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Decentralisation and Political Business Cycle: Fund Utilization of the MP-LADS in India

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Abstract

The Members of Parliament Local Area Development Scheme (MP-LADS) came in effect in 1993, closely followed by the 73rd Amendment to the Constitution, along with the wave of democratic decentralisation process in India. The MP-LADS allows for a fixed amount, non-lapsable Rs. 2 crores per year for each Member of the Parliament (MP), at the discretion of the MPs to carry out developmental works of capital nature in their respective constituencies. In last 14 years, more than 8 times of the annual expenditure on higher education by the central government has been spent on the MP-LADS. This paper examines whether there is any political business cycle in spending funds under the MP-LADS, its extent, and determinants. We find that there are political business cycles in spending by the MPs, and its extent varies across Lok Sabha constituencies. The extent of political business cycle is lower in case of leftist MPs compared to that in case of centrist and rightist MPs. Higher degree of competition faced in the last election by an MP induces him/her to misuse the scheme more severely, and younger MPs seems to be less inclined to generate political business cycle in spending. We also find that higher level of awareness of general citizens and better law and order conditions in states restricts MPs from misusing funds to gain political mileage.

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1. Introduction:

The Members of Parliament (MPs) of India argued that their constituents often approach them for taking up small developmental works of capital nature and they should be made empowered to carry out such works in their respective constituencies. In response to this demand the Members of Parliament Local Area Development Scheme (MP-LADS), a plan scheme fully funded by the central government, was introduced in December 1993, soon after the fundamental constitutional reform towards decentralisation took place. It is an outcome of the process of decentralisation in India. The purpose of this scheme was to delegate authority and empower the MPs to recommend developmental works in their respective constituencies with emphasis on creation of durable community assets based on locally felt needs. It is believed that the MP-LADS has the potential to provide an effective channel for citizens to be heard, and being closely connected to general citizens the MPs can respond to local needs efficiently through this scheme. Along with the Lok Sabha MPs, the Rajya Sabha MPs are also entitled to take advantage of the MP-LADS in order to respond to locally felt needs.¹

In 1993-94, when the scheme was launched, an amount of Rs. 5 lakhs per MP was allotted, which became Rs. 1 crore per annum from 1994-95 per MP constituency. This was further increased to Rs. 2 crores per annum per MP from 1998-99. Since then approximately Rs. 1590 crores is being allotted to the MPs every year under the MP-LADS. Though the fund under the MP-LADS is released biannually, the scheme has the flexibility in the sense that any unspent balance of previous year(s) is non-lapsable. This is an important feature of the MP-LADS. Total Rs. 17625.18 crores has been made available to MPs by the central government under this scheme in last 14 years, which is more than 8 times of the expenditure (plan and non-plan) on higher education by the central government in 2006-07. Given this backdrop, it is important to carefully study the manner of utilization of funds under the MP-LADS. On going debates on issues of decentralisation together with the possibility of misuse of the MP-LADS to gain political

¹Lok Sabha Members can recommend works for their respective constituencies. Elected Members of Rajya Sabha can recommend works for implementation in one or more districts as they may choose in the State of their election. Nominated Members of Lok Sabha and Rajya Sabha can recommend works for implementation in one or more districts anywhere in the country.

mileage, since the MPs are likely to be guided by political motives, further justifies the importance of this study. In this paper we attempt to answer the following questions. Is there any political business cycle in spending funds available under the MP-LADS? Do political ideologies of the MPs play any role in fund utilisation? Are younger MPs better than older MPs? Is there any relation between educational attainments of the MPs and their performances? Does popularity of the MPs' matter? Is there any impact of awareness of citizens, law and order conditions in states, and existing infrastructural facilities in states on fund utilisation?

In India, the process of democratic decentralisation was instigated around the same time when the major program of economic reform was launched. The fundamental constitutional reform in India – 73rd and 74th Amendments to the Constitution in 1993 – was the major breakthrough towards decentralisation, which created legal basis for local self-rule. The core of the motivation to shift from the centralised system to decentralised institutional framework came from the understanding that decentralisation brings decision-making closer to the people and therefore yields programmes and services that better address local needs.

Decentralised governance structure has emerged as the dominant trend all around the world during the last two decades. Due to many failures of centralised states, decentralisation is believed to be the appropriate institutional framework to ensure a range of desired economic and social outcomes: more transparent system of functioning, more responsive government, higher level of efficiency, high growth of the economy, development of states and its local areas, local cultural and political autonomy, etc. Decentralisation may be considered in terms of (a) diffusion, delegation, and devolution, (b) fiscal, political, and administrative decentralisation (Kumar 2006). According to the World Bank's estimates in 1998, 63 out of 75 developing and transitional countries with more than 5 millions populations had embarked on a process of political devolution (Crook and Manor 1998).

Policy makers and academicians have put forward many justifications in favour of decentralisation. Ample success stories of decentralisation across the globe also have been documented in the literature. For example, Qian and Roland (1998) document that decentralisation of information and authority and inter-jurisdictional competition have acted as commitment devices on the part of the central or provincial government to provide market incentives in promoting local business development in China; the phenomenal industrial growth in last two decades in China can be attributed to decentralised institutional framework (Bardhan 2002); increased decentralisation has led to better delivery of health and education services in many developing countries including India (Mahal, Srivastava, and Sanan 2000), Bolivia (Faguet 2001) and Brazil (Santos 1998); there have been modest gains in targeting efficiency and cost-effectiveness of targeted social assistance program following decentralisation in Albania (Alderman 1998); analysis of primary data of households and government officials at municipal and provincial levels in the Philippines suggests that decentralisation may improve the quality of information used in public investment decisions (Azfar *et al* 2000); decentralisation seems to have negative impact on corruption (Gurgur and Shah 2005, a study based on data of 30 developing and industrial countries); decentralisation is found to have positive effects on quality and cost-effectiveness of infrastructure projects in many countries (World Development Report 1994 on infrastructure); to name a few. However, these arguments and evidences represent only the one side of the story.

There is flip side of decentralisation as well. There are many empirical evidences and economic theory indicating that decentralisation may lead to higher degree of corruption and inefficiency, and less accountability (Rose-Ackerman 1997, Tanzi 2000). While local governments are likely to have better information and accountability pressure, local elites and interest groups may more easily capture them (Bardhan 2002, Blair 2000, Dreze and Sen 1996). Shirk (1993) argues that local officials often use their financial authority under decentralisation to build political machines, collecting rents in exchange of selective benefits and patronage distribution, and federalism may not always have been market-preserving in China.

Manipulation of the economy by politicians to gain electoral advantage is a longstanding phenomenon in many democracies across the world. In his pioneering work, Nordhaus (1975) developed a model of political business cycles, where myopic voters get influenced by pre-election boom caused by expansionary fiscal and monetary policies and support the incumbent party with favourable votes. Following Nordhaus (1975), the literature on political business cycle has been enriched by many studies. However, Nordhaus's model came under severe criticism, after rational expectations revolutions, due to its presumption that voters' expectations are formed adaptively. In their seminal paper, Rogoff and Sibert (1988) rehabilitated the political business cycle model in rational expectations framework. They have shown that, in equilibrium, incumbent politicians increase government spending in pre-election periods in an effort to signal competence, resulting in a political business cycle in spending. Considering a similar framework of analysis, Rogoff (1990) has shown that incumbent politicians may strategically manipulate the composition of expenditures in pre-electoral years, by favouring items that are more visible to the electorate. The main prediction that incumbent politicians manipulate the economy to gain electoral advantage has got many empirical supports. Shi and Svensson (2002) find that on average fiscal deficit increases by 1% of GDP in election years with a much larger effect in developing countries. Alesina et al. (1997) find the existence of political fiscal cycle in 13 OECD countries, from 1961 to 1993. Evidence of political business cycle in spending by local governments is also found by Blais and Nadeau (1992) in Canada, Akhmedov and Zhuravskaya (2004) in Russia, Germany see Seitz (2000) in Germany, Petterson-Lidbom (2001) in Sweden, to name a few. These empirical evidences indicate that decentralisation may raise the possibility of political business cycle in spending by the incumbent politicians at sub-national levels in general. Politicians may tend to exploit their control over funds for their personal benefits. Nexus between local governments and local elites and interest groups might also play significant role in selection and implementation of projects. Some evidences in favour of this argument are found in case of the MP-LADS also (PEO 2001).

Two reports by the Comptroller Auditor General of India (CAG Report 1993-97 and 1997-2000) have pointed out underutilization of funds and inadequate implementation of the scheme. Based on survey of selected authoritative bodies, MPs, and potential beneficiaries of the scheme, covering the period from 1994-95 to 1998-99, PEO (2001) reveals that in more than 25% cases MPs have not considered local needs while recommending works. It also indicates that local politics seems to have played significant role in utilization of MP-LADS. Similar evidence is found in case of MLA-ADS in Madhya Pradesh (Singh *et al* 2003). PEO (2001) also documents that the MP-LADS suffers from financial mismanagement and consequent inflated reporting of the amount spent by the MPs. Most of the works are done through contractors who enjoy the political patronage of the MP, which is not permitted according to the prescribed guideline; and the quality of the work done under the MP-LADS is not up to the mark in many cases. These are important findings to understand some features of utilization process of the MP-LADS. However, existing studies sidestep the important issue of utilization of the scheme to gain political mileage, and doesn't investigate the possible impacts of factors like political ideology, educational attainment, popularity and age of MPs, awareness of citizens and law and order conditions of states on fund utilization. This paper attempts to fill this gap.

We have analysed state level aggregate and Lok Sabha constituency level data on fund released to Lok Sabha MPs and its expenditure, collected from the Ministry of Statistics and Program Implementation, Government of India. Since, unlike Rajya Sabha MPs, Lok Sabha MPs are directly elected by the citizens of the country, except 2 nominated members out of total 545 members, we have focused on utilization by Lok Sabha MPs in this paper.

Analysis of this paper shows that there is political business cycle in spending funds of MP-LADS. We find that MPs accumulate fund by not spending of about 47% of the allotted amount during the first half of their term, and spend that accumulated amount together with the newly allotted amount during the second half of their term. It implies that MPs utilize the MP-LADS to ensure their re-election.

Econometric analysis of this paper shows that leftist MPs spend more symmetrically over their entire term than centrist and rightist MPs. We also find that younger MPs are less prone to create political business cycle than older MPs. Surprisingly, educational attainments of MPs and their popularity does not seem to have any impact on fund utilization. We also find that degree of awareness of general citizens, law and order conditions of states, and level of infrastructure in states seems to play significant roles in determining the process of utilisation of fund. While awareness of general citizens and law and order conditions of sates have positive impact, level of infrastructure has negative impact on fund utilisation by MPs.

The rest of the paper proceeds as follows. In the next section, we investigate whether there is any political business cycle in spending funds. Section 3 identifies the extent of political business cycle and offers an econometric analysis of impacts of some factors as discussed before on fund utilisation and reports the findings. Section 4 concludes.

2. MP-LADS and Political Business Cycle:

In this section we examine whether there is any political business cycle in spending the money available under the MP-LADS by the 14th Lok Sabha MPs. This analysis is based on state level (cumulative) and constituency level data on fund available under this scheme and expenditure figures, collected from the website of the Ministry of Statistics and Programme Implementation (MoSPI)², Government of India.

Cumulative fund released and expenditure data shows that, during the period from December 1993 to October 2006, total Rs. 11265.18 crores have been made available under the MP-LADS in India, and Rs. 10009.50 have been spent. That is, 88.85% of money available under the MP-LADS has been utilized. This cumulative utilization figure increases to 89.84%, if we consider data till November 2007. There are some variations, though not very high, across states in cumulative fund utilization. Out of 14

² www.mospi.gov.in

major states (Andhra Pradesh, Bihar, Gujarat, Haryana, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Orissa, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh, and West Bengal) under consideration, which encompasses 463 out of 545 MP constituencies, Tamil Nadu ranks the first with 95.64% cumulative utilization and Bihar ranks the last with 82.98% cumulative utilization as on November 30, 2007. See Table 1, which reports state level cumulative utilization of funds available under the MP-LADS by the Lok Sabha MPs. On an average, this cumulative utilization figures appear very encouraging. Based on this observation, one may be very tempted to jump to the conclusion that the MPs are performing quite well as far as the utilization of the MP-LADS is concerned. However, from these cumulative figures it is not possible to understand the dynamics of fund utilization by the MPs over the time span of their term in office, which is very important to draw any such conclusion.

Table 1: Cumulative Fund Utilization by Lok Sabha MPs

States	Till 31. 10. 2006			Till 30.11.2007		
	Amount Available * (Rs. Crore)	Expenditure Incurred# (Rs. Crore)	% Spent ^{\$}	Amount Available * (Rs. Crore)	Expenditure Incurred# (Rs. Crore)	% Spent ^{\$}
Andhra Pradesh	888.41	800.63	90.12	974.72	890.68	91.38
Bihar	812.78	670.86	82.54	880.59	730.71	82.98
Gujarat	542.53	486.05	89.59	585.59	539.13	92.07
Haryana	212.34	187.43	88.27	235.75	206.43	87.56
Karnataka	577.65	524.34	90.77	628.34	568.58	90.49
Kerala	397.18	356.95	89.87	434.29	391.43	90.13
Madhya Pradesh	611.31	564.05	92.27	667.08	623.35	93.44
Maharashtra	976.91	871.64	89.22	1080.65	971.90	89.94
Orissa	439.74	376.22	85.56	479.65	425.73	88.76
Punjab	272.72	239.56	87.84	301.20	274.07	90.99
Rajasthan	529.73	487.53	92.03	587.44	545.93	92.93
Tamil Nadu	832.60	778.22	93.47	922.48	882.24	95.64
Uttar Pradesh	1700.16	1498.28	88.13	1843.82	1617.25	87.71
West Bengal	802.73	708.06	88.21	889.59	792.34	89.07
Total of 14 States	9596.79	8549.82	89.09	10511.19	9459.77	90.00
All India	11265.18	10009.50	88.85	12339.43	11086.18	89.84

Notes:

* Amount Available = (Cumulative Fund Released by Govt. of India Since Inception 1993 + Interest)

Expenditure Incurred = Cumulative Expenditure Since 1993

\$ % Spent = (Expenditure Incurred/Amount Available)*100

As sated before, in 1998-99 the amount allotted per MP in each year under the MP-LADS has been increased to Rs. 2 crores, which is released in two equal installments. Moreover, any unspent amount of money is non-lapsable. That is, the MPs can potentially choose the time to recommend works without sacrificing any amount that is made available to them under the scheme. In other words, they can accumulate fund during some period(s), and spend that accumulated amount of money along with the newly allotted amounts in some other period, during their term in office, of their choice. Two extreme possibilities are: (a) each MP utilizes Rs. 2 crores in each year, and (b) each MP utilizes the entire sum of Rs 10 crores only at the last year of the tenure. We can consider the first possibility as the benchmark, which refers to the uniform allocation of funds over time. In contrast, the second possibility can be referred as the case of ‘severe political business cycle’ in spending, since such behavior of the MPs can only be justified by the motive of ensuring re-election.

Table 2 reports the fund utilization, calculated from the cumulative figures, by the 14th Lok Sabha MPs, who are in office since May 2004. Each of them was entitled to utilize Rs.5 crores during the period from May 2004 to October 2006. Data shows that, on an average, taking all 545 MP constituencies together, only Rs. 2.7 crores have been spent per MP, leaving more than 46% unutilized, during that period. If we extend the time period to November 2007, percentage of utilization falls by 13%, but the average accumulated amount per MP remains at Rs. 2.3 crores. These figures are more or less same, if we consider each state separately. Out of 14 major states, in 10 states the average accumulated amount per MP during the first two and half years of their term of a maximum of five years is more than Rs. 2 crores. There is no decline in the accumulated amount per MP, even after the completion of three and half years of their term.

We get similar picture from the constituency level detailed data on fund utilization, of 217 MP constituencies belonging to 14 major states, by the 14th Lok Sabha MPs till October 2006. This data has been reported by the respective district authorities to the MoPSI, data of remaining constituencies was not available. We find that, on an average,

only 45.6% of allotted amount has been utilized by those 217 MPs. That is, about Rs. 2.7 crores, out of Rs. 5 crores, per MP has remained unspent till October 2006.

Table 2: Fund Utilization by the 14th Lok Sabha MPs

States	Number of MPs	As on 31. 10. 2006		As on 30.11.2007	
		Amount Unspent Per MP * (Rs. Crore)	% Unspent **	Amount Unspent Per MP * (Rs. Crore)	% Unspent **
Andhra Pradesh	42	2.09	41.80	2.00	28.59
Bihar	40	3.55	70.96	3.75	53.53
Gujarat	26	2.17	43.45	1.79	25.53
Haryana	10	2.49	49.82	2.93	41.89
Karnataka	28	1.90	38.08	2.13	30.48
Kerala	20	2.01	40.23	2.14	30.61
Madhya Pradesh	29	1.63	32.59	1.51	21.54
Maharashtra	48	2.19	43.86	2.27	32.37
Orissa	21	3.02	60.50	2.57	36.68
Punjab	13	2.55	51.02	2.09	29.81
Rajasthan	25	1.69	33.77	1.66	23.72
Tamil Nadu	39	1.39	27.89	1.03	14.74
Uttar Pradesh	80	2.52	50.47	2.83	40.46
West Bengal	42	2.25	45.08	2.32	33.08
Total of 14 States	463	2.26	45.23	2.27	32.44
All India	545	2.30	46.08	2.30	32.85

Notes:

* Amount Unspent Per MP = (Unspent Balance/ Number of MPs),

Unspent Balance = Amount Available - Expenditure Incurred

** % Unspent = (Amount Unspent Per MP/ Entitled Amount of Each MP of 14th Lok Sabha)*100

On the other hand, we find that over all cumulative utilization as on November 2006 is 89%. If we deduct the total expenditure by the 14th Lok Sabha MPs till November 2006 from the cumulative expenditure during the period from December 1993 to November 2006 and divide that net amount by the cumulative fund available till April 2004, we will get the measure of fund utilization till the end of the 13th Lok Sabha. Now, if we take a conservative estimate that on an average about Rs. 2 crores out of total Rs 5 crores per MP of the 14th Lok Sabha remained unspent till October 2006. Therefore, the calculated fund utilization at the end of the 13th Lok Sabha is more than 98% (= 100*[10009.5 – 3*545]/[11265.18 – 5*545]). It indicates that MPs tend to make full use of the total

amount of money available during their tenure in office. However, the spending/allocation are not uniform across the years of tenure. The MPs accumulate funds during the first half of their tenure in order to spend more when it is close to the next Lok Sabha election, which is likely to increase the probability of re-election of the existing MPs. We note that we need to have annual fund utilization data of each Lok Sabha separately to depict this feature more clearly. However, such data is not available, which induces us to adopt the method as above. Nonetheless, our analysis offers some evidence of political business cycle in spending by the MPs.

Clearly, the above findings strengthen the argument, by adding an important dimension to it, that the MPs are using the MP-LADS with political motives rather than using it in its true spirit. Strict preference of the MPs for more number of small works over relatively less number of large-scale works of capital nature, of which a large proportion of works are not based on locally felt needs but to please interest groups (PEO 2001), also indicates that MP-LADS is being misused to gain political mileage. PEO (2001) find that, under MP-LADS, more than 46% works got an allocation of less than Rs. 50 thousands, while works with allocation of Rs. 5 lakhs or more constitute only 3.6 per cent of the works. Moreover, the large number of works done/sanctioned comes under the category of Roads & Bridges. Construction works are generally preferred not only for their noticeable character, but also the ample opportunities for political reward through the ceremonies of declaration, inauguration, etc (Singh et al 2003).

3. Political ideology, popularity, citizens' awareness and fund utilization

In the previous section we have analysed the manner of utilization of the MP-LADS's fund by the MPs. It implies that there is political business cycle in spending by the MPs. However, we have not taken into account the differences in characteristics of the MPs and their constituencies. There are 545 Lok Sabha MPs with different political ideologies, levels of education, age, levels of popularity, etc. Also, they represent different constituencies that differ in terms of many parameters, such as levels of general awareness of people, law and order conditions, infrastructure, etc, which are likely to

influence the manner of fund utilization by the MPs. It is likely that there will be differences among the MPs as far as fund utilization is concerned. In other words, it is likely that there will be variations of the extent of political business cycle in spending across Lok Sabha constituencies. To understand the issue clearly, it is important to measure the extent of that variation, if any, and examine the impacts of possible factors responsible for that. This section offers an econometric analysis to examine possible impacts of some characteristics of the MPs and of their respective constituencies, as indicated above, on fund utilization.

Data and variable constructions:

The analysis of this section is based on disaggregated data of 217 Lok Sabha constituencies belonging to 14 major states (Andhra Pradesh, Bihar, Gujarat, Haryana, Karnataka, Kerala, Madhay Pradesh, Maharashtra, Orissa, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh, and west Bengal) in India from May 2004 to October 2006, which is the first one and half years of the 14th Lok Sabha MPs' tenure. The choice of the sample was restricted by the availability of non-cumulative data on constituency wise fund availability and expenditure incurred, which are essential for this analysis.³ The source of this data is the website of the Ministry of Statistics and Programme Implementation, Government of India.

Dependent variable: We define the variable '*Fund Utilization*' as the ratio of the amount of money utilized (spent or sanctioned for works to be done) to the amount of money made available to the MPs during May 2004 to October 2006. The mean and SD of '*Fund Utilization*' are 0.456 and 0.38, respectively. Only 22 out of 217 MPs have utilized fully (*Fund Utilization*=1), whereas for more than 40% of the MPs' '*Fund Utilization*' is less than one-third. That is, some MPs utilize the fund uniformly over time, whereas some others heavily accumulate funds during the first phase of their tenure. It implies that there are wide variations of the extent of political business cycle in spending

³ We note that our sample of observations may not be representative, but this is the best one can get given the unavailability of data. Since the sample consists of 47% of total number of constituencies in 14 major states, the analysis seems to be useful at least to some extent.

across constituencies. We use *'Fund Utilization'* as the dependent variable in our analysis.

Explanatory variables: We consider two sets of explanatory variables in this analysis. The first set of variables captures some personal characteristics of the MPs and the second set of variables capture some features of Lok Sabha constituencies. Below we provide definitions and some descriptive statistics of these variables. It is possible that, other than the variable that we consider in this paper, there are some unobserved factors that might have impact on fund utilization. However, since our focus is to explain the observed variation of the extent of political business cycle in spending, we consider the following explanatory variables.

In order to assess the role of political ideologies of the MPs, we use the variable *'Political Ideology'*. Based on agenda papers of parties and manifestoes released before the 14th Lok Sabha election, we have classified political parties in three groups: leftist, centrist, and rightist.⁴ *'Political Ideology'* takes value -1 if the MP belongs to leftist political party, 0 if the MP belongs to centrist political party, and $+1$ if the MP belongs to rightist political party. In the sample, there are 31 leftist, 140 centrist, and 46 rightist MPs. Average fund utilization, during the period of study from May 2004 to October 2006, by the leftist, centrist, and rightist MPs are 51.7%, 46.1% and 40%, respectively. It seems that leftist MPs are less prone to political business cycle in spending funds as far as the MP-LADS is concerned compared to others.

Popularity of the MPs in their respective constituencies might play some role in fund utilization. We use a proxy of popularity defined as,

$$\text{'Popularity'} = (\% \text{ of total votes received by the MP} - \% \text{ of total votes received by the runner-up candidate}) / (\text{total number of contestants in that constituency}).$$

⁴ We have considered CPI, CPIM, FB, and RSP in the leftist group; AGP, BJD, DMK, INC, JD (S), JMM, KEC, MDMK, MNF, NCP, PMK, RJD, SP, TDP, TRS, BSP, LJSP, RPI (A), SAD and SS in the centrist group; and BJP in the rightist group.

The numerator is the margin of votes, as a percentage of total valid votes, with which the MP has defeated his/her immediate competitor. More popular candidates are likely to win with a greater margin. But, that margin may also depend on the total number of contestants in a particular constituency. We divide the margin by the total number of contestants to normalize the effects of the number of contestants, which gives us a comparable measure of popularity. Data on percentage of votes and number of contestants were collected from the Statistical Reports on General Elections 2004, Election Commissions of India, New Delhi. In the sample, the number of contestants per constituency varies from 3 to 32, with the average at 10.5; and the range of votes' margin is from 0.07% to 61.41% with the average at 112.3%.⁵ 'Popularity' can also be interpreted as a measure of the extent of competition faced by a MP in the last Lok Sabha election, where lower value of 'Popularity' indicates higher degree of competition. Lower level of 'Popularity' may prompt an MP to behave more aggressively during his tenure in office and use all possible means to strengthen his/her position to ensure re-election. Such behavior may propel that MP to rely on possible positives effects of political business cycle in spending on outcomes of election more heavily. So, we expect positive impact of 'Popularity' on 'Fund Utilization'.

We also use years of schooling of the MPs as an explanatory variable to examine the impact of formal education on the manner of fund utilization. None of the MPs, in the sample, has less than 8 years of schooling. The average level of education of the MPs is more than graduation (15.53 years of schooling). To control for age specific factors, we use MPs' age as an explanatory variable. Most of the MPs, 171 out of 217, are more than 45 years old.

It is argued that the extent of effectiveness of any decentralised institutional framework crucially depends on awareness of citizens and law and order conditions of the state (Bardhan 2002). In case of the MP-LADS also these factors are likely to play important roles. It is expected that higher level of awareness of citizens will put more pressure on the MPs to function more effectively and transparently. Poor law and order conditions of

⁵ The mean and S.D of the variable 'Popularity' are 1.52 and 2 respectively.

states might lead to higher degree of corruption, put restraints on project implementations, and create avenues to misuse funds. We consider variables ‘*Awareness of People*’ and ‘*Crimes in States*’ as proxies of awareness of citizens and law and order conditions, respectively. The variable ‘*Awareness of People*’ is defined as 100 minus the percentage of out of school children of the age group 6 – 14 years in the states in 2005. ‘*Crimes in States*’ is equivalent to ranks of states on the basis of rate of total cognizable crimes in the states per thousand populations in 2001. Higher value of the variable ‘*Crimes in States*’ indicates poorer law and order conditions in a State. We expect to have positive impact of ‘*Awareness of People*’ and negative impact of ‘*Crimes in States*’ on ‘*Fund Utilization*’. We have also used the variable ‘*Coverage of Roads in State*’, defined as road length in K.M per 100 squares K.M in the year 2000, to control for the impact of level of existing infrastructure.^{6 7}

Econometric method:

Since the dependent variable ‘*Fund Utilization*’ is a fraction, which takes values in the range [0, 1], and we have observations with extreme values of the dependent variable, we postulate the following econometric model, as suggested by Papake and Woolridge (1996).

$$y_i = G(X_i\beta) + u_i, \dots\dots\dots (1)$$

where i refers to Lok Sabha constituency. The dependent variable y_i is ‘*Fund Utilization*’ in the i^{th} constituency. G is logit link function (cdf), X_i denotes the vector of characteristics of the MPs and their constituencies (*Age of MP, Political Ideology, Popularity of MP, and MP’s Education, Awareness of People, Crimes in State, and Coverage of Roads in State*), β is the vector of coefficients, and u_i is the error term ($E(u_i | x_i) = 0$). The corresponding log-likelihood function is $l_i(b) = y_i \log[G(X_i b)] + (1 - y_i) \log[1 - G(X_i b)]$. The Quasi Maximum Likelihood

⁶ We note that there are likely to be variations in peoples’ awareness level, effective law and order conditions, and level of infrastructure across constituencies within the same state. However, constituency level data on such variables are not available. So, we have used state level variables.
⁷ Source of these data is www.indiastat.com.

Estimator (QMLE) of β is obtained from the maximization problem $Max_b \sum_{i=1}^n l_i(b)$. The QMLE is consistent and \sqrt{N} asymptotically normal irrespective of the actual distribution of y . See Papake and Woolridge (1996) for details of this method.

Since the dependent variable is bounded between 0 and 1, OLS method is inappropriate in this case. Because, the predicted values from the OLS regression can never be guaranteed to lie in the unit interval. Moreover, the traditional way of transforming the data by a logit function, $\log[y/(1-y)]$, is not appropriate in this case, since the model cannot be true for $y=1$. Therefore, QMLE is the most appropriate in our case.

We also estimate the following model using OLS method to test robustness of our results.

$$y_i = X_i\beta + u_i, \dots\dots\dots(2),$$

where the dependent variable is the natural logarithm of ‘*Expenditure*’, which equals the amount of money utilized (spent or sanctioned for works to be done) during May 2004 to October 2006 by a MP, X_i is the vector of explanatory variable, β is the vector of coefficients, and u_i is the error term ($u_i \sim IID(0, \sigma^2)$). We find similar results.

Results:

The econometric analysis throws up several interesting insights. First and foremost, political ideologies of the MPs significantly affect their behaviour towards fund utilization. We find that the utilization of funds under the MP-LADS by the MPs affiliated to leftist political parties is more uniform than their centrist and rightist counterparts. The negative and significant coefficient of ‘*Political Ideology*’ indicates that the percentage of utilization of funds decreases for higher values of ‘*Political Ideology*’. That is, leftist MPs utilize more than centrist MPs, and centrist MPs utilize more than rightist MPs during the first half of their tenure. Descriptive statistics also shows that fund utilization by leftist MPs is 11.7% (5.6%) higher than that by the rightist(centrist) MPs during the period of study, from May 2004 to October 2006. Overall, it seems that the political business cycle in spending is less severe in case of

leftist MPs compared to that in case of centrist and rightist MPs, as far as MP-LADS is concerned.

Table 3: Some Factors of Fund Utilization

Explanatory Variables	(1) Dependent Variable: <i>Fund Utilization</i>			(2) Dependent Variable: <i>log(Expenditure)</i>	
	(QMLE)			(OLS)	
	Coefficients	M.E.	p-values	Coefficients	p-values
<i>Age of MP</i>	-0.015	-0.004	0.019	-0.018	0.003
<i>Political Ideology</i>	-0.322	-0.080	0.034	-0.382	0.024
<i>Popularity</i>	0.004	0.001	0.056	0.002	0.062
<i>MP's Education</i>	0.020	0.005	0.459	-0.004	0.885
<i>Awareness of People</i>	0.125	0.031	0.000	0.066	0.004
<i>Crimes</i>	-0.027	-0.007	0.075	-0.033	0.012
<i>Coverage of Roads</i>	-0.005	-0.001	0.003	-0.005	0.002
Constant	3.212		0.000	18.929	0.000
No. of Observations	217	217		217	
R-Squared	0.249			0.178	
Overall Significance Test	chi2(7) = 30.90 Prob > chi2 = 0.000			F(7, 208) = 4.64 Prob > F = 0.000	

We find that relatively young MPs are inclined to utilize funds under the MP-LADS more uniformly over time than their elder counterparts. The coefficient of '*Age of MP*' is negative and significant. That is, on an average, the extent of political business cycle in spending increases with an increase in the MP's age, *ceteris paribus*.

The positive and significant coefficient of '*Popularity*' implies that higher level of support base of the MPs in their respective constituencies induces them to act more responsibly and to be less dependent on election strategies that mobilize voters during pre-election period. It can also be interpreted as lower degree of competition faced in the last election boosts the MPs to rely less on positive effects of political business cycle in spending. Surprisingly, we find that formal education of MPs doesn't have any significant impact on fund utilization (The coefficient of '*MP's Education*' is insignificant).

As expected, awareness of citizen has a positive and significant impact on fund utilization. Higher level of awareness of people leads to more uniform utilization of funds, as desired, over time, and will leave less scope to the MPs' to utilize funds with political motives. We also find that '*Crimes in State*' has negative and significant impact on fund utilization. That is, poor law and order conditions in states leave more scope for misusing MP-LADS. It implies that, higher level of awareness of citizens and improved law and order conditions in states reduces the extent of political business cycle in spending, as far as the MP-LADS is concerned. We find that level of existing infrastructure in states has negative impact on fund utilization (the coefficient of '*Coverage of Roads in State*' is negative and significant). A possible explanation of this result is, on an average, states having better infrastructural facilities might lead to less demand for small works, and that might induce the MPs more to accumulate funds in the beginning years of their term to come up with large scale work towards the end of their term to impress voters. Careful analysis of type of works sanctioned by the MPs, on a case-by-case basis, might be helpful to understand the impact of level of existing infrastructure on the manner of fund utilization. We leave this issue for future research.

4. Conclusion

We have analysed the manner of utilization of funds under the MP-LADS by the Lok Sabha MPs and its determinants. An important aspect of our analysis is the focus on political motives of the MPs that leads to political business cycles. We tried to study whether there is any political business cycle in spending funds under the MP-LADS, its extent, and determinants. Our data concerns Lok Sabha MPs. We have analysed state level cumulative expenditure and fund availability under the MP-LADS from 1993 to 2006 and from 1993 to 2007, and also disaggregated constituency level data of the 14th Lok Sabha MPs from May 2004 to October 2006, that covers the first one and half years of their term in office.

We find that there are political business cycles in spending by the MPs, and the extent of that widely varies across Lok Sabha constituencies. Political ideology is an important

determinant of the extent of political business cycle. It seems that the extent is lower in case of leftist MPs compared to that in case of centrist and rightist MPs. We also find that higher level of support base of the MPs in their respective constituencies, reflected through the lower degree of competition faced in the preceding general election, leads to more uniform fund utilization over time, and younger MPs fare better than the older MPs. Surprisingly, educational attainments of the MPs doesn't have any impact on fund utilization. We also find that higher level of awareness of general citizens and better law and order conditions in states restricts MPs to misuse funds to gain political mileage and that leads to more uniform utilization of funds over time. These results have been tested for robustness to alternative specifications and econometric methodologies. However, since our sample is restricted due to unavailability of data for all the constituencies, our results need to be interpreted with caution.

Accumulation of funds during the initial periods of the MPs' tenure and the resultant political business cycle is spending is being possible primarily due to the non-lapsable character of funds under the MP-LADS. If unused funds are made lapsable, large-scale misuse of the MP-LADS by incumbent parliamentarians to gain political mileage can be restricted to some extent. Other than the aspect of political business cycle in spending, there are several other forms of misuse of MP-LADS by the MPs. For example, uneven distribution of funds across districts, politically motivated choice of works, poor quality of assets created and its maintenance, capture by interest groups and close associates of MPs, financial mismanagement of the scheme and consequent inflated reporting of the amount spent, etc (PEO 2001). In a nutshell, it appears that the MP-LADS, under which a large amount of money is being spent every year, is in existence to help the incumbent MPs to stabilize their membership in the parliament, rather than serving its true purpose. It questions the legitimacy and necessity of such development schemes.

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