inter-state sales of goods introduced by constitutional amendment, levied by the Centre but collected and retained by states, which functioned in effect as an export tax. See also Rao and Rao, 1995.

[8] There is an opposing view that sees a more decentralized tax base, in effect reduced vertical gaps, as essential for no-bailout hard budget constraints, which are necessary for effective competitive (Breton, 1996) or market-preserving (Weingast, 1993) federalism. At the limiting case of a zero subnational tax base, this is certainly persuasive, but not necessarily at the 30-60 percent ranges within which federations normally function.

[9] There is general consensus on this issue (Rao, 1993; Singh and Srinivasan, 2006).

[10] Verney, 1995, and Rudolph and Rudolph, 1987, provide examples of these political tussles.

[11] Singh and Srinivasan, 2006, deal with the Indian case; also Saez, 2002.

merely underlines the necessity for clear spheres of rights and obligations, which is structurally necessary in any case. The focus of this paper is therefore on the larger structural framework which existed in India much prior to reform. The argument for clarity of assignment is not to be construed as an argument for one form of federal structure over another, although the dual federalism model under which India is classified (Shah, 2007)[12] happens also to be more common in developing countries (with the major exception of Brazil), than cooperative federalism, where the division of responsibility is continually negotiable on an issue-specific basis.

The configuration of domestic forces influencing reform has recently been modeled to distinguish between competition enhancement, which helps those with endowments and might therefore be opposed by those without endowments, and endowment enhancement, which will be opposed by those with endowments who seek to preserve their rents (Rajan, 2006). This competitive rent preservation model is persuasive, but leaves open the issue of why the dynamic of pre-reform states led to unequal endowments in the first place. If the necessity for public funding of primary education and primary health care is taken as a given, then low endowments in a federal setting could be the outcome of adverse incentives in the structure of funding of subnational governments, which usually carry the major expenditure responsibility for these functions.

The paper does not address the issue of the trade-offs between centralized and decentralized systems, which has been the subject of renewed attention in the theoretical literature,[13] with the interpolation of a legislature between the ultimate voter and government introducing the scope for legislative bargaining within each federation. These further developments have not fundamentally changed the parameters governing the trade-offs between unitary and federal systems, with federal systems clearly better in the presence of diversity of preferences with respect to public goods, and centralized systems clearly better when there are cross-jurisdictional spillovers. The formal fiscal structures in a federation define the scope and room for political bargaining. This paper quantifies the bargaining margin in Central fiscal flows to states, and attempts to explain the behaviour of the bargaining margin over time by relating it to an index of political fractionalization within the Indian federation.

The paper also does not examine whether other Indian institutions like the bureaucracy serve Central over state or local interests. Such leanings if any will have room to operate only to the extent of the bargaining margin as it has developed over time. Finally, the paper also does not cover the considerable literature on inter-state inequalities, which in and of themselves are not prima facie evidence of failure of the

[12] Within the dual category, India is classified along with USA and Canada in the coordinate authority model, where local governments have little or no direct relationship with the federal government, as opposed to the layer cake model where central government has the hierarchical right to deal with local governments directly (Shah, 2007). However, in actual fiscal functioning, where Central fiscal flows directly targeting local governments amount to one-third of total Central developmental assistance to rural areas (Rajaraman, et. al, 2007), clearly India is more layer cake than coordinate authority.

[13] Baron and Ferejohn, 1989, and Inman and Rubinfeld, 1997.

vertical transfer mechanism. The evidence so far on convergence, or the lack thereof, is in any case inconclusive.[14]

The next section motivates the paper with some descriptives on expenditure on health and education, and on the share of states in total expenditure aggregating across both layers of government. In terms of Constitutional assignment, health is the exclusive responsibility of states, and education (after 1976) is a concurrent function shared between Centre and states. The poor international rating of India in both these components of the Human Development Index is well-known. There is also an aggregate measure of developmental expenditure in India, whose boundaries are defined to include everything except expenditure on administrative departments and interest payments. So defined to include for example expenditures on setting up public sector industries, and subsequent subsidies to loss-making public sector enterprises, the implication of the share of states would be difficult to interpret.

Statutory fiscal flows from Centre to states are quantified in the section that follows, relative to a wholly independent stream of funding under the Planning machinery, altogether outside the provenance of Finance Commissions. The section will also quantity the component of this non-statutory Plan flow not subordinated to formulae for spatial allocation, leaving open discretionary allocation amenable to political bargaining. The difference between statutory flows, and non-statutory flows even when formulaic, are examined in terms of their incentives for expenditure allocations. The focus here is on distinguishing between formulaic and non-formulaic flows, not so much the properties of the formulae themselves in terms of whether they promote competitive equality or not,[15] and therefore quite different from the investigation in Rao and Singh, 2005, of the cross-sectional progressivity of statutory and non-statutory flows in particular years. That study found that statutory flows were equalizing in 1998-99, with an elasticity with respect to Net State Domestic Product of -0.26, and that overall flows were equalizing too, with an elasticity of -0.19, notwithstanding the non-equalising pattern of the non-statutory component. The bargaining margin in Centre-state flows is defined in the paper as the non-formulaic component of total flows, and changes in this share from year to year are found to be systematically related to year to year changes in an index that measures the degree of political diversity in the Indian federation, with a two-year lag.

Control over aggregate borrowing by states is vested with the Central government, appropriately for Central macroeconomic control over fiscal imbalances in the federation taken as a whole (the third layer is not permitted to run fiscal imbalances).[16] The process by which these limits are set has however never been made transparent, in terms of either the aggregate limits on state borrowing, or the distribution of the aggregate between states. The next section of the paper performs an econometric exercise on the consolidated fiscal imbalance aggregating across Centre and states over

[14] Singh and Srinivasan, 2006; 349-59.

[15] Competitive equality extends the classical notion of competing jurisdictions (Tiebout, 1956) to the requirements for inter-governmental transfers (Breton, 1987, Wildavsky, 1990).

[16] Under Article 293(3) of the Constitution.

the period 1951-2005 to test for whether it responded to the national political cycle (which lost its synchronicity with sub-national election cycles after the first fifteen years). The same specification is then estimated on the fiscal imbalance at the Centre taken by itself, and the contrast between the two yields insights into whether the discretionary control (rightly) vested at national level over aggregate subnational borrowing from financial markets was subject to opportunistic temporal distortions in pre-election years.

The next section examines the impact of the debt build-up as a result of the practice, suspended in 2005 upon the recommendation of the Twelfth Finance Commission, of requiring states to take a large portion of their non-statutory Plan flows from the Centre as long-term loans, along with another channel of essentially compulsory state borrowing from the Centre. Over a period of steeply rising interest rates after the lifting of financial repression in the eighties,[17] this led to an accumulation of high-interest bearing debt owed by states to Centre. With interest dues claiming ever increasing shares of current expenditure, the Twelfth Finance Commission (TFC) recommended a programmed write-off of this debt overhang over the horizon 2005-10, conditional upon a structured fiscal correction time table. The complexity of these conditionalities made for a further disparity between the statutory provision, and the manner of its implementation, which imposed uniform targets on states widely disparate in terms of their fiscal sustainability status. The section quantifies the disparity in the required fiscal adjustment arising from the imposition of uniform targets on states with widely varying initial conditions.

The final section draws together the conclusions from the preceding sections.

Expenditure on Health and Education

Figure 1 plots the overall share of the states in total public expenditure, current and capital, and their share in aggregate health and education expenditure.[18] The Figure also plots aggregate expenditure on health and education as a percent of GDP.

Four stylized facts emerge. First, the share of the states in expenditures on health and education, at or above 90 percent for most of the period, was much higher than their share in total expenditure, which was in the 50–60 percent range.[19] Second, the health and expenditure graphs are similarly placed, despite the exclusive assignment of health to states, as against the concurrent assignment of education.[20] Third, state shares in both health and education show a falling trend over the last ten years to around 85 percent

[17] Rajaraman, 2006, charts the interest rates on public debt in India over the period 1951-2001.

[18] Entry 6 in the State List is "Public health and sanitation; hospitals and dispensaries"; education was entry 11 in the State List, but was moved to entry 25 of the Concurrent List by the forty-second Amendment Act in 1976. The three lists attached to the Seventh Schedule of the Indian Constitution define the subjects over which the power to enact laws are assigned exclusively to the Centre (List 1), States (List 2) and both (List 3).

[19] There is a sharp dip in 1979-80, a year of negative growth in the Indian economy, owing to an unusually synchronous weather shock over much of the country.

[20] Although education was assigned to the concurrent list only in 1976, there had all along been some named educational institutions in the Central List right from the beginning.

presently, especially sharp after 2000, despite a slight rise in their share in overall expenditure. Fourth, although both health and education expenditure rose as a percentage of GDP from near-zero levels in 1951-52, health has never crossed 1.3 percent of GDP, a peak achieved in 1987-88, and education has never crossed 3.3 percent of GDP, achieved in 1988-89 and again in 1999-2000.

Not surprisingly, at these expenditure levels, India performs poorly on health and education indicators in the Human Development Index as compared to other developing countries. The Human Development Report 2006 places India at rank 126 out of 177 countries with an index value of 0.611 as against 0.679 for all developing countries. Life expectancy at birth is 63.6 as against 65.2 for all developing countries, and the adult literacy rate is 61 percent as against 78.9.[21] Quite aside from these rankings, the skills constraint is among the capacity limitations underpinning the present overheating of the Indian economy.[22]

As against the share of states in total expenditure of a little over half, their share in tax revenue has been of the order of one-third, leaving a vertical gap of about 20 percent. It is argued here that the magnitude of the vertical gap itself does not matter. Indeed, if one of the presently visualized forms of the proposed goods and services tax (GST) were to be implemented, states would have negligible revenue collection powers of their own, and the vertical gap would essentially equal their share in total expenditure. What matters is the statutory framework for closure of the vertical gap, and the actual departures from it. Both these have to be investigated for their incentive properties, and for what they reveal about the political economy of the fiscal federation.

Primary education and health for a growing population call for steady multi-year expenditure commitments, without downside spikes, towards annual salary and other concomitant non-salary costs of delivering the service. The next section examines the pattern of fund flow from Centre to states for whether the embedded incentives enabled states to credibly commit themselves to provision of these services. The fall observed over the last ten years in states' share has been because of the huge new programmes for primary education and mid-day meals in schools funded by the Centre, and not routed through states.[23] Thus, the policy response has been to alter the pattern of funding, when the need of the hour is for an analysis is for why funding failure occurred in the first place.

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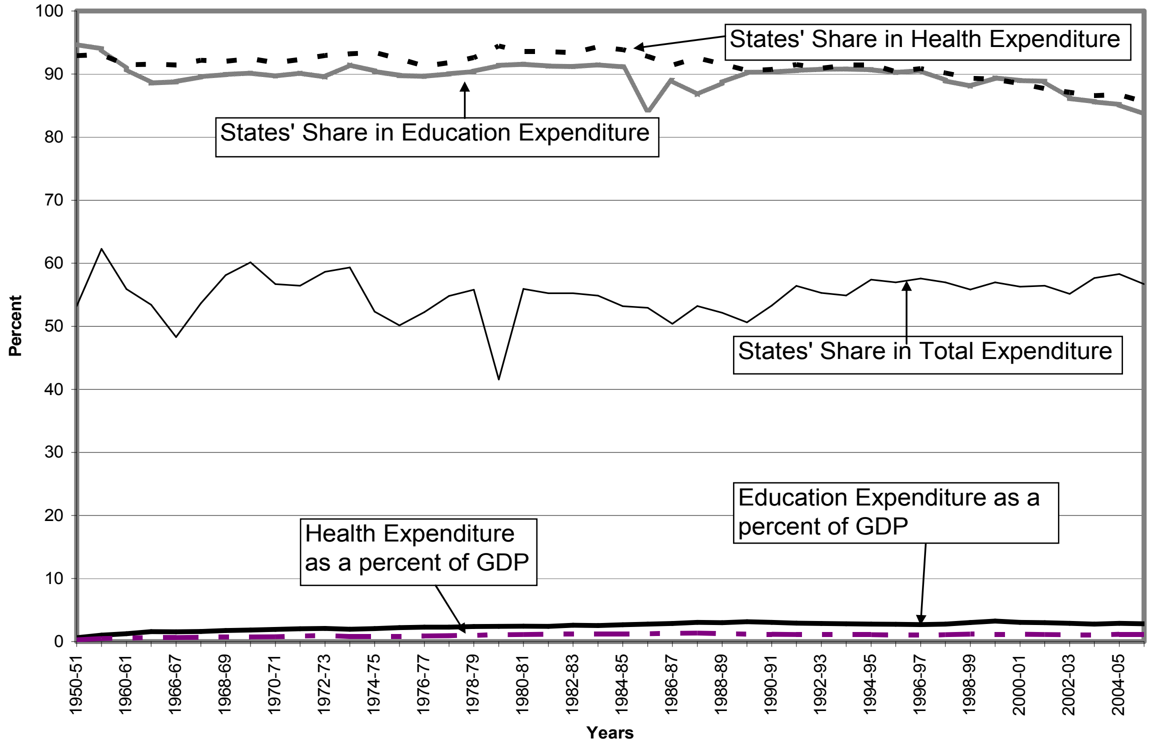
[21] The Human Development Index and its constituent indicators in the 2006 report pertain to the year 2004.

[22] There are no systematic data sources on wages, but it is estimated that nominal wage increases have averaged 12-14 percent in the last few years (Subramaniam, 2007).

[23] The Sarva Shiksha Abhyan and the National Rural Health Mission are both intended to provide non-salary support for primary education and health respectively, through an independent channel of funding.

FIGURE 1. State Shares in Expenditure 1950-2006: Aggregate, Health, Education



Source: All expenditure figures from Government of India, *Indian Public Finance Statistics,* assorted issues going up to 2005-06; GDP from Government of India, 2007, *Economic Survey 2006-07* for the new series, and *Reserve Bank of India Handbook of Statistics 2005-06* for the old series.

Notes: 1. Education includes art and culture; health includes medical and public health, water and sanitation. Until 1966-67 figures were available only at quinquennial intervals. For 2004-05 and 2005-06, figures are revised and budget estimates respectively. Total expenditure includes lending net of repayments.

2. The GDP new series with 1999-2000 as base yielded a splicing factor of 1.0045 for years of overlap with the old series, which was then used to generate a single compatible series for the period 1950-51 to 2005-06.

Fiscal Flows from Centre to States

Although the Constitution does not explicitly forbid Central assistance to states other than those mandated by Finance Commissions, the statutory provision for closure of the vertical fiscal gap quite clearly acknowledges the need for states to have unconditional annual shares of Central revenues, predictable in quantum (subject to a known margin of error), allocated in accordance with transparent formulae as determined by an external body of experts, and subject to formal review every five years by a freshly constituted body of experts. The configuration of the statutory flow thus favours committed expenditures of the kind called for by primary education and health to a growing population.

Right from the start, the statutory flow was supplemented by an assortment of non-statutory flows for developmental assistance, for quinquennial periods along the lines of Soviet Five Year Plans,[24] called Plan flows. The statutory flow is accordingly termed a non-Plan flow, although just to keep things complicated, there are some non-statutory non-Plan (loan) flows as well.[25] The sequence of Plan periods has continued with some disruptions into the post-reform period; the Eleventh Plan currently covers the period 2007-2012.

The major feature of the non-statutory flow which de-incentivised multi-year expenditure commitments of the kind needed for primary education and public health, was that the aggregate yearly quantum of Plan assistance was not laid down in the way statutory flows were. The quinquennial allocations were purely indicative, with annual disbursements free to vary in total quantum at the discretion of the Centre. The paradox was that the flows explicitly meant for development assistance actually disfavoured key elements of developmental expenditure.

Figure 2 shows the two components of Central fiscal flows to states, statutory and Plan, as shares of the total across the two.[26] In practice, the statutory flow was exceeded by the non-statutory flow for the first twenty years, and was essentially half of the total for the next thirty years of this fifty-six year period, never amounting to more than sixty percent (except after 2005).

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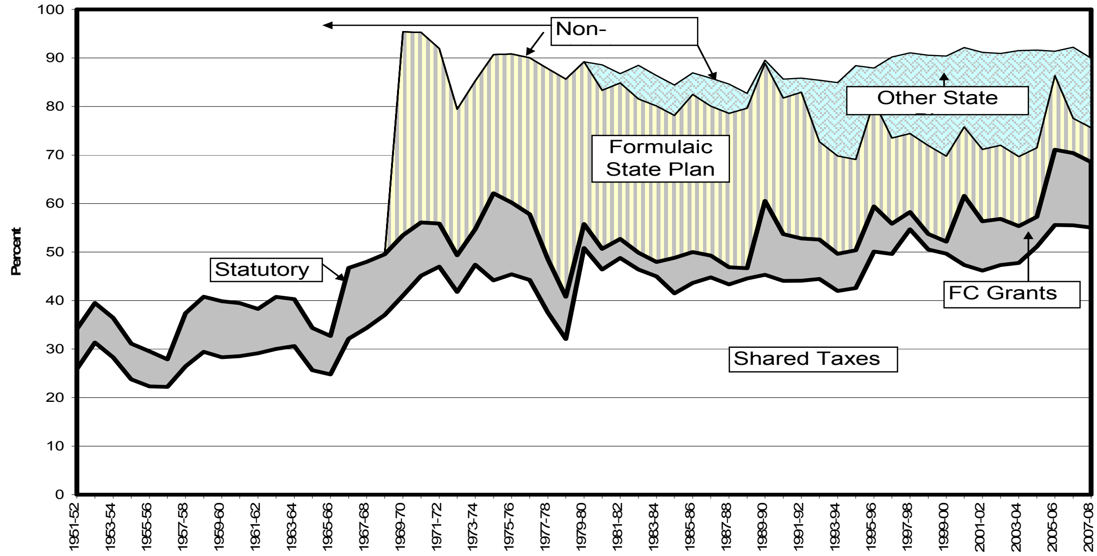
[24] Although non-statutory, these were permissible under Article 282 of the Constitution. There were two components of Plan flows, Central assistance for state Plans, and Central Plan expenditure routed through state exchequers.

[25] These consist principally of flows against small savings collections under a scheme detailed in the next section on state borrowing.

[26] This excludes non-statutory non-Plan assistance, driven by an altogether different dynamic of on-lent small savings. There was also short-term "ways and means" assistance, which should in principle have remained constant in end-year outstandings over time. And clearly it excludes expenditure on that portion of the Centre's own Plan which did not go into state exchequers at all (see footnote 24).

FIGURE 2. Statutory and Non-statutory Inter-governmental Flows 1951-2007



Source: Figures starting 2005-06 are pre-actuals or budget estimates. Shared taxes are from Government of India, *Indian Public Finance Statistics,* assorted issues, upto 2002-03; Central Finance Accounts, for 2003-04 and 2004-05; Reserve Bank of India *State Finances* for 2005-06 and 2006-07; and as projected in the Report of the Twelfth Finance Commission for 2007-08. Statutory FC grants are from Reports of Finance Commissions, First to Twelfth. Non-statutory Plan flows are from the Report of the Seventh Finance Commission for years upto 1973-74, and from RBI State Finances, assorted issues, supplemented by the RBI Handbook on State Finances 2004 for all subsequent years upto 2004-05. For the latest three years 2005-08, the Government of India Budgets for 2006 and 2007 were more plausible. For details on the data discrepancies between these and other sources, see Rajaraman, 2004, Appendix I.

Notes: 1. Non-statutory flows: Summed across revenue and gross capital flows to state Government exchequers as Plan expenditure. They have four components: Central Assistance for state Plans which was subordinated to (the Gadgil) formula after 1969-70; Central Plan schemes; Centrally Sponsored Schemes (CSS), which are co-funded with states; and Special Plan schemes since 1992-93. Central Plan/CSS flows over 1956-57 to 1960-61 were imputed, since figures were reported as unobtainable in the source used for those years. Formulaic state Plan flows are that component of state Plan assistance subordinated to the Gadgil formula; after 1986-87, these are officially termed "Normal Central Assistance". This does not carry a separate account head and so cannot be extracted from finance accounts. Actual figures were available going back only to 2002-03 from the Ministry of Finance (private communication). For prior years the only source was the Central Budget Documents, from which pre-actuals for the preceding year were extracted from the Plan assistance going from the Ministry of Finance; non-formulaic scheme assistance goes from other Ministries. The capital flow is gross; the net capital flow is not obtainable even from the Central Finance Accounts, because loan repayments by States to the Centre do not distinguish between Plan and other loans.

2. Statutory flows: FC grants are unconditional for the most part, and include grants intended for onward transmission to local bodies from the Eleventh FC on. The minor exceptions are upgradation and special problems grants (from the Seventh FC on), which are conditional on expenditure incurred; and margin money for calamity relief (from the Eighth FC on), accessible only after crossing prescribed state expenditure caps. The Eleventh Finance Commission grant total here includes the 15 percent withheld as an incentive for fiscal correction, and does not include a matching 15 percent added on for all states, including those not among the beneficiary set for the grants from which the withholding was done.

The statutory flow is pre-determined and largely formulaic in distribution between states, accepted as mandated by Finance Commissions and implemented with no modifications.[27] It has two components, shares of Central tax revenues, and grants, both as prescribed by Finance Commissions. Shared taxes are the most formulaic, although their configuration has changed over time from shares of individual taxes to a share of overall collections.[28] Grants prescribed in absolutes by Finance Commissions are as statutorily legitimate as shared taxes, but have carried adverse incentive for fiscal discipline.[29] There is also a clear discretionary element in their distribution between states, but because they are prescribed by a group of technical experts, they could in principle be seen as determined outside a bargaining context.[30] Once prescribed and accepted in Parliament, grants are as unalterable as tax shares, and because prescribed in absolutes, actually even more predictable than tax shares. Shared taxes have accounted for most of the statutory flow, which rose substantially in 1970 to half the total flow and remained there until 2005.

Another major development in 1970 was that Central assistance for state Plans, the major content of non-statutory flows, was subordinated to a formula, which prescribed the share of each state in the total, along with a uniform seventy percent loan content across states.[31] The remainder was that portion of Central Plan expenditure routed through state exchequers, and was thus explicitly at the discretion of the Centre.[32]

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[27] There are recent instances of failure of the Central Government to conform to its statutory obligations as formally accepted in Parliament, for example, with respect to the closure of the Fiscal Reforms Facility of the Eleventh Finance Commission. For departures from prescription and implementation of the recommendations of the Twelfth Finance Commission, see Rajaraman and Majumdar, 2005.

[28] From 1996-97, as recommended by the Tenth Finance Commission.

[29] "Deficit grants" to tide over fiscal shortfalls of states as estimated after factoring in tax shares are the major component of Finance Commission and grants, and have been widely pilloried for their obvious adverse incentives (Rao and Singh, 2005: 203). They need not have been, if deficits had been assessed from norm-based expenditures rather than from past actuals, which has been partially attempted ever since the Ninth Commission. Deficit grants are entirely unconditional. However, the Eleventh FC withheld 15 percent for conditional release upon fiscal correction; see notes to Figure 2.

[30] However, there is evidence of caprice in the distribution of these grants between states; see Rajaraman and Majumdar, 2005.

[31] The Gadgil formula itself applied to the inter-state distribution of total Plan assistance. The loan and grant components are commonly ascribed to the formula because they were introduced simultaneously with it, but were really arrived at by the National Development Council (Vithal and Sastry, 2002: 44), a body which meets episodically with full state representation. The formula is actually applied to the residual after deducting a component awarded to what are called special category (mostly northeastern) States. This subset of eleven states characterized broadly by hilly terrain, has a special status for fiscal purposes. It intersects with the set carrying special constitutional provisions under Article 371 of the Constitution making for an asymmetric federal structure (Arora, 1995), but curiously does not itself carry a Constitutional underpinning. Although the loan share (ten percent) is different for the special category, it is formulaic again within the special category. The Gadgil formula has undergone some modifications over the years, reported in detail in Vithal and Sastry, 2002: 152. The weights used after 1991 are 60 percent for population, 25 percent inversely related to per capita State Domestic Product, 7.5 percent for special problems, and 7.5 percent for performance in "tax effort, fiscal management, population control, female literacy, on-time completion of externally aided projects and land reforms". The population weight is by the 1971 population so as not to de-incentivise population control; and the SDP related weight is further split into 20 percent, which goes only to states below the average SDP and is calculated by the deviation from the mean, and 5 percent which goes to all states and is calculated by distance from the highest per

In effect, there developed after 1970 two parallel formulaic components to Central flows to states, one statutory, one not, yielding a sharp rise in the aggregate formulaic share to 95 percent, and a corresponding reduction in the bargaining margin to 5 percent. In itself, this was very major improvement. However, there were two serious problems with the persistence of two-track assistance to states, even after introduction of the formula.

The total non-statutory flow continued to remain variable from year to year, discouraging expansion of facilities of the health and education variety, which called for regular multi-year commitments, principally on salaries, extending far beyond the Plan period in which new facilities were funded.[33] Indeed, Figure 2 shows a very sharp dip in 1972-73 in Central assistance for state Plans, soon after it became formulaic, when the lagged response of the Centre[34] to the drought of the previous year meant a sharp rise in Central expenditure on drought relief and a corresponding reduction in support for state Plans. It is also generally apparent in the spikes in statutory shares, which were in absolute terms reasonably steady across years (albeit with some discontinuities across Finance Commission transitions).

Second, the 70 percent loan content carried an incentive for projects that could yield a return from which the debt could be serviced. This was the impulse behind the creation by states of parastatals (public sector undertakings), with the promise of commercial return. The year-to-year variability was consistent with episodic loan or equity contributions from state exchequers to these parastatals.

The loans added to a steady increase in state indebtedness to the Centre (another source also added to it, detailed in the next section). Interest rates on these loans were set by the Centre, and in this manner, states lost control of a substantial portion of their current expenditure.[35] The interest burdens of state governments were among the expenditures that further reduced the willingness of states to expand salary commitments, for health and expenditure. The source of these interest burdens was eventually addressed by the Twelfth Finance Commission, which recommended no compulsory loan component in state Plan assistance from the Centre, starting from 2005.

Perhaps in response to the debt build-up, Central assistance to state Plans began to include components not subordinated to the basic formula.[36] The advantage of largely grant receipts was traded off against the loss of formulaic distribution between states.

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capita level (with a provision for the state at the top). The remaining 15 percent is based on assessments which introduce a discretionary margin into the formula.

[32] A portion of this went under the name of Centrally Sponsored Schemes, which required a co-financing stream from states.

[33] These went into non-Plan expenditures, to be covered by statutory flows and own revenues of states.

[34] This has been a standard feature of the relief response for adverse weather shocks; see next section. But there have been other years in which State Plan assistance fell for no apparent reason, such as 1995-96.

[35] Default on these loans was ruled out by deduction at source of interest dues from Central transfers to states.

[36] As other schemes outside the formula began to be increasingly added on, the formulaic portion was given the term "normal Central assistance" starting with the budget documents of 1986-87.

Thus, although the total of Finance Commission and state Plan assistance apparently stayed within the 85-90 percent range after 1970, the formulaic share began to decline. The non-formulaic share began widening again to reach thirty percent by 2006-07. The drivers of the year to year variations in the non-formulaic share are investigated further in this section.

Although the non-formulaic component in Central assistance for State Plans as a phenomenon is well-known, there was a complete absence of any formal accounting provision for segregating it from the non-formulaic component.[37] No attempt has therefore been made so far to quantify it in a systematic manner. The numbers underlying Figure 2 have been teased out of budget documents, as detailed in the notes to Figure 2. The non-formulaic component was open to bargaining in terms of the types and distribution of schemes introduced, and this added to the unpredictability of the total quantum of Central assistance to state Plans further uncertainty about the share that could be garnered by any individual state.[38]

The fluctuations over the period in the non-formulaic bargaining margin in total Central flows to states, clearly call for an explanation. Figure 3 plots the bargaining margin, obtained as the residual from the formulaic share of total flows shown in Figure 2, against an index of political fractionalisation (PFI) for each year, constructed for the major fifteen states in the federation. states are assigned each year to two groups, one if the ruling party in the state during the year was either the same as, or a supporter of, the party ruling at the Centre; the other if not.[39] Based on the ethnofractionalisation formula, the index has the value zero if all states are aligned with the Centre, and also if they are all in opposition to the Centre.[40] This might seem to be a limitation, but it is actually a useful property as an indicator of the fractionalization among states regardless of the political alignment of each fraction. An index of this kind has not been attempted earlier, and is difficult to do for at least three reasons. First, the major parties have split over the years and re-grouped in bewilderingly intricate ways. Second, a party not formally in the government at the Centre might nevertheless be a supporter, and therefore aligned with it (an example is the Communist Party Marxist, which supports the present Congress-led UPA coalition at the Centre), and such non-formal agreements are subject to change even within the term of a particular government at the Centre. Finally, elections at state level have lost all synchronicity with elections to government at national level. There are mid-year changes of government in the states, sometimes more than one such in a single fiscal

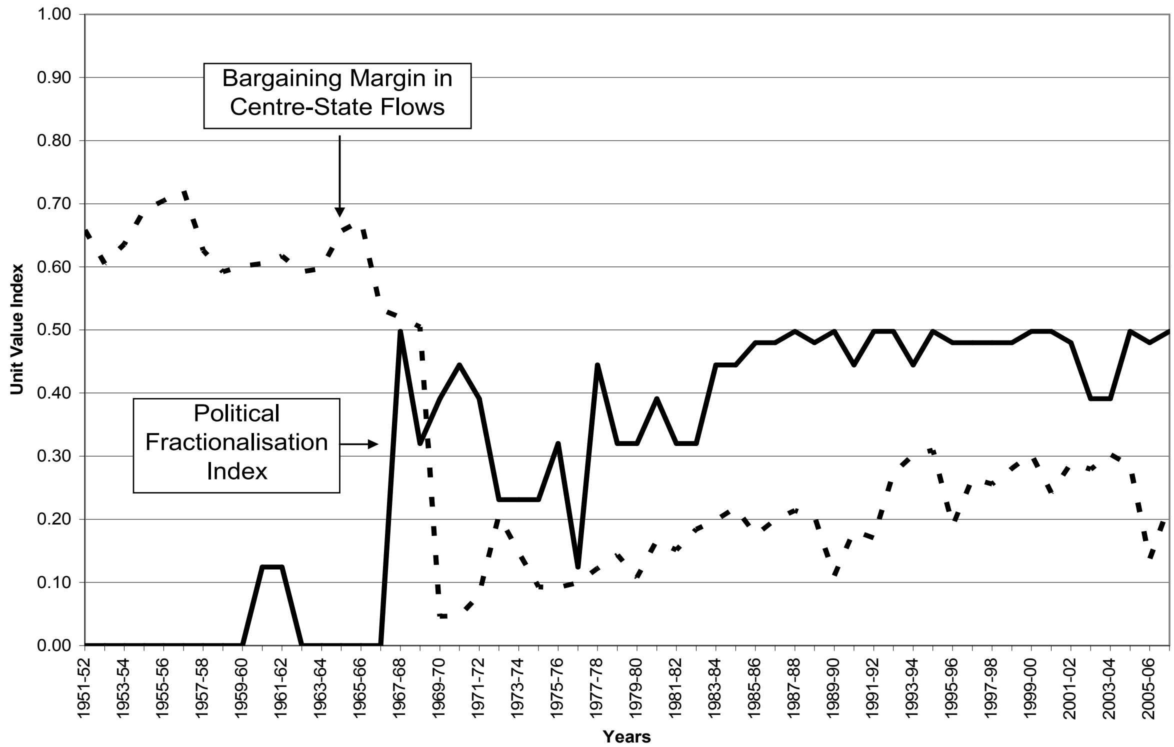
[37] No attempt was made to quantify it in an earlier exercise (Rajaraman, 2004) for this reason. Accounting head 3601 for Central assistance to State governments carries only an undifferentiated sub-head 101 for Block Grants in aggregate.

[38] Kletzer and Singh, 2000, arrive at their support for pre-committed amounts or formulae for flows to states through a separate line of argument, that the costs of exerting influence (akin to rent-seeking) may outweigh the benefits of discretion in making transfers.

[39] No further splitting into party groups was attempted. In years when the state government was dismissed under Article 356 and placed under Central rule, it was assigned to group one. In years with transitions during the year, the closing situation was taken. The formula for the index is shown in the notes to Figure 3.

[40] The PFI ranges in value from zero to one in the general case, but in this case of two groups, can range only between zero and 0.5.

FIGURE 3. The Bargaining Margin and the Political Fractionalisation Index 1951-2006



Source: Author's calculations for the bargaining margin, obtained as the residual after deduction of the formulaic components from total flows, using data from sources to Figure 2. For the PFI, author's calculations from election data in Butler et. al., 1995 and Penguin Books 2005.

Notes: 1. The PFI has the same form as the standard ethnofractionalization index.

PFI = 1- $\sum f_i^{\,2}$, i= 1,2, where f_i = fraction of states ruled by the same party as that at the Centre (i=1), or not (i=2). Where there were mid-year changes in government, the party in power at the close of the year was used to assign it to one of the two groups. Where the year closed with an interlude where the state government was dismissed and President's Rule imposed from the Centre, the state was assigned to group i=1. The PFI has been constructed for the major fifteen states over the period 1951-52 to 2007-08. It varies in value from 0 to 0.5 because there are two groups, and in first differences from -0.5 to +0.5.

2. The bargaining margin is aggregated over Central allocations to all states, which grew in number over time with breakaway pieces of the major fifteen, along with the graduation of Union Territories directly governed by the Centre into states in their own right. It varies in value from 0 to 1, and in first differences from -1 to +1. Since there was no clustering of values at these extremes, a tobit model was not estimated.

year, with frequent interludes when the Centre has dismissed the state government and administered the state directly. The manner in which all of these were handled are detailed in the notes to Figure 3.

The PFI shot up from zero to 0.5 with the elections of 1967, two years before the major drop in the bargaining margin in Centre-state flows in 1969-70. Thereafter, the PFI varied considerably before settling in the 0.4 to 0.5 range. A single equation OLS regression of the bargaining margin in first differences on the two-period lagged first difference in the PFI was estimated (table 1), treating changes in the PFI as exogenous to the system.[41] The two-period lag is in accordance with the institutional processes of the Indian fiscal system, where the flows in year t are planned in year (t-1). The model basically tests for whether the change in the bargaining margin from (t-1) to year t, as determined by budgetary processes at work in year (t-1), is related to the observed political change in the most recent completed year, (t-2), relative to the year before. The PFI reflects the political situation at the close of year (t-2), and thus basically reflects the situation at the start of year (t-1), when decisions with respect to year t are taken. The completed political configuration in year (t-1) is not yet known in order for a one-period lag to show any impact, but the table presents those results too.

The coefficients show a significant inverse relationship with a two-period lag. The bargaining margin declines by 0.05 (with a corresponding rise in the share of the formulaic fraction of Central flows to states) for every rise in the PFI by 0.1.

A second index measuring political opposition (POI) was also tried, for the simple fraction of states ruled by parties in opposition to the ruling formation at the Centre. Given the decision-making lags in the system this required a reassignment of parties in opposition to the ruling formation at the Centre with a two-year forward lag. The inverse relationship shows up again, with the same two-period lag, but although statistically significant is less compelling than with the PFI. There is inherently more noise in a measure like POI when taken in lagged form than in an index like the PFI.

To conclude, the share of statutory flows, the unconditional and predictable statutory component of total Central assistance to states, did not account for appreciably more than one-half of total flows, until the award period of the Twelfth Finance Commission began in 2005-06. The year-to-year unpredictability of the non-statutory component, which accounted for half the total until very recently, discouraged expansions in health and education facilities which call for steady funding commitments from year to year. The further uncertainty as to each state's share of the uncertain total dropped dramatically with the subordination of the major share of Plan flows to formulaic allocation across states starting in 1969-70, but the high loan component discouraged expenditures with no prospect of commercial return for loan servicing. Over time the non-formulaic bargaining margin in Plan support grew again on the promise of grant rather than loan support, at the expense of formulaic allocation across states. None

[41] Politics and parties in India are sufficiently personality driven to justify this assumption. For example the sudden leap in the PFI from zero to 0.5 in 1967 was surely a consequence of the passing away of Nehru in 1964.

TABLE 1. The Political Underpinnings of the Bargaining Margin in Centre-State Fiscal Flows 1951-52 to 2007-08

Dependent Variable: Bargaining Margin(t-(t-1))

	PFI		*POI*
	((t-2)-(t-3)) *(lagged twice)*	*((t-1)-(t-2))* *(lagged once)*	*((t-2)-(t-3))* *(lagged twice)*
Intercept	-0.003	-0.007	-0.009
	(-0.305)	(-0.664)	(-0.781)
PFI coefficient	-0.478	0.09s	
	(-5.024)***	(0.800)	-
POI coefficient	-	-	-0.135
			(-1.916)*
R bar squared	0.314	-0.007	0.048
F-value	25.237***	0.640	3.670*
No. of observations	54	55	54

Source: See source to Figure 3.

Notes: 1. Variable definitions: See notes to Figure 3 for definition of the bargaining margin and the PFI. The Political Opposition Index (POI) is the simple fraction of states, f_2 in the PFI formula, ruled by parties in opposition to the ruling formation at the Centre, recalculated for the lag in the model to represent opposition to the government at time (t-1) when the budgetary decision yielding the first difference for year t is taken. The series for PFI/POI with two lags go upto the closing values for 2005-06, with one lag, upto 2006-07. Neither variable is defined for the year 2007-08.

2. Significance: Figures in parentheses are t-values. Asterisks mark levels of statistical significance, three for $P < 0.01$. All D-W values fell in the range 1.81-2.01.

of these developments over time was subject to formal assessment or monitoring by any standing platform open to all partners in the federation.[42] The terms of reference of Finance Commissions typically confined their field of vision to non-Plan flows, until recently.[43]

The sharp drop in the bargaining margin in 1969-70 was a lagged response to a sharp increase in 1967-68 in the index of political fractionalization in the federation. The bargaining margin in first differences is inversely related to the two-year lagged first difference in the index. From these results, it seems possible to conclude that the increasing political fractionalization[44] in India over time has had a favourable upward impact on the formulaic share of total Central flows to states, and has therefore been favourable towards greater willingness by states to make steady expenditure commitments to provision of primary education and health.[45]

Four miscellaneous points should be noted before concluding this section. First, the segment of assistance to state Plans that is non-formulaic is not necessarily wholly capricious in its distribution between states. The bargaining element has to do with the schemes that are selected, and the nature of the formulae used for distribution between eligible states. Some of these are conditional on reform and therefore not apportioned *a priori*. The essential point though is that these flows are conditional and that the quantum is subject to yearly variation. Second, a frequent feature of these scheme-specific Plan flows to states is that the funds remain unutilized for long periods for any of a number of reasons, including lack of projects on the shelf. Clearly, this is not a characteristic of statutory or formulaic fund flows which flow into the general pool, and point to the general inefficiency of the non-formulaic add-on.

Third, there are Central Plan expenditures which do not flow to state exchequers and therefore have not been considered here, but are fully open to bargaining in terms of type of scheme and location. In that sense, there is a wider bargaining margin than what has been considered here.

Finally, the lowering of state shares in total expenditure on health and education charted in figure 1 is because of a number of Central Plan schemes that have been devised to correct state failure in education. The best known is the Sarva Shiksha Abhiyan for primary education. The paradox is that correctives of this kind aggravate the conditions that led to underprovision of primary education by states in the first place.

[42] However, there were fitful efforts by subsets of states to come together on specific issues over the years; see Kapur, 1995.

[43] The Seventh (1979-84) and Eighth (1984-89) Finance Commissions were the first whose terms of reference were expanded to include Plan funding requirements of states, but this was dropped and re-surfaced only in the terms of the Eleventh (2000-2005) Commission (Twelfth Finance Commissions, 2003).

[44] This is political fractionalization within a stable electoral system as distinct from political instability that is negatively associated with growth (Mankin, 1995).

[45] Sinha, 2005 makes a similar argument from a parallel stream of thought, that political linkage mechanisms guaranteed by regionalized party competition in India make consistent local and central preference and incentives over policy changes.

State Borrowing

In addition to the compulsory borrowing component of Plan assistance, states were permitted to borrow through sale of securities to financial markets (called market borrowings), which along with all other channels was subject to Central government approval as in all federations, for reasons of macroeconomic discipline.[46] The total quantum in general has been conservatively set, with outstanding market borrowings of states at end-2007 at a little over 6 percent of GDP.[47]

The problem with market borrowings was not Central control over the total, but the wholly non-transparent determination of both the aggregate and its allocation between states, and therefore its unpredictability from year to year. The state-wise borrowing shares in the aggregate were worked out as a part of annual Plan discussions, and alterable through bilateral negotiation between each state and the Centre. Thus the bargaining space extended beyond that quantified in the last section within Plan flows.

The other major channel of borrowing permissible to states added to state borrowing from the Centre, until 1998-99. This was through sale of small savings instruments to the general public, which were routed through the Central Budget and on-lent to states against jurisdictional collections, until a very major accounting change in 1999-2000. Routing through the Central Budget was terminated and state borrowings against these collections were owed to a Fund in the Public Account rather than to the Centre as previously.[48] This rendered the fiscal deficit at the Centre non-comparable

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[46]Under Article 293 to the Constitution, control over market borrowings is only applicable to state governments with outstanding debt to the Centre. See Ter-Minassian, 1997 and Watts, 1999 for comparative information on other federations.

[47] But this may go up with the withdrawal of Central lending to states after 2005.

[48] All accounting flows in respect of small savings after 1 April 1999 were moved to a National Small Savings Fund in the Public Account, enabling for the first time a clear picture of the financial viability of the scheme, which was rendered utterly opaque by the accounting separations previously in place. Only deposits and redemptions were previously shown separately in the Public Account (with redemptions essentially serviced by growing deposits), but all loans to states against deposits, all loan recoveries, all interest receipts and payments, and all agency charges were routed through the Central Budget. Because state borrowing through this channel was limited only by jurisdictional collections, there was general pressure by consensus to widen the gap in post-tax returns between small savings and other instruments. The corresponding on-lending rates to states also rose correspondingly, to a peak of 15.0 percent. Subsequent to the accounting reform, it became possible to align deposit and lending rates and bring both down in several stages. This accounting reform was a major fiscal achievement, and was critical to the growth subsequently enabled in the Indian economy. Rates on small savings after 1999-2000 were benchmarked to an assortment of instrument-specific rates, but in the absence of any public commitment to the margin in terms of either magnitude or sign, the final rates remained administered rather than market-driven. A more formal commitment was made starting 2002-03 to both the instrument-specific benchmark/s, and a cap on margins of +50 basis points, as recommended by an official committee. Within that cap, the margin is still under Central control, and the Centre continues to offer tax incentives for these instruments. Thus, the Centre still carries downside flexibility with respect to rates on small savings to a considerable degree. Because these are zero-risk instruments, many still carrying tax incentives, these rates continue to function as a floor to the interest rate structure in the economy. With its control over the margin, and the tax incentives given, the Central government remains in control of the aggregate flows into the scheme.

across the divide. The Central government administered the deposit rates on these schemes, so controlling the levers on total collections, and still does.

State loans from the Centre against small savings added to Plan loans gave the Centre the biggest share in state liabilities, and the administered rates on all these gave it a dominant role in determining the interest payable by states on their debt. Until 1991 when the reform programme began, loans to the Centre were between 70 to 80 percent range of total state liabilities.[49] The next section goes into details of the scheme to reduce this debt overhang that came into operation in 2005.

Thus the Centre had macroeconomic control over state-level borrowing through all channels, and therefore over the consolidated fiscal imbalance. This explains the finding in Khemani, 2004, for election years at state government level in India, of no rise in fiscal imbalances of individual states, but only a re-allocation of taxes and expenditures in favour of special interest groups.

An earlier exercise over 1951-2001 (Rajaraman, 2006) found evidence of upward spikes in the consolidated fiscal imbalance in years immediately preceding elections to the national Parliament ("general" elections, which lost synchronicity with state elections after the first three electoral cycles, to the point where there is now a state election practically every year). The evidence of countercyclical stabilisation response to growth rates lagged by one year was visible for the revenue (current account) deficit over the entire period, and for the fiscal (current plus capital account) deficit only after 1971.

That exercise is carried forward here by estimating an augmented specification for the fiscal imbalance consolidated across Centre and states, and over the same period for the Centre taken by itself. Because of the accounting change in 1999-00 in the routing of small savings, the series for the comparative exercise had to be terminated at 1998-99, since the Central fiscal imbalance is not comparable across that divide. The consolidated fiscal balance nets out all state borrowing from the Centre. Therefore the differential impacts of the variables in the specifications identify factors driving year-to-year changes in the limits placed by the Centre on state borrowing from financial markets.

The results for pre-election fiscal behaviour in OECD countries, summarised in Alesina et al, 1997, point to partisan rather than opportunistic behaviour over the electoral cycle at national level. However, there are contrary results for subnational elections in the U.S. (Besley and Case, 1995) showing that the probability of incumbent victory is inversely related to tax increases relative to neighbouring jurisdictions.

The only econometric studies for fiscal imbalances in India are confined to the Central government. Cashin et al, 2001, establish the presence of tax-smoothing through a VAR approach for the period 1951-97. Tax smoothing, as the term suggests, will leave

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[49] Ways and Means advances from the Centre to tide over temporary cash needs, also added to the stock of liabilities. Repayments of these are lumped together with other loan repayments, so that it is impossible to judge whether the net stock increased from year to year. Notwithstanding this and a simultaneous W&M window with the RBI, the budget constraint faced by states could be termed as hard rather than soft.

the tax burden unadjusted to temporary shocks in expenditure, though not to permanent increases. This result is plausible and very useful as far as it goes, but the underlying model treats government expenditure (net of interest) as exogenously given.[50] Clearly, there is a need to build on this further so as to understand what drives temporary expenditure shocks. Further, by investigating fiscal behaviour in terms of imbalances rather than expenditure, the tax response gets factored in, and informs policy reform more comprehensively. There is also the study by Sen and Vaidya, 1996, which examines Central government revenue (current account) imbalances, and finds a statistically significant increase in pre-election years over the period 1951-89. Interestingly, they find no electoral response in either expenditure or revenue taken independently, thus suggesting the use of both in conjunction and contradicting therefore the tax smoothing result of Cashin et al., 2001.

The dependent variable of all the regressions reported in table 2 is the primary fiscal deficit, as a percent of GDP, taken in first differences. The explanatory variables are the election year dummy, GDP growth rates taken both concurrently and lagged one year[51] and the PFI (first differences lagged twice, as in the case of the exercise in table 1, and for the same reason in view of the institutional lags in the fiscal decision-making process). The election year dummy is invariant with respect to the party in power and is assigned a value of one for the fiscal year immediately preceding an election, anticipated either because the government had reached the last year of its five-year term (recent examples are the elections in 1989 and 1996), or because the government expected to be voted out of power in the course of the year (as for example the elections in 1980, 1991 and 1998).[52]

The specifications are estimated with data series spanning two periods, one starting in 1951-52, and the other starting in 1969-70 (the year when higher formulaic shares of Plan flows to states began).

[50] Tax-smoothing (Barro, 1979) is not so much the analogue as the mirror-image for public consumption of the consumption-smoothing model for private consumption; what is smoothed here is revenue (income) rather than expenditure (consumption).

[51] In Rajaraman, 2006, there is an alternative set of specifications with the agricultural growth rate instead, because of the exogenous rainfall factor, which in failed years calls forth a fiscal relief response in the form of rural employment and other welfare schemes.

[52] General elections to the national Parliament, if held before the fifth year of the full term, have always been precipitated by the opposition rather than by the government in power voluntarily choosing to shorten its term. Thus, general elections held after the lapse of less than five years remain exogenously imposed, and are not jointly determined with the fiscal imbalance or other variables in the specification. This does not hold at state government level (Khemani, 2004). The two special cases were the elections in October 1984 and September 1999. The corresponding dummy value of one was assigned to 1984-85 (even though the precipitating event was unforeseen, it was the last year of a five-year term); and to 1998-99 (since the government was voted out at the conclusion of that fiscal year, with caretaker status until the mid-year election in 1999-2000).

TABLE 2. Electoral Underpinnings of Fiscal Imbalances 1951-52 to 1998-99: Consolidated (Centre + States) and Centre

Dependent Variable: % PFD/GDP(t-(t-1))

		Centre+states 1951-99	*Centre 1951-99*	*Centre+states 1969-99*	*Centre 1969-99*
Common intercept		0.330	0.451	0.248	0.204
		(1.044)	(1.231)	(0.586)	(0.502)
Pre-election year intercept		0.729	0.380	1.291	0.602
		(2.324)**	(1.046)	(2.968)***	(1.441)
GDP growth rate (%)	(t)	-0.036	-0.079	0.008	-0.025
		(-0.861)	(-1.615)	(0.147)	(-0.465)
	(t-1)	-0.067	-0.038	(-0.132)	-0.059
		(-1.546)	(-0.776)	(-2.101)**	(-0.978)
PFI ((t-2) – (t-3))		-1.264	-1.054	-0.969	-0.694
		(-0.985)	(-0.709)	(-0.707)	(-0.527)
R bar squared		0.065	-0.003	0.155	-0.054
F-value		1.768	0.970	2.325*	0.630
No. of observations		45	45	30	30

Source: Author's calculation from Government of India, Indian Public Finance Statistics, assorted issues for fiscal data, supplemented by Rangamannar, 2002 for the fifties. Sources to figure 3 for all election data. PFI from author's calculations.

Notes: 1. Variable definitions: The dependent variable is the primary deficit in percent of GDP taken in first differences (t-(t-1)), obtained after subtracting interest payments from the fiscal deficit, which is officially reported only after 1988-89. For all prior years, fiscal deficits had to be calculated from the difference between expenditure and non-debt current receipts. There were no disinvestment non-debt capital receipts during that period. All reported capital expenditure figures going into these calculations are net of loan recoveries, and net out loan repayments. GDP growth rates are from the factor cost aggregate.

2. Data series: All series begin in 1951-52, yielding first differences starting 1952-53. The two year lag with the PFI yielded a first value starting with 1954-55, and thus 45 observations going upto 1998-99. The second estimation period starts with 1969-70, yielding 30 observations going upto 1998-99.

3. Significance: See notes to table 1.

Over the 1951-99 period the only coefficient that carries statistical significance is the pre-election year positive intercept for the consolidated fiscal imbalance. It is not significant in the regression for the Centre alone (indeed, the regression itself is statistically insignificant). When estimated over the 1969-99 period, the pre-election spike is higher, for the consolidated imbalance, but again insignificant for the Central imbalance alone. Thus opportunistic pre-election behaviour by the Central government resulted in temporary upward spikes in the aggregate borrowing limits placed on states rather than in any direct spikes in the fiscal imbalance at the Central level alone. This finding substantiates the fact of Central control over the consolidated fiscal imbalances, and the opportunity so obtained for temporal distortions in response to the electoral cycle.The distortions seem to have gone up after 1969 although the coefficient of the PFI (first differences lagged twice) itself is insignificant.

The coefficients for the growth rates in concurrent or lagged form carry negative signs, as expected, but are not statistically significant except after 1969, when there is a significant coefficient on the one-period lagged growth rate, for the consolidated imbalance alone.[53]

The election year distortions in limits on borrowing from financial markets added to the uncertainties faced by states in aggregate non-statutory assistance from the Centre, and act as further adverse incentives for enhancement of steady expenditure commitments by states of the kind required for provision of primary education and health. Because of the non-transparent manner of allocation of the aggregate, the uncertainty at the level of any individual state on borrowing limits extended to non-election years as well.

Finally, table 3 extends the exercise upto 2005 for the consolidated fiscal balance alone, with two data series. One splices the reported deficit for years after 1988-89 (the fiscal deficit was officially reported only starting 1988-89, see notes to table 2), to the generated figure for prior years; the second uses the generated figure for all years. The generated figure does not conform to the reported figure for years in which both are available, with the discrepancy between the two ranging between 1.8-19.5 percent of the reported number, not accounted for by disinvestment receipts on the capital account.[54] The two results are shown in the table to highlight problems that still remain

[53] The coefficients for the concurrent growth rate capture the composite effect of the structural properties of the fiscal system, which in India carry a peculiar feature that could impart an upward bias to the concurrent growth coefficient. Small savings collections, which are supply-driven, would carry buoyancy with respect to the growth rate, but are of course only one component of government borrowing. Unless government borrowing through other instruments is adjusted in response to the small savings inflows in the course of the year, there could be a positive concurrent growth impact on net government borrowing. This could counter the policy response, if any, and yield a statistically insignificant coefficient. The coefficients for growth lagged one year do however carry the policy response, and these are indeed negative and statistically significant coefficients. The one-year lag in the stabilization policy response is also in conformity with the institutional lags in decision-making, where fiscal decisions with respect to year t are made in year (t-1).

[54] Disinvestment, which started in 1991-92, was reported in budget documents of the Central government starting from the year 2000. These receipts did not close the gap between the reported and the generated

TABLE 3. Electoral Underpinnings of the Fiscal Imbalance 1951-52 to 2004-05: Consolidated (Centre + States)

		Centre+states 1951-05	
		Dependent variable: reported % PFD/GDP(t-(t-1))	*Dependent variable: generated % PFD/GDP(t-(t-1))*
Common intercept		0.323	0.407
		(1.058)	(1.420)
Pre-election year intercept		0.536	0.641
		(1.870)*	(2.378)**
GDP growth rate (%)	(t)	-0.042	-0.046
		(-1.058)	(-1.231)
	(t-1)	-0.051	-0.070
		(-1.264)	(-1.840)
PFI ((t-2) – (t-3))		-1.079	-1.272
		(-0.867)	(-1.086)
R bar squared		0.025	0.088
F-value		1.325	2.208
No. of observations		51	51

Source: See source to table 2.

Notes: 1. Variable definitions: The first column splices the reported primary fiscal deficit after 1988-89 onto the generated figures for earlier years (see note 1 to table 2). The second column uses the generated figures for all years. In years after 1988-89, where there were disinvestment receipts, the reported figure should be the more correct, since it should (in principle) exclude disinvestment receipts (which are not reported and therefore cannot be subtracted from the generated figure). In practice however, the discrepancy varies widely, and is especially high in 1998-99 (14 thousand crore) and 2003-04 (22 thousand crore), higher than known disinvestment receipts in those years.

2. Significance: See notes to table 1.

figures for the fiscal deficit, although there is the (unlikely) possibility that the remaining disparity could be accounted for disinvestment by states, on which there is no consolidated data anywhere.

with official reporting of fiscal magnitudes. Both results show that the pre-election intercept damped down relative to the estimate over 1951 to 1999, more sharply with the reported series. There was only one national election year after 1999, in 2004. The pre-election year 2003-04 shows evidence of the fiscal restraint introduced by the Fiscal Responsibility and Budget Management Act of 2003. It was also the only year in which there were substantial disinvestment receipts at the Centre, but a considerable discrepancy remains even after factoring this in. At the very least, the disparity between the generated and reported fiscal deficits calls for making transparent disinvestment receipts at the level of both Centre and states.[55]

Starting 2005-06 there was a regime change with cessation of direct Central lending to states for Plan expenditure. There was also a change to a more inflexible system of caps on state borrowing as part of the conditionalities for debt concessions detailed in the previous section, so that electoral patterns in the consolidated fiscal imbalance will probably not be visible after 2005.

The Debt Write-off Scheme 2005-2010

At least two recent schemes have been devised to reverse the build-up of debt owed to the Centre by states. Both these are applicable to all states, unlike earlier one-off selective debt pardons for individual states on account of special conditions, such as insurgency. The most ambitious is that currently in place devised by the Twelfth Finance Commission for the horizon 2005-10, subject to fiscal conditionalities.[56]

The recommendation by the Twelfth Finance Commission was for a fiscal adjustment aggregated across all states towards a target fiscal deficit at 3 percent of GDP by 2008-09, which with nominal growth of 13.6 percent, would deliver a target debt level at 25 percent of GDP, but only over an infinite horizon.[57] In the face of the tedious and intricate procedure prescribed by the Report for allocation of the required adjustment across states (summarized in an appendix to the paper), the administrative rules by which the recommendations were implemented equated the average adjustment target to a uniform fiscal deficit applicable to each state of 3 percent of state GDP by the target year of 2008-09.[58] This was a violation *prima facie* of the recommendations as accepted in Parliament, but in the absence of any standing platform where these issues could be raised, it carried the day.

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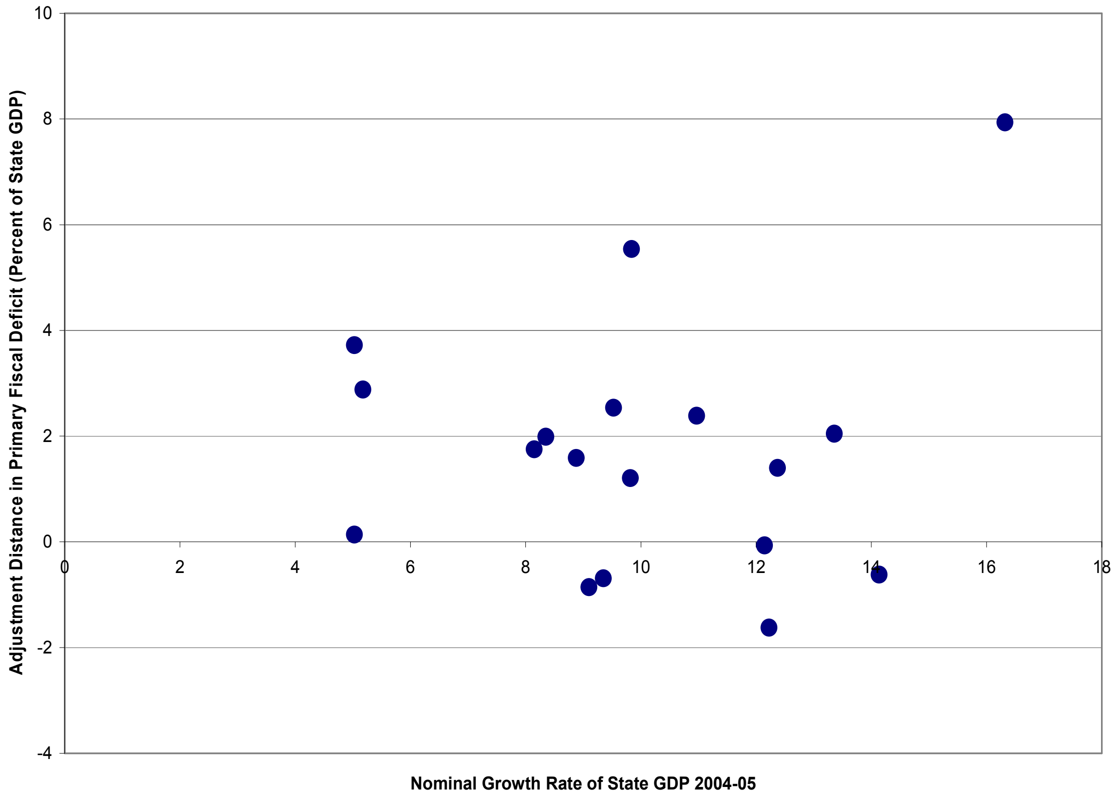
55 As a first step towards making transparent the process of disinvestment itself, which has been riddled with allegations of corruption.

56 Prior to the 2005-10 scheme a debt swap permitted swapping of debt to the Centre carrying interest rates exceeding 13 percent against replacement borrowing from financial markets including small savings. This did not reduce the debt stock but lowered the interest bill of State governments.

57 The formula for the time taken to reach the target ratio of debt to GDP from time 0 to time t is given by $t = \log [d_0 - 0.25] / \log [d_t - 0.25] * \log (1+n)$, and can yield a finite number therefore only for debt levels slightly above the infinite target value.

58 Annex 7 of GOI, 2005. Even the required target in terms of national GDP should have translated into 4 percent of the individual GDP of states, because state GDP is reported at factor cost, and the GDP of the country at market prices in any year is above the sum of state GDP by one-third (see Rajaraman and Majumdar, 2005).

FIGURE 4. Scatter of the Adjustment Distance Required for the Debt Write-Off against Nominal Growth Rates of State GDP



Source: Author's calculations using data from RBI State Finances, 2006-07. State Domestic Product figures from www.indiastat.com

Notes: Variable Definitions: All State Domestic Product figures are at factor cost. The adjustment distance is obtained as the difference between the actual primary fiscal deficit in 2004-05 and the required primary deficit to achieve a uniform overall fiscal deficit target of 3 percent of State GDP (see text for equation used to calculate the required primary deficit).

The required primary fiscal deficit in order to meet the uniform fiscal deficit of 3 percent of state GDP is a function of the average interest rate payable on state debt, and the nominal rate of growth, in accordance with the formula given below, and will clearly vary across states:

$p_t = f_t - i\, d_{(t-1)}/(1 + n)$, where p_t is the required primary fiscal deficit, n is the nominal rate of growth, and i is the average nominal interest rate payable on state debt.

The required primary fiscal deficit towards the uniform fiscal deficit target was calculated here at debt levels and values of the interest rate and nominal growth parameters that prevailed in 2004-05, the immediate pre-adjustment year. The requirement ranged from a primary surplus of 3 percent of state GDP to a permissible deficit of 1.2 percent of state GDP.

The adjustment distance between the actual and the required primary deficit in 2004-05 was then calculated, and is shown in a scatter against growth rates of state GDP in Figure 4. Two points emerge quite clearly. First, the adjustment distance range is nearly 10 percent of state GDP, from states which had actual primary deficits above the required level by 8 percent of State GDP, to states which had actual deficits (or surpluses) below the required level by 2 percent of state GDP. The issue is the range itself in the first instance, which by imposing uneven correction robs states of any sense of control over their fiscal parameters. There is also the fact of its having been imposed in the absence of any questioning of the wrongful interpretation of recommendations which prescribed state-specific adjustment formulae.

The second point is that there is no evidence of any systematic relationship between the adjustment distance and the nominal rate of growth.[59] States with a required adjustment of 3.5 percent of GDP, which grew at a nominal growth rate of 5 percent in 2004-05, and therefore at negligible real rates, would be heavily pressed to achieve their targets. The growth rates in the figure are single-year rates of 2004-05 and therefore clearly not immutable. The essential point however is that capricious adjustments of this kind add immeasurably to the uncertainties surrounding state allocations of expenditure, and therefore impact negatively on state willingness to commit themselves to avenues that are not compressible in the short-run.

The debt example above is merely one of a larger class of phenomena, whereby a complex mandate is simplified in the executive order through which it is effected, and distorted in the process of simplification. Another example was the fiscal reform facility of the Eleventh Finance Commission, which withheld a portion of its recommended statutory grants to be given only if the recipients crossed a fiscal correction threshold. The undistributed amount was to be distributed among performing states at the conclusion of the scheme, but this was not in fact done, and was the subject of extended dispute. There was no forum where the issue could be raised. The Inter State Council was established only as late as 1990 under a Constitutional provision for such a platform under Article 263, for resolution of all other than river water disputes (for which there was a separate provision under Article 262), but, in the years since, it has not been able to

[59] See appendix to this paper.

play the role envisioned for it. The move by states to a VAT on 1 April 2005, perhaps the single most important fiscal reform at the level of states since Independence, was discussed and driven by a process altogether outside the purview of the Council.

There are many other issues potentially within the purview of such a body. There are the expenditure externalities imposed upon states every time the Centre revises the salary scales of civil servants upwards. The modalities of service taxation lie in a constitutional limbo even though services account for a little over half of GDP, and drive growth. There is presently an indirect tax levied on services by the Centre under a default provision in the Constitution.[60] There are other revenue issues having to do with royalty rates on minerals, a very important source of non-tax revenue for some of the poorer states, which are presently set by the Centre. There are unfunded mandates, such as the National Rural Employment Guarantee started in February 2006, to provide an employment guarantee of 100 days to every rural household in every financial year, in such rural areas in each state as notified by the Centre, at an absolute stipulated minimum daily wage. State governments bear one-tenth of the variable cost, such administrative costs as will be decided by the Central government, and unemployment compensation in case of failure to provide work within fifteen days of demand for work at the location where it is demanded.

In a country with as much economic and other diversity as India, there is need for a much more systematic and standing dispute resolution forum, in which major issues of the kind just outlined can be resolved in a participatory framework, such that the economic parameters within which state governments function are predictable, within an acceptable margin of error.

Conclusions

If the necessity for public funding of primary education and primary health care is taken as a given,[61] poor human capital endowments in a federal setting could be the outcome of adverse incentives in the structure of funding of subnational governments, which usually carry the major expenditure responsibility for these functions.

Public expenditure on education and health in India has never commanded more than 3.3 and 1.3 percent of GDP, respectively. This paper investigates the nature of fiscal flows in the Indian federation to identify possible causes.

The assignment of expenditure responsibilities and revenue rights in India gives rise to a vertical fiscal gap at subnational state level, for the closure of which there is a statutory provision enshrined in the Constitution, revisited every five years. These

[60] A Constitutional Amendment enacted in early 2004, assigns to the Centre rights of collection and appropriation (including sharing percentages), outside the purview of Finance Commissions, in respect of taxes on notified services. No list has so far been so notified.
[61] In the tradition of the new political economy, accepting reform rather than rejection of the public role (Inman, 1985), although a sizeable body of opinion now favours market provision with private choice.

statutory flows are predictable in quantum and unconditional, properties necessary for multi-year expenditures of the kind needed for provision of primary education and health.

However, statutory flows never amounted in practice (except after 2005) to more than sixty percent of the total flow. Even after non-statutory flows became largely formulaic in distribution between states in 1969-70, they remained unpredictable in aggregate from year to year. That, along with the seventy percent loan content implicitly altered the allocation incentives away from avenues such as health and education facilities, which call for multi-year current expenditure commitments, and carry no promise of commercial returns like public enterprises (potentially, at any rate). After 1969-70, the burden of the compulsory loan component led to a gradual reduction again in the share of the formulaic component.

The non-formulaic bargaining margin in total flows, aggregating across statutory and non-statutory, is quantified in this paper, and found to vary inversely with an index of political fractionalization of states in the federation, with a two-period lag. As fractionalization increases, the formulaic share rises. Thus in the absence of a formal platform, the system has ricocheted in response to the political kaleidoscope, with the potential for constant change itself unsuited to the unchanging funding requirements of basic developmental services. If one of the presently visualized forms of the proposed goods and services tax (GST) were to be implemented, states would have negligible revenue collection powers of their own, and the vertical gap would essentially equal their share in total expenditure. In that case, the properties of fiscal flows to states will matter even more than they do today

The specifications estimated for the fiscal imbalance consolidated across Centre and states, and over the same period for the Centre taken by itself, together establish that aggregate Central limits on state borrowing from financial markets were raised in pre-election years. Thus, Central control over the consolidated fiscal imbalance, in itself a laudable macroeconomic feature of the Indian federation, was subordinated to opportunistic behaviour over the national electoral cycle. These temporal distortions, and the spatial distortions implicit in the non-transparent allocation of borrowing entitlements across states, added further to the expenditure uncertainty faced by states.

The formal results suggest that increasing political fractionalization has had a favourable upward impact on the formulaic share of total Central flows to states, and has thus been favourable towards creating enabling conditions for states to make steady expenditure commitments of the kind needed for primary education and health. However, the pre-election distortion in borrowing entitlements for states was greater in the period after 1969, when political fractionalization was in general higher than before 1969.

Starting 2005-06, there has been a regime change with cessation of direct Central lending to states for Plan expenditure, and a more inflexible system of caps on state borrowing as part of the conditionalities for debt concessions detailed in the previous section. Thus, the kinds of uncertainties and patterns in aggregate borrowing limits on states will not be visible after 2005, at least until 2010. This is one of the good outcomes of the Twelfth Finance Commission recommendations, but is potentially reversible beyond 2010.

The build-up of state debt and interest liabilities to the Centre was sought to be dismantled starting 2005 with fiscal correction conditionalities. These conditionalities imposed adjustment distances varying widely between states, with a range of nearly 10 percent of state GDP. The issue is the range itself in the first instance, which by imposing uniform targets on states with widely varying initial conditions, robs states of any sense of control over their fiscal parameters. There is also the fact of its having been imposed in the absence of any questioning of the wrongful interpretation of recommendations which prescribed state-specific adjustment formulae. The debt example is merely one of a larger class of phenomena, whereby a complex mandate is simplified in the executive order through which it is effected, and distorted in the process of simplification.

These developments ran on unchecked in the absence of a standing platform whereby the *de facto* functioning of fiscal arrangements might have been open for continual examination and monitoring by all partners to the federation There is no effective standing dispute resolution forum, in which major issues spanning Central transfers, revenue rights, expenditure externalities, and unfunded mandates, can be resolved in a participatory framework, such that the economic parameters within which state governments function are known to them within an acceptable margin of error.

There has been a fall over the last ten years in the share of states in expenditure on health and education because of the huge new Central expenditures on primary education and mid-day meals in schools, not routed through states. Thus, the policy response has been to alter the pattern of functional responsibility, when the need of the hour is for restoration to states of their Constitutionally assigned functions, with correction of the adverse incentives that became embedded in the *de facto* structure of subnational funding.

Appendix: The Conditional Debt Concessions for States of the Twelfth Finance Commission

The summary of the debt concessions in this appendix draws on the detailed account in Rajaraman and Majumdar, 2005. In accordance with the convention whereby Finance Commission recommendations are accepted in full by the Centre, with a few minor exceptions along the way, the Twelfth Finance Commission scheme for debt concessions was accepted, and by extension, the conditionalities attached to those concessions as prescribed in the report. [62]

The scheme was in two parts, each with separate sets of conditionalities.

The first part was a concessional rate of interest of 7.5 percent on state debt owed to the Centre, a 300 basis point reduction from the then average across all states of 10.5 percent. All state debt owed to the Centre was to be consolidated and rescheduled for a fresh term of 20 years, with 20 equal installments due. The second part of the scheme was a write-off of debt repayments due until 2009-10, essentially the first five of the 20 newly drawn annual repayments. The write-off was however pro-rated to achieved fiscal correction, so that a state might not achieve a full write-off even of the first five installments.

The first part of the scheme required enactment of fiscal responsibility legislation (FRBM Acts) by states with five features, one of which was that the fiscal deficit be reduced to 3 percent of Gross State Domestic Product (GSDP), in an unspecified target year. The report also suggested that the Centre set borrowing limits for states so as to achieve an aggregate fiscal deficit target across all states of 3 percent of GDP at market prices, by 2008-09, and held there in 2009-10.

There was thus a basic contradiction between the idea of centrally-set borrowing limits in this manner, and the ostensible freedom given to states to design their own fiscal deficit paths in their FRBM legislation.

The external cap on state borrowing was to be set by formula allowing for variations in three parameters, for the individual state (subscript j), relative to all states taken in aggregate (subscript a). The three parameters were the ratio of revenue receipts (inclusive of taxes and grants from the Centre) to GSDP (r); the interest rate on debt (i); and the nominal growth rate (g).[63]

$$f_j = f_a \left[\frac{i_a \; r_j \; g_j}{i_j \; r_a \; g_a} \right]$$

[62] The formal document in which this is done is the Explanatory Memorandum on the Action Taken on the Twelfth Finance Commission Recommendations, dated 26 February 2005. For a detailed chronicle of departures from full acceptance, see Twelfth Finance Commission, 2003.
[63] The formula as given in the Report was incorrect. This is the corrected formula.

The formula enabled a higher target deficit for states with a higher nominal growth rate, for constant values of the other two parameters. The report suggested time-invariant values for all parameters, but the state nominal growth rates projected in the report were sufficiently at odds with achieved growth rates of states as to lead to serious misallocations of the required correction if used. A correction path in conformity with the formula could only be set iteratively over time with adaptive adjustments to parameter values. Even for constant values of GSDP nominal growth rates, and constant revenue buoyancies, the ratio of revenue receipts to GSDP is time-varying as long as these buoyancies are not equal to one.

The second part of the scheme was the debt write-off, which was pro-rated to achieved correction,[64] and carried in addition an absolute cap on the fiscal deficit at the level in the year 2004-05. A state fully in conformity with the externally prescribed correction formula, which was configured in terms of percentages to State Domestic Product, could easily exceed this cap, because of a higher nominal growth rate for example. There were other issues, detailed in Rajaraman and Majumdar, 2005.

The executive order for implementation of these recommendations, with all their internal inconsistencies, essentially threw out the formula, capped the fiscal deficit at the absolute level in 2004-05, and set the absolute amounts for successive years as well so as to reach a uniform 3 percent of State Domestic Product for all states in 2008-09 (failing even to set the correct equivalent for 3 percent of GDP at 3.99 percent of aggregate GSDP at factor cost).[65]

[64] To the achieved reduction in the deficit on current account (the revenue deficit), rather than the fiscal deficit.
[65] Details are in Rajaraman and Majumdar, 2005, table 1.

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