

# Political Lobbying and Fiscal Federalism

## Case of Industrial Licences and Letters of Intent

*In a quasi-federal democracy like India, political representatives often fight to attract central disbursements towards their own states. Among central disbursements, two most important ones are letters of intent and industrial licences. Much of the disparities in the economic growth of various states is attributable to variations in the development of industries and the latter, in turn, are largely contingent on the nature of the industrial policies that were followed. In this paper the authors argue that the industrial policies pursued in the post-independence era resulted in a distorted pattern of disbursement of letters of intent and industrial licences. This remains true even after account is taken of the 'demand'-generated aspect of the disbursements. It is also shown how the presence of the same distortion in the disbursements in the so-called backward regions vitiates the very objective of balanced regional development.*

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### I Introduction

The Indian Constitution can be dubbed as a federal one but of a very special kind, with a distribution of power between the states and the union that is heavily tilted towards the latter. Under the present provisions, India has been often called a quasi-federation because whatever the structure of power, the nature of the Indian polity is such that it compels the union to be a federation of states. It is commonly held that although the constitutional provision has tilted the balance of power in favour of the union government, it has also tried to strike a balance by means of a financial structure, that is more or less federal. The most well known measure taken in this respect is the provision of distribution of various items under the union, the state and the concurrent lists. Various critics [Dandekar 1987, Thimmaiah 1997, Paranjape 1988] in the field of public finance are of the opinion that certain unitary tendencies still dominate the scenario of Indian federal finance. This is legitimised in various ways, critics opine, which go totally against the federal intentions of the Constitution. And often this is facilitated by an underlying theme of subordination of the states, which runs right through the Constitution. For instance, Dandekar (1987) alleges that even in matters in the concurrent list, the union government's opinion prevails. All important matters, such as commercial and industrial policy, price control, distribution

of foodstuffs, trade unions, industrial and labour disputes and above all economic and social planning are placed in the concurrent list and the union has the final say in all these matters. The setting up of the financial powers of the Planning Commission notwithstanding the existence of a constitutional body like the Finance Commission itself was under attack from these critics, who saw the former's role only as a countervailing force to the independent Finance Commission. They are particularly unhappy and vocal about the third institution of central financing to the states, which works beyond the instrumentalities of both the Planning and the Finance Commissions. The transfers made through this source are often referred to as the union ministry transfers and the ministers in the council of ministers in an elected government's legislature constitute the source of such transfers. Critics allege that the existence of bias in the economy's fiscal-financial arena has been made particularly convenient by certain ad hoc transfers under the Planning Commission and the whole of the union ministry transfers, which are by their very nature, ad hoc. Because no rule prevails in the disbursement of these, ad hoc transfers have become susceptible to various manipulations by various groups, formally termed as pressure groups or lobbyists.

In this paper, we try to explore the possibility of quantifying the extent of what is known as lobbying and other kinds of political influence by states to lure certain centralised allocations. There is substan-

tial evidence in our literature, which indicates growing disparities among different regions of the country [Ghosh et al 1998]. We believe that such quantification (by way of constructing certain indices) will help us find out certain important routes through which these disparities sustain themselves. The exercise will also help us look at the limitations of the representative democratic structure of a country and the contribution of its inherent structural bias in generating disparities. This, being of elemental significance, we first try to construct the political influence indices and then the disbursement indices and finally try to relate these two parts in the Indian context.

In our first paper [Biswas and Marjit 2000], we have tried to ascertain the impact of certain political indices on the disbursement pattern of what is known as the 'discretionary fund'. As we just mentioned, the union government disburses a certain part of the central fund beyond the instrumentalities of both Finance and Planning Commissions. These are directly disbursed through the union ministries and are termed as ad hoc transfers. Apart from this, within the disbursement earmarked for the Planning Commission, a certain part is not covered under the so-called Gadgil Formula and is, therefore, vulnerable to manipulations from outside. This 'non-Gadgil' part of the Planning Commission transfers along with the union ministries' ad hoc transfers are referred to as the discretionary finance. In the paper the political indices that we constructed

explained the disbursement pattern significantly and it was established that certain quantification of political power does accomplish the task of explaining 'contingent political interests' present in the bargaining of funds between the states and the centre of this quasi-federation. The task was important in the context of the operation of a so-called pluralistic economy where certain kinds of lobbying had structurally made their presence felt, although under a covert dimension.

In this paper, we will see whether the political variables that we brought in to explain discretionary disbursement in the earlier paper can also explain certain disbursements which, unlike the earlier case, are non-pecuniary or qualitative in nature. Two of the most important among these are the disbursements of letters of intent and industrial licences. As is well known, the Industries (Development and Regulation) Act of 1951 made it mandatory for all scheduled industries employing more than 100 workers and having fixed assets of more than Rs10 lakh to obtain a licence for the establishment of new industries or the extension of existing ones. Many years later after this regulation came into force, the Hazari Report (1967) raised certain serious questions about the impact of the government act on industrial licensing and criticised its contribution to the failure to achieve the declared objectives in the country's industrial arena. Particularly relevant to us is its criticism about 'balanced regional development' because the committee finds the channelisation of investment in this arena to be extremely doubtful. The Dutt Committee (1969)<sup>1</sup> also found that the licensing policy was unable to help industrially backward states and also backward areas within a state. It opined that the productwise distribution of licences revealed a high degree of concentration in already industrialised states. The Dagli Committee Report (1979)<sup>2</sup> said that no action has been taken with regard to Hazari's finding that licensing had actually led to a disproportionate growth of the assets of a few large houses. It also mentioned that it has been a major finding of the committee of 1969 (the Industrial Licensing and Policy Enquiry Committee) that the licensing system has not been effective in securing proper regional dispersal of industries and in the development of backward areas. All these findings point to the fact that industrial licensing was, in a way, helping selective regional concentration of industries, in direct contrast to what it was meant to serve. We choose this as the entry point of our analysis. However

sanctimonious might be the purpose of introducing licences in bringing about decentralisation in the context of the Indian economy, the possibility that the distribution of licences followed a distorted pattern for a substantial period, could not be ruled out. More so because of the continual presence of certain extra-economic pressures in various kinds of disbursement from the centre to the states, as has been outlined in the previous paragraphs. As our results will show, certain political variables do show substantial significance in the distribution of the letters and licences. It is important to note that our time horizon is spread over more than two decades and therefore the distortion that we are talking about is under no circumstances insignificant.

In this backdrop, it would be also be unwise to forget that there is substantial evidence in literature about the development of divergence among various states of India along with its overall growth [Dutta 1993]. Regional imbalance and the growing disparities between states, critics think, could be an outcome of an uneven growth process. The divergence theorists believe that over the entire plan period, either because of wrong planning and/or because of the problems in implementation, a great deal of polarisation had taken place among the growth processes of the states. For example, Ghosh et al (1998) think that the rising regional disparity may be the outcome of lower efficiency with which public capital is utilised and also of infrastructural disparity across the states. It is widely held that state intervention is a necessary element in the development of a post-colonial economy. State intervention not only influences the pace of capitalist development, it also shapes the nature of that process [Baru 1988]. Many economists are of the opinion that the way industrialisation had been handled in India has a lot to do with the development of regional disparities. Goldar and Seth (1989), for example, write that the states that gained relatively more from public sector investment in the late 1950s and 1960s experienced a more pronounced slowdown in industrial growth after the mid-1960s (presumably because there was a significant slowdown of public investment in this period). These states are Bihar, West Bengal, Orissa and Rajasthan. This spatial variation in the process of industrialisation becomes prominent when one keeps in mind the fact that three of the four states being mentioned are in the eastern region. Dholakia (1989) writes that in the post-independence era the entire southern region along with West Bengal

and Assam has a considerably above-average capital productivity in manufacturing but significantly less capital per worker. The northern region (all the other states), on the contrary, has high capital per worker but is far below the national average in terms of capital productivity excepting Gujarat and Maharashtra. "To a large extent", Dholakia writes, "capital productivity reflects the efficiency with which capital is employed and the nature of technology used in manufacturing". It is less likely to be increased directly by the policy changes over a short period of time. Capital per worker, on the contrary, is basically a policy variable whose value can be increased through increased investment. Therefore, this event reflects a favourable attitude on the part of the government towards the northern region. Also, as Dholakia notes, public enterprises are, by and large, more capital intensive. One of the important reasons for the high capital intensity in manufacturing of the northern region during the mid-1980s is that the north has secured a higher share in investment in the new undertakings of the central government. All this evidence taken together points to the fact that the regional disparity in economic growth is largely a fall-out of an industrial policy decision which is faulty, to say the least, and this all-round favouritism in the industrial scenario is a matter of deliberate policy distortion. The term 'deliberate' may be debated. A democratically elected government often faces certain pressures from outside which it may not have the arsenal to fight. Pressure from influential interest lobbies and contingent political interests often forces a government in a democratic structure to give into the politics of immediate appeasement. By the same token, it is also often forced to choose distortive policies to meet the immediate needs of electoral advantage. More often than not these are not 'deliberate' and well planned in the strictest sense of the term [Chatterjee 1997]. In case of industrialisation, for instance, the private business houses may take an active role to lobby for licences and both the government in power and the opposition may be vulnerable to their dictates.

Because lobbying on the part of private business houses is almost impossible to quantify, certain economic indicators of a state such as income or infrastructure should stand as good proxies. This is so because private capital would be eager to see itself getting invested mostly in the already developed zones. As far as licensing in the public enterprises is concerned, the politi-

cal indices should fare well. Once again, we have the opportunity to quote from Dagli's report of 1979. The report, interestingly, had an opinion that one should not leave regional dispersal in the hands of licencing authorities. It opined that regional dispersal should rather be a part of the development plan of the government and the dispersal of infrastructure, rather than licensing, would cause dispersal of industries. There is an important analysis that the report provided as a rationale to this. It found out that one difficulty in the way of licencing being effective for regional dispersal, even in the few limited areas where attempts were made, was the pressure that was exerted on the licensing authorities, especially by the state governments. Not only did every state support almost every application for licensing within its territory, but they (the states) also brought to bear considerable pressure at several levels on the centre in favour of the state applications. To some extent, this was inevitable because in a situation where there is no long-term picture of development indicating to a state what industries are proposed to be developed in its territory, the state authorities are bound to press for a share in whatever is being developed. The report gives a well known example of the sugar industry. Granting of more licences to the more viable sugar factories of the south and the west became difficult because of interference by the northern states, which were unhappy at the prospect of the possible closure of existing sugar mills in their states. It also mentioned that there was considerable competition among the states for obtaining the location of some of the impact projects. All these findings show that individual states did lobby with the centre for the disbursement of licences. This also gives a basis to our hypothesis that licensing has been largely contingent on political factors and there were interests other than private capital interests, for instance, the interest lobbies like the constituent states that forcefully carved out a pattern of investment as far as the public enterprises are concerned. These were instrumental in shaping the route of industrial licensing in the public sector. Acceptance of this leads to the second question: how to measure the strength of whatever state lobbying had taken place. We will discuss at length this process of quantification. One thing has to be kept in mind. The data on the letters of intent and the industrial licences that we have comprise both the public and the private sectors, without showing any further disaggregation. There-

fore, in the estimation procedure that we adopt, we keep both the economic development indices of income as well as the political indices of a state as explanations for letters or licence disbursements.

Our paper is divided into the following sections: section II elaborates the process we adopt for making the political indices. Section III elaborates the data. Section IV shows the regression equations and elucidates the result. Section V deals with the letters and licences in the backward regions and depicts the scenario there. Section VI concludes the paper.

## II

### The Making of the Indices

In a representative democracy such as the one India is, the elected representative is in a way compelled to act towards securing her specific state constituency's economic ends. The measure of her utility is directly contingent on the possibility of her being re-elected. And her being re-elected is directly dependent on how well she has managed to keep the financial commitments that have been made to her electorate. For this reason, a representative is bound to take certain measures towards a tangible financial end in favour of her own constituency. In other words, assuming a general standard of efficiency, each representative member in a representative democracy will devote a considerable amount of effort to lure certain disbursements to her specific state-constituency's end. Acceptance of this leads to a second question. If this behavioural pattern of fulfilling the financial commitments of her electorate is common to all elected representatives in a parliamentary democracy, can one think of an aggregate behavioural pattern within the geographical territory of a state? In other words, can we say that homogeneity of behaviour would enable the elected members of a state (region) to behave as a group of lobbyists in luring certain disbursements towards their own state's end, treating other such groups as rival entities? Perhaps we can. State lobbying does exist in a country like India. But because this is not legitimised in a certain way, one has to operate under a covert dimension. In a federal structure like the US, lobbying is institutionalised and organised [Milbrath 1963, Berry 1977, Schlozman and Tierney 1986, Wright 1990, Pincus and 1975]. On the other hand, lobbying continues to be regarded with suspicion in India and it lacks a social sanction, so to speak [Kochanek 1974]. In any form of lobbying in India, therefore, overt activities of lobbying are

absent. This is the reason why it becomes very difficult to have a quantitative account of how much lobbying is done to a particular end by various groups of lobbyists. This also explains the dearth of literature in this arena in the Indian context. We now try to give an account of how we tried to accomplish this, namely constructing the state lobbying index.

In the two bodies of Indian legislature – parliament and government – elected representatives fight for their state constituencies. The amount of pressure they exert as a group is proportionate to their strength of representation. So the number of representatives from a state can be taken as a proxy for the amount of lobbying done. But a problem crops up in this line of argument. Seats in parliament for a state are directly proportional to the population of that state. So if the parliament is taken into account, the lobbying index for a larger state is always going to be greater compared with a smaller one. For this reason, for the time being, we look at representation in terms of participation in the government. In other words, all representatives that we consider are representatives in the council of ministers. We will cope with the problem arising with the parliament afterwards.

The second problem relates to a hierarchy within the council of ministers. The most important members of the council of ministers, including the prime minister, fall under the category of cabinet ministers followed by ministers of state (independent), ministers of state and deputy ministers. The second and the fourth category are not always there. They are sometimes abolished and reinstated thereafter. But as long as there are different categories, the question of giving proper weights to each of them remains. But it is very difficult to assign a set of proper weights to the categories in respect of hierarchy, because we do not have any compelling evidence in hand that a cabinet minister is necessarily more powerful than his deputy counterpart in terms of financial disbursement. One has also take into account the fact that "ranking of members of the cabinet" as Michael Brecher notes, "appears to be based on a composite of the incumbent's political importance in the party and seniority, as intuitively perceived by the PM... Yet formal status is not a measure of influence or involvement in the decision process" [Hardgrave 1992]. So, for our first benchmark analysis, we assume no significant difference in bargaining power for different categories. In other words, same weights are attached to each of them. Another purpose of using this simple index is to

see how it fares as a possible explanatory variable before we go into the complexities of index formation.

Given this framework, lobbying power for a state can be calculated as the summation of proportional representation of various categories of ministers in the cabinet contributed by the state in question, normalised in terms of state population. Lobbying Power (LP)<sub>jt</sub> =

$$\frac{h_{jt} / \sum_j h_{jt}}{\text{pop}_{jt}}$$

where  $h_{jt}$  is the total representation of the  $j$ th state in the cabinet at time period  $t$  and  $\text{pop}_{jt}$  is the population of the  $j$ th state in the same period in time.

We introduce three political time dummies – the poldis dummy, the coalition dummy and the reform dummy. Introducing political dummies along with economic or political variables are quite common in politico-metric analyses. Accordingly, the political disturbance dummy

poldis = 1 if the year is 1975 or 1976 or an election year; or  
= 0 otherwise.

The coalition dummy

coa = 1 if the year is 1977 or falls in the group 1990-1994, both boundaries included; or  
= 0 otherwise.

The reform dummy

ref = 1 if the year falls in the group of years 1985-1994, both boundaries included; or  
= 0 otherwise

Let us elaborate on the dummies. The political disturbance dummy contains, along with the election years, the years 1975 and 1976, when internal emergency was imposed in the country. The year of imposition of emergency was 1975 but for the most part of 1976 this state of emergency prevailed.

The coalition dummy takes a value of 1 in 1977 and 1990, when Morarji Desai and V P Singh headed coalition governments at the centre, and also in the post-1990 Congress government headed by Narasimha Rao when the seats the Congress government had as a percentage of total seats was 44.5 per cent. For the other governments that the Congress formed at the centre, the seats won by it as a percentage of total seats was always more than 50 per cent. We are taking 50 per cent as the cut-off, below which we assume that the government in power has only that much of bargaining capacity vis-a-vis the opposition which makes it closer to a coalition government rather than a non-coalition one.

The reform dummy tries to measure the impact of economic reforms introduced primarily by Rajiv Gandhi and later carried ahead by the Narasimha Rao government. In setting up this dummy, we put the value of the dummy at 1 during 1985-1994 for all the states. The rest of the years get 0. Rajiv Gandhi came to power in the 1984 election. We consider the year next to it as the beginning of the reform year.

There may be other indices of political influence (other political variables), which are also responsible for influencing the pattern of central disbursement. Some of these indices are readily available. For instance, one might want to see the role of voter turnout percentages (in the Lok Sabha elections) in explaining central disbursement to the states. A highly populated state, under normal circumstances, has a higher number of voters, absolutely speaking. But the turnout percentage (total turnout relative to the state population) of a larger state may be lower compared with a smaller state and that may be instrumental in deciding various disbursements. This seems plausible because a higher turnout percentage of a particular state can be associated with a higher return in the election, if proper investment is made there, and our hypothesis therefore is: turnout can be counted as an explanatory variable in the various forms of central disbursement to the states.

Other political influence variables can also be construed in the same fashion as was done in the case of lobbying power. There is one such index constructed by Butler, Lahiri and Roy [Butler et al 1995]. This is termed as the index of opposition unity, or IOU.

$$\text{IOU} = \frac{\text{vote of the largest opposition party}}{\text{sum of the votes of all opposition parties}}$$

Butler et al (1995) deployed this index in finding out the change in the margin of votes in the states between two successive elections. We, on the other hand, borrow this index in explaining certain disbursement patterns. Our contention here is that stronger is the IOU index for a state, higher should be all kinds of disbursement in favour of it. Because in case a state has a higher opposition unity, the ruling party's fear of losing the next election is also higher. So the endeavour to allure disbursement is also likely to be higher in this case. At the other end, even the opposition in this state has a voice, which is likely to be heard much above the other states because of the strength of the unity. Both these reasons, particularly the latter one, are likely to lead to a higher actual disbursement.

We now try to look at alternative indices of lobbying. We have discussed the problem of taking the strength of MPs from a state to be an index of lobbying by that state. It posed itself as a problem because the number of MPs that a state has, has a one-to-one correspondence with the population of the state. To overcome that, let us take the lobbying strength of a state as the proportion of the number of MPs who belong to the party in power at the centre or the ruling coalition and/or those who belong to the party which is in an alliance with the party or coalition that is heading the government. So lobbying power now becomes  $\text{parl}_{jt} = \text{MP}_{kjt} / \text{MP}_{jt}$  where  $\text{MP}_{kjt}$  and  $\text{MP}_{jt}$  are the number of MPs in alliance with the ruling party or coalition and the total number of MPs respectively of the  $j$ th state at time period  $t$ .<sup>3</sup> Let us now look at a third index of lobbying where lobbying is measured by a dummy, which takes the value of 1 if the state's ruling party has an alignment with the party/coalition in power at the centre and 0 otherwise.

align = 1 if the state's ruling party has an alignment with the party/coalition at the centre  
= 0 otherwise.

### III Data Analysis

#### Elaboration of the Data

Choice of the time period: Initially our idea was to take the entire period since independence as our relevant period but later on we decided to restrict it to a 21-year perspective. Our period stretches from 1974 to 1994. The reasons behind this choice are: (a) This period covers many major upheavals in India's post-independence political history – six major elections, the 1975 emergency, two coalition governments of 1977 and 1990 – and the very important phase of the economic reforms tried out by the Rajiv Gandhi and the Narasimha Rao governments.

(b) The last reason being of specific importance to us as economic analysts, we tried to divide the whole period into pre- and post-reform years. If the 1984 election and Rajiv Gandhi's victory in that is taken as the breakthrough year, then we have almost exactly the same number of years left before and after that, considering our entire stretch of time.

(c) Problems with regard to data, at this point of time, acted as a constraint. For the early post-independence years, the boundaries of the states were ill-defined or at

least were very different from what they are now. Reconciliation with that would have been a problem.

For the years 1978 and 1989 we did not have separate information regarding the ministerial representation. Our data source clubbed them with 1977 and 1988, respectively. In 1979 we have data on the Charan Singh ministry which lasted only for three weeks. For this reason, it will be unwise to take that year into consideration. So, in actuality, we have 18 years in hand.

Choice of the states: The states we look at are Andhra Pradesh, Bihar, Gujarat, Haryana, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Orissa, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh and West Bengal.<sup>4</sup> So in total we have 252 observations with 14 states and 18 time points.

### The Political Variables

Data source: Our raw data for ministerial representation has been taken from *India Reference Annual*, a government of India publication (annual) and from Butler et al (1996). The latter is also the data source of the variables turnout and IOU. That we have annual data on ministerial representation might seem queer at the first instance because elections, under normal circumstances, take place after every five years. This is, of course, true for the MPs. For the ministers in the council of ministers, on the other hand, cabinet reshuffling is such a frequent event that the annual data show sufficient year-to-year variation.

### The Variables to be Explained

As has been mentioned earlier, in this paper we are trying to analyse the impact of political bargaining on various central disbursements which are non-pecuniary in nature. Two of the most important among them are the disbursements of industrial licences and letters of intent. Here, we have an opportunity to quote the Guidelines for Industries 1976-77, government of India, to understand the technical difference between letters of intent and industrial licence. "A licence is a written permission from the government to an industrial undertaking to manufacture specific articles falling under what is known as the scheduled industries", according to the Industries (Development and Regulation) Act, 1951. Now, if an article is approved and further clearances (such as foreign collaboration and capital goods

imports) are not involved and no other prior conditions have to be fulfilled, an industrial licence is issued to the applicant. In other cases, a letter of intent is issued. A letter was, therefore, a formal approval in principle for making an investment by the ministry of industry. Armed with this letter the entrepreneur could then tie up other requirements for setting up the project. If he needed to import capital goods, he had to obtain a capital goods import licence from the chief controller of imports and exports in the ministry of commerce. The approval for the import, however, was given by a committee set up in the ministry of industry. If there was also need for a foreign technology collaboration agreement, the entrepreneur had to obtain specific approval for this from a committee chaired by the finance secretary but serviced by the ministry of industry. In order to raise funds for the project, if an entrepreneur wanted to go to the capital market, he needed separate approval from the controller of capital issues in the ministry of finance. For imports of raw material and components, separate licences had to be obtained on an annual basis from the chief controller of imports and exports. In each case, an 'essentiality' and indigenous non-availability clearance had to be given by the technical wing of the ministry of industry (the director general of technical development). Once everything was tied up and the unit was about to go into production, the entrepreneur had to go back to the ministry of industry for an 'industrial licence' [Rakesh 1992].

The government of India also announced certain financial incentives for industries established in certain selected 'backward' districts of various states to ensure balanced regional development. This is of some importance to us because we also have the data on the break-up of letters of intent and industrial licences issued to the 'backward' areas from which the same kind of indices can be constructed.

The ministry of industry, government of India, publishes an annual report on the statewise break-up of the number of letters of intent and industrial licences issued in a year.<sup>5</sup> From that we construct certain indices of industrial licence (henceforth mostly referred to as licence) and letters of intent (henceforth mostly referred to as letters) in the same manner in which we have constructed the lobbying index.

LI is the letters of intent index and IL is the industrial licence index.  $LI_{jt}$  = per capita number of letters issued to a state j in a year t / total number of letters issued

to all the states in that year t.  $IL_{jt}$  = per capita number of licences issued to a state j in a year t / total number of licences issued to all the states in that year t.

$LI_{back}$  is the letters of intent index and  $IL_{back}$  is the industrial licence index in backward districts, respectively.  $LI_{backjt}$  = per capita number of letters issued to a state j in a year t in its backward areas / total number of letters issued to all the states in their backward areas in that year t.  $IL_{backjt}$  = per capita number of licences issued to a state j in a year t in its backward areas / total number of licences issued to all the states in their backward areas in that year t.

### Other Explanatory Variables

Before we go further, we need to think about certain variables other than the political variables that may influence the disbursement. For instance, to see the impact of lobbying on the newly constructed indices of distribution of licences and letters, we need to keep in mind the demand aspect as well. A part, undoubtedly a large one, of the number of licences or letters would certainly be demand-driven in the sense that disbursement of licences would depend largely on the number of applications going from a state. Because this data is difficult to get, we take proxies. We take state income index as a measure of the relative prosperity of a state. The assumption is that there is a one-to-one correspondence between the relative 'development' of a state and the demand for applications that it places for approval under licencing. We make an income index in the same way in which all the other indices were made. The income index,  $incin_{jt}$  = per capita net state domestic product of the state j at time period t / total income of all the states at time t.

## IV Regression Equations and Results

Let us first consider the variable industrial licence or II. As we have mentioned earlier, our data puts the licences to the public and private sector together for each state in a specific year. Because there is no disaggregation, we can safely assume that the income index would explain a large part of the licences distributed because income certainly stands as a good proxy for the private capital interests. As we will see below, income indeed acts as a very significant variable in explaining disbursement. So highly does it explain

disbursement that it often tends to suppress other variables' explanatory power in the process of regression. So what we do is first find out income's effect in the disbursement process and then take the residuals of that regression and run a regression using the rest of our variables. This two-step regression is, therefore, used to isolate income's effect and then to see what the impact of the more implicit variables like our political variables is on the residuals of the previous regression. While doing this, we use the fixed effect model of panel regression. Because the fixed effect model yields consistent estimators even while the state of the world is described by the Random Effect model, the former has been given priority. The Fixed Effect model also controls for the time-invariant state-specific factors in the regression, making it much more robust in the face of variations in other factors.<sup>6</sup> While taking income as an explanation, we take year-to-year time dummies, which will catch the time trend, if any, in the disbursement process. Once we take care of the annual time trend present in the disbursement process, we do away with the time dummies in the next iteration and run a simple Fixed Effect model with the political variables.

We carry out a one-tailed test as far as the political variables are concerned excepting the political dummy variables. This is so because in case of political variables there is partial observability. Lobbying might have a positive effect on disbursement, but it can never have a negative effect. Negative significance should be interpreted as insignificance. Similarly for opposition unity and turnout. The political dummies, however, are time trend dummies and during those years for which we have introduced the dummies, the regression line might go up or down depending on the causality, and we need to run a two-tailed test. The same is true for the income index.

One more thing remains to be noted. We check the collinearity matrix consisting of all the variables. We see that the combinations (LP and political disturbance slope dummy), (coalition slope dummy and reform slope dummy), (turn and iou), (reform and coalition intercept dummy) are highly correlated. Apart from this, all the individual slope dummies are highly correlated with their intercept counterparts. This prevents us from putting these combinations in the same regression equation. Also, because we will have too many combinations of variables, we show the results of only some selected combina-

tions. We take the combinations which yields significant results for us.

Below we estimate the impact of income on the licences disbursed.

$IL_{jt} = v_0 + v_1 \text{incin}_{jt} + a_j + u_{jt} + k_t$   
Where  $IL_{jt}$  is the licence index,  $\text{incin}_{jt}$  is the income index,  $a_j$  represents state dummies,  $k_t$  represents 17 time dummies for 18 years.

Panel regression in this equation yields:

#### Result 1: Fixed Effect Regression

IL	Coefficient	Standard Error
Incin	.7605613 (2.418**)	.3145344
Constant	3.96e-10 (.879)	4.51e-10
R-sq(within) = .1259		
F(18,220) = 1.76**		

Notes: \* denotes significance at 1 per cent level of significance. \*\* and \*\*\* denote significance at 5 per cent and 10 per cent level, respectively. The results regarding the time dummies are not shown as those are of little significance to us.

As can be seen, the income index is significant at 5 per cent level. The constant is insignificant. The F-statistic is significant at the 5 per cent level.

We take the residuals of the above regression. These are named as  $\text{res}_{jt}$ . Next we see how much of the residual is explained by the combination of lobbying power, reform slope dummy and voter turnout. We estimate the following equation.

$$\text{res}_{jt} = a_0 + a_1 LP_{jt} + (a_2 - a_1) \text{ref}_{jt} LP_{jt} + a_3 \text{turn}_{jt} + a_j + u_{jt}$$

#### Result 2: Fixed Effect Regression

res	Coefficient	Standard Error
LP	.1127089(7.527*)	.014973
ref.LP	-.204153(-14.941*)	.0136636
turn	2.96e-10(2.203**)	1.34e-10
constant	1.54e-09(18.289*)	8.44e-11
R sq (within)=.5216		
F(3,235) = 85.40*		

Both lobbying power and the reform slope dummy are significant at 1 per cent level. This shows that state lobbying in the council of ministers quite significantly explains disbursement of license after the demand aspect is taken care of. But in the reform years, disbursement of licences is less sensitive to changes (increase or decrease) in the lobbying power compared with the years when reform measures had not started getting implemented. The coefficient of the variable voter turnout is significant at 5 per cent level showing that more is the voter turnout in a state at a certain point in time, more is the disbursement of licences in favour of that state. The F-statistic is significant at 1 per cent level.

We next try to estimate the residuals in terms of lobbying power, coalition slope dummy and index of opposition unity.

$$\text{res}_{jt} = b_0 + b_1 LP_{jt} + (b_2 - b_1) \text{coa}_{jt} LP_{jt} + b_3 \text{iou}_{jt} + a_j + u_{jt}$$

#### Result 3: Fixed Effect Regression

res	Coefficient	Standard Error
LP	.1102421(6.144*)	.0179416
coa.LP	-.1545874(-9.291*)	.0166383
iou	4.16e-10(3.778*)	1.10e-10
constant	1.35e-09(15.881*)	8.50e-11
R sq (within)=.3335		
F(3,235) = 39.20*		

Coefficients of all the variables are significant at the 1 per cent level. Lobbying power, as before, significantly explains the residuals, although under the coalition regime, changes in lobbying affect disbursement less than in the non-coalition one. The states that have a high index of opposition unity in a year, get more licences in that period of time. The F-statistic is significant at the 1 per cent level.

Now, let us take a combination of lobbying power, political disturbance intercept dummy and voter turnout to see how much they explain the residuals.

$$\text{res}_{jt} = c_0 + c_1 LP_{jt} + (c_2 - c_0) \text{poldis}_{jt} + c_3 \text{turn}_{jt} + a_j + u_{jt}$$

#### Result 4: Fixed Effect Regression

res	Coefficient	Standard Error
LP	.0691192(3.414*)	.020243
poldis	9.70e-11(2.990*)	3.24e-11
turn	3.96e-10(2.151**)	1.84e-10
constant	1.37e-09(11.915*)	1.15e-10
R sq (within)=.1013		
F(3,235) = 8.83*		

Lobbying power, as usual, is significantly explains the residual disbursement of licences. The political disturbance dummy shows positive significance indicating, in the politically disturbed years, disbursement of licences increases for each state and the intercept of the regression line goes up. As before, high voter turnout fetches higher disbursement of licences (this is true for the 5 per cent level of significance). The F-statistic is significant, as before, at the 1 per cent level.

How does the reform intercept dummy behave in the above combination if we replace the political disturbance intercept dummy by it? We estimate:

$$\text{res}_{jt} = d_0 + d_1 LP_{jt} + (d_2 - d_0) \text{ref}_{jt} + d_3 \text{turn}_{jt} + a_j + u_{jt}$$

#### Result 5: Fixed Effect Regression

res	Coefficient	Standard Error
LP	.0256132(1.917**)	.0133644
ref	-3.87e-10(-18.534*)	2.09e-11
turn	4.81e-10(4.029*)	1.19e-10
constant	1.62e-09(21.439*)	7.55e-11
R sq (within)=.6210		
F(3,235) = 128.37*		

We can see from the above result that with the reform intercept dummy and voter turnout, lobbying power is significant at the 5 per cent level in explaining the residual disbursement. The reform intercept dummy is highly negatively significant indicating in the post-reform years the disbursement of licences has gone down significantly for each state compared with the pre-reform years. The voter turnout is, again, significantly explaining the residual disbursement and we are getting an F-statistic of the regression, which is significant at the 1 per cent level.

Let us see how the coalition intercept dummy fares in combination with lobbying and the index of opposition unity.

We estimate:

$$res_{jt} = g_0 + g_1 LP_{jt} + (g_2 - g_0)coa_{jt} + g_3 iou_{jt} + a_j + u_{jt}$$

#### Result 6: Fixed Effect Regression

res	Coefficient	Standard Error
LP	.0519259(3.166*)	.0164002
coa	-3.10e-10(-11.390*)	2.72e-11
iou	3.41e-10(3.298*)	1.04e-10
constant	1.52e-09(18.717*)	8.14e-11
R sq (within)=.4129		
F(3,235) = 55.08*		

As in the case of the reform intercept dummy, the coalition intercept dummy also shows huge negative significance. In the coalition years, for each state, the disbursement of licences comes down significantly. Lobbying power and the index of opposition unity is explaining the residual positively at the 1 per cent level of significance.

We should think of other lobbying variables at this juncture and see how they fare in the process of regression. We estimate the residual with a combination of the parliament index and the index of opposition unity.

$$res_{jt} = h_0 + h_1 parl_{jt} + h_2 iou_{jt} + a_j + u_{jt}$$

#### Result 7: Fixed Effect Regression

res	Coefficient	Standard Error
parl	2.68e-10(4.356*)	6.15e-11
iou	4.51e-10(3.565*)	1.27e-10
constant	1.22e-09(11.584*)	1.06e-10
R sq (within)=.1147		
F(2,236) = 15.29*		

Lobbying power in terms of the members of parliament is highly significant in explaining the disbursement pattern. The index of opposition unity is, as before, explaining the residuals significantly.

What about the alignment dummy? Taking it in combination with the index of opposition unity we estimate:

$$res_{jt} = m_1 + m_2 iou_{jt} + m_3 align_{jt} + a_j + u_{jt}$$

#### Result 8: Fixed Effect Regression

res	Coefficient	Standard Error
align	1.88e-10(4.770*)	3.95e-11
iou	5.78e-10(4.467*)	1.29e-10
constant	1.19e-09(11.146*)	1.07e-10
R sq (within)=.1277		
F(2,236) = 17.27*		

Coefficients of all the variables are significant at the 1 per cent level. The alignment dummy along with the opposition unity explains the residual disbursement quite significantly.

In some of the results above, the R-squares are sometimes low implying that the explanatory power of the equation is poor. But here one thing has to be kept in mind. We are mostly dealing with political variables. Whether those variables show a significance vis-a-vis the disbursement index is something that we are trying to explore. The low explanatory power of the regression equations, therefore, should not be of great concern for us.

Next, we come to the question of the disbursement of letters. We have already spent some words on the difference between issuing of letters and the disbursement of licences. Letters are, in a sense, more preliminary than the licences. Below we see how, going by the same procedure, the letters of intent index is explained by the political variables.

We have followed the same procedure as the licences in running the regressions and we are therefore, not elaborating on the steps. Here are the results of the regressions:

We estimate the following equation:

$$LI_{jt} = b_0 + b_1 incin_{jt} + a_j + u_{jt} + k_t$$

where  $LI_{jt}$  is the letters of intent index,  $incin_{jt}$  is the income index,  $a_j$  represents state dummies and  $k_t$  represents 17 time dummies for 18 years.

#### Result 9: Fixed Effect Regression

LI	Coefficient	Standard Error
incin	.9045905(3.872*)	.2336023
constant	2.01e-10(.599)	3.35e-10
R-sq (within) = .2496		
F(18,220) = 4.06*		

The income index is significant at the 1 per cent level. The constant is insignificant. We do not show the result of the time dummies as before.

We take the residuals of the above regression. These are named as  $res1_{jt}$ . Next we try to estimate the following equation.

$$res1_{jt} = c_0 + c_1 LP_{jt} + (c_2 - c_1) ref_{jt} LP_{jt} + c_3 iou_{jt} + a_j + u_{jt}$$

where LP is our lobbying power, ref is the

reform slope dummy and iou is the index of opposition unity.

#### Result 10: Fixed Effect Regression

res1	Coefficient	Standard Error
LP	.1341542(8.099*)	.0165641
ref LP	-.2323117(-15.240*)	.0152432
iou	1.59e-10(1.525***)	1.04e-10
constant	1.55e-09(19.087*)	8.14e-11
R sq (within)=.5416		
F(3,235) = 92.57*		

The coefficients of the lobbying power and the coalition slope dummy are significant at 1 per cent level. The index of opposition unity is significant at the 10 per cent level. The F-statistic is significant at the 1 per cent level.

We next try to estimate an equation containing the lobbying power, coalition slope dummy and index of opposition unity.

$$res1_{jt} = d_0 + d_1 LP_{jt} + (d_2 - d_1)coa_{jt} LP_{jt} + d_3 iou_{jt} + a_j + u_{jt}$$

#### Result 11: Fixed Effect Regression

res1	Coefficient	Standard Error
LP	.1312705(6.380*)	.0205746
ref LP	-.1664222(-8.722*)	.01908
iou	4.01e-10(3.175*)	1.26e-10
constant	1.30e-09(13.335*)	9.74e-11
R sq (within)=.3115		
F(3,235) = 35.44*		

All the coefficients here are significant at the 1 per cent level.

We try out a regression consisting of lobbying power, political disturbance intercept dummy and voter turnout to see how much this combination explains the income residuals.

$$res1_{jt} = e_0 + e_1 LP_{jt} + (e_2 - e_0) poldis_{jt} + e_3 iou_{jt} + a_j + u_{jt}$$

#### Result 12: Fixed Effect Regression

res1	Coefficient	Standard Error
LP	.08505(3.721*)	.0228594
poldis	6.20e-11(1.666***)	3.72e-11
iou	3.57e-10(2.430*)	1.47e-10
constant	1.30e-09(11.636*)	1.12e-10
R sq (within)=.0993		
F(3,235) = 8.63*		

Lobbying power and the index of opposition unity show strong significance (1 per cent) in the combination. The political disturbance slope dummy shows a weak significance (at the 10 per cent level). As before, we can ignore the low value of the within R-square, because our main focus is to find out whether the political variables are explaining the disbursement pattern and not how much of the disbursement pattern we can explain by bringing in various explanatory variables.

We have tried out estimation with the other measures of lobbying like parliament and the alignment indices in combination with the index of opposition unity and voter turnout respectively and found significant coefficients in each of the cases (excepting for the combination of the parliament index and the voter turnout in which turn yielded insignificant t-value). We have also tried out estimations incorporating the reform and the coalition intercept dummies. As the number of regression equations are too many, we are not showing them explicitly to the extent in which we had showed them in the case of industrial licences.

One thing needs to be said at this juncture. In some of the combinations, for example, with lobbying and the coalition intercept or the coalition slope dummy or the reform slope dummy, voter turnout is becoming insignificant even at 10 per cent level as was the case with the parliament index. Obviously, in these combinations turnout is not working as an explanation, but that should not bother us much since voter turnout acts as a significant explanation when placed alone or only with lobbying as an explanatory variable (although, the significance is weak, at 10 per cent level). So voter turnout can be taken to explain the income residuals of the letters of intent significantly (although weakly). Only, its explanatory power is suppressed by some of the very strong explanatory variables like the coalition slope or intercept dummies.

The results say that income is by far the most significant variable in explaining the disbursement of licences and letters. Other than this, the political variables lobbying power along with the coalition or the reform slope and intercept dummies and the political disturbance intercept dummy explain the disbursement process quite significantly. Because all these are implicit variables, to find out their effect, we need to eliminate the effects of the income index. Variables like voter turnout and index of opposition unity also positively and significantly explain the disbursement residuals. So do the other measures of lobbying like the parliament and the alignment indices.

### Interpretation

The results amply point to the fact that the states with a higher bargaining power (higher proportional per capita representation in the council of ministers) can pull per capita wise proportionally more licences and letters towards their end. The

result is arrived at easily after the so-called demand-driven aspect of the disbursements has been taken care of by using proportional per capita net state domestic product (the income index) as the sole explanatory variable in the first step of our regression procedure. In the second step, we take the residuals of this regression and try to find out what impact the political variables have on these residuals. Apart from lobbying power, constructed in terms of representation in the council of ministers, if a state has more lobbying power in terms of the strength of its MPs or it has a party in power which has an alignment with the centre, it would be easier for it to bag more licences and letters.

The significance of the political power variables needs no explanation. This is an expected result. The higher the political strength of a state at the centre is, the higher is the chance of its getting more benefits in terms of letters of intent and industrial licences. The significantly negative slope of the coalition slope dummy reflects that in the coalition years, disbursement of licences and letters are much less sensitive to changes in the lobbying power. This is expected because we are measuring state lobbying in the council of ministers and in almost all the cases in India, the coalition partners are mostly the state or region-based parties. So there is always a presence of a within coalition threat in the coalition years which makes it more difficult for the high lobbying states to bag that high amount of disbursement which was possible under a single-party government. Similarly, because it is a coalition regime, the low lobbying states will now be less tolerant to accept lower disbursement and if that is somehow imposed from above, they might threaten to break off from the coalition itself. This justifies why in the coalition years, a very small increase (decrease) in lobbying would bring about lesser increase (decrease) in the disbursement quantities. In the coalition years, the significant intercept dummy shows that per capita share of disbursement goes downwards parallelly to indicate that in these years there has actually been a reduction in licences and letters for each amount of lobbying done in the council of ministers. This result gets justified once one remembers that most of the years under coalition government fall in the era of delicensing. The Narasimha Rao government announced a new industrial policy parliament on July, 24, 1991. The most important changes initiated in this policy are with respect to the virtual scrapping of industrial licensing and registration

policies. The new policy abolished industrial licensing for all excepting 18 industries such as coal, alcohol, petroleum and sugar. Once this new economic policy was introduced, the number of licences and letters disbursed went down drastically. So as a whole, disbursements got reduced in the face of increased flexibility in the industrial sector.

The same argument can be used for the reform dummies. The reform intercept dummy shows negative significance, which can be rationalised in terms of the new economic policy. The opening up of the economy and the consequent lowering of restrictions in the industrial arena after Rajiv Gandhi came to power were responsible for an overall reduction of letters and licences. Raising the limit of exemption from licensing, relaxations for MRTP and FERA companies, delicensing certain broad categories of industries were some of the measures being taken. In the process of deregulation first 32 groups of industries were delicensed without any investment limits. Second, in 1988, all industries were exempted from licensing except for a specified list of 26 industries. This exemption from licensing was, however, subject to investment and locational limitations [Rakesh 1992]. The exemption limit under the MRTP Act was raised. New elements included the policy of broad-banding, whereby the firms in a number of industries could diversify in related business without licences [Chaudhuri 1998]. All these contributed to the fact that for all the states the disbursement went down uniformly under the reform regime. The reform slope dummy shows negative significance because of the dummy's near convergence with the coalition slope dummy.

The significantly positive coefficient of the political disturbance intercept dummy shows that in the politically disturbed years (most of which are election years), all the states start getting more letters and licences and hence the regression line moves parallelly upwards. This is also obvious in a certain way. In the politically disturbed years, higher disbursement can be interpreted as some form of economic appeasement, which was necessary for containing the disturbances (or gaining in the election).

The significance of the index of opposition unity shows that if the opposition is highly unified in a state, it can snatch away more disbursements in its favour. As we have mentioned earlier, this is quite expected. A highly united opposition in a state is more likely to be able to raise its voice in the parliament and thereby pull

more letters and licences towards its end compared with a state where the opposition itself is divided. Also, the government in power in a state where the opposition is united is more likely to put in more effort to attracting disbursements in order to fight the opposition and stay in power.

If the voter turnout is proportionately high in a state, that state is likely to be rewarded more in terms of disbursement. This is so because for the government in power at the centre, the state where voter turnout is greater in proportion to the population is more likely to bring in greater return for the same amount of investment in other states. In other words, a state where the electorate is more likely to express their opinion is a better investment because investing more in that state is more likely to bring success in the election for the government in power.

Although it is obvious from the result that the higher the income of a state is, the larger is the chance of its disbursement via the higher 'demand route', what is more interesting and also somewhat intriguing to note in this context is that the findings of the Hazari Committee in 1967 and the Industrial Licence Policy Inquiry Committee (ILPIC) in 1969 are still very much valid. We have elaborated before that both the committees alleged that among other things, the government's regulations on industrial licences were not successful in achieving the declared objectives. As will be elaborated below, the government had always talked about correcting the regional imbalances by securing industries in the backward areas or no-industry districts of a state. The government had also given its opinion in favour of dispelling the inter-state imbalances and disparities in development. As our finding shows, even while distributing licences and letters in the backward regions, political influences had worked to a great extent. But even if we keep that aside, is it unreasonable in this backdrop to expect that there should be some incentives in terms of licences for investors in the poorer states? The strong significance shown by the income index in explaining the disbursement, in case of both letters and licences, is definitely in keeping with the private investors' eagerness to invest in a developed state. But in no way is this in consonance with the government of India's avowed objectives of alleviating disparities. This, therefore, can be interpreted as the private capital's winning the show of the entire licensing system in a big way, keeping public capital interests behind. Secondly, way back in 1967, the Hazari Report articulated the

fear that some big industrial houses had already succeeded widely in pre-empting licensing capacities of many industries due to the faulty Industrial Policy Act of 1951. This, it alleged, was particularly true of Birla applications, which managed to foreclose the licensing capacity of smaller enterprises by sitting tight on unutilised licences. Our finding gives enough support to the fact that private capital has ruled the roost in the licensing scenario (through the income route). Thus, on the one hand, private capital, by whatever means was available, had been able to corner licences in a large way. On the other, looking at our results, it can be said that the rest was distributed mainly on the basis of various political influences of the states. The importance of our findings lies in the fact that industrial licences, which shape a country's industrial profile, had been manipulated through private and public sources of lobbying in a very big way in India. It is not surprising, therefore, that industrialisation failed completely as far as dispelling regional disparity in this country is concerned.

## V Backward Areas

Let us now look at the disbursement of licences and letters bracketed for the backward areas. As part of the measures to ensure balanced regional development, the government of India announced certain financial incentives for industries established in selected backward districts/areas.<sup>7</sup> These are in addition to the facilities and incentives that are offered by individual state governments. The incentive schemes announced were: (a) Central Outright Grant or Subsidy Scheme, 1971, (b) Concessional Finance Scheme extended by the All India Term Lending Institutions, and (c) Transport Subsidy Scheme, 1971. All these included 'special tax rebates', 'import facilities', 'income tax exemptions on subsidy' and of course 'concessional finance' in the form of low rate of interest, longer initial grace period, and reduction of commitment charges. Needless to say, preferential treatment in the grant of industrial licences was one of the most important concessions. The scheme of concessional finance covered 246 districts, 101 districts/areas were identified for the purpose of the Central Subsidy Scheme.

There were three categories of backward areas. Category 'A' comprised no-industry districts plus special regions (118 districts). Category 'B' included the districts currently eligible for central subsidy minus

districts included in category 'A' (55 districts). Category 'C' comprised 246 concessional finance districts minus those included in categories 'A' and 'B' (113 districts). In 1985, it was announced that the export obligation of 60 per cent imposed on MRTP and FERA companies was to be reduced to 25 per cent for districts included in categories 'B' and 'C' and the export obligation would be done away with if the location is in category 'A' districts.

With all these facilities (valid under certain restrictions), the government issued special licences for backward areas of every state. With regard to the source of this data, it must be said that, from the same sources we did not get this data for the years earlier than 1982. So, our total time period becomes 12 and the total number of observations become (12\*14=168). We are showing only some selected estimations as before and that too only with licences, since with letters the results are more or less the same.

The regression equation, following the same procedure looks like:

$$IL_{backjt} = f_0 + f_1 incin_{jt} + a_j + u_{jt} + k_t$$

where  $IL_{backjt}$  is the industrial licence index for backward areas,  $incin_{jt}$  is the income index,  $a_j$  represents state dummies and  $k_t$  represents 17 time dummies for 18 years.

### Result 13: Fixed Effect Regression

$IL_{back}$	Coefficient	Standard Error
incin	.7784074(1.583***)	.4916095
constant	7.58e-11(.114)	6.63e-10
	R-sq (within)=.1228	
	F(12,142) = 1.66	

The income index is still explaining the disbursement of licences in the backward region, although weakly (at 10 per cent level). The F-statistic is insignificant.

We take the residual of this regression and call the  $res2_{jt}$

Let us estimate the following equation:  
 $res2_{jt} = g_0 + g_1 LP_{jt} + (g_2 - g_1) ref_{jt} + LP_{jt} + g_3 turn_{jt} + a_j + u_{jt}$

### Fixed Effect Regression

res2	Coefficient	Standard Error
LP	.1368147(5.812*)	.0235412
ref LP	-.1909044(-9.693*)	.0196953
turn	4.38e-10(2.788*)	1.57e-10
constant	1.23e-09(11.850*)	1.03e-10
	R sq (within)=.4201	
	F(3,151) = 36.46*	

All the variables – the lobbying power, the reform slope dummy and the voter turnout are significant at the 1 per cent level. So even in backward areas, the

political variables are quite significantly explaining the income residuals of disbursement of licences. The F-statistic is significant at the 1 per cent level.

Next we see how the other forms of lobbying fare in this context. We estimate an equation containing the parliament index and the voter turnout.

$$res2_{jt} = h_0 + h_1 parl_{jt} + h_2 turn_{jt} + a_j + u_{jt}$$

#### Result 15: Fixed Effect Regression

res2	Coefficient	Standard Error
parl	2.54e-10(3.714*)	6.84e-11
turn	4.81e-10(2.531*)	1.90e-10
constant	1.01e-09(8.473*)	1.20e-10
R sq (within)=.1294 F(2,152) = 11.29*		

The parliament index and voter turnout are again significant at the 1 per cent level.

Next we estimate an equation containing the index of opposition unity and the alignment index.

$$res2_{jt} = k_1 + k_2 iou_{jt} + k_3 align_{jt} + a_j + u_{jt}$$

#### Fixed Effect Regression

res2	Coefficient	Standard Error
align	1.48e-10(3.134*)	4.73e-11
iou	3.50e-10(2.181**)	1.60e-10
constant	1.13e-09(8.882*)	1.27e-10
R sq (within)=.0759 F(2,152) = 6.24*		

The alignment index and the index of opposition unity are showing significance at the 1 per cent and 5 per cent level, respectively.

As we have mentioned earlier, we will not show the same kind of estimations done in case of letters of intent in the backward areas because the direction of significance of the variables yielded in the results are exactly the same. We end this section only by showing that in case of letters disbursed in the backward areas, the income index is explaining the disbursement pattern in a stronger way compared with the industrial licences.

$$LI_{backjt} = l_0 + l_1 incin_{jt} + a_j + u_{jt} + k_t$$

where  $LI_{backjt}$  is the letters of intent index for the backward areas,  $incin_{jt}$  is the income index,  $a_j$  represents state dummies and  $k_t$  represents 17 time dummies for 18 years.

#### Result 13: Fixed Effect Regression

$LI_{back}$	Coefficient	Standard Error
incin	.7745514(1.881**)	.411684
constant	1.91e-10(.344)	5.55e-10
R-sq (within) = .1650 F(12,142) = 2.34*		

The income index is now significant at the 5 per cent level instead of 10 per cent in case of licences. All the constructed

measures of lobbying are significant in explaining the residuals of the above regression (we do not show them explicitly) implying, once again, that political power has a significant role to play in the disbursement process of licences and letters even in the case of backward areas.

## VI Conclusion

In the end, we would like to reiterate that the policies and implementational aspects of industrial licensing are of great significance vis-a-vis the development of a mixed economic structure like India. Hence, the distortions and changes brought about by it has very important bearings for the economy as a whole. It is important to study these impacts responsible for shaping the structure of the economy to a large extent, in spite of the fact that delicensing has replaced almost the entire system of licensing in the past few years.<sup>8</sup> Our study ranging over more than two decades and 14 major states in India, brings into the limelight the systematic distortion of the distribution of letters and licences in favour of the more prosperous and politically more influential states, an allegation applicable equally in both the cases of both 'normal' and 'backward' zones. [27]

## Notes

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- 1 More widely known as the Industrial Licensing Policy Enquiry Committee (1969).
- 2 Also known as the Report of the Committee on Controls and Subsidies (1979).
- 3 Obviously, unlike ministers, the index based on the members of parliament does not show variation within the tenure of a government. So we repeat the index for the years for which it is valid. Money disbursement index remains the same as before.
- 4 Assam, Jammu and Kashmir and Himachal Pradesh are left out by virtue of being special category states. For the same reason the six north-eastern states are left out.
- 5 See Handbook of Industrial Statistics, Ministry of Industry, Government of India, various issues.
- 6 Say, Orissa's relative population under the poverty line has remained the same for the period under consideration. So even if we don't take into account poverty levels as an explanation in our regression equations, the model takes care of that factor implicitly and the misspecification error is minimised. See Johnston and DiNardo, (1997).
- 7 See 'Guidelines for Industries 1976-77, Government of India', Department of Industrial Development, Ministry of Industry and Civil Supplies, New Delhi.
- 8 'Thus industrial licensing has been abolished except for a small group of hazardous and

environmentally sensitive industries: MRTPL houses are no longer required to take separate permission for investment and expansion, Chowdhuri S op cit.

## References

- Baru, S (1988): 'State and Industrialisation in a Post-Colonial Capitalist Economy: The Experience of India' in *Economic and Political Weekly*, January 23.
- Berry, J M (1977): *Lobbying for the People*, Princeton University Press, Princeton, NJ.
- Biswas, R and S Marjit (2000): 'Political Lobbying and Discretionary Finance in India: An Aspect of Regional Political Influence in a Representative Democracy', mimeo, Centre for Studies in Social Sciences, Calcutta.
- Butler, D, Ashok Lahiri and Prannoy Roy (1995): *India Decides: Elections 1952-1995*, Living Media India, New Delhi.
- Chatterjee, Partha (1997): 'Development Planning and the Indian State' in *State and Politics in India*, edited by Partha Chatterjee, Oxford University Press.
- Chaudhuri Sudip (1998): 'Debates on Industrialisation' in *The Indian Economy: Major Debates since Independence*, edited by Terence Byres, Oxford University Press.
- Dandekar (1987): 'Unitary Elements in a Federal Constitution', *Economic and Political Weekly*, October 31.
- Dholakia, R H (1989): 'Regional Aspects of Industrialisation in India' in *Economic and Political Weekly*, November 18.
- Dutta, Roychowdhury U (1993): 'Inter-State and Intra-State Variations in Economic Development and Standards of living', *Journal of the Indian School of Political Economy*, Vol 5, No 1, January-March.
- Ghosh, B S Marjit and C Neogy (1998): 'Economic Growth and Regional Divergence in India, 1960 to 1995', *Economic and Political Weekly*, June 17.
- Goldar, B and V Seth (1989): 'Spatial Variations in the Rate of Industrial Growth in India', *Economic and Political Weekly*, June 3.
- Hardgrave, R L (1992): *India, Government and Politics in a Developing Nation*, Harcourt, Brace and Javanovich, New York.
- Hazari, R K (1967): 'Industrial Planning and Licensing Policy', Final Report.
- Johnston and Dinerdo (1997): *Econometric Methods (fourth edition)*, Macgraw-Hill International.
- Kochanek, S A (1974): *Business and Politics in India*, University of California Press.
- Milbrath, L (1963): *The Washington Lobbyists*, Rand McNally, Chicago.
- Paranjape, H K (1988): 'Task of the Ninth Finance Commission: The Planning Commission Tangle', *Economic and Political Weekly*, September 17.
- Pincus, J J (1975): 'Pressure Groups and the Pattern of Tariffs' in *Journal of Political Economy*, Volume 83.
- Rakesh, M (1992): 'Industrial Policy and Controls' in Bimal Jalan (ed), *The Indian Economy: Problems and Prospects*, Viking.
- Schlozman and Tierney (1986): *Organised Interests and American Democracy*, Harper and Row, New York.
- Thimmaiah G (1997): 'Federal India - Burning Issues in Union-State Relations', *Journal of the Indian School of Political Economy*, October-December.
- Wright, J R (1990): 'Contributions, Lobbying and Committee Voting in the US House of Representatives' in *American Political Science Review*, March, Vol 84, No 1.