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Partisan Politics and Intergovernmental Transfers in India

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Abstract

Recently there has been a surge in international empirical evidence that national policymakers allocate resources across regions based on political considerations, in addition to any normative considerations of equity and efficiency. In order to mitigate these political compulsions, several federations around the world have attempted to create independent constitutional bodies that are responsible for determining federal transfers to subnational jurisdictions. Khemani tests whether constitutional rules indeed make a difference in curbing political influence by contrasting the impact of political variables on two types of intergovernmental transfers to states in the Indian federation over a period of time, 1972–95. The pattern of evidence shows that transfers,

whose regional distribution is determined by political agents, usually provide greater resources to state governments that are politically affiliated with the national ruling party and are important in maximizing the party's representation in the national legislature. But the political effect on statutory transfers, determined by an independent agency with constitutional authority, is strikingly contrary, with greater resources going to unaffiliated state governments. The author argues that this contrasting evidence indicates that constitutional rules indeed restrict the extent to which partisan politics can affect resources available to subnational governments.

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I. Introduction

A recent surge of empirical evidence shows that variations in intergovernmental transfers to sub-national jurisdictions within countries cannot be explained by traditional concerns of equity and efficiency alone, and that political variables representing electoral incentives of public agents are additional and significant determinants (Grossman, 1994; Pereyra, 1996; Worthington and Dollery, 1998; Porto and Sanguinetti, 2001). This paper adds to the literature by analyzing and contrasting the political determinants of different channels of transfers within one large developing country, India, in an effort to explore how different institutional arrangements may alter the impact of political opportunism. The Indian federation provides a valuable laboratory for this purpose because there exist multiple central government agencies that control different types of grants for which disaggregated data is available since 1972.

Normative theories of fiscal federalism postulate that inter-government transfers should be determined by equity and efficiency considerations, to support local governments in providing differentiated public goods to heterogeneous populations, while ensuring an even distribution of basic services across all regions (Musgrave, 1959, 1983; Oates, 1972; Gramlich, 1977). A more recent literature focuses on the inefficiencies created by local taxation due to inter-jurisdictional tax competition and mobility, that creates a valuable role for central taxation and regional distribution via grants-in-aid (Inman and Rubinfeld, 1996, provide an excellent review). However, empirical evidence shows that such normative theories lack explanatory power because central decisions about the regional distribution of resources actually take place within a political economy context where national legislators are elected from regional constituencies, and political bargaining within the legislature determines outcomes (Weingast, 1979; Shepsle, 1979; Weingast, Shepsle, and Johnsen, 1981; Baron and Ferejohn, 1989; Becker, 1983).

Wright (1974) provided some of the first indications that political factors were significant in determining the allocation of federal funds across states in the United States. In particular, he found a strong positive correlation between New Deal spending

per capita and electoral votes per capita across states. Inman (1988) argues that the pattern of distribution of central grants to the states in the United States does not seem consistent with policies designed to correct inefficiencies of a decentralized tax system, but rather reflects decisions taken by a universalistic central legislature. Grossman (1994) models grants to the U.S. states as being determined by the “political capital” of state politicians and interest groups, and finds that empirical measures of this—party affiliation between the national congress and the state legislature, the size of the majority of the affiliated party in the state legislature, and the size of the state bureaucracy and union membership—are positively correlated with per capita grants. Extending this literature to federal arrangements in developing countries, Porto and Sanguinetti (2001) find that Argentine provinces with greater political representation per capita in the national legislature receive larger shares of central transfers compared to more populous and less represented states.

In recognition of these political compulsions, several federations around the world have attempted to create politically independent constitutional bodies that are responsible for determining federal transfers to sub-national jurisdictions. However, there is no evidence in the literature that explicitly tests whether these constitutional rules indeed make a difference. For instance, in Australia inter-government transfers are determined by an independent Commonwealth Grants Commission, which is supposed to be “free from political and bureaucratic bias” (Matthews, 1994, p. 16). Worthington and Dollery (1998) find evidence that some transfers that are not subject to strict fiscal equalization formula that govern other fiscal assistance grants in Australia, are distributed across states in a manner that is consistent with a Grossman-style story of states with greater “political capital” receiving greater transfers. However, they do not provide any evidence to show whether formula-driven financial assistance grants, on the other hand, are indeed impervious to political control, as suggested by the different institutional framework within which they are determined.

This paper contrasts the effects of political variables on intergovernmental transfers determined under different institutional conditions in India, in an attempt to fill this gap in the literature. There are two systematic channels of general purpose transfers from the center to the states in India—(i) general revenue sharing and grants in aid of

state budgets for which the distribution across states is determined by the Finance Commission, an independent body with constitutional authority, whose members consist of technical experts appointed every five years by legal decree; and (ii) grants and loans to support state development plans managed by the Planning Commission, a semi-independent body with no direct constitutional authority. The criteria for distribution of these so-called “plan” transfers across states is largely determined by a national council headed by the national political executive, with representation of state political leaders. Plan grants and statutory revenue transfers together make up about 30 percent of state revenues and 5 percent of state income on average in the sample under study. Plan loans constitute more than 50 percent of new state borrowings each year on average in the sample. If political incentives play a role in determining distribution of resources to state governments, and if formal institutions external to political agencies serve as a check on political opportunism, we would expect very different effects of political variables on plan transfers from the Planning Commission compared to statutory transfers from the Finance Commission.

Using disaggregated data for intergovernmental transfers for 15 major states of India, over the period 1972-1995, we find strikingly contrary effects of partisan affiliation on plan transfers versus statutory transfers from the Finance Commission. State governments that are politically affiliated with the central government receive significantly greater plan grants and loans, but significantly lower statutory transfers. Furthermore, plan grants and loans are higher to those affiliated states where the national ruling party controls a smaller proportion of seats allotted to the state in the national legislature, and hence where it has more to gain in order to maximize representation. Statutory transfers are contrastingly lower to these affiliated states whose ruling parties control a smaller share of the state’s representation in the national legislature. If the two sets of transfers are pooled, then the partisan effect on plan transfers dominates, that is, total general-purpose transfers from the center are greater when a state government is politically affiliated with the center. Affiliated states whose ruling parties control less than half of the state’s seats in the national legislature receive total transfers that are greater by 4 to 18 percent of the sample average.

The partisan effect on general purpose transfers is consistent with a model of electoral competition between rival political parties where voters vote along party lines leading to spillovers for a political party between local and national elections. The equilibrium in this model, if political agents control the decision-making process, is characterized by greater resource transfers to politically affiliated state governments. The intuition for this is in complete accordance with the Grossman (1994) hypothesis of “political capital” of states determining their grant allocation, and hence these results are consistent with the evidence received from other countries. Following Lindbeck and Weibull (1987), Snyder (1989), and Case (2001), we contrast additional empirical predictions for the distribution of transfers under two different political objectives—whether to maximize representation in the national legislature or the probability of winning a majority of seats. We find that the pattern of evidence, specifically, greater resources targeted to those states where the national ruling party controls a smaller proportion of seats in the national legislature, is consistent with the former objective, that of maximizing the number of seats won in the national legislature.

Statutory transfers, on the other hand, over which political control is limited by constitutional decree, serve to counter these partisan effects on resources available to state governments. Finance Commission transfers are also affected by the same political variables, but in exactly the opposite direction than those predicted by the model of electoral competition. This is a surprising result, and we argue that it suggests that constitutional rules indeed act as a check on politically motivated distribution of resources by the national executive. The mandate of the Finance Commission is to provide equalizing transfers, with greater resources allocated to disadvantaged states. If non-affiliated states are politically disadvantaged, and likely to have fewer national resources directed towards them, whether through intergovernmental fiscal transfers or overall national investments, then it is possible that greater statutory transfers would be directed to them not because of political motives but because they happen to be the resource-poor states.

There is a third category of systematic transfers from the center to the states in India—these are specific purpose transfers from central ministries for individual sector projects, making up about 6 percent of total revenue receipts of state governments and 1

percent of state income on average in the sample under study.¹ The use of funds for these central schemes is tightly controlled by the central ministries through detailed rules and conditionalities. The theoretical literature on such specific project-based transfers by the central government focuses the analysis at the level of electoral districts (Cox and McCubbins, 1986; Lindbeck and Weibull, 1987; Dixit and Londregan, 1995, 1996, 1998). In testing these models of central allocation of project resources, Levitt and Snyder (1995), Case (2001), and Schady (2000), amongst others, find that national politicians indeed pursue disaggregated targeting of individual districts to serve particular political objectives.

Although the literature suggests that political effects on such project-specific transfers are better modeled at the level of the electoral district, we undertake similar analysis for these central schemes aggregated at the state level as for the general-purpose transfers discussed above. Not surprisingly, at this level of aggregation we do not find large nor robust effects of state-level political variables on these transfers. The only political variable that is a significant determinant of state-level variation in transfers for central schemes is the number of seats from the state controlled by the central ruling party in the national legislature. Greater grants for central schemes are made to those unaffiliated states where the central political party controls a larger number of seats in the national legislature. This evidence is consistent with the literature on such specific-purpose transfers that are targeted at the level of electoral districts.

The results of this study are consistent with other recent attempts to econometrically identify the political determinants of these different channels of transfers in India (Rao and Singh, 2000; and Dasgupta, Dhillon, and Dutta, 2001). The broad conclusion of these studies is that political forces indeed influence all channels of transfers, but they do not provide robust estimates of the nature of the political influence, and why it differs across the three types of transfers. In contrast, the results presented here are robust to a large range of specifications, and systematically account for the differences across the types of transfers.

¹ Specific purpose transfers for central schemes consist of both grants and loans. Grants for central schemes are about 16 percent of total central grants (including plan grants and statutory revenue transfers), while loans for central schemes are about 8 percent of total central loans.

In the next section we provide a simple model for the determination of inter-government transfers by a central agent to guide and interpret the empirical analysis. In section III we provide some details about the Indian institutions of fiscal federalism, and the different types of transfers. Section IV describes the data and presents and interprets the empirical evidence. Section V concludes.

III. A Simple Model

We first present a basic model derived from Porto and Sanguinetti (2001) that reflects traditional efficiency and equity considerations in the determination of inter-government transfers. We then augment the model to describe how political considerations may change the allocation of grants across states, and obtain testable implications for the effect of political variables on these grants. The model is very simple, focusing only on inter-government grants to guide and interpret the econometric analysis, and abstracting completely from any issue of taxation.

Let S denote the number of states in a federal country, where any state s consists of N_s identical electoral districts, with an exogenous level of income Y_s , and preferences defined over a local public good Z_s and private consumption C_s :

$$U_s = U_s(C_s, Z_s) \quad (1)$$

The public good Z_s is produced in each state by the state government at a cost of P_s per unit. The local production of this public good is financed by general-purpose grants G_s provided by the federal government from an exogenous endowment R . Hence, the budget constraint for the representative electoral district of state s can be written as follows:

$$Y_s + G_s = C_s + P_s * Z_s \quad (2)$$

The optimization of the utility function in (1) subject to the constraint in (2) yields the following indirect utility function for the representative district of state s :

$$V^s(Y_s, G_s, P_s) \quad (3)$$

with the partial derivatives of the functions being $V_y > 0$, $V_g > 0$, and $V_p < 0$. The federal government chooses the allocation of grants G_1, G_2, \dots, G_s , to maximize a social welfare function that gives equal weight to every citizen:

$$sw = \sum_{s=1}^s N_s (V^s (Y_s, G_s, P_s)) \quad (4)$$

The first order condition that needs to be satisfied for optimal transfers G_r and G_s to any two states r and s is given by:

$$N_r V_g^r (Y_r, G_r, P_r) = N_s V_g^s (Y_s, G_s, P_s) \quad (5)$$

which is simply the condition that marginal benefits from additional transfers to each state have to be equal. Porto and Sanguinetti (2001) show that under fairly general specifications of utility, we have:

$$\frac{\partial G_s}{\partial Y_s} \leq 0 \quad (6)$$

that is, transfers are greater to states with lower income. Under somewhat stricter conditions, namely, that the elasticity of substitution for the utility function U_s is less than one, we have:

$$\frac{\partial G_s}{\partial P_s} \geq 0 \quad (7)$$

that is, transfers will be greater to those states with higher costs of producing public goods.

Now we introduce explicit political considerations into the analysis. Political parties A and B compete for seats to the national and state legislatures from the same electoral districts. Without loss of generality, let party A be the incumbent party of the federal government with majority seats in the national legislature. Amongst the S states in the federation, a subset S_A have incumbents belonging to the party A , and the remaining subset S_B have incumbents belonging to the party B .

We characterize the voting behavior of citizens of any state s in accordance with models of probabilistic voting where voters evaluate incumbents on the basis of their performance in office, as compared to a randomly distributed cut-off point. The electoral districts, of any state s now differ in their realization of this random variable σ_s , whose cumulative distribution function is given by $\Phi(\sigma_s)$. In addition, there is a general popularity bias in favor of the national ruling party A , denoted by the parameter μ . An individual district d in a state in S_A is won by party A in national elections if :

$$V^{ds}(Y_s, G_s, P_s) + \mu > \sigma_{ds} \quad (8)$$

On the other hand, an individual district d in a state in S_B is won by party A in national elections if :

$$V^{ds}(Y_s, G_s, P_s) - \mu < \sigma_{ds} \quad (9)$$

that is, if the incumbent party B loses the district.

These assumptions about voting behavior and electoral objectives are admittedly restrictive—that voters vote for political parties in an identical manner in both local and national elections; that voters only care about performance in office rather than policy platforms announced by competing candidates, or expected welfare from competing candidates. The assumption of identical voting along party lines in state and national elections is not unreasonable in the context of Indian electoral institutions characterized as they are by party-based electoral competition between multiple political parties with regional power bases. Butler, Lahiri, and Roy (1995) indicate that political parties are at the center of Indian democracy, with opinion polls showing that voters are influenced more by the image of the party rather than the specific candidate. This party-line voting seems to be constant across the different levels of elections, both to the national and to the state legislature.² Even for other countries, Leyden (1992), Grossman (1994), and

² An example from the state of Andhra Pradesh is illustrative in this context. The Congress party lost control of the state government in Andhra Pradesh in the 1983 state elections to a new regional party, the Telegu Desam. In the next national elections in 1984, even though it won an overwhelming majority of seats in the national legislature, the Congress lost most seats from Andhra Pradesh to the Telegu Desam, despite the latter's novice status in national politics.

Bungey and others (1991) agree that party affiliation between the center and the states can be a critical factor influencing the ability of the federal government to win votes from that state.

The voting rule assumed above is also consistent with features of electoral politics in India—specifically, that political parties are of the same “type” when it comes to economic or fiscal policies so that voters in any district take their decision not by comparing differing policy platforms but by setting a threshold value for re-electing an incumbent based on performance in providing public goods while in office. Chhibber (1995) and Weiner and Field (1974) suggest that there are limited ideological differences between parties along the lines of economic policy, but rather, party identity is driven by social, ethnic, and regional differences. Political parties are therefore more concerned with providing their supporters with access to public resources rather than competing in the space of economic policy for potential votes. Electoral competition thus revolves around access to the instruments of government and appropriation of public resources by different groups (Chhibber, 1995).

This feature of Indian party politics suggests a modification to the common class of models where elections serve the purpose of removing from office an incumbent that has performed poorly, the so-called “post-election” models discussed by Persson and Tabellini (2000). Usually, in “post-election” models parties are assumed to be identical so that voters do not have ideological preferences defined over them that are independent of actual policies. Here, we assume that some voters have strong ideological preferences that lead them to cast their vote for individual candidate identities defined along social, ethnic, or religious lines, irrespective of actual performance in office. The higher the density of these “ideological” voters the lower is the realization of σ_{ds} , that is, the lower is the threshold that voters in the district can agree upon to determine the re-election of their political representative. Hence, districts with a high concentration of ideological voting are easier to win even with a lower level of public goods provision because of a lower threshold value of re-election.

We make no restrictive assumptions on the distribution of σ_s across states, and hence on the distribution of ideological voters across states, assuming that the cumulative distribution function $\Phi(\sigma_s)$ is the same for every state. Hence, for state a in subset S_A , where the incumbent party is political party A , the proportion of seats received by the national incumbent is given by:

$$P_a = N_a \Phi(V^a(Y_a, G_a, P_a) + \mu) \quad (10)$$

On the other hand, for state b in subset S_B , where the incumbent party is political party B , the proportion of seats received by the national incumbent is:

$$P_b = N_b (1 - \Phi(V^b(Y_b, G_b, P_b) - \mu)). \quad (11)$$

From expressions (9) and (10), we have:

$$\frac{\partial P_a}{\partial G_a} = N_a \phi(V^a(Y_a, G_a, P_a) + \mu) V_g^a > 0$$

and

$$\frac{\partial P_b}{\partial G_b} = -N_b \phi(V^b(Y_b, G_b, P_b) - \mu) V_g^b < 0 \quad (12)$$

We assume that political parties care only about their electoral objectives. The national incumbent party A chooses the distribution G_s to maximize either the probability of winning a majority of seats in the legislature, that is, the probability that the seat share exceeds $\frac{1}{2}$, or the total seat share per se. In either case, the conditions in line (12) imply that the optimal solution to the national government's problem will be characterized by $G_a > G_b$, that is, affiliated states should receive greater fiscal transfers than non-affiliated states. The solution for G_b will be a corner solution given by any constitutional constraint on the national government regarding the provision of certain minimum level of resources to each sub-national jurisdiction.

However, we get very different predictions about the pattern of resource allocation amongst affiliated states, depending on the degree to which they are "core" supporters, if we assume that the electoral objective is to maximize the total number of

seats in the legislature as opposed to maximizing the probability of winning a majority of seats. Lindbeck and Weibull (1987) contrast these two objectives and obtain the result that with the former objective more funds should be allocated to districts where electoral races are tight, whereas with the latter more weight should be given to “pivotal” districts or core supporters without whom it would be particularly difficult to win a majority. In a closely related paper on campaign spending, Snyder (1989) obtains a similar result—a party that seeks to maximize the probability of winning a majority will spend more on “safe” districts, that is, where it has an overall advantage because these are more likely to be pivotal in obtaining a majority. These results are also similar to those obtained by Cox and McCubbins (1986) where risk-averse candidates over-invest in their closest supporters, while risk-loving candidates pursue “swing” districts more aggressively, that is, districts where voters are more likely to evaluate the candidate in terms of actual performance in office.

In an empirical test of these competing political objectives, Case (2001) finds that social assistance funding provided to district governments in Albania was targeted both to swing districts (where the “distance” of votes received by the President’s party from the 50 percent mark was small), and to politically pivotal districts, as in the core supporters of the president’s party (where the percentage of votes for the President’s party in the previous elections was high), and interprets the evidence as indicative of the president attempting to maximize the probability of his own re-election.

In our model of allocation of national resources across states in India it is less straightforward to characterize “core support” and “swing” states, because of the higher level of political aggregation than the level of the electoral district, and because constitutional rules do not require national parties to win 50 percent of the votes from a state in order to win the seats allotted to the state in the national legislature. Instead, the country is divided into over 500 districts for elections to the national legislature, and the party that wins a majority of districts, distributed in any manner across the country,

irrespective of state borders³, usually gets to form the government.⁴ Individual districts are single-member constituencies won on the basis of a first-past-the-post system, that is the seat is won by the candidate that gets more votes than any other. This simple plurality electoral law in practice implies a very tenuous link between the percentage of popular votes received by a party and the number of seats won in the national legislature. Butler, Lahiri, and Roy (1995) indicate that once a party crosses a particular threshold in votes, around 30 to 35 percent, it can move to a landslide victory in seats by gaining just a few percentage points in popular support, or conversely, it can lose a majority of seats in the national legislature by losing a few critical votes.

We now allow the distribution function of ideological voters across states to differ in order to derive conditions under which a state is a “core supporter” as opposed to a “swing” state, and hence different predictions under different political objectives. Figure 1 depicts the density function ϕ of threshold values σ_s around the cut-off point, $V^{ds}(Y_s, G_s, P_s) + \mu$, in a “core support” state, while Figure 2 depicts the same for a “swing” state, within the category of affiliated states. A “core support” state is characterized as one where there is a higher proportion of districts with threshold values below the cut-off level, both because of the shape of the density function around the cut-off point and because of greater popularity of the national party, that is, a higher value of μ . Hence, the national ruling party is likely to win a greater proportion of districts from a “core support” state. On the other hand, in a “swing” state, a higher proportion of districts have threshold values above the cut-off point, both because of the shape of the density function around the cut-off point and a lower value of μ . Hence, the national ruling party is likely to win a smaller proportion of seats from a “swing” state.

An additional unit of grants at the cut-off point gains a smaller number of additional seats for the national party in a “core support” state as opposed to a “swing”

³ Each national electoral district is wholly contained within some state’s borders. States differ in the number of districts for the national legislature that is allotted to them, that is denoted by N_s in the model above.

⁴ In case of a clear majority, as in more than 50 percent of the seats, the party is always invited by the President (the constitutional head) to form the government. However, in recent years no single party has won even close to 50 percent of the seats, in which case coalitions are built across party lines that need to face a confidence vote in Parliament in order to form the government.

state, because of the downward slope of the density function around the cut-off point in the former and the upward slope in the latter. This is shown by the shaded area under the density function when the cut-off point moves to the right due to additional grants. Yet, the total number of seats from “core support” states, that is the area under the density function to the left of the cut-off point, may be close enough to 50 percent so that these are “pivotal” for the national party if its objective is to gain a majority in the national legislature. That is, without these states, the national party would not be able to win a majority. Hence, if the objective of the national party is to win a majority it should allocate greater resources to “core support” states rather than to “swing” states. Empirically, this implies that not only should the national party allocate more resources to affiliated states, but within affiliated states particularly target those states where it controls a larger proportion of seats in the national legislature. The reverse is true if the objective is to maximize the number of seats won in the national legislature—that is, to maximize partisan representation the national party should target resources to those affiliated states where an additional unit of grants gains a greater number of seats at the margin, that is, states where it controls a smaller number of seats in the national legislature.

The above political economy framework forms the basis of the empirical specification for this analysis which is estimated for each type of transfers described below, in order to test not only whether transfers are manipulated for political purposes, but additionally, what the underlying political objectives are, and whether constitutional rules provide a check on political opportunism.

III. Institutions of Fiscal Federalism and Inter-government Transfers in India

The constitutional assignment of expenditure responsibilities and revenue authority between the central and the state governments in India is inherently imbalanced to give the central government a role in regional redistribution.⁵ Provision of public services is substantially decentralized to state governments, which undertake about 60

⁵ Detailed analysis of fiscal federalism and inter-government transfers in India, with exhaustive references, can be found in Rao and Chelliah (1991) and Rao and Singh (2000, 2001).

percent of total spending. Central grants to state governments constitute about 38 percent of state revenues, and 4.7 percent of the national GDP (Rao and Singh, 2000). There are three channels of systematic central transfers in support of state budgets—(i) formula-driven general revenue sharing and statutory grants; (ii) formula-driven general purpose transfers to support state development plans; and (iii) discretionary transfers from central ministries for specified sector projects. A summary description of these transfers is provided in Table 1.

Bulk of the central transfers to state governments consist of general revenue sharing of the proceeds of certain centrally levied and administered taxes determined in the Constitution. The shares of the center and the states and the horizontal distribution across states is decided by the Finance Commission, a statutory body made up of technical experts appointed by the President of India every five years. In addition to tax devolution, the Finance Commission also provides for grants-in-aid that are popularly known as “gap-filling” transfers as they are designed to cover the discrepancy between projected expenditures and revenues of states. Tax devolution by the Finance Commission accounted for 58 percent and statutory grants for 3 percent of total revenue transfers to states in 1998, bringing the total share of statutory transfers in revenue transfers to 61 percent (Rao and Singh, 2000). The share of statutory transfers in the sample of major states studied here is even greater, at 64 percent on average.

Although the Constitution only provides for one statutory body to determine transfers to the states, another central agency that has been the architect of planned economic development in India, the Planning Commission, also makes transfers to states for so-called “plan” expenditures determined within state government budgets. The distribution formula for Planning Commission transfers is determined by the National Development Council which is chaired by the Prime Minister and includes all central cabinet ministers, Chief Ministers of states, and the members of the Planning Commission. The grant component of total plan assistance is approximately 30 percent, with the remaining 70 percent devolved to the states as loans. Plan grants to all states constituted about 22 percent of total revenue transfers in 1998 (Rao and Singh, 2000). For the sample of major states studied here, plan grants constitute a lower proportion, 15

percent, on average of revenue transfers. Plan loans constitute more than 50 percent of total state borrowings on average in the sample.

In addition to the general purpose transfers determined by the Finance Commission and Planning Commission, individual central ministries also devolve funds to states for specific projects either wholly financed by the center—central plan schemes and sector projects—or requiring counterpart funds from states—centrally sponsored schemes. These specific purpose transfers, while determined at the discretion of central ministries, are generally monitored by the Planning Commission, and constituted about 15 percent of total central transfers in 1998 (Rao and Singh, 2000).

The transfers determined by the Finance Commission and Planning Commission are general purpose transfers that increase the budget resources available to state governments to allocate at their discretion. We test whether the predictions of the model for the determination of G_s holds for these transfers. The institutional determinants of statutory transfers by the Finance Commission versus plan transfers by the Planning Commission would lead us to expect that the effect of political opportunism is more pronounced for the latter since these are determined through the direct participation of the executive branch of the federal government. Statutory transfers, on the other hand, are determined by a Commission whose appointment cycle is typically not congruent with the electoral cycle, and hence there is greater likelihood of political independence.⁶

The distribution of both statutory and plan transfers across states is supposed to be formula-driven. Successive Finance Commissions have put different weights on the criteria of derivation, population, per capita state domestic product, and a variety of measures for relative poverty and “backwardness” of states. Plan transfers have been devolved according to different versions of the Gadgil formula established in 1969, which puts the greatest weight on state population, but has also reflected similar concerns for redistribution to resource-poor states as the Finance Commission formulae.

⁶ However, Rao and Singh (2000) provide anecdotal evidence to suggest that the members of the Finance Commission have close bureaucratic ties with the central executive, and are often transferred midway through their tenure on the Commission to coveted positions in the central administration.

The discretionary transfers for central schemes are specific purpose transfers for projects over which the central government has considerable control. Spending on these programs is heavily circumscribed by central government dictates, and many scholars of Indian fiscal federalism have suggested that these rules are often resented by state governments as central government intrusion into state decision-making (Rao and Chelliah, 1991). Rao and Singh (2000) describe that there are about 250 central schemes with detailed conditionalities such as requirements on staffing patterns or selection of beneficiaries that the central government imposes on the use of these funds. These schemes are implemented at the district level, and it is therefore likely that political targeting of these schemes occurs at a more disaggregated level than that of the state.

IV. Data and Empirical Evidence

Data

Disaggregated data on the three different types of transfers—statutory transfers, plan grants, and central schemes—is reported in consistent categories since 1972 in the *Reserve Bank of India Bulletin*, a quarterly publication of the central bank of India with annual issues on details of finances of state governments.⁷ The data on intergovernmental transfers is combined with political and economic data available from other sources for 15 major states of India over the period 1972-1995. The political data is compiled from Butler, Lahiri, and Roy (1995). State demographic and economic characteristics, and a state-level price index to convert all variables into real terms are available from a data set put together at the World Bank, which is described in detail in Özler and others (1996). Table 2 provides summary statistics for each of the variables included in the analysis.

These 15 states of India account for 95 percent of the total population. India consists of 26 states at present but many of the smaller ones have been created recently. However, 11 of the 15 states under study have existed since the organization of the federation in 1956. An additional two, were created for linguistic reasons out of a single large state—Maharashtra and Gujarat—in 1960; and two in 1966—Punjab and

⁷ I am grateful to Tim Besley of the London School of Economics and to Bhaskar Naidu of the World Bank's South Asia regional division for providing me with some of this data that had already been compiled in their research groups.

Haryana—also for ethnic and linguistic reasons. Hence, in order to avoid issues of endogenous state boundaries, and of special transfers to smaller states, we focus only on the 15 major states that have existed from the early days of the federation.⁸

Empirical Specification

As discussed above, general purpose transfers from the center to the states in India are formula-driven. State population and income are the main variables entering the distribution formulae determined by successive generations of the Finance Commission and Planning Commission. For the distribution across states of centrally collected taxes shared with the states, successive Finance Commissions have put different weights on the criteria of population, inverse of per capita income, and a variety of measures for relative poverty and “backwardness” of states (such as “distance” of the poorest state from the richest), together amounting to 80-90 percent of the weight, while the tax contribution of individual states makes up the remaining 10-20 percent (Datt and Sundharam, 1998). For grants, the Finance Commissions have used discretion in assessing relative need and urgency of states for additional fiscal resources, guided by the general objective of providing greater assistance to resource disadvantaged states.

Planning Commissions have used versions of the Gadgil formula since 1969 which also puts different weights on a similar set of variables, primarily population and the inverse of income. This suggests that income, population, and state fixed effects (capturing the relative position of states along the dimension of economic development) should explain a great deal of the variation in these central transfers across states. In addition, variation over time may be explained by year-specific shocks to the center’s available resources for regional distribution, and hence common to all states. Hence, the econometric specification implied by a strict model of formula-driven transfers would be as follows:

$$G_{it} = \eta^G Z_{it} + \alpha^G_i + \delta^G_t + \varepsilon^G_{it} \quad (13)$$

⁸ These 15 states are: Andhra Pradesh, Assam, Bihar, Gujarat, Haryana, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Orissa, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh, and West Bengal. A sixteenth major state, Jammu and Kashmir, has been excluded because of the political uncertainties in the region that continue to this day.

where G_{it} are the general purpose transfers consisting of statutory transfers and plan grants and loans; Z_{it} , is a vector of state economic characteristics that dominate the distribution formulae, namely, per capita state income and total population; α_i represents state-level fixed effects; and δ_t , are year effects included to control for various shocks to the national economy and fiscal resources in any given year.⁹

However, if political considerations influence the center's distribution of resources across states, as there is evidence for in other federations in both the developed and developing world, then specification (13) would need to be appropriately augmented with political variables. The political economy model presented in Section II suggests the following empirical specification for the federal government's distribution of general purpose transfers to the states:

$$G_{it} = \beta \text{AFFILIATION}_{it} + \gamma \text{AFFIL} * \text{SEATS}_{it} + \varphi (1 - \text{AFFIL}) * \text{SEATS}_{it} + \eta^G Z_{it} + \alpha^G_i + \delta^G_t + \varepsilon^G_{it} \quad (14)$$

where AFFILIATION_{it} is an indicator of political affiliation that equals 1 when the incumbent party in state i at time t belongs to the same party as that governing at the center at time t , and 0 otherwise; the next two variables are the interaction of political affiliation with the proportion of seats (allotted to the state) controlled by the national ruling party in the national legislature— SEATS_{it} . The fixed-effects specification implies that, β , the coefficient on political affiliation, is identified from variation within a state from its own average transfer receipts when it is affiliated and not affiliated with the center.

Condition (12) suggests that a federal government that uses fiscal instruments for resource transfer to state governments to optimize its electoral objectives will choose a distribution such that:

$$\beta > 0$$

⁹ The distribution formulae for both statutory transfers and plan transfers have also given weight to measures of revenue potential of states. We control for this through the inclusion of state income and state fixed effects, since revenue potential of states is arguably invariant over time and largely determined by state income. In recent years, outside of the sample under study, some weight is being placed on measures of state tax efforts to provide incentives for additional own revenue mobilization.

Furthermore, controlling for political affiliation, we expect that if the objective of political parties is to maximize the number of seats in the national legislature, as opposed to the probability of winning a majority, then the coefficient on the interaction of affiliation with the proportion of seats controlled by the national ruling party should be negative:

$$\gamma < 0$$

That is, greater resources should be targeted to those affiliated states where the national ruling party controls a smaller proportion of seats in the national legislature.

However, if the constitutional rules determining the allocation of statutory transfers and the institutions circumscribing the determination of plan grants are indeed impervious to political pressure, we would expect both β and γ to be statistically insignificant.

The affiliation indicator is coded as equal to 1 if we are able to establish strict matching in party identity between the state and central government, that is, we ignore the role of political affiliation between loosely knit coalitions. This is important for the empirical specification to be consistent with the model outlined in Section II because the results are driven by the assumption that voters are able to clearly distinguish between different political parties, and the rewards for the central government from state fiscal policies derive immediately from the rewards to the state political party.

Endogeneity of the affiliation indicator and the proportion of seats controlled by the national ruling party in the legislature may be a cause for concern in specification (13), as greater central transfers to a state may influence voter perceptions and good-will and lead to increasing votes for the national political party and hence to the election of a state government that is politically affiliated with the center. We address this by using the following feature of electoral and fiscal institutions in India: that political variables are invariant between elections and updated at each election, and as elections are generally scheduled to take place immediately at the end or very beginning of a fiscal year, the resulting values of the political variables applicable to fiscal year t in state i , over which the fiscal variable G_{it} is measured, may be regarded as pre-determined with respect to the

determination of G_{it} .¹⁰ If, on the other hand, knowing this schedule the central agencies design transfers to be disbursed precisely around election times, then the coefficient β on the affiliation indicator would in fact be picking-up the effect of the timing of elections. It is straight forward to check for this by including various indicators of the state election cycle, which we undertake and report the results below.

It may also be argued that unobserved voter tastes and other shocks that affect both the political process of determining affiliation of the state government as well as inter-government fiscal transfers are driving the correlation between the affiliation indicator and transfers. We argue that this effect of unobserved voter tastes and other shocks are attenuated by the inclusion of state and year fixed effects. As discussed in Section II, the literature on electoral competition in India has emphasized that differences between Indian political parties are not linked to differences in voter taste for fiscal policy, but rather voter taste for party identity along social and ethnic lines which are either region-specific and largely invariant over time, or affected by time-specific shocks.

Results

The estimates of the simple specification in (13) are presented in Table 3 for each type of general purpose transfer. About 61 percent of the variation in total plan transfers and 81 percent of the variation in statutory transfers is explained by this specification based on the formulae governing the distribution of transfers. When no state fixed effects are included, statutory transfers are negatively correlated with state income, thereby affirming the role of the Finance Commission in providing greater assistance to disadvantaged states. Total plan transfers, on the other hand are not significantly correlated with income—while plan grants are progressive, as are statutory grants, per capita plan loans to states are greater when state income is higher.

¹⁰ The fiscal year in India runs from April 1 to March 31, which is the period over which annual fiscal variables are measured. Hence transfers received by any state in year 1988, for example, relate to receipts between April 1988 and March 1989. Most elections in India (both to the state and national legislatures) have occurred between the months of January-April. Therefore, the political variables in year 1988 are derived from elections that occurred between January and April 1988, and hence predetermined with respect to the decisions over fiscal transfers.

When state fixed effects are included much of the redistributive content of central transfers is reduced to some states receiving systematically greater transfers than others— Assam, Orissa, and Kerala receive significantly greater statutory transfers than the average of the other states, while Assam, Punjab, and Uttar Pradesh receive significantly greater plan transfers. The result for Assam is not surprising, since it is the only state in the sample of 15 major states studied here that is explicitly assigned to the category of “special” states that receive greater central assistance.¹¹ Orissa has consistently been the poorest state of India, which explains why greater statutory transfers are directed towards it. Kerala and Uttar Pradesh are also states with poverty rates generally above the country average. Punjab, on the other hand, is one of the richest states, but perhaps receives greater plan transfers owing to its economic importance as an agricultural state during the Green Revolution, or to its political importance during a secessionist movement in the 1980s. In general, the results in Table 3 show that statutory transfers are more progressive in redistribution across states, and have a greater percentage of their variation across states and over time explained by the simple economic criteria underlying their distribution formula, than is the case for total plan transfers.

Table 4 reports the results of augmenting the simple model with the inclusion of political variables. We find that plan grants are directed towards affiliated states as the model predicts, and furthermore towards those affiliated states that contribute a smaller share of the total number of state legislators in the national assembly for the national ruling party. Those affiliated states from which only half of the national legislators belong to the national ruling party receive about 10 percent greater plan transfers than states with greater proportion of seats in the national legislature belonging to the national ruling party. States with an even lower proportion, say only a quarter of the seats belonging to the national ruling party, receive even greater transfers by about 30 percent of the sample average. These results are consistent with the political economy model outlined in Section II—not only do we find evidence that transfer instruments are affected by political objectives, but the pattern of evidence also identifies the particular

¹¹ The special category states are the smaller states, presumably with greater fiscal disadvantages, and the north eastern states with tribal populations that are both politically important (due to continuing secessionist movements) and economically needy.

form of the political objective, that of maximizing the number of seats in the national legislature. Consistent with this objective, greater transfers are directed towards those states where the national ruling party has more seats to gain, rather than to the core support states where it already controls a high proportion of seats to the national legislature.

On the other hand, statutory transfers to politically affiliated states controlling half the proportion of seats in the national legislature are 16 percent *lower* than the sample average, and hence directly contradictory to the predictions of a model of political opportunism. This is a surprising result, and we argue below that it indicates not only that constitutional rules are effective in curbing political manipulation, but that they may actually attenuate the impact of political opportunism on total resources available to states. Inclusion of the political variables explains an additional 4 percent of the variation in plan transfers, but only an additional 1 percent of the variation in statutory transfers.

We probe the interpretation of the surprising results for the impact of political affiliation on statutory transfers a little further. What if the results for statutory transfers are driven by political affiliation of states with powerful political parties that have temporarily lost control of the national legislature, and hence register as non-affiliated for some years? We test for this by estimating whether Congress-controlled states receive the bulk of transfers, even after accounting for political affiliation, since the Congress party has been, by far, the historically dominant party in India. We find no effect of Congress states on the distribution of statutory transfers, and the coefficient for affiliation remains unchanged even after including the indicator variable for Congress states.

Another alternate explanation may be that the political economy model is misspecified, with the “right” model being that the state affiliation of individual members of the Finance Commission matters for statutory transfers. However, there is no reason for the individual affiliations of the members to be systematically correlated with the political affiliation between the center and the individual states, especially after we’ve already controlled for state fixed effects, which may have created such systematic correlation due to the existence of particular states that have been historically non-affiliated with the center and also happen to be states with a tradition of producing

leading national policy-makers. Hence, even if the individual affiliation of Finance Commission members matters, it still does not explain the effect of center-state political affiliation estimated here.

Yet another alternate view may be that instead of a model of central political opportunism, the model explaining the distribution of transfers is that of a bargaining game between the center and the states (as is the view of Riker, 1975, and the basis of Rao and Singh's, 2000, empirical testing). If statutory transfers were determined by a process of non-cooperative bargaining, then it may result in greater transfers to non-affiliated states. Yet, the rest of the evidence is contradictory to such a story of Rikerian bargaining, a logical extension of which would be to expect non-affiliated states with a greater share of seats to receive greater transfers; or all states with a greater share of seats to be so favored. It therefore does not seem possible to explain the effect of political affiliation on statutory transfers by a model of explicit political motivation without coming into conflict with the evidence for plan transfers, and the evidence on lower transfers to states where the national ruling party controls a larger proportion of seats.

We therefore conclude that the only interpretation consistent with the pattern of results for both types of general purpose transfers is that while the one that is more amenable to control by political agents, the plan transfers, is indeed targeted to politically important states as predicted by a specific political economy model of central resource distribution, the other that is determined by apolitical agents with constitutional authority, the statutory transfers, actually serves as a check on political opportunism by increasing resources available at the margin to politically disadvantaged states. This pattern of evidence is also difficult to reconcile with models of universalistic legislatures which would predict that all states, both affiliated and unaffiliated, tend to get greater transfers when they have more legislators from the central ruling party.

Table 5 reports the total effect of political affiliation on the sum of both these general purpose transfers. The political effect on plan transfers dominates the overall results, with total general purpose transfers to politically important affiliated states (that is, those with a lower proportion of seats in the national legislature controlled by the national ruling party) being significantly greater than to other states. For affiliated states

with half or less than half the state's seats in the national legislature controlled by the ruling party, total general purpose fiscal transfers are higher by between 4 and 18 percent of the sample average.

This pattern of evidence is robust to several other political explanations involving other political variables, such as the state election cycle, an indicator for the presence of a coalition government at the state level, and an interaction of affiliation after 1990 when coalition politics emerged in the national legislature and non-cooperative bargaining between the center and regional parties in the states became more likely. Table 6 shows the results with the inclusion of these variables. The previous results for the impact of political affiliation is unchanged. The state election cycle and the post-1990 emergence of national coalition politics have no significant effect on transfers. However, one additional political effect emerges—when a state is ruled by a coalition of political parties it tends to receive lower statutory transfers.

Reverse causation, that is, that higher central transfers increase state support for the central ruling party leading to greater probability of political affiliation and a higher proportion of seats for the national ruling party, and correlation with unobserved voter tastes does not seem defensible on several counts. First, the affiliation effect persists even after controlling for the timing of state elections, which is one of the mechanisms by which the effect would run in the opposite direction; second, because the suggested positive sign on the coefficient for affiliation does not apply for the largest group of central transfers—the statutory transfers; and third, the correlation of transfers with the proportion of seats for the national ruling party is exactly opposite in sign to what would be predicted by this alternate story of endogeneity of the political variables.

Table 7 reports the results for the specific purpose transfers to state governments for central schemes executed at the district level. The political model employed here does not perform well in explaining the variation in these transfers for central schemes. One reason for this could be that central schemes are decided at the constituency level rather than the state level, and political variation across electoral districts really drives allocation through these schemes. If this district level political variation cannot be effectively aggregated to the state level, as may be the case in India due to the disconnect

between votes won in a district and seats won in the state or national legislature (as discussed in Butler, Lahiri, and Roy, 1995), then a state-level model to explain the political economy of central schemes will not be effective.

After testing multiple specifications, only a very restricted political variable was found to be statistically significant—non-affiliated states with a higher share of central ruling party legislators in the national assembly receive greater grants for central schemes. Non-affiliated states with more than half the national legislators belonging to the national ruling party receive between 12 and 25 percent greater grants for central schemes. The political effect on transfers for central schemes seems to be consistent with the anecdotal evidence available in the literature on Indian fiscal federalism (Rao and Chelliah, 1991; Rao and Singh, 2000), as discussed earlier, that central schemes are amenable to greater control by the national executive, and implemented at the level of electoral districts. Hence, the state-level effect of greater grants to non-affiliated states with a larger proportion of national ruling party legislators may be the result of aggregating up from the targeting of affiliated electoral districts, which is particularly important in non-affiliated states where the other fiscal instruments of general purpose transfers cannot be used to gain seats to the national legislature. Future research on this issue with district level data would be valuable for a better understanding of political incentives behind public spending policies in India.

V. Conclusion

Recently there has been a surge in empirical evidence that national politicians make decisions of regional resource allocation based upon the optimization of their electoral objectives, in addition to any normative considerations of equity and efficiency. In recognition of these political compulsions, several federations around the world have attempted to create independent constitutional bodies that are responsible for determining federal transfers to sub-national jurisdictions. This study attempts to test whether political factors are significant in determining intergovernmental fiscal transfers in India, and to further identify the particular form of the political objective function. We also test whether constitutional rules circumscribing political discretion over transfer instruments

indeed make a difference, by contrasting the impact of political variables on different types of inter-government transfers to states in the Indian federation.

The empirical results indicate that when national political agents have decision-making authority over the distribution of resources across states, then the distribution of intergovernmental transfers across states over time is influenced by political considerations. Furthermore, the pattern of evidence is consistent with a particular political objective, that of obtaining the maximum number of seats in the national legislature, as opposed to maximizing the probability of winning a majority. National political parties target greater resources to those states where they have more seats to gain in the national legislature, rather than to states that are their core support bases, and hence pivotal for winning a majority.

The effect of partisan politics on transfers that are determined under strict constitutional authority is strikingly contrary to the partisan effect on other transfers that are subject to less stringent rules. While plan transfers to politically affiliated states, whose distribution formula is determined by a national council with representation of the national political executive, are 10 percent higher than the sample average, statutory transfers to politically affiliated states, whose distribution formula is determined by a constitutional body whose members have no official political affiliation, are 13 percent *lower* than the sample average. This evidence suggests that while more discretionary transfers are indeed amenable to serve political objectives, the rules-based transfers may in fact be used by statutory bodies to counteract partisan effects on resources available to state governments.

The analysis undertaken here therefore shows that constitutional rules determining intergovernmental transfers indeed make a difference for the allocation outcome. Furthermore, the contrast between the different types of transfers suggests that the difference is due to the effect of constitutional rules on the general decision-making process rather than the difference between formula-driven versus discretionary transfers. Although both statutory transfers and plan grants are formula-driven, we find a partisan effect on each of them albeit in meaningfully opposite directions. These findings highlight the significance of the political incentive environment within which policy

decisions are made, and the limitations of technical formulae in neutralizing or blocking the impact of political imperatives.

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P_A : Proportion of seats for party A

$\frac{dP_A}{dG}$: Additional seats gained through an additional unit of G .

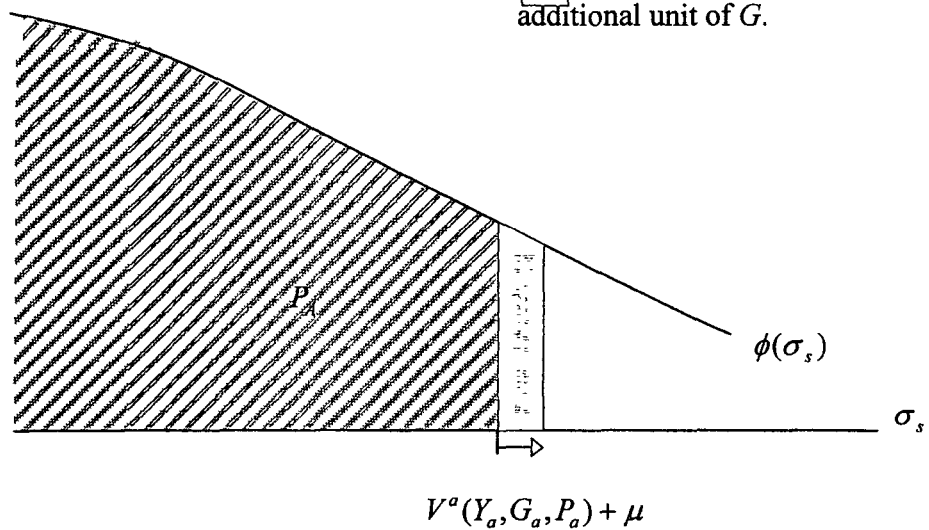


Figure 1
"Core Support" State:
Higher Proportion of Seats Controlled by the National Incumbent

P_A : Proportion of seats for party A

■ : Additional seats gained through an additional unit of G .

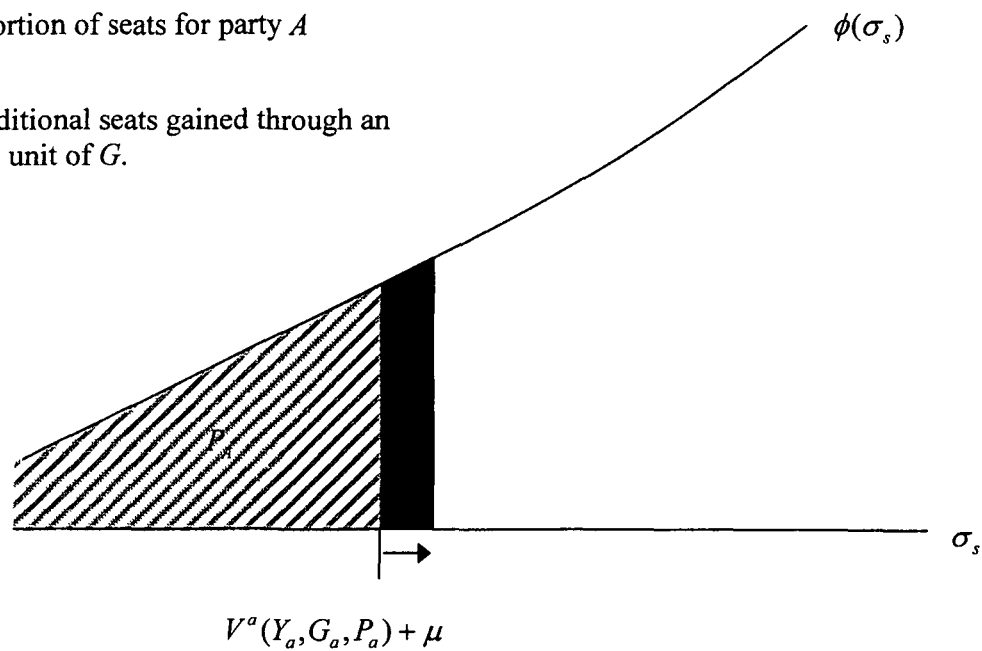


Figure 2
“Swing” State:
Lower Proportion of Seats Controlled by the National Incumbent

Table 1
Intergovernmental Transfers in India

	Type	Decision-making Authority for Distribution Criteria	Share in Total Central Transfers ^a
Statutory Revenue Transfers (Tax sharing + grants)	General purpose	Statutory body appointed every 5 years	64% (of grants)
Plan Transfers (Ratio of grants to loans instituted to be approximately 30:70)	General purpose	National council chaired by the prime minister, and including central cabinet ministers and state chief ministers	15% (of grants) 51% (of central loans)
Central Schemes (No fixed ratio of grants to loans)	Specific purpose	Individual central ministries	16% (of grants) 8% (of central loans)
<p>a. Numbers are the sample average for 15 major states over the period 1972-1995. The transfer numbers do not add up to 100% because some central grants and loans are non-systematic, for emergency and miscellaneous purposes. A significant portion (31%) of loans to a state classified as coming from the center are from small savings originating in the state.</p>			

Table 2
Summary Statistics^a

Variable	No. of Obs.	Mean	Std. Dev.
Finance Commission Transfers	352	173.32	64.80
Planning Commission Grants	351	45.85	45.65
Planning Commission Loans	345	80.72	74.18
Grants for Central Schemes	351	46.04	27.10
Loans for Central Schemes	345	4.88	8.39
Real state domestic product	360	4803.73	1807.98
Total population (in thousands)	360	47396.79	28163.28
Political affiliation (=1 if center and state govt. belong to same political party)	360	0.62	0.49
Affiliation * Proportion of seats held by representatives of the national ruling party ^b	360	0.47	0.41
(1- Affiliation) * Proportion of seats held by the representatives of the national ruling party	360	0.15	0.27
Coalition government (=1 if state executive consists of a coalition govt.)	360	0.16	0.37
State election year (=1 in the year preceding a state election)	360	0.21	0.41

a. Fiscal variables and state domestic product are in per capita 1992 rupees

b. Proportion of the total seats allotted to the state in the national legislature

Table 3 Economic/Formula Determinants of Intergovernmental Transfers (t-statistic in parenthesis)						
Variable	Statutory Transfers		Plan Grants		Total Plan Transfers (Loans + Grants)	
Real state income per capita	-0.02 (-10.36)	-0.004 (-1.16)	-0.01 (-4.62)	-0.01 (2.14)	0.003 (0.64)	0.01 (1.51)
Total population	-0.0002 (-2.79)	0.0005 (1.29)	-0.0004 (-3.65)	-0.001 (-1.19)	-0.001 (-4.76)	-0.002 (-1.58)
Year Effects	Yes	Yes	Yes	Yes	Yes	Yes
State fixed effects	No	Yes	No	Yes	No	Yes
	N=352 Rsqr=0.68	N=352 Rsqr=0.81	N=351 Rsqr=0.31	N=351 Rsqr=0.63	N=345 Rsqr=0.31	N=345 Rsqr=0.61
<i>Note:</i> OLS regressions with robust standard errors; Dependent variables and state income are in per capita 1992 rupees.						

Table 4		
Effect of Partisan Politics on Intergovernmental Transfers		
(t-statistic in parenthesis)		
Variable	Total Plan Transfers	Statutory Transfers
Political affiliation (=1 if center and state govts. belong to the same political party)	64.74 (2.51)	-41.84 (-3.69)
Affiliation * Proportion of seats controlled by national ruling party	-103.25 (-3.21)	25.66 (2.23)
(1- Affiliation) * Proportion of seats controlled by national ruling party	-40.88 (-2.39)	-11.32 (-1.03)
Real state income per capita	0.01 (1.65)	-0.003 (-0.94)
Total population	-0.002 (-2.02)	0.00004 (0.10)
F-statistic for H ₀ : effect of seats is equal for affiliated and non- affiliated states	3.80 (p-value = 0.05)	5.84 (p-value = 0.02)
	N = 345 R-sq = 0.65	N = 352 R-sq = 0.82
<i>Note: State fixed effects and year effects included; OLS regressions with robust standard errors; Dependent variables and state income are in per capita 1992 rupees</i>		

Table 5 Effect of Partisan Politics on Intergovernmental Transfers (t-statistic in parenthesis)	
Variable	Total Transfers (Statutory Transfers + Plan Transfers)
Political affiliation	56.29 (2.13)
Affiliation * Proportion of seats controlled by national ruling party	-88.49 (-2.91)
Real state income per capita	0.004 (0.60)
Total population	-0.001 (-1.33)
	N = 345 R-sq = 0.79
<i>Note: State fixed effects and year effects included; OLS regressions with robust standard errors; Dependent variables and state income are in per capita 1992 rupees</i>	

Table 6 Effect of Other Political Variables on Intergovernmental Transfers (t-statistic in parenthesis)		
Variable	Total Plan Transfers	Statutory Transfers
Political affiliation (=1 if center and state govts. belong to the same political party)	84.21 (2.76)	-39.48 (-3.07)
Affiliation * Proportion of seats controlled by national ruling party	-108.58 (-3.22)	20.58 (1.79)
(1- Affiliation) * Proportion of seats controlled by national ruling party	-38.93 (-2.26)	-4.94 (-0.44)
Coalition government (=1 if state executive consists of a coalition govt.)	7.94 (0.57)	-18.65 (-2.32)
State election year (=1 in the year preceding a state election)	-10.93 (-1.29)	5.39 (1.30)
(1- Affiliation) * Years1990-1995	32.75 (1.63)	-1.75 (-0.16)
Real state income per capita	0.01 (1.65)	-0.003 (-0.99)
Total population	-0.002 (-2.02)	0.0001 (0.36)
	N = 345 R-sq = 0.65	N = 352 R-sq = 0.83
<i>Note:</i> State fixed effects and year effects included; OLS regressions with robust standard errors; Dependent variables and state income are in per capita 1992 rupees		

Table 7 Effect of Partisan Politics on Specific-Purpose Grants (t-statistic in parenthesis)	
Variable	Grants for Central Schemes
Political affiliation (=1 if center and state govts. belong to the same political party)	3.38 (0.70)
Affiliation * Proportion of seats controlled by national ruling party	-0.93 (-0.18)
(1 - Affiliation) * Proportion of seats controlled by national ruling party	11.41 (2.64)
Real state income per capita	-0.004 (-1.88)
Total population	-0.0002 (-0.91)
	N = 351 R-sq = 0.71
<i>Note:</i> State fixed effects and year effects included; OLS regressions with robust standard errors; Dependent variables and state income are in per capita 1992 rupees	

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