Contributions to the exchequer funds by state level public sector enterprises: Does political alignment matter?

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**Abstract**

*In the absence of a mechanism to ensure regular payments despite being mandated by most state governments the amount of contributions made by state level public sector enterprises (SLPEs) is abysmally poor. The situation is driven by the presence of soft budget constraints and strong financial support from the state governments. The current study analyses the effect of political factors on the contribution that SLPEs make to the state governments’ exchequer funds. As a next step, the study also considers the effect of ideological differences between the Centre and the state on SLPE contributions. Using different econometric methods, the study finds that SLPEs located in assembly constituencies that are politically aligned with the state government, make frequent and larger contributions to the exchequer funds. Surprisingly, the subsidies provided to the SLPEs by state governments are not driven by political alignment between the state government and the constituency where the enterprise is located. In fact, subsidies compensate for the contributions to the extent that there is no effect of political alignment on net contributions (contributions- subsidies) by SLPEs to state governments. Finally, political alignment has a strong influence on the relative share of contributions made by SLPEs to state governments vis-à-vis the centre. These results are robust across different model specifications.*

**Keywords:** political alignment, state owned enterprises, India, decentralization, federalism, soft budget constraints

**JEL Codes:** L32, H77, G35

1. **Introduction**

A federal structure divides the government into various levels. In developing economies, this decentralization leads to the centre providing assistance in the form of resource allocation and aids to the state/local governments. Most of the papers in the existing literature examine the effect of political alignment on resources allocation from the centre to the lower level governments. In the Indian context, Arulampalam (2009) et al. study the political economy of centre- state discretionary transfers in India and find that politically aligned states receive higher grants from the centre as compared to the non-aligned ones. Khemani (2003) also examines intergovernmental transfers for 15 major states in India over the period 1972-1995 and finds state governments that are politically affiliated with the central government receive greater plan grants and loans. Other studies that have spawned the Indian literature on decentralization and intergovernmental transfers include Rodden and Wilkinson (2004) and Rao and Singh (2000).

At a subnational level, Asher and Novosad (2015) find that firms in constituencies aligned with the state government exhibit better performance as compared to constituencies that are not aligned. Cole (2009) finds evidence of state governments in India rewarding districts aligned with them post elections. Dey and Sen (2016) use a quasi experimental design in West Bengal and find that village council level parties spend more in politically aligned constituencies.

The current study aims to contribute to this literature but with some differing features. The common thread of these studies is that they emphasize the effect of political alignment on the benefits that the constituency (state) accrues from the state (centre). In contrast, the current study aims to examine the effect of political alignment on the power that the state government has on the constituencies. Secondly, the effect of ideological dissimilarities of the state government with the centre is also taken into account. Finally, the study analyses political alignment effect in a very unique context- state owned enterprises.

State owned enterprises are seen as catalysts of promoting a wide array of social objectives such as reducing regional inequalities, investing in projects that have long gestation periods, regulating prices for certain products and services and providing employment to the masses. One of the tangible contributions of the state owned enterprises is the contribution made to the exchequer’s funds. These are financial amounts contributed by these enterprises in the form of taxes, interest on loan payments and dividends to the government which in turn may be utilized for bridging budgetary deficit. Indian state owned enterprises can be segregated into two segments- (i) enterprises owned by the central government, central public sector enterprises (CPSEs) and (ii) enterprises owned by the state governments, state level public sector enterprises (SLPEs). While there is a plethora of studies focusing on different aspects of CPSEs, SLPEs have been relatively under researched. The current study aims to examine a specific aspect of contributions made by SLPEs to the exchequers funds.

The study focuses on SLPEs due to the following reason. SOEs, in general, are different in structure, ownership and functioning as compared to private enterprises. Unlike private enterprises (where managers/ agents run the company on behalf of the owners/prinicpal), SOEs are characterized by a double agent problem- SOEs are owned by the citizens (principals) of the country who elect the government (agent 1) that further appoints managers (agent 2) to run SOEs. This makes these enterprises very susceptible to moral hazard problems by both agents. In the context of India, agent 1, the government which is formed by a political party (coalition of parties) is ill famous for various corruption cases. According to India’s election watchdog, Association for Democratic Reforms, nearly a third of members of parliament (158 out of 543) faced criminal charges in 2011.[[2]](#footnote-2) According to the Transparency International Survey, 2013, which is a global survey to gauge the extent of worldwide corruption, India was high up on the world scales. Eighty six percent of Indians who were surveyed believed that all political parties are corrupt in India. They also believed corruption has increased overtime in India.[[3]](#footnote-3) This suggests that the enterprises that come under the jurisdiction of these parties (when in power) are susceptible to corruption as well. This makes focusing on one of the aspects of financial discipline of these enterprises interesting from a political economy perspective.

The financial health of SLPEs is closely associated with the performance of states. Poor state level economic situations trickle down to the SLPEs in the form of reduced transfers and aids. Similarly, in times of fiscal distress, the state might want to utilize the contributions made by these enterprises. The current study aims to examine the effect of political alignment on the contributions made by SLPEs to the respective states in India. While analyzing financial discipline of SLPEs in India, the study takes account of two salient features of these enterprises. First of all, although mandated by most state governments, the amount of money that these enterprises contribute towards the state’s exchequer funds is dismally low. Also, abysmally low proportions of SLPEs make these contributions. Secondly, financial discipline of SLPEs demands consideration of soft budget constraints, which may result in only select SLPEs making a contribution. These facts press the need to understand the type of SLPEs that make contribution.

The study employs data on all functional manufacturing and non-financial services SLPEs owned by the state governments between 2007 and 2009. This is combined with the political data for state level elections in all assembly constituencies in India for the three years. The study uses panel data, tobit and two parts model to capture the effect of political alignment on SLPE contributions to state funds. The results suggest that enterprises located in assembly constituencies that are politically aligned with the party governing the state contribute more frequently and larger amounts to state funds as compared to enterprises located in constituencies that are not aligned. This may be because it is easier for the state government to get contributions from those enterprises that are located in its own constituencies. However, SLPEs face soft budget constraints that make fund availability abundant. To examine the role of political alignment on soft budget constraints, regression models with subsidies as the dependent variables are used. Regression results suggest that subsidies are not influenced by political alignment between the constituencies and the state government. So, if net contributions (contribution minus subsidies) is analysed, the effect of political alignment vanishes. As an extension, the study also focuses on the relative contribution by SLPEs to the state vis-à-vis the centre and finds strong influence of political alignment. This suggests that political alignment influences only the share of contributions being made to the state and not the total amount.

1. **Indian Context**
   1. **State elections**

State governments in India are the second wing of the federal structure of the government. States play an important role in resource allocation at the state level, provision of select public goods and governance. There are twenty nine states and seven union territories in India. However, based on the presence of state level public sector enterprises the current study covers twenty six states and one union territory. Each state has a legislative assembly. The Vidhan Sabha is the lower house of the states of India and members of the Vidhan Sabha are directly elected by the people of the state through adult electoral suffrage. There are 4120 assembly constituencies in India with Uttar Pradesh having the highest number of ACs (403) and Pondicherry the lowest (30). State elections are held every five years and the party with the highest number of seats can form the government.[[4]](#footnote-4) For the period of our analysis (2007-2009) the following elections were held:

**Figure 1: State level election cycle for 2007-2009**

Figure 1 iterates that eighteen states had elections between the period under consideration. For the remaining seven states that did not have elections in the period 2007 to 2009, the data on the ruling party for every assembly constituency is collected based on the most recent elections. To summarize, we collect Vidhan Sabha election data from 2003 to 2009.[[5]](#footnote-5) We also collect data on the ruling party of every state during the period under consideration. We define political alignment as the same party at the assembly constituency as at the state level.

* 1. **State level public sector enterprises**

Indian state owned enterprises can be segregated into two segments- (i) enterprises owned by the central government, central public sector enterprises (CPSEs) and (ii) enterprises owned by the state governments, state level public sector enterprises (SLPEs). The SLPEs play an essential role in providing services as infrastructure, electricity, transportation, agro-industrial facilities. A brief overview of SLPEs with respect to their centre counterpart is provided in Table 1.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | **CPSE** | | **SLPE** | |
|  | **2008** | | **2009** | **2008** | **2009** |
| Number of operational enterprises | 213 | | 217 | 614 | 624 |
| Employee size (in Millions) | 1.53 | | 1.49 | 1.53 | 1.52 |
| Investment (in Rs. Billions) | 5135.32 | | 5807.84 | 4544.71 | 5182.09 |
| Turnover (in Rs. Billions) | 12715.21 | | 12448.05 | 3173.16 | 3668.14 |
| Net profit/Loss (in Rs. Billions) | 838.67 | | 922.03 | -178.66 | -132.27 |
| Total Contribution (in Rs. Billions) | 1659.94 | | 1487.89 | 306.34 | 309.14 |
| **Source:** Public Enterprise Survey, 2009  Total contribution = contribution to state government + contribution to the centre | | | | | |

**Table 1: Comparison of select indicators between CPSE and SLPE in India**

The investment and number of employees employed by CPSEs and SLPEs is almost comparable, it is the net profits and contributions to the exchequers that is in stark contrast for the two segments of public sector enterprises in India. With negative net profits and limited contribution to the exchequer SLPEs impose financial burden on the respective state governments.

The financial aids and subsidies provided by SLPEs are strongly associated with the financial position of the respective state governments’ exchequers. The typical SLPE will receive less financial aid from the state’s funds if the state has a fiscal deficit or financial distress to deal with. The current study extends this argument to the contributions made by these SLPEs towards the state governments. Since SLPEs have been backed by the state governments and face soft budget constraints a very minute fraction of SLPEs make contributions to the state governments. Despite asking enterprises to pay dividends to the government, many enterprises do not contribute to the exchequers’ funds. Based on this, the study conjectures that state governments have a higher chance of getting contributions from SLPEs operating in assembly constituencies that are run by the same party. SLPEs located in the same assembly constituencies are highly dependent on the local political and business environment in which they operate. Kumar (2014) employs Indian state level election results and finds evidence of politicians directly interfering with firm activity thus influencing production and investment activity adversely.[[6]](#footnote-6) Political influence and external factors have a stronger effect on decisions made in public enterprises.

**2.3.** **Soft budget constraints in a federal structure**

Fiscal discipline in SOEs is closely linked to the nature of budget constraints. If the government has been subsidizing SOEs in the past, it will be very difficult for the government to establish credible commitment against it. The SOEs, thus, will assume that in the case of any financial stress the government will bail them out. This implies that there are not enough incentives for the SOEs to maintain financial discipline. This has been discussed by several studies in the context of subnational and national governments. Pisaru (2001) focus on how subnational governments overspend due to the soft budget constraints and subsidies provided by the national government. Similarly, Khemani (2002) also reports that in India states that are governed by the same party that runs the Centre overspends and has higher deficits. Singh and Vashishtha (2004) and Arulampalam (2009) find that aligned states get higher transfers from the Centre than the unaligned states.

This suggests that in the present context, SLPEs located in constituencies that are politically aligned with the state may enjoy higher subsidies by the state government as compared to the SLPEs located in unaligned constituencies. This brings us to the duality of political alignment in the context of finances of SLPEs. If contributions and subsidies both are driven by political alignment, then considering contributions to the states’ exchequer might be misleading. To account for this, the study uses net contributions (contributions minus subsidies) made by each enterprise to the state’s exchequer funds as one of the important measures to capture financial transfers from the SLPEs to the state governments.

1. **Data and variables**

The study combines publicly available data from different sources. SLPE financial data is combined with assembly constituency level political data. The time period of analysis is 2007 to 2009.

* 1. **Political data**

The data on assembly constituency level outcomes for all Vidhan Sabha elections between 2003- 2009 come from the website of the Election Commission of India website. The study uses information on the main party that won the elections.

*Political alignment*

The study uses political alignment as one of the main independent variables – a dummy variable that takes value one if the same party is in power at the assembly constituency and the state. To compute political alignment for each SLPE, the assembly constituency for each SLPE is identified from the location information on the official SLPE website. Then, the dummy variable is constructed for the assembly constituency and state government alignment.

*Ideology variables*

The study also controls for the ideology of the state. In order to construct the ideology scores for the state governments, I rely on Chhibber and Nooruddin (2004) and Dash and Raja (2014), who have coded ideology scores of all national and major regional parties in India based on the parties' objectives, past prescribed policies and actions. For the few remaining regional parties, I collected the relevant information from the parties' websites and media reports. The ideological stand takes integer values from one to five, where right is coded 1, right-center 2, center 3, left-center 4 and left 5. Next, by identifying the party that had won the most recent Vidhan Sabha (state-level) elections I get the state government's ideology during the year. Based on these ideology scores, the third ideology variable that captures the similarity between the centre and the state is also constructed. Ideology difference, the difference between the ideology of the centre and the state is used as variable to capture ideological dissimilarities between the two levels of governments.

**3.2. SLPE Data**

The study uses financial data on manufacturing and non-financial services SLPEs in India. The data contain information on contribution made by these enterprises to the state exchequer’s funds, profitability, firm age, firm size, accumulated losses, subsidies received by the government and the employee strength in each SLPE. The construction of the variables have been described in Table 2:

|  |  |  |
| --- | --- | --- |
| **Category** | **Variable** | **Definition/ Formula** |
| Contributions by SLPEs | Gross contributions | Logarithmic transformation of the amount being contributed by each SLPE to the state government |
|  | Net contributions | Logarithmic transformation of the amount being contributed by each SLPE to the state government after removing the subsidies paid by the state government to each SLPE |
| Relative contribution | Share of contribution | Ratio of the contribution paid by SLPE to the state government over the contribution paid to both state and centre government |
| Subsidies | Subsidies | Logarithmic transformation of the subsidies provided by the state government to each SLPE in the state |
| Profitability | Return on assets | Ratio of net profit over assets |
| Firm age | Years in operation | Difference between current year and its year of incorporation |
| Firm size | Asset size | Logarithmic transformation of total assets |
| Accumulated losses | Loss | Logarithmic transformation of losses |
| Employee size | Workforce | Logarithmic transformation of the total number of employees working in the SLPE |
| **Source:** Calculated from the dataset | | |

**Table 2: Construction of financial variables**

The political and firm level data is merged by web scraping location data for each SLPE off the official website of each SLPE. The location city is mapped to the assembly constituency and hence the assembly constituency level political variables too. The financial variables for each of the SLPEs span for a financial year (April of the current year to March of the next year). For political data in a particular year, I collect data for centre, state and local elections. The imputation of the financial data with the electoral data is simple for a year unless it was an election year at any level. If elections happened in a particular year, the study takes the following approach. Suppose state s has elections in June of year t where party B takes over the predecessor, party A. Then, for year t the study assumes party B to be in power. However, if the same elections had taken place in December of year t, then year t would have party A in power and party B would come into power only in year t+1.

**4. Descriptive Statistics**

With an average loss of Rs. 198 million across all SLPEs, 40 percent of these enterprises had incurred losses in the three year period (Table 3). With losses of the loss making enterprises over powering the profits of the profit making enterprises, the SLPE management had imposed a financial burden on the exchequers’ funds.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Set of Enterprises** | **No. of firms** | **Total Profits** | **Total Subsidies** | **Adjusted profits** |
| All | 609 | -364.19 | 876.80 | -1241.0 |
| Positive profits | 366 | 242.07 | 237.60 | 4.47 |
| Negative profits | 243 | -606.27 | 639.20 | -1245.4 |
| Source: Calculated from the dataset (in Rs. Billions)  Adjusted profits is the difference between Profits and subsidies for each group. | | | | |

**Table 3: Total profits earned by SLPEs in India between 2007 and 2009**

In the same period, the subsidies given by the government to these enterprises stood at an average of Rs. 476.7 million. The average contribution to both centre and state exchequer’s funds mounted to half the value of subsidies- Rs. 234.4 million. Further, 230 such enterprises have never made a contribution to either of the exchequers between 2007 and 2009 (Table 3).

This also suggests that subsidies are higher than the contributions made by all SLPEs. After netting out the subsidies, the adjusted profit of “Positive Profit” group reduces to one-sixtieth the original amount. In fact, the correlation between subsidies given by the governments to these enterprises and the contributions made by the enterprises to the exchequers is as low as 0.2.[[7]](#footnote-7)

This suggests that contributions made by the enterprises to the exchequers are not solely driven by the amount of subsidies that these enterprises received. The contributions of state owned enterprises to the governments are made in forms of taxes, duties, interests on loans and dividends. The total contribution made by SLPEs in certain states to the respective state governments has been presented in Table 4.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **States** | **2002** | **2003** | **2004** | **2005** | **2006** | **2007** |
| **Assam** | 19.5 | 24.9 | 22 | 21.8 | 21.8 | 23.3 |
| **Himachal Pradesh** | 3.8 | 4.8 | 10.7 | 13.8 | 9.9 | 8 |
| **Andhra Pradesh** | 13.1 | 878.6 | 881.6 | 881.6 | 871.9 | 212.9 |
| **Gujarat** | 385.9 | 329.5 | 572.3 | 420.5 | 572.3 | 480.3 |
| **Haryana** | 622.8 | 628 | 638.9 | 642.7 | 663.7 | 67.3 |
| **Karnataka** | 2.8 | 6.8 | 7.9 | 6.6 | 15.2 | 26.2 |
| **Kerala** | 205 | 204.6 | 778.5 | 736.8 | 224.2 | 214.8 |
| **Orissa** | 764.6 | 687.9 | 1203.4 | 1201.6 | 203.1 | 1.6 |
| **Punjab** | 08.3 | 7.5 | 0.2 | 0.2 | 12.9 | 5.4 |
| **Rajasthan** | 84.9 | 146.9 | 228.4 | 230.3 | 95.5 | 152.7 |
| **Tamil Nadu** | 57 | 63.1 | 63.2 | 63.2 | 64.9 | 64.9 |
| **Uttar Pradesh** | 6.3 | 13.5 | 14 | 14.5 | 14.5 | 14.5 |
| Source: Report no. 26 by Ministry of Finance on SLPEs (in Rs. Million) | | | | | | |

**Table 4: Contribution to the State Exchequer (2002-2007)**

Table 4 presents that contributions by SLPEs have different trends for different states. Under difficult fiscal distress situations, the Indian government asks public sector enterprises for assistance. For instance, in 2012 the government had asked central PSEs to invest their cash pile as dividends to the government.[[8]](#footnote-8) Again, in January 2016, the finance ministry had detailed a new policy for dividend and issuance of bonus shares in times of “financial crunch”.[[9]](#footnote-9) A month later, Odisha government also announced a similar policy for all state level public sector enterprises in Odisha.[[10]](#footnote-10) In contrast, the public sector, cushioned with the soft budget constraints of the government has skipped paying dividend money to the exchequer. For instance, the government witnessed a 67% decline in dividend receipt from public sector banks in FY 16, after 16 of 22 public sector banks skipped dividend pays.[[11]](#footnote-11) The total amount of dividends collected from the public sector enterprises is also skewed in terms of very few enterprises paying the money.[[12]](#footnote-12)

Unlike private enterprises, dividend decisions in public sector enterprises are a relatively unimportant area of discussion. Since these enterprises are owned by the government, dividends as a special amount being paid back to the government from the surplus is not a matter of important concern to most managers of the enterprises. Further, unlike private enterprises, the quality of public sector enterprises is not judged by the amount or frequency of contributions made by the enterprises to the exchequers. This opens the possibility of political influence and pressure on such decisions. The study hypothesizes that state governments will have stronger influence in enterprises that are located in assembly constituencies that are run by the same party as that which is in power at the state. However, the presence of soft budget constraints captured by subsidies need to be accounted for while examining financial contributions.

To examine if there is any systematic difference between SLPEs that contribute and that don’t contribute to the exchequer’s funds we divide SLPEs into two categories on the basis of whether they made a contribution or not in a specific year. Select indicators of SLPEs that contributed and that did not contribute are then compared using mean tests in Table 5.

|  |  |  |  |
| --- | --- | --- | --- |
| **Characteristic** | **SLPEs that Contributed** | **Enterprises that did not** | **Difference** |
| Political alignment | 0.581 | 0.500 | 0.080\*\*\* |
| State ideology | 2.872 | 2.876 | -0.059 |
| Profitability | -0.003 | -0.08 | 0.085\*\*\* |
| Debt equity ratio | 7.262 | 84.892 | -77.629\*\* |
| Subsidies | 8.094 | 7.972 | 0.121\*\*\* |
| Firm age | 31.69 | 26.22 | 5.471\*\*\* |
| Firm size | 8.83 | 8.37 | 0.459\*\*\* |
| Employees | 6.108 | 4.538 | 1.569\*\*\* |
| **Note:** The table presents mean tests between enterprises that contributed to the states’ exchequer and enterprises that did not  **Source:** Calculated from the dataset. | | | |

**Table 5: Mean differences between SLPEs that contributed and that did not**

According to Table 5, enterprises that contributed to the state’s exchequer, on average, were located in constituencies that were politically better aligned with the state government. Further, whether an enterprise is located in a state that is governed by a right or left wing party has no significant impact on the contributions made. SLPEs that contributed were different in certain firm specific internal factors from the SLPEs that did not contribute. Specifically, enterprises that contributed were more profitable, more experienced, larger in size with higher employee strength, higher subsidy and lower debt as compared to enterprises that did not contribute. As a next step, we use econometric methods to examine the relationship. In Table 6 we provide a basic profile of the variables that are used in the analysis.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Mean** | **Standard Deviation** | **Minimum** | **Maximum** |
| ***Contribution related variables*** | | | |  |
| Gross Contribution | 8.94 | 0.49 | 0 | 13.51 |
| Subsidies | 1.77 | 3.25 | 0 | 13.39 |
| Net Contribution | 4.71 | 4.54 | 0 | 13.51 |
| Relative contribution | 0.52 | 0.49 | 0 | 1 |
| ***Political variables*** | |  |  |  |
| Political alignment | 0.54 | 0.49 | 0 | 1 |
| Ideology difference | 0.03 | 1.35 | -2.07 | 2.31 |
| Ideology of the state | 2.84 | 1.34 | 1 | 5 |
| ***Firm specific controls*** | | |  |  |
| Firm age | 29.07 | 16.26 | 0 | 97 |
| Firm size | 8.61 | 1.44 | 0 | 14.15 |
| Profitability | -0.04 | 0.51 | -10.42 | 1.89 |
| Accumulated losses | 3.73 | 4.39 | 0 | 14.45 |
| Employee size | 5.35 | 2.55 | 0 | 11.66 |
| Source: Calculated from the dataset | | | | |

**Table 6: Summary statistics of variables**

**5. Econometric Methodology**

The study takes a multidimensional approach towards capturing contributions using the econometric methodology by employing both absolute and relative perspectives in understanding contributions made by SLPEs. While examining the absolute perspective, three dependent variables are used: (i) gross contributions made by SLPEs to the state exchequer funds (ii) subsidies received by SLPEs from the state government and (iii) net contributions made by SLPEs to the state exchequer funds (gross contribution – subsidies). Additionally, I use the share of contributions made to state in the total contribution (state contribution and centre contribution) made by each SLPE as a relative measure. For each of the four measures of financial contributions the study examines two decisions for each SLPE- the decision of whether to contribute or not and the decision of how much to contribute.

**5.1 To contribute or not?**

To examine the effect of political alignment on whether an SLPE makes a contribution to the state’s exchequer’s funds the study employs a probit model with industry, year and state fixed effects. Let *Pidst* denote whether the *i*th SLPE in the *d*th industry and *s*th state makes a contribution to the state or not in year *t.* The model can be specified as

 …………………………… (1)

Where *Xidst* denote whether the *i*th SLPE in the *d*th industry and *s*th state is politically aligned the state or not in year *t.*are the state level, industry level and year level fixed effects.

**5.2. How much to contribute?**

To test the effect of political alignment on the amount of SLPE contribution made by the enterprises we use a fixed effects regression. The model specification is given by

 ………………………………. (2)

Where *Yidst* captures the contribution made by the *i*th SLPE in the *d*th industry and *s*th state in year *t.* This model controls for industry, year and state fixed effects.

Further, since the data on contribution to the state funds is skewed in favor of zeros, fitting a normal distribution may be misleading. Hence, the study employs a tobit regression which allows censoring at zero. The model specification is same as (2) but the dependent variable is modeled assuming a lower limit of censoring at zero. This is because 48% of the dependent variable observation has a zero value- indicating no contribution made by an SLPE in a particular year.

As an extension, the study also attempts to capture contribution using a two part model. The underlying assumption is that the enterprise first decides on whether to contribute or not. Only after conditioning on making a contribution, the enterprise decides on how much to contribute. The decision is captured in two stages-

1. Stage I:A probit model (eqn (1)) that captures whether an SLPE makes a contribution or not
2. Stage II: Conditioned on contributing (*Pidst*= 1), the second stage models amount of contribution (eqn (2)).

To get consistent estimates, the standard errors are corrected in the second stage.[[13]](#footnote-13) The three models considered for the extent of contribution are different models and so the absolute coefficients might not be directly comparable. However, the use of different specifications enables us to validate the qualitative (direction and significance) aspect of the influence of the political variables on the dependent variables.

**6. Results**

**6.1. Absolute contribution**

*Gross contribution*

We start with the results of the regression models where gross contributions made to the state government are used as the dependent variables. Four model specifications are used. Probit model captures whether an SLPE contributes to the state’s funds or not. Next, to capture amount contributed the study uses fixed effects, tobit and a two stage model. The results of all the four models have been presented in Table 7.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Gross Contribution** | **Probit** | **Fixed Effects** | **Tobit** | **Two part model** |
| ***Political variables*** | | | | |
| Political alignment | 0.250\*\*\* | 0.038\*\*\* | 0.038\*\*\* | 0.148\*\*\* |
|  | (0.064) | (0.021) | (0.020) | (0.040) |
| Ideology difference | -0.588\*\*\* | -3.267\*\*\* | -3.267\*\*\* | -0.037\*\* |
|  | (0.125) | (0.043) | (0.043) | (0.016) |
| Ideology of the state | 0.616\*\*\* | 3.266\*\*\* | 3.267\*\*\* | 0.023\*\*\* |
|  | (0.120) | (0.043) | (0.043) | (0.009) |
| ***Firm specific factors*** | | | | |
| Firm age | 0.001 | 0.001 | 0.002 | 0.001 |
|  | (0.002) | (0.008) | (0.001) | (0.002) |
| Firm size | 0.068\*\* | 0.049\*\*\* | 0.049\*\*\* | 0.067\*\*\* |
|  | (0.033) | (0.014) | (0.013) | (0.018) |
| Firm profitability | 0.388\*\*\* | 0.004 | 0.004 | 0.121 |
|  | (0.144) | (0.012) | (0.012) | (0.122) |
| Accumulated losses | -0.020\*\*\* | -0.005\* | -0.005\* | -0.024\*\*\* |
|  | (0.008) | (0.003) | (0.003) | (0.002) |
| Employees | 0.148\*\*\* | 0.038\*\*\* | 0.038\*\*\* | 0.058\*\*\* |
|  | (0.016) | (0.007) | (0.007) | (0.009) |
| ***Controls*** | | | | |
| Industry dummies | Yes | Yes | Yes | Yes |
| State dummies | Yes | Yes | Yes | Yes |
| Year dummies | Yes | Yes | Yes | Yes |
| No. of observations | 1799 | 1799 | 1799 | 940 |
| R squared |  | 0.1454 |  | 0.2024 |
| Note: The table presents the effect of political alignment between the state government and the party at the assembly constituency level on the gross contributions made by SLPEs to the respective state governments. Model I is a probit model with the dependent variable taking the value one if an SLPE makes a contribution to the state exchequers funds and zero otherwise. Model II is a fixed effects model with contributions made to the state exchequer’s funds as the dependent variable. Model III is a tobit model with the same dependent variable as that used in Model II. Model IV is a two part model where in the first part a probit model is run and conditioned on contributing the second part examines the effect of political alignment on the contributions made. Standard errors are reported in parentheses. \*, \*\* and \*\*\* indicate significance at 10, 5 and 1 percent respectively. | | | | |

**Table 7: Effect of political alignment on gross SLPE Contribution**

Table 7 suggests that political alignment between the state government and the assembly constituency where the enterprise is located has a positive effect on the contributions made by the enterprises to the state’s exchequer’s funds. SLPEs located in assembly constituencies that are politically aligned with the state government choose to contribute and in larger amounts as compared to SLPEs located in assembly constituencies that are not politically aligned with the state. Further, ideology similarity between the centre and the state governments also lead to more frequent and higher contributions being made by the SLPES in that state. Similarly, SLPEs located in states that are more left winged contribute more than the SLPEs located in right winged states. Firm specific factors play a very important role in influencing contributions by SLPEs. Large firm size and low accumulated losses lead to higher incidence and larger amounts of contributions. All specifications have controlled for year, industry and state fixed effects.

*Subsidies made by the state government*

The results from the models examining factors affecting subsidies provided by the state governments to SLPEs have been presented in Table 8.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Total Subsidies** | **Probit** | **Fixed Effects** | **Tobit** | **Two part model** |
| ***Political variables*** | | | | |
| Political alignment | 0.066 | 0.057 | 0.437 | 0.002 |
|  | (0.068) | (0.147) | (0.551) | (0.229) |
| Ideology difference | -0.093\*\*\* | -0.325\*\*\* | -0.927\*\*\* | -0.435\*\*\* |
|  | (0.028) | (0.060) | (0.226) | (0.094) |
| Ideology of the state | -1.365\*\*\* | -1.754\*\*\* | -13.417\*\*\* | 0.166 |
|  | (0.284) | (0.749) | (2.309) | (0.126) |
| ***Firm specific factors*** | | | | |
| Firm age | -0.004\*\* | -0.016\*\*\* | -0.043\*\*\* | -0.016\*\* |
|  | (0.002) | (0.004) | (0.017) | (0.008) |
| Firm size | 0.080\*\* | 0.391\*\*\* | 0.922\*\*\* | 0.460\*\*\* |
|  | (0.034) | (0.101) | (0.285) | (0.091) |
| Firm profitability | 0.108\* | 0.115 | 0.807 | -1.178\*\*\* |
|  | (0.063) | (0.085) | (0.546) | (0.054) |
| Accumulated losses | 0.011\* | 0.048\*\* | 0.122\* | 0.047\*\* |
|  | (0.006) | (0.021) | (0.067) | (0.028) |
| Employees | 0.048\*\*\* | 0.084\*\* | 0.382\*\*\* | 0.058\*\*\* |
|  | (0.016) | (0.043) | (0.140) | (0.009) |
| ***Controls*** | | | | |
| Industry dummies | Yes | Yes | Yes | Yes |
| State dummies | Yes | Yes | Yes | Yes |
| Year dummies | Yes | Yes | Yes | Yes |
| No. of observations | 1799 | 1799 | 1799 | 474 |
| R squared |  | 0.30 |  | 0.35 |
| Note: The table presents the effect of political alignment between the state government and the party at the assembly constituency level on the subsidies given to SLPEs by the respective state governments. Model I is a probit model with the dependent variable taking the value one if an SLPE gets a subsidy from the state government and zero otherwise. Model II is a fixed effects model with subsidies received by the SLPEs as the dependent variable. Model III is a tobit model with the same dependent variable as that used in Model II. Model IV is a two part model where in the first part a probit model is run and conditioned on getting a subsidy the second part examines the effect of political alignment on the amount of subsidy received. Standard errors are reported in parentheses. \*, \*\* and \*\*\* indicate significance at 10, 5 and 1 percent respectively. | | | | |

**Table 8: Effect of political alignment on the subsidies received by SLPEs**

Table 8 suggests that subsidies received by the SLPEs from the state governments are not driven by the same political factors as the gross contributions made by the SLPEs to the state exchequer funds. Specifically, the most surprising result is that subsidies to SLPEs is not driven by political alignment between the state government and the assembly constituency where the enterprise is located. This result is robust across all model specifications. This suggests that the overall poor situation of SLPEs is a burden on the state governments that the state governments do not have a scope of discriminating between SLPEs for funds. An interesting result is the relationship between ideology difference between the centre and the state government with subsidies received by SLPEs. It is seen that if the state is ideologically similar to the central government, the state gives higher subsidies to its SLPEs. This may be explained with the help of soft budget constraints in the context of a federal political structure. With states being aligned with the Centre, it gets larger funds in the form of grants, loans and subsidies from the central government. With readily available sufficient funds to the state governments, they can utilize a part of it to give subsidies to the SLPEs in its state. In terms of firm specific factors, less experience and large size leads to getting higher subsidies from the state governments. Further, large accumulated losses drive higher subsidies being given by the state government to the SLPEs.

*Net Contributions to the exchequer*

To account for the two way transfer of funds between the state governments and the SLPEs, the study utilizes the net contributions received by the exchequers from each of the SLPEs. It is the difference between the gross contributions and the subsidies calculated for each SLPE. The results of the models using net contributions of SLPEs as the dependent variables have been presented in Table 9.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Net Contribution** | **Probit** | **Fixed Effects** | **Tobit** | **Two part model** |
| ***Political variables*** | | | | |
| Political alignment | 0.027 | 0.001 | 0.001 | 0.002 |
|  | (0.066) | (0.001) | (0.001) | (0.005) |
| Ideology difference | -0.558\*\*\* | -0.191\*\*\* | -0.191\*\*\* | -0.004\*\* |
|  | (0.117) | (0.002) | (0.002) | (0.002) |
| Ideology of the state | 0.521\*\*\* | 0.192\*\*\* | 0.192\*\*\* | 0.002 |
|  | (0.112) | (0.002) | (0.002) | (0.002) |
| ***Firm specific factors*** | | | | |
| Firm age | 0.015\*\*\* | 0.001 | 0.001 | 0.001 |
|  | (0.002) | (0.001) | (0.001) | (0.001) |
| Firm size | 0.007 | -0.002\*\*\* | -0.002\*\*\* | -0.004\*\* |
|  | (0.034) | (0.001) | (0.001) | (0.002) |
| Firm profitability | 0.438\*\*\* | 0.001 | 0.001 | 0.013 |
|  | (0.168) | (0.001) | (0.001) | (0.016) |
| Accumulated losses | -0.020\*\*\* | -0.007\*\*\* | -0.007\*\*\* | 0.047\*\* |
|  | (0.008) | (0.003) | (0.003) | (0.028) |
| Employees | 0.135\*\*\* | 0.003\*\*\* | 0.003\*\*\* | 0.006\*\*\* |
|  | 0.017) | (0.001) | (0.001) | (0.001) |
| ***Controls*** | | | | |
| Industry dummies | Yes | Yes | Yes | Yes |
| State dummies | Yes | Yes | Yes | Yes |
| Year dummies | Yes | Yes | Yes | Yes |
| No. of observations | 1799 | 1799 | 1799 | 474 |
| R squared |  | 0.30 |  | 0.35 |
| Note: The table presents the effect of political alignment between the state government and the party at the assembly constituency level on the net contributions made by SLPEs to the respective state governments. Model I is a probit model with the dependent variable taking the value one if an SLPE makes a net contribution to the state exchequers funds and zero otherwise. Model II is a fixed effects model with net contributions made to the state exchequer’s funds as the dependent variable. Model III is a tobit model with the same dependent variable as that used in Model II. Model IV is a two part model where in the first part a probit model is run and conditioned on contributing the second part examines the effect of political alignment on the net contributions made. Standard errors are reported in parentheses. \*, \*\* and \*\*\* indicate significance at 10, 5 and 1 percent respectively. | | | | |

**Table 9: Effect of political alignment on the net contributions made by SLPEs**

According to Table 9, political alignment between the assembly constituencies and state governments has no effect on the net contributions made by SLPEs. In other words, the effect of political alignment between the state government and the assembly constituency vanishes as we move from gross contribution to net contribution made to the state governments. This suggests that although enterprises located in assembly constituencies make higher contributions to the state governments, the transfer of subsidies compensates the contributions. Further, ideology difference between the centre and the state has a significant effect on the contribution made by SLPEs. Ideology similarity between the centre and the state government leads to higher net contribution made by the SLPE. This is in line with the effect of ideology difference on gross contribution suggesting that the effect of ideology difference on gross contribution is stronger than the effect of ideology difference on subsidies. Among firm specific factors, it is observed that small size and low accumulated losses drive higher contributions made by SLPEs to the state governments. To summarize, the channel of firm specific factors influencing net contributions made to SLPEs is driven by subsidies more than the gross contribution.

The overall findings of absolute contributions made by SLPEs to state governments using the three dependent variables suggest that the effects of most political and firm specific factors are driven mostly by subsidies. An exception is ideology difference effect on net contribution which is strongly driven by gross contribution by SLPEs. This may be because despite being owned by the state government, the centre has some role to play in SLPEs as well. For instance, employment features in the concurrent (state and centre) list of items. The role of central government in SLPEs was also highlighted when the Supreme Court of India had dismissed the allocation of 153 coal blocks allocated to state PSUs in 2014 since no state government or PSUs of the state governments are eligible for mining coal for commercial use.[[14]](#footnote-14) Thus ideology similarity between the centre and the state may act as a positive signal for SLPEs to make frequent and larger contributions to the states’ exchequer funds.

**6.2. Relative contributions made to state exchequer funds**

The results of the regressions of various factors influencing the share of contributions made by the SLPEs to the state government vis-à-vis the centre government is provided in Table 10.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Contribution share to state** | **Probit** | **Fixed Effects** | **Tobit** | **Two part model** |
| ***Political variables*** | | | | |
| Political alignment | 0.240\*\*\* | 0.051\*\*\* | 0.132\*\*\* | 0.172\*\*\* |
|  | (0.067) | (0.019) | (0.045) | (0.037) |
| Ideology difference | 0.884\*\*\* | 0.127\*\*\* | 0.608\*\*\* | 0.172\*\*\* |
|  | (0.165) | (0.045) | (0.099) | (0.039) |
| Ideology of the state | -0.850\*\*\* | -0.132\*\*\* | -0.608\*\*\* | -0.004 |
|  | (0.161) | (0.043) | (0.099) | (0.079) |
| ***Firm specific factors*** | | | | |
| Firm age | 0.013\*\*\* | 0.001 | 0.004\*\*\* | -0.002\*\* |
|  | (0.003) | (0.001) | (0.001) | (0.001) |
| Firm size | 0.054\* | 0.003 | 0.004 | -0.026\*\* |
|  | (0.032) | (0.009) | (0.021) | (0.011) |
| Firm profitability | 0.394\*\*\* | 0.049\*\*\* | 0.292\*\*\* | -0.141\*\* |
|  | (0.139) | (0.011) | (0.095) | (0.074) |
| Accumulated losses | -0.019\*\*\* | -0.009\*\*\* | -0.016\*\*\* | 0.024\*\*\* |
|  | (0.008) | (0.002) | (0.005) | (0.002) |
| Employees | 0.150\*\*\* | 0.037\*\*\* | 0.098\*\*\* | 0.013\*\*\* |
|  | (0.015) | (0.004) | (0.010) | (0.005) |
| ***Controls*** | | | | |
| Industry dummies | Yes | Yes | Yes | Yes |
| State dummies | Yes | Yes | Yes | Yes |
| Year dummies | Yes | Yes | Yes | Yes |
| No. of observations | 1799 | 1799 | 1799 | 941 |
| R squared |  | 0.38 |  | 0.21 |
| Note: The table presents the effect of political alignment between the state government and the party at the assembly constituency level on the relative contributions made by SLPEs to the respective state governments. Model I is a probit model with the dependent variable taking the value one if an SLPE makes a contribution to the state exchequers funds and zero otherwise. Model II is a fixed effects model with net contributions made to the state exchequer’s funds as the dependent variable. Model III is a tobit model with the same dependent variable as that used in Model II. Model IV is a two part model where in the first part a probit model is run and conditioned on contributing the second part examines the effect of political alignment on the relative contributions made. Standard errors are reported in parentheses. \*, \*\* and \*\*\* indicate significance at 10, 5 and 1 percent respectively. | | | | |

**Table 10: Effect of political alignment on relative contributions made to state government**

Table 10 suggests that the effect of political alignment is strong only when the relative contributions made is considered. Specifically, political alignment between the state government and the assembly constituency where the enterprise is located leads to higher contributions made to the state government vis-à-vis the centre. Further, ideology difference between the centre and the state government behaves as expected. If the centre and state are ideologically dissimilar, the state’s get a higher share of contribution from the SLPEs vis-à-vis the centre. Finally, firm specific factors suggest that larger size and low accumulated losses lead to higher relative contributions to states’ exchequer funds.[[15]](#footnote-15)

**7. Conclusion**

The current study combines financial data on state level public sector enterprises with electoral data to test if political alignment at the state- constituency level has an impact on SLPE contribution to the state’s exchequer funds. Using select econometric methods, the results show limited influence of political alignment on the contribution made.

Existing literature on political alignment has focused on transfers from the centre to the state (state to the local government). The current study sheds light on the benefit that the higher level government may accrue from entities in the constituencies that are run by the same party. While doing so, the study also controls for the ideology differences between the state government and the centre. The study reiterates the presence of political influence in the decisions and functioning of public sector enterprises.

Simultaneously, the study also contributes to a parallel literature- the scanty literature on state level public sector enterprises in India. The study presses the need for policies aimed at better performance, improved governance and reduced political influence in state level public sector enterprises. Based on the financial situation of each SLPE, policies such as memorandum of understanding, disinvestment or closure may be chosen. This will induce financial autonomy, increased competition and less reliance on state support for funds. This may also result in a more widespread coverage of enterprises making timely payments to the state’s funds.

The study also brings the lack of financial discipline in SLPEs in India to the limelight. With limited number of SLPEs making abysmally low contributions to the government’s exchequers, the SLPEs are not acting as pioneers of social development. Further, with huge subsidies being provided by the government, these enterprises impose a huge burden on the government. The study emphasizes the need for a careful scrutiny of soft budget constraints so that greater financial discipline can be restored in SLPEs in India.

There are some limitations of the study. The unavailability of data limits the analysis to three years of data. Secondly, a theoretical model examining soft budget constraints and financial contributions made by state owned enterprises in a federal situation requires some attention. This is part of future research.

**References**

Arulampalam, W., Dasgupta, S., Dhillon, A., and Dutta, B (2009). Electoral goals and center-state transfers: A theoretical model and empirical evidence from India. Journal of Development Economics, 88(1), pp. 103-119.

Asher, S. and Novosad, P. (2016). Politicians and Local Economic Growth: Evidence from India. Available at SSRN: https://ssrn.com/abstract=2811187 or <http://dx.doi.org/10.2139/ssrn.2811187>

Chhibber, P. and Nooruddin, I. (2004). Do party systems count? The number of parties and government performance in the indian states. Comparative Political Studies, 37(2):152–187.

Cole, S. (2009). Fixing Market Failures or Fixing Elections? Agricultural Credit in India. American Economic Journal: Applied Economics, 1(1), 219-250.

Dash, B. B. and Raja, A. V. (2014). Do political determinants affect revenue collections? a study of the indian states. International Review of Economics, 3(61):253–278.

Dey, Subhasish and Sen, Kunal, Is Partisan Alignment Electorally Rewarding? Evidence from Village Council Elections in India.IZA Discussion Paper No. 9994. Available at SSRN: <https://ssrn.com/abstract=2800491>

Khemani, Stuti. 2002. Federal politics and budget deficits: evidence from the states of India. Policy, Research working paper ; WPS 2915. Washington, DC: World Bank.

Khemani, S. (2003).Partisan Politics and Intergovernmental Transfers in India. Working Paper, 3016, Development Research Group, The World Bank.

Kumar, N. (2014). Political Interference and Crowding Out in Bank Lending (May 9, 2016). Available at SSRN: https://ssrn.com/abstract=2686773 or <http://dx.doi.org/10.2139/ssrn.2686773>

Ministry of Finance (2010).In house study of State Level Public Sector Undertaking. Source: <http://fincomindia.nic.in/writereaddata/html_en_files/oldcommission_html/fincom13/discussion/report26.pdf>

Rodden, J. and Wilkinson, S. (2004). The shifting political economy of redistribution in the Indian federation.Working paper.Available at <http://hdl.handle.net/1721.1/18135>.

Rao, M., & Singh, N. (2007).The Political Economy of India's Fiscal Federal System and Its Reform.Publius, 37(1), 26-44.

Singh, N., & Garima Vasishtha. (2004). Patterns in Centre-State Fiscal Transfers: An Illustrative Analysis. Economic and Political Weekly, 39(45), 4897-4903.

1. Assistant Professor, Flat 2A, Centre for Development Studies, P.O. Prasanth Nagar, Ulloor Junction, Trivandrum- 695011. Phone: +91-8137879873 [↑](#footnote-ref-1)
2. Source: <http://www.bbc.com/news/world-south-asia-13692575> [↑](#footnote-ref-2)
3. Source: <http://archive.indianexpress.com/news/all-political-parties-are-corrupt-believe-86---indians-transparency-international-survey/1139640/> [↑](#footnote-ref-3)
4. If it steps down the party with the second highest number of votes is given a chance to form the government and so on. [↑](#footnote-ref-4)
5. We have to track elections for four years before the period of analysis (2007-2009). For instance, if state A has its elections in 2008, then the political variables for the year 2007 will be the variables relevant to the previous government that came to power at most as early as 2003. Hence, we collect political data for all state level elections between 2003 and 2009. [↑](#footnote-ref-5)
6. Kumar (2015) focuses on the private sector. However, the distortion will not be less for public sector enterprises. The double agent problem in state owned enterprises (citizens are owners who select the government -agent 1 which in turn appoints the manager-agent 2) makes these enterprises more susceptible to political interference and external business environment. [↑](#footnote-ref-6)
7. Calculated from the dataset [↑](#footnote-ref-7)
8. Source: <http://indiatoday.intoday.in/story/india-psu-exchequer-manmohan-singh-investment-special-dividend/1/225955.html> [↑](#footnote-ref-8)
9. Source: <http://indianexpress.com/article/business/business-others/finmin-asks-central-psus-to-pay-30-dividend-issue-bonus-shares/> [↑](#footnote-ref-9)
10. Source: <http://www.odisha.gov.in/finance/pdf/2016/3980.pdf> [↑](#footnote-ref-10)
11. Source: <http://www.livemint.com/Industry/S9m31VoY9xzEN6h1qieuwO/16-of-22-public-sector-banks-skip-dividend-in-FY16-on-mounti.html> [↑](#footnote-ref-11)
12. Source: <http://www.financialexpress.com/opinion/why-narendra-modi-govt-has-to-be-careful-about-reviving-psus/269549/> [↑](#footnote-ref-12)
13. STATA 12 is used for the analysis. The command tpm helps in obtaining the two part model results with corrected standard errors [↑](#footnote-ref-13)
14. Source: http://www.telegraphindia.com/1140826/jsp/nation/story\_18761900.jsp#.WD56urJ961s [↑](#footnote-ref-14)
15. Since the data on subsidies provided by the centre to SLPEs is not given, I do not include subsidies in the analysis of relative contributions. [↑](#footnote-ref-15)