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Abstract

Nordhaus (1975) is one of the earliest studies to provide a theoretical assessment of political business cycles, explaining opportunistic behaviour of political parties before the elections. This study is an attempt to find the nature of association between electoral incentives and the use of welfare policies in a federal democratic system through the lens of India's largest nationwide social security scheme, MGNREGS. Among the panel data random effects models, the Hausman-Taylor instrumental variable estimator is used for econometric modelling by leveraging data at a month on month level from April 2012 to June 2019 for twenty-two Indian states.

The demand for work and person-days of work are considered for the analysis capturing respectively the demand and supply side variables of the program. After controlling for rainfall, rural population and landless agricultural labour, an asymmetric behaviour is observed for the states governed by regional parties such that they tend to generate significantly lower person-days of work near the central elections but show a significantly higher demand for work near the state elections. Moreover, states ruled by aligned central and state parties generate higher than average demand for work under the scheme. The over-arching framework of multi-party democracy and the dynamics of center-state relations present in centrally sponsored schemes create scope for such behaviour.

Key words: *elections, incumbent, MGNREGS, Hausman-Taylor IV regression*

JEL Codes: *C36, D72, D91, J08*

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INTRODUCTION

Being the largest democratic republic in the world, ensuring that welfare policies reach all the intended beneficiaries is quite a tremendous challenge. The three tier federal structure consisting of the union, state and the local levels of government facilitates the smooth functioning of large welfare policies (Rao, 2017). However, political considerations often cloud the efficacy of a well-intended policy. Specifically in the case of centrally sponsored schemes, an interesting center-state dynamic is built-in that creates an environment for political gains to seep in. Centrally sponsored schemes are schemes where the funds for the scheme are largely supplied by the center but the states are given the responsibility for the implementation of the scheme. The states' contribution in terms of funds is specifically defined. An analogy can be drawn from the game of chess. In order to checkmate the opponent king in the game of chess, the most powerful strategist on the chess board is the queen and not the king, however, the queen would be helpless if the opponent checkmates its own king first. Akin to the queen is the state government, which is chiefly responsible for implementation of the policy and akin to the king is the center which provides oxygen to the policy. Similarly, in corporate finance, agency theory is defined as the relationship between the people who provide funds i.e. the shareholders and the people who implement the policy i.e. the managers (or the agents). A principal-agent conflict arises when the agent's actions are not in line with maximising the shareholder's value or the principal. Similar conflict could arise in a center-state interaction when the state might have objectives that are not in line with the center. On the other hand, center and the state could collude if the state government is aligned with the objectives of the center. One such massive and highly valuable centrally sponsored schemes is the Mahatma Gandhi National Rural Employment Guarantee scheme (MGNREGS) enacted under the Mahatma Gandhi National Rural Employment Guarantee Act, 2005 (Ministry of Rural Development (MoRD), 2013b).

The aim of the scheme is to provide at least 100 days of guaranteed wage employment in a financial year to adult members of every rural household in the country volunteering to do manual unskilled work. By 1st April 2008, MGNREGS was implemented throughout the country covering all the rural districts (Ministry of Rural Development (MoRD), 2013b). The MGNREGS is a revolutionary scheme as it makes the government legally accountable to any rural household demanding work (Bhanumurthy *et. al.*, 2014). Moreover, the scheme intends to strengthen natural resource management through creation of durable assets that could provide safeguard against severe calamities that often bring about chronic poverty in the rural districts of the country. This rights based approach gives the governments at the grass root unprecedented responsibility. Under the scheme, the *Gram Sabha* i.e. the local village body, is responsible for identification of projects and preparing the shelf of works on which the labour can be employed. The *Gram Panchayat* (the local elected body) is responsible for collecting the applications for work from any rural household possessing a job card and for ensuring that within 15 days of application the said applicant is allotted work. Based on the demand at the *Gram Panchayat* (GP, henceforth) level a labour budget is prepared. The labour budget is where the journey of this study begins. The labour budget needs to be ratified by multiple bodies that place themselves over the GP. From the GP it goes in the form of a block plan to the Programme Officer (PO) at the Intermediate level who would then approve and send it to the District Programme coordinator (DPC). The DPC would then forward the labour budget to the State Government.

The State government after approving the labour budget would finally reach the empowered committee set up by the Ministry of Rural development which would act as the body for approving the quantum of funds to be transferred. The empowered committee, based on the state's projected number of person-days (*persondays, henceforth*), its opening balance and the past performance would decide on the amount to be released. The projected *persondays* calculated is a very crucial figure as

the funds are released against this number. The state government is required to give estimates of *persondays* projected across every district on a monthly basis for the upcoming financial year (Ministry of Rural Development (MoRD), 2016).

Given the linkage of the scheme to poverty with a direct connect at the implementation level between the 'principal' and the 'agent' as indicated earlier, a scope for opportunistic behaviour prior to the elections could take shape (Nordhaus, 1975). The election season makes for a compelling case, where parties try to cash in on the immediate memory of the voter and try to create the best last impression possible particularly the state governments to gain any possible political mileage among the MGNREGS beneficiaries. This study analyses the pattern if any in the labour-days component of the MGNREGS program in light of the election season; the differences in the pattern between the central and state elections as well as across different types of political parties governing the states.

LITERATURE REVIEW

Conceptual Framework

Euphemistically termed political strategy, the objective of political parties is to leverage ways of generating as many votes as possible. Studies on voter behaviour by Healy and Lenz (2014) show that the voter is most receptive to immediate information than to information over a longer period of time. Using the psychological concept of end heuristics, which means that the end is given a relatively higher weight than the periods before that, they show that voters unintentionally substitute the information received at the end for the whole. This is similar to the psychological heuristic of peak-end rule which suggests that people are more likely to judge an experience based on how they felt at the peak and how they felt at the end rather than looking at the sum or the average of the whole performance. The voter is myopic and would be willing to give a higher value to his experience with a political party near

the election season. This could give rise to political business cycles such that incumbent parties will try to exploit policy instruments to boost performance just before elections often hurting the period post elections (Nordhaus, 1975; Sen and Vaidya, 1996; Vaidya and Kangasabapathy, 2014). Sen and Vaidya (1996); Vaidya and Kangasabapathy (2014) examine the validity of Nordhaus (1975) theory of political business cycles in the context of Indian budgets. They show that the incumbent government might look for fiscal profligacy as the elections date comes closer and would also want to use expansionary monetary policy in an attempt to increase the output and reduce unemployment. Since the inflationary effect of these actions would be felt post the elections the incumbent uses this strategy to entice the voter in an attempt to get re-elected. They investigate large revenue deficits during the time of the elections showing that the political parties are opportunistic. Vaidya and Kangasabapathy (2014) compare the deviations in revised estimates and actual estimate in 18 normal budgets and 6 interim budgets and find that in all the budgets the revenue component was overestimated and the expenditure was underestimated leading to high revenue deficit and fiscal deficit. However, this effect becomes more pronounced in the case of an interim budget, suggesting manipulation on the part of the government just before the election period. Pattanayak and Kumar (2019) look at fiscal transfers from center to the state in the event of a natural calamity such as drought. They find that the total grants offered to states in the event of a drought year is 9 percent higher for copartisan states, whereas, in a normal year it is 6 percent higher for such states as compared to the non-aligned states. They further find that the differential between aligned and non-aligned states for non-planned grants is as high as 16 percent suggesting considerable favouritism from the center.

Political parties during the election season do factor in the center state equation when taking decisions regarding centrally funded schemes. MNREGS being among the largest centrally sponsored social security schemes in the country, certainly becomes a target during the election season. Over the years it has been observed that the gap

between the average employment demanded and the actual provision of work as part of the scheme has widened. Over a period of five years on average 89 percent of the people who demanded work received it but this leaves out close to 0.5 to 0.6 crore households. Moreover, the average *persondays* of work generated per household has remained less than 50 across all years (Kapur and Paul, 2019). Under the MNREGS scheme, Bhanumurthy *et. al.* (2014) extensively study the issue of increasing unspent balances with the states. Unspent balances are characterised as funds that remain with the state or the district collector and that are not utilised due to improper utilisation or a delay in fund release. They look at utilisation ratios i.e. the proportion of funds utilised as a percentage of total funds available and find that states such as Andhra Pradesh, Assam, Haryana, Jammu and Kashmir, Kerala and Uttarakhand have high utilisation ratios, whereas states such as Bihar, Gujarat, Jharkhand, and Uttar Pradesh have low utilisation ratios. They suggest that one of the biggest reasons for such unspent balances is the inaccurate projection of the monthly *persondays* that the states plan to generate. When compared with the actual *persondays* generated there is a wide discrepancy in the projection and this results in either inadequate supply of funds or oversupply of funds at a point in time. Thus, these projections are not being made in a methodical and accurate manner. An important point made in this regard is that the seasonality of labour is not factored in appropriately when making the projections. This seasonality could also be a reason for unspent balances. Further, Narayanan, Dhorajiwala and Golani (2019), in their analysis of payment delays for 10 states under the employment guarantee scheme find that only 32 percent of the workers received their wages within the stipulated 15 days period post work completion as against the claims of 85 percent made by the center. Despite streamlining the payment process and making it digital, the infrastructural bottlenecks persist and the workers' wages are delayed by several weeks without appropriate reason or additional compensation. Rao (2017) suggests that notwithstanding the fact that preparation of the labour budget does take into account factors such as the past performance of the state, initiatives taken to strengthen

the delivery mechanism of the programme, the magnitude and intensity of rural poverty and frequency and occurrence of natural calamities, the empowered committee set up by the center exercises considerable discretion in deciding on the quantum of funds to be released. Thus, it is not necessary that the state with the largest concentration of poor would receive the highest grant. To add to the political complexity, the rise of regionally dominant parties over the last decades has been an exciting phenomenon. These parties have won their states not based on caste politics but on the grounds of a sense of unity and togetherness in the region. They have struck a chord with the voter of the region and are forcing the two main national parties, the Indian National Congress (INC) and the Bharatiya Janata Party (BJP) to enter into coalitions if they wish to have presence in region states. Vaishnav (2015) argues that even though regional parties have stormed their way into national politics giving people a regional alternative, the 2014 general elections results are evidence that regional parties may have dominance over their state elections but at the national level they are still minor players and do not have a strong influence.

Empirical Review

Arulampalam *et. al.* (2009) study the transfers of central governments to state governments keeping electoral goals in mind. The state stands between the voters and the center and thus, the ruling party of the state would benefit from any additional expenditure undertaken by the center. Thus, in an unaligned state with different parties ruling in the center and the state, the center would be wary of the goodwill leaks to the incumbent state party from a centrally funded scheme. However, in an aligned state i.e. the same party at the state and the center, the center would be comfortable in spending resources as the voter would associate it with the same party. Further, they discuss the notion of a swing state in which vote share increase of a political party depends on the amount of goodwill it is able to create. Using a log linear grants model, they estimate that a state that is aligned and swing in the state elections and center elections is likely to receive 19.6 percent higher central grant than

a state which is non-aligned and non-swing. Being both aligned and swing maximises the chances of the state receiving higher grants. Min and Golden (2013) find evidence of higher electricity line losses in the state of Uttar Pradesh just before the state assembly elections. They show that the incumbent uses this as a strategy to impress voters as a populous state like Uttar Pradesh faces severe electricity fluctuations and most rural areas have unmetered electricity connections giving leeway to political rent seeking and higher line losses. Using a fixed effects OLS regression to explain higher division level line losses due to the election year, they are able to show that line losses are about three points higher in the election year compared to the other years suggesting reduced effort by the state authorities to monitor electricity use in the election year. Bonner *et. al.* (2012) perform a cross state comparison to understand the variation in levels of implementation success of the different states. Implementation success for a state is defined in terms of the average *persondays* worked per rural household, average percentage of *persondays* worked by women and MGNREGS wage as a percentage of state minimum wages. A composite index for success derived from the above measures is taken as the dependent variable. They find that literacy levels of the state have a significantly high positive correlation coefficient with the implementation success confirming the belief that high literacy levels allow workers to be better informed and interact more with the government institutions to demand work. At the same time lower level bureaucrats are key players in ensuring smooth functioning of the programme. Thus, to learn how political connections, bureaucracy and literacy levels affect the success of the scheme they focus on a qualitative comparison between two prominent states of Tamil Nadu and Uttar Pradesh.

In Tami Nadu, the funds for the scheme are directly distributed to the districts and not to the states limiting corruption. The bureaucratic structure from the *Gram Panchayat* (GP) president to the Block development officer (BDO) to the district commissioner (DC) and the Chief Minister (CM) is well interlinked to ensure that all are accountable

to the delivery of the scheme. The primary survey also found that regular social audits take place to check if workers are getting paid in the shortest possible time. In contrast, the study finds that in Uttar Pradesh, more power is given to the local body Panchayat which lacks the know-how to implement the program effectively. Workers in UP were unaware of their rights under the scheme and did not have a convenient mechanism in place to collect wages under the scheme. Reports of village favouritism by the gram panchayat also emerged from the survey. The primary survey further revealed that women have felt empowered and encouraged to demand work under the scheme contrary to the state of Uttar Pradesh, where women do want to work and see benefits from the scheme but are restricted by social factors such as caste, religion, competition by men and institutional factors such as improper child care provisions and denial of job cards to women households. Distributive politics around MGNREGS at the constituency level was studied by Das and Maiorano (2019). The study observes assembly constituencies (ACs) of Andhra Pradesh over the election cycle 2009-2014. Distributive strategies are influenced by clientelism needs of the political parties. Clientelism ensures that political support is obtained on a quid pro quo basis by allocating more funds to potential voters of the party. They use time-wise cross-sectional regression as well as district fixed effects panel data model over the election cycle. It is found that swing AC's i.e. AC's where support needs to be gathered, are the constituencies that see a higher wage expenditure. However, the core support constituencies see a higher material expenditures as parties get contractors on board for election funding and mobilising support. Thus, they ensure that the contractors in a core region get higher share in the material expenditure contracts. The study also mentions about powerful farmers lobby that uses its influence over the political parties to suppress MGNREGS wages to ensure small farm labourers do not get attracted to the scheme. Thus, in the agricultural main season MGNREGS work drops dramatically. Similarly, Gupta and Mukhopadhyay (2016) focus on fund allocation at the local level in the state of Rajasthan. They establish a relationship between the election results in the state of Rajasthan and the fund allocation made as

part of the scheme. They find evidence of the Downsian model, which argues that parties are less likely to direct funds where they are very strong or are very weak. Parties would take more interest in the middle voter who needs to be swayed in favour and this creates an inverted U-shaped relationship between the funds allocated and the vote share. This study also finds that the right to work nature of the program is often suppressed by a top down force that operates through a supply channel.

Political competition between the state and the center over who gets recognition for public programs becomes a much debated topic in Indian politics (Bonner *et. al.*, 2012; Arulampalam, 2009). The situation becomes even more strategic in the case of centrally sponsored schemes such as the MGNREGS where the works are carried out at the gram panchayat level, the accountability aspect comes under the state governments and the funds are disbursed by the center. Moreover, with the rise of regional parties in the political sphere and their influence on state politics, the center-state dynamic has evolved to become a three player interaction between the national party at the center, national party in the state and regional party in the state (Vaishnav, 2015). Manjhi and Mehra (2018) use the pooled mean group method to show significant political transfer cycles for loans from center with 1.7 percent higher transfers in the year of the assembly elections. They show that governments in the center with a right wing ideology tend to provide more grants rather than loans to the states before the assembly elections, whereas, its relatively less during the other years. However, when it comes to parliamentary elections, right wing governments prefer giving out loans in the year before the parliamentary elections rather than grants or greater tax devolution. They find that if the center and state are aligned or have the same government the possibility of the union government retaining its power is reduced but the possibility of the state-level government retaining power increases.

Thus, the studies reviewed above indicate that development schemes could be used for manipulating the voter for political capture and in turn indicate sub optimal development outcomes in a democracy. In order to improve the functioning of development schemes like MGNREGS and the scope that democracy gives for development, a better understanding of the relationship between multi-party democracy, federal structure of governance, and socio-economic development is essential. In this context, this study makes an attempt to extend the analysis of some of the earlier studies focussing on the labour component of the scheme. The existing literature acknowledges that the labour projections made under the MGNREGS have been poor, however, none of the studies try to probe this lacuna further. The study hopes to give a political angle to the deviations seen in the labour projections. This could go a long way in improving the quality of the labour budgets approved by the center. By dealing with data on a monthly basis across elections, this study differentiates itself from the existing literature which has mostly used yearly data. This will help bring out a magnified view which may not be possible under a yearly setting.

Thus, the objective of the study is to

- Use the labour component of the largest social security scheme in the world, the MGNREGS, to find evidence if any, of political motives near the time of elections.
- Analyse any possible patterns in a political context emerging from India's federal structure.
- Trace the opportunistic behaviour of the various types of incumbent state governments.

DATA SOURCES

From the labour budget, we consider a supply side variable and a demand side variable to get a complete picture of the inaccuracies in the labour budget arising due to the elections. On the supply side, MGNREGS requires each state to report monthly data on the projected *persondays* and the actual *persondays* generated. The projections are made on a

month on month basis at the beginning of the year based on the identification of projects and preparing of shelf of works on which the labour can be employed. The actual *persondays* are then recorded at the end of each month based on the number of people enrolled and the number of days worked in that month. We take log of the ratio of actual *persondays* to the projected *persondays* (denoted by $\ln abyp$) to compare the difference between the two over time.

On the demand side, we consider the variable *persondemand*. This gives the number of people on a month on month basis who filed an application seeking work with the gram panchayat. We take the log of *persondemand* (denoted as $\ln pd$) to account for the large variability in the numbers between various states.

The data on both the *persondays* and *persondemand* is taken from the NREGA MIS portal as described in the sources section of Table 1 below. However, accurate data is only available from April 2012 till June 2019, giving us 87 time points. Twenty two states are considered for further analysis¹. Table 1 gives definition of variables we have used for the empirical analysis along with the respective sources. The choice of explanatory variables and the controls considered are further elaborated later with the empirical strategy.

¹ The states left out include Andhra Pradesh and the newly formed Telangana because Telangana was separated from Andhra Pradesh only in 2014 and thus, taking them into analysis might give inaccurate results. The other states left out include Arunachal Pradesh, Manipur and Mizoram due to inaccurate and incorrect availability of data on the MGNREGA portal. Jammu and Kashmir along with Goa were also left out due to irregular elections and very low relative presence of the programme in Goa.

Table 1: Definition of Variables and Data Sources

Variable Name	Label	Source
Dependent Variables		
Inabyp: $\log\left(\frac{\text{Actual Persondays}}{\text{Projected Persondays}}\right)$	Logarithm of the monthly actual persondays generated by different states divided by the corresponding projected persondays	MIS ^a
Inpd: $\log(\text{persondemand})$	Logarithm of the number of registered persons who demanded work under the scheme for different states every month	MIS
Political explanatory Variables		
stateelec	1 to five months before the state election, including the state election month and 0 otherwise	ECI ^b
centerelec	1 to five months before the central election, including the central election month and 0 otherwise	ECI
Rainexcess	Month-wise percentage actual rainfall departure from the normal	IMD ^c
Aligned	1 if in a particular month, ruling state party is aligned with ruling national party, 0 otherwise	ECI and Author's own estimates of the election impact creating the election window
stateelec_aligned	1 denotes a state which is aligned and in the state election window, 0 otherwise	
centerelec_aligned	1 denotes a state which is aligned and in the central election window, 0 otherwise	
stateelec_regional	1 denotes a state which is regional and in the state election window, 0 otherwise	
centerelec_regional	1 denotes a state which is regional and in the central election window, 0 otherwise	
Regional	1 if the state has never been ruled by a national party, 0 otherwise	
Control Variables		
loglandless	State-level logarithm of total landless agricultural labourers	Census 2011
logrural	State-level logarithm of total rural population	Census 2011

a) MIS: Management Information System is the open database of the MGNREGA and can be accessed at <http://mnregaweb4.nic.in/netnrega/MISreport4.aspx>

b) ECI: Election Commission of India takes the responsibility for conducting elections and also provides data on its website pertaining to the winners of the election and can be accessed at <https://eci.gov.in/statistical-report/statistical-reports/>

c) IMD: Indian meteorological department website publishes month-wise data on rainfall and can be accessed under the rainfall reports section on their website [http://hydro.imd.gov.in/hydrometweb/\(S\(mlytsi55445nsmaygrn5xc45\)\)/landing.aspx](http://hydro.imd.gov.in/hydrometweb/(S(mlytsi55445nsmaygrn5xc45))/landing.aspx)

TRACING POLITICAL MOTIVES

In 2009, the majority party in the center was the Indian National Congress (INC) with 206 out of the 543 seats and this led to Dr. Manmohan Singh of the INC becoming the prime minister for a second consecutive term. However, in 2014 it was the Bharatiya Janata Party (BJP) that emerged as the largest party, winning 282 out of the 543 seats in the Lok Sabha and this led to Mr. Narendra Modi of the BJP becoming the prime minister of the country. In April 2019, BJP won a second consecutive term in the office with a massive majority of 303 seats, while its primary national rival INC, was restricted to 52 seats. While the Lok Sabha elections help form the central government, the Vidhan Sabha elections (State assembly elections) help form the state governments. The respective state elections happen at various dates fixed by the election commission of India (ECI). For example, the state election for Bihar was held in November 2015, whereas, the state election for Assam was conducted in April 2016, Haryana in October 2014, Himachal Pradesh in October 2017 and so on.

Now, the incumbent state governments could either belong to a national party like the congress or the BJP, or they could be a regional party such as the AIADMK in Tamil Nadu or the Biju Janata Dal in Odisha. The incumbent government every election would want to try its best to get re-elected and would use all the resources at its disposal. However, under different center-state combinations, different strategies could be applied by state government to optimise their vote share. The MGNREGS, given its scale and reach in the rural areas of the country could be used as an incredible image building policy. Through such an employment guarantee policy and especially leveraging it in the election season, the incumbent government could form a positive mental image among its voters.

To see if this is indeed true, a time trend plotting the actual *persondays* and the projected *persondays* could give us an insight into the state governments' behaviour around the election period. Figure 1a

shows the time trend for the state of Assam over the 87 month period starting from April 2012. We define a central election window that begins five months before April 2014 and five months before the subsequent central election held in April 2019. Similarly, a state election window is defined which begins five months before the respective states' election month.

Case of Assam

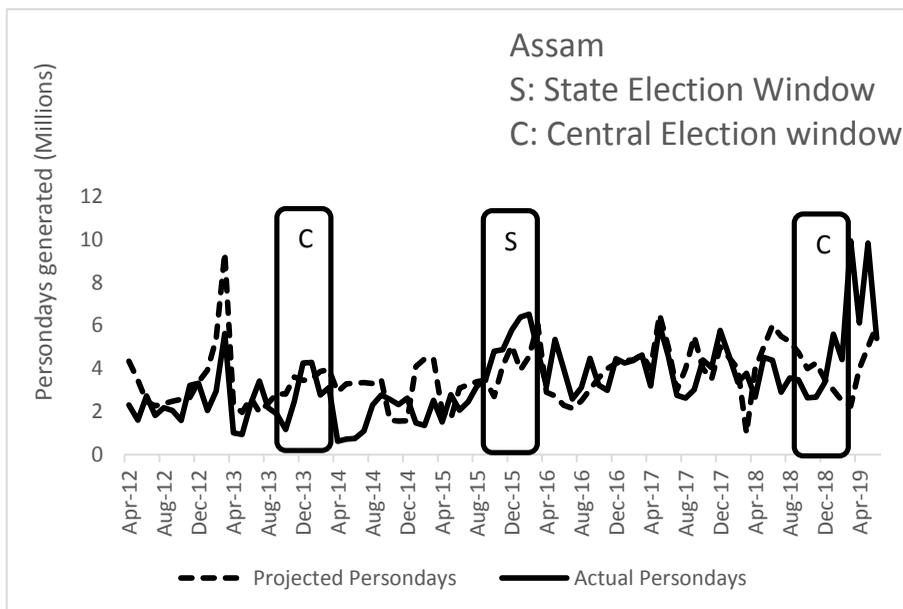
Assam was an aligned state in both the central election windows with the INC in the center as well as in the state for the first one and the BJP in the center and the state for the second one. In Figure 1a showing the trend for Assam, we see that in the initial months of the first five month central election window the Actual *persondays* does exceed the projected *persondays* however it again falls below the projected *persondays*. During the period post April 2014 till the state election window, Assam was a non-aligned state but with congress in the state and the BJP in the center. This graph indicates that the congress being the state government in power would have wanted to leverage its implementation powers in the state election window in order to get re-elected. Thus, the state election window would begin five months before the election month i.e. November 2015 for elections held in April 2016. In the figure, it can clearly be seen that in this state election window, the actuals are greater than the projected *persondays*. In the second central election window from November 2018 to April 2019, we see the aligned BJP ruled state government heavily pushing the actual *persondays* just before the parliamentary elections.

Case of Rajasthan

Now, it is equally possible that an aligned state depicts the same behaviour in the state election window. An aligned state with implementation powers and funding power at both the state and the center level would also like to press into action in the election window. Figure 1b is one such case of the state of Rajasthan. For the time period considered, Rajasthan had two state elections, one in December 2013

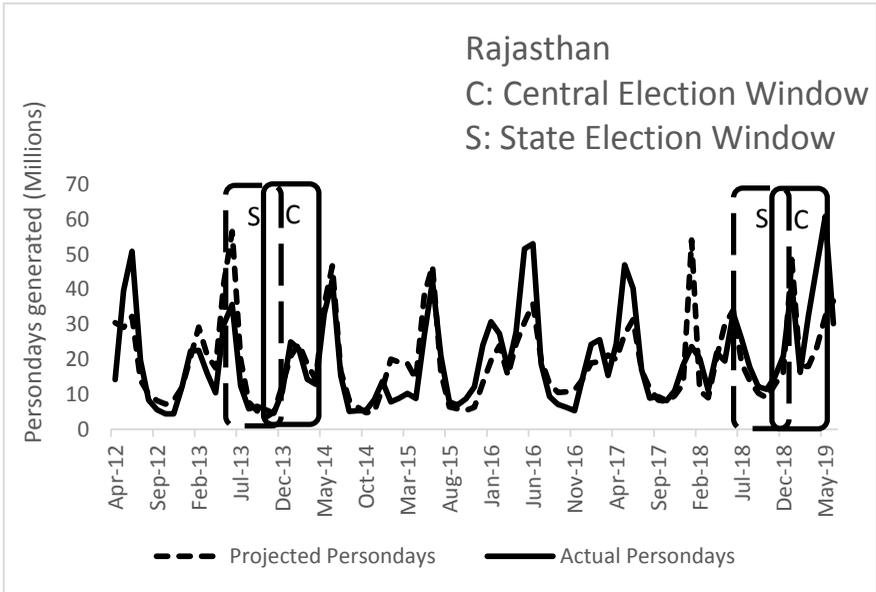
and another in December 2018. Rajasthan was an aligned state in both these periods with the INC ruling in the first elections and the BJP taking over during the second state elections. Here again we see that the actual *persondays* are higher in the state election window than the projected *persondays*, though not by much. Both the central election windows starting from November 2013 and November 2018 coincide with the state election windows. We see that as the central election months are approaching the actual persondays are almost always equal to the projected persondays.

Figure 1a: Monthly Trend in Projected *Persondays* and Actual *Persondays* Generated for the State of Assam, April 2012-April 2019



Source: Management Information System (MIS) is the open database of the MGNREGA and can be accessed at <http://mnregaweb4.nic.in/netnrega/MISreport4.aspx>

Figure 1b: Time Trend Plotting Projected *Persondays* and Actual *Persondays* Generated for the State of Rajasthan



Source: Same as in Figure 1a.

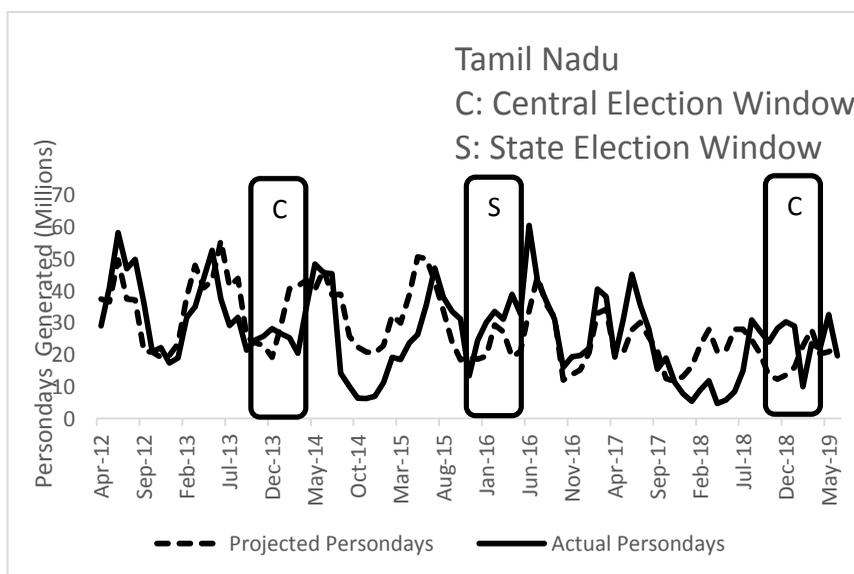
Rise of Regional Parties

The regional party ruled states i.e. states where none of the national parties have ever been in power for the time period considered, form an interesting aspect of our data analysis. Since these states operate and focus only in one particular state, we strongly believe that these states would press for creating much higher actual *persondays* particularly in the state election window. Figure 1c depicts the case of the regional state of Tamil Nadu. In the central elections the actual *persondays* are much lower than the projected *persondays*, suggesting Tamil Nadu's reluctance to generate higher actual *persondays* near the Lok Sabha elections. However, in the state election window this is definitely not the case. The state elections for Tamil Nadu took place on May 2016 and we can clearly see that the actual *persondays* are much higher than the projected

persondays in the state election window. The second central election window again sees a sharp dip in the actual *persondays* towards the end of the window.

This is an interesting puzzle as this suggests that the regional state is showing its domination where it matters but since the power structure of a regional party in the center is limited, it may not be as excited to generate employment near the central election.

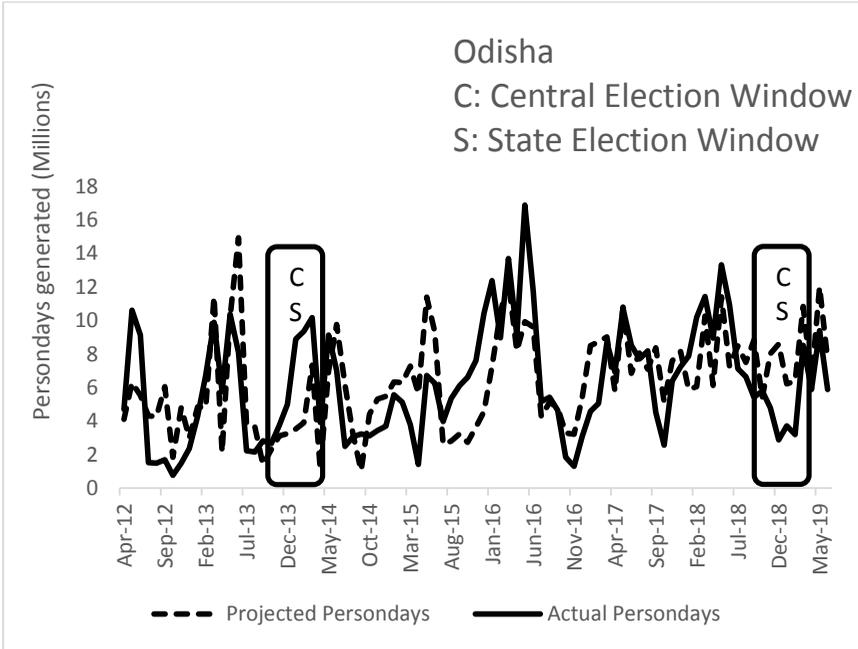
Figure 1c: Time Trend Plotting Projected *Persondays* and Actual *Persondays* Generated for the State of Tamil Nadu



Source: Same as in Figure 1a.

We also plot the time trend for Odisha in figure 1d, another regional state in the time period considered and find a similar result.

Figure 1d. Time Trend Plotting Projected *Persondays* and Actual *Persondays* Generated for the State of Odisha



Source: Same as in Figure 1a.

In Odisha, regional party Biju Janata Dal was in power over the entire time period studied. In the case of Odisha, since the state elections were conducted on April 2014, they coincided with the central elections. In the first window, the actual *persondays* are clearly higher than the projected *persondays*. However, in the second window, the projected *persondays* are higher than the actual *persondays* but towards the end of the window there is a spike in the actual *persondays*.

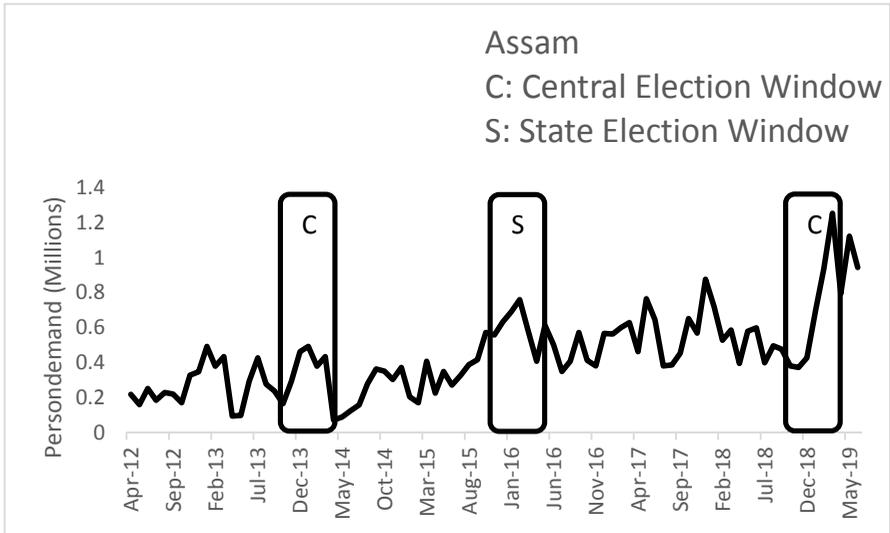
Patterns in Person Demand

The next variable considered is person demand (*persondemand*, henceforth) defined as the registered persons who demanded work under

the scheme. All registered households under MNREGA i.e. any household that is in possession of a job card can demand work. However, households that complete 100 days of work in a particular financial year cannot demand for more. An applicant is allowed to demand for work as many times but the dates must not coincide i.e. at a time the person should be employed only for one work. (Ministry of Rural Development (MoRD), n.d). Thus, every adult member of a registered household whose name appears on the households' job card is entitled to apply for unskilled manual work under the scheme. Within fifteen days of providing application to the gram panchayat, work must be allotted to the applicant, failing which the applicant has to be paid unemployment allowance. The state government is liable to pay the unemployment allowance as per section 7(3) of the MNREGA. (Ministry of Rural Development (MoRD), 2013a) As the elections approach nearer, the parties would be keener on showing their presence on the ground by approaching people and motivating them to register for work. Registering for work could give the rural voter a sense of empowerment and security, inducing them to vote for the party in the upcoming elections.

Figure 2a plots the monthly trend for the state of Assam against the number of people who demanded work in that particular month. In both the central election windows, Assam was an aligned state and we see that particularly in the second central election window, there is a definite spike in the *persondemand* for work under the scheme. Assam was not aligned to the national party in the state election window and we find that there is a mix of upward and downward movement of *persondemand* within the same window.

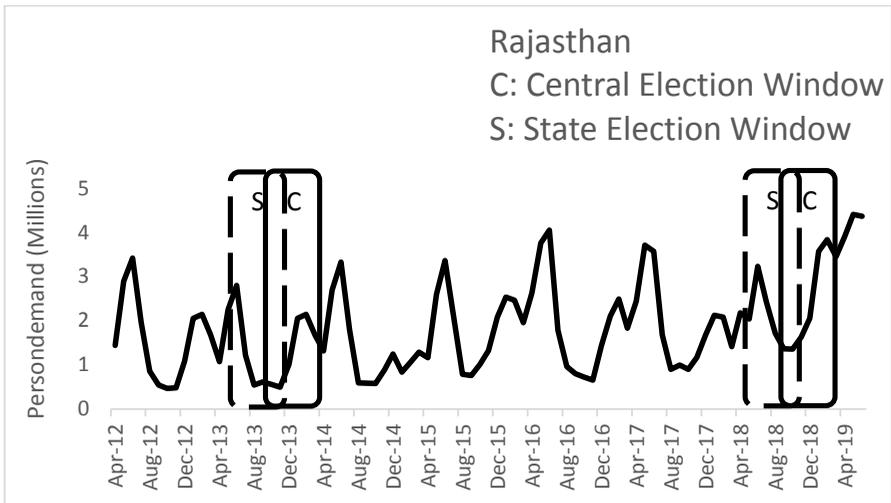
Figure 2a: Time trend Plotting Number Of People Who Demanded Work in a Month for the State of Assam



Source: Same as in Figure 1a.

Figure 2b plots the trend for the state of Rajasthan which as mentioned before faced two elections in the time period studied. The time trend of Rajasthan shows seasonality. The peaks in the demand for work are seen in the summer months. Rajasthan was ruled by national parties in all the election windows. This could be a reason for the higher spike observed in the central election windows. The state election windows do not show a clear trend but the *persondemand* starts to rise in the last part of the window which coincides with the central election window.

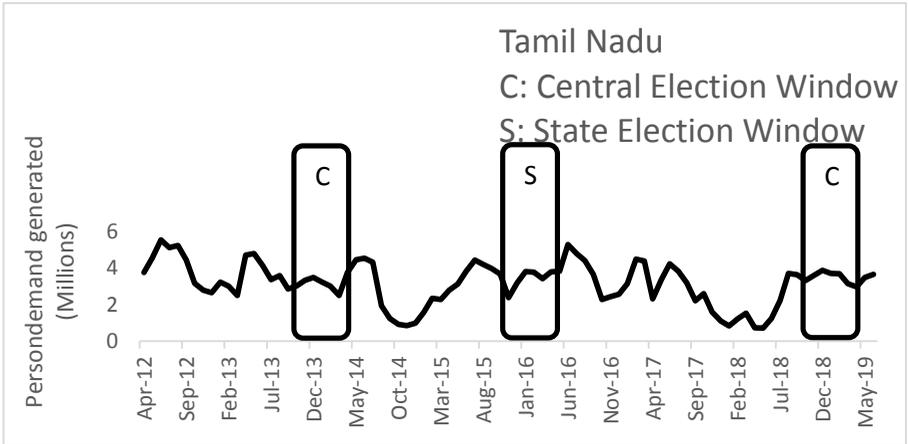
Figure 2b: Time Trend Plotting Number of People Who Demanded Work in a Month for the State of Rajasthan



Source: Same as in Figure 1a.

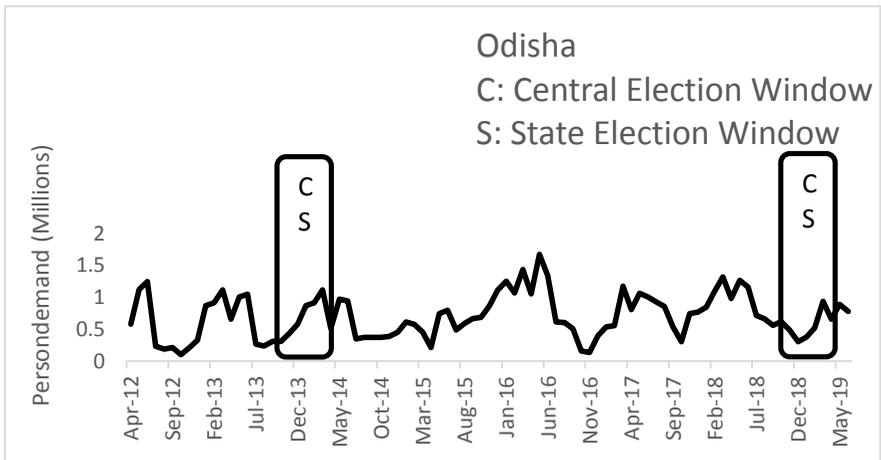
Next, we plot the time trend against the *persondemand* for the regional states of Tamil Nadu and Odisha in figure 2c and 2d respectively. Here, we expect the regional states to have an increasing trend particularly closer to the state election window and a downward trend closer to the central election window. In the case of Tamil Nadu, in the last half of both the central election windows the *persondemand* starts to go down. However, in the case of the state election window, there is an upward trend in the last half of the window. In the case of Odisha, we observe an upward trend in the *persondemand* in both the windows. A possible reason for this is that both the state elections and central elections happen at the same time for Odisha.

Figure 2c: Time Trend Plotting Number of People Who Demanded Work in a Month for the State of Tamil Nadu



Source: Same as in Figure 1a.

Figure 2d. Time Trend Plotting Number of People Who Demanded Work in a Month for the State of Odisha



Source: Same as in Figure 1a.

EMPIRICAL STRATEGY

To capture the effect of political considerations, it is necessary to introduce a dependent variable that can account for variations due to necessary and idiosyncratic factors leaving the model to be driven to an extent by behaviour around the elections. The two dependent variables that have been considered are *Inabyp* i.e. the $\log(\text{Actual Persondays}/\text{Projected Persondays})$ and *Inpd* i.e. the $\log(\text{Persondemand})$.

Choice of Political Explanatory Variables

As our objective is primarily to see changes in behaviour during the election season, we define the variable for election windows denoted by *stateelec* and *centerelec*. The election window is taken to begin five months from the election month. Since the central election for the entire country took place in April 2014, the election window pertaining to the central election would begin from the month of November 2013 and go till the election month of April and for the central election held in April 2019, it would begin from November 2018. State election windows are also defined in a similar manner for each state. For example, if Bihar had its state election in the month of November 2015, the election window for Bihar would then begin from June 2015 and go till the election month of November. Consistent with the literature on voter behaviour as indicated in the literature review, it is in these five to six months prior to the election month when the voter is most sensitive to any positive influence from the political party. Thus, we believe that it is in this window the party must decide whether it wants to generate higher *persondays* of employment and higher *persondemand* for work.

Next we define the variable *aligned*, as taking the value 1 if the ruling party in the state is in an alliance with the center. A track was kept of the specific months in which parties announced if they were joining an alliance or breaking away from an alliance. This allowed us to create a time varying variable over the obtained monthly data. Taking Assam as an example, till April 2014 (Lok Sabha election month), there was INC at

the center and in the state as well (aligned). However, post April 2014, till April 2016 (Assam state election month), BJP took charge at the center and INC continued to be the government in the state (not aligned) and post April 2016, BJP continued to rule at the center and also formed the government in the state (aligned). The ruling party here is defined as the party which wins the majority of seats in an election and as a result, in most cases its chief ministerial candidate or its prime ministerial candidate takes the oath of office.

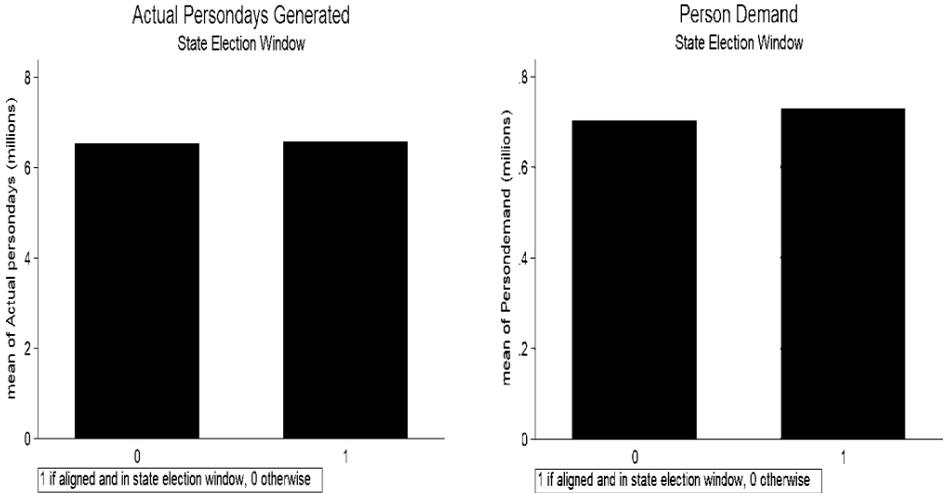
Thus, in cases of a fractured mandate, the chief minister's party is given the benefit of doubt and the party's alliance with the ruling party in the center is considered. This also has a psychological connotation in the sense that people usually associate the central government with the prime ministerial figure and the state government with the chief ministerial figure (Sharma and Anshuman, 2019). For example, in 2014 Lok Sabha elections, even though the Bharatiya Janata Party had a clear majority, it was the National Democratic Alliance (NDA) i.e. BJP along with its allies that formed the government in the center. However, people tend to equate the central government with the current Prime Minister Mr. Narendra Modi (Subramanian, 2014; Vaishnav, 2015; Sharma and Anshuman, 2019). This bias could be stronger for the rural population where the voters might be naïve and as a result would only have the image of a political figure or a party symbol when casting their vote (Healy and Lenz, 2014). Similarly at the state level people of the state tend to equate the state government with its chief minister. Prominent example comes from the state of Tamil Nadu, where people of the state would synonymise the state government with its chief minister such as the late Ms. Jayalalitha of AIADMK or the late Dr. Karunanidhi of the DMK.

To bring in the relationship between political considerations and the state's behaviour in the election window, we interact the time varying binary variables created above and create two other interaction variables namely *stateelec_aligned* and *centerelec_aligned*. These variables take

on the value of 1 when the state is an aligned state and it is in the respective election window month and zero otherwise. Figures 3a and 3b show a bar graph plotting the mean of actual *persondays* and the mean of *persondemand* generated over the *stateelec_aligned* variable.

Both the graphs suggest that aligned states and non-aligned states are performing closely in the state election window. However, the aligned states seem to be slightly more active in the state election window. The negligible difference between the aligned and the non-aligned states is understandable as the state election is a time for the state government to boost up its campaign regardless of its alignment with the center. This becomes much more relevant in the case of centrally sponsored schemes like the MGNREGS as the implementation power is with the state government. Since the state government functions on the ground and forms the machinery that provides the end goal of generating employment, the concerned rural population might misattribute the whole policy to the state government.

Figure 3. Aligned State and Non-Aligned State in the State Election Window



a. Average actual *persondays*

b. Average Number of Persons who demand work

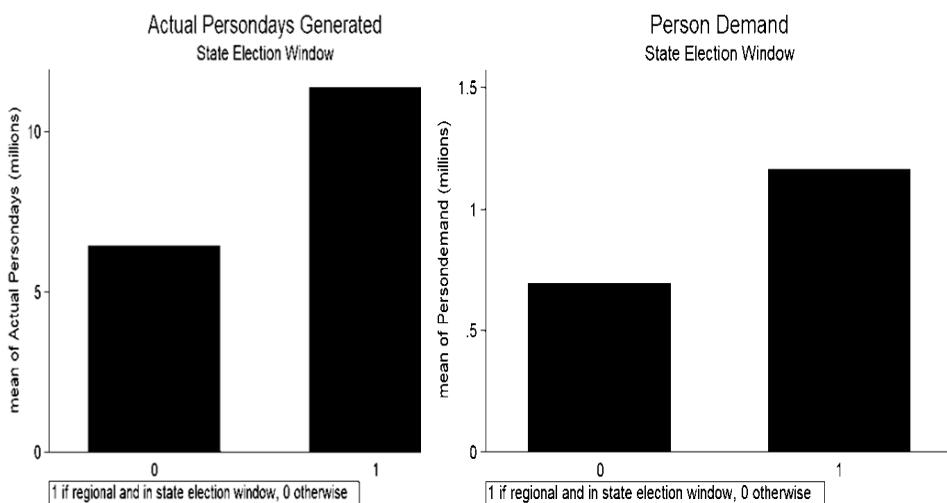
Source: Same as in figure 1a and Author’s own estimates of the election window;

Note: States aligned in the state election window were Chhattisgarh, Gujarat, Madhya Pradesh, Punjab and Rajasthan

In line with this theory, we felt that if a state is dominated by a regional party we are likely to see a much higher performance from the state in the state election window. To bring out this finer effect we generate the variable *regional* indicating the value 1 if the state was never governed by a national party and 0 otherwise. There were a total of seven states which were found to be regional, namely, Bihar, Kerala, Nagaland, Odisha, Sikkim, Tamil Nadu and West Bengal. Next, similar to the aligned case we interacted the dummy variable for region with the election variables to generate the interaction variables *stateelec_regional* and *centerelec_regional*. Figures 4a and 4b show the graph for actual *persondays* and the *persondemand* generated for a regional state over

the state election window. This gives us a clearer picture that on average, a regional party would not shy away from spending during the election window. This is because it is aware that there is high probability that people will misattribute any development work in the state to the regional state government. This is a key finding that will be explored in the later sections.

Figure 4: Regional and Non-Regional States in the State-Election Window



a. Average actual *persondays*

b. Average number of persons who demanded work

Source: same as in figure 1a and Author’s own estimates of the election window

Note: Regional states in the state election window are Bihar, Kerala, Nagaland, Odisha, Sikkim, Tamil Nadu and West Bengal

Other Control Variables

When considering all the states together, it is important to control for state’s rural population, since the size of the rural population would affect the budgetary allocation to the state and thereby affect the actual *persondays* generated in the state and the *persondemand*. Thus, using census data for the year 2011, we account for rural population for each

state by introducing the variable *logrural*. Along with the rural population of the state, the number of landless agricultural labourers in a state would also affect the number of *persondays* a state would generate in a given month. By doing so we could gather crucial insights on whether the projections made by the government are accurate. To incorporate the effect of rainfall, we define the variable *rainexcess* that measures the amount by which rainfall in a given month exceeds the normal rainfall or falls below the normal rainfall. This data is available with The Indian Meteorological Department (IMD) that publishes monthly data on the percentage departure in rainfall from the normal rainfall. We believe that in the months of a good rainfall i.e. when agriculture is doing well, less employment would be generated as part of the scheme and when there will be a heavy deficit in rainfall more people would be willing to join the scheme.

Econometric Modelling

The Hausman and Taylor random effects instrumental variable model is used for econometric modelling (Greene, 2003). This is due to the presence of time invariant and time variant endogenous regressors in the equation, which will be elaborated upon after a brief explanation of the Hausman-Taylor model.

The linear model for panel data model is as below is considered:

$$y_{it} = \mathbf{x}'_{it}\boldsymbol{\beta} + \mathbf{z}'_i\boldsymbol{\alpha} + \varepsilon_{it}$$

The random effects model stands on the assumption that the unobserved cross section specific effects, \mathbf{z}_i are uncorrelated with the included explanatory variables, \mathbf{x}_{it} . This proves to be a major shortcoming of the model as variables such as *stateelec_aligned*, *centerelec_aligned*, *stateelec_regional*, and *centerelec_regional* could be correlated with state specific unobserved factors such as the voters' preference. However, the random effects does allow for certain time-invariant characteristics such as the variables *regional*, the population of the state as measured by the census, which the fixed effects model simply absorbs. The Hausman-

Taylor's estimator for the random effects model overcomes the limitations posed by the random and the fixed effects model.

The model takes the form:

$$Y_{it} = \mathbf{x}'_{1it} \boldsymbol{\beta}_1 + \mathbf{x}'_{2it} \boldsymbol{\beta}_2 + \mathbf{z}'_{1i} \boldsymbol{\alpha}_1 + \mathbf{z}'_{2i} \boldsymbol{\alpha}_2 + \varepsilon_{it} + u_i$$

In this formulation, the unobserved individual effects that are contained in $\mathbf{z}'_i \boldsymbol{\alpha}$ in the equation above are constrained in the person specific random term denoted by u_i . Hausman and Taylor define four sets of observed variables in the model:

\mathbf{x}_{1it} set of variables that are time varying and uncorrelated with u_i

\mathbf{z}_{1i} set of variables that are time-invariant and uncorrelated with u_i

\mathbf{x}_{2it} set of variables that are time varying and correlated with u_i

\mathbf{z}_{2i} set of variables that are time-invariant and correlated with u_i

The Hausman-Taylor relies on the crucial assumptions that one can distinguish sets of variables \mathbf{x}_1 and \mathbf{z}_1 that are uncorrelated with u_i from \mathbf{x}_2 and \mathbf{z}_2 which are not. The Hausman-Taylor model uses only the information available within the model and comes up with an instrumental variable estimator.

The regression equations we estimate are as follows:

$$\begin{aligned} Inabyp_{it} = & constant + \beta_1 stateelec_t + \beta_2 centerelec_t + \beta_3 rainexcess_{it} + \beta_4 aligned_{it} \\ & + \beta_5 stateelec_aligned_{it} + \beta_6 centerelec_aligned_{it} \\ & + \beta_7 stateelec_Regional_{it} + \beta_8 centerelec_regional_{it} + \beta_9 regional_i \\ & + \beta_{10} loglandless_i + \beta_{11} logrural_i \end{aligned} \quad (1)$$

$$\begin{aligned} Inpd_{it} = & constant + \beta_1 stateelec_t + \beta_2 centerelec_t + \beta_3 rainexcess_{it} + \beta_4 aligned_{it} \\ & + \beta_5 stateelec_aligned_{it} + \beta_6 centerelec_aligned_{it} \\ & + \beta_7 stateelec_Regional_{it} + \beta_8 centerelec_regional_{it} + \beta_9 regional_i \\ & + \beta_{10} logrural_i \end{aligned} \quad (2)$$

In the above regression equations, the variables are organised to satisfy the criteria as set by the Hausman-Taylor estimator.

[*stateelec_{it}*, *centerelec_t*, *rainexcess_{it}*] form the set of time variant exogenous regressors: The election variables can be considered truly exogenous as the month of the election is pre-determined by the Election Commission of India (ECI) and can be reasonably expected to be not correlated with any state-specific factors (Khemani, 2000). The elections are held once in five years and the Election commission announces the exact data for the polls to be held a few months before. The variable *rainexcess_{it}* can also be considered to be exogenous as the amount of rainfall observed over a particular month would be reasonably uncorrelated with any state specific factor.

[*aligned_{it}*, *stateelec_aligned_{it}*, *centerelec_aligned_{it}*, *stateelec_Regional_{it}*, *centerelec_Regional_{it}*] form the set of time variant endogenous regressors i.e. correlated with u_i : We consider *aligned_{it}* to be endogenous as the voter's characteristics specific to the state might play a role in deciding whether a certain state and center have the same party or a party which is aligned with the ruling party in the center. Similarly, *stateelec_aligned_{it}*, *centerelec_aligned_{it}* are considered to be endogenous as the party in power during the state election window and the central election window must have used state specific electoral strategies to attract voters towards them. Thus, we can expect the voters of a certain state having a certain degree of affection towards a certain party and voting for them. Similarly, *stateelec_Regional_{it}* and *centerelec_Regional_{it}* were taken to be endogenous. For example, voters of the state of Tamil Nadu prefer voting for a regional party from their state such as the AIADMK, DMK over any national party. This preference has been consistent over the years and results in a battle between just the regional parties in the election window in such states.

[*regional_i*, *loglandless_i*, *logrural_i*] form the set of time invariant endogenous regressors i.e. correlated with u_i : The variable *regional_i* is time invariant but endogenous owing to the fact that voters in regional states have consistently showed bias towards parties originating and

mostly operating in their specific state. The variables $\log_{landless}_i$ and \log_{rural}_i taken from Census 2011 data are also considered to be endogenous and time invariant as the population difference between states with some states such as Uttar Pradesh having an extremely high population compared to a smaller state such as Sikkim might in itself explain that certain state specific factors might have contributed to more people settling in a certain region of the country. In the second regression equation which takes $\ln pd_{it}$ as the dependent variable, the variable $\log_{landless}_i$ is not considered and only the variable \log_{rural}_i is considered. Since the *persondemand* for work during the year is a demand side variable it crucially depends on the entire population rather than just the number of landless agriculture labourers in a specific state. Taking only the number of landless agricultural labourers in a certain state might not accurately represent the demand driven by rural women and other adults.

Thus, in line with the discussion presented above, we propose the following ex-ante:

- There is a significant difference for regional states as compared to non-regional states in the months leading up to the state elections with higher *abyp* i.e. $\frac{\text{Actual Persondays}}{\text{Projected Persondays}}$ and, *persondemand* for work
- There is a significant difference for regional states as compared to non-regional states in the months leading up to the central elections with lower *abyp* i.e. $\frac{\text{Actual Persondays}}{\text{Projected Persondays}}$ and, *persondemand* for work
- There is a significant difference for aligned states as compared to non-aligned states in the amount of *persondays* generated and the *persondemand* for work.

RESULTS AND DISCUSSION

The descriptive statistics of various variables are presented in Table 2. There is a high level of variation in the month on month *persondays* generated across states. On the demand side, the number of people demanding work in a particular month also has high variability.

Table 2: Descriptive Statistics

Variable	Obs	Mean	Std.Dev.	Min	Max
Inabyp: $\log\left(\frac{\text{Actual Persondays}}{\text{Projected Persondays}}\right)$	1914	-.217	.779	-6.292	2.255
Inpd: $\log(\text{persondemand})$	1914	12.837	1.391	7.469	15.531
stateelec	1914	.103	.304	0	1
centerelec	1914	.138	.345	0	1
Rainexcess	1914	-.065	1.39	-1	32.335
Aligned	1914	.475	.5	0	1
stateelec_aligned	1914	.027	.163	0	1
Centerelec_aligned	1914	.074	.261	0	1
stateelec_regional	1914	.038	.19	0	1
Centerelec_regional	1914	.05	.218	0	1
Regional	1914	.364	.481	0	1
loglandless	1914	14.55	1.872	10.165	16.808
logrural	1914	16.691	1.423	13.032	18.859

Source: Author's own estimates. Note: The description of variables are given in Table 1

We consider the panel data framework comprising of twenty two states and analysed over a period of eighty seven months starting from April 2012 to June 2019. In Table 3, we first test the presence of panel unit roots in the variables as the number of time-series observations (87) is higher than the cross-sectional (22) observations.

Table 3: Results for the Unit Root Test

	LLC	Breitung	IPS	Fisher-ADF Chi-square	Hadri
Inabyp: log($\frac{\text{Actual Persondays}}{\text{Projected Persondays}}$.)	-12.37*	-6.32*	-15.35*	261.98*	0.07
Inpd: log (<i>persondemand</i>)	-3.55*	-7.19*	-14.56*	284.95*	0.58
Rainexcess	-42.16*	-7.66*	-26.69*	401.68*	-0.20

Source: Author's own estimates. **Note:** *indicates significance at the 1 percent level

We find that under multiple panel unit root tests, we find the dependent variables *Inabyp*, *Inpd* and the variable *rainexcess* to be stationary. The Hadri LM test takes the null to be stationary, thus an acceptance of the null hypothesis indicates stationarity in the panels. Stationarity in the trend component of panel unit roots indicates that there is mean reversion and only transient shocks are felt. In line with our hypothesis, these transient shocks could be arising in the election windows, which peter out once the elections are over.

From the results in Table 4, taking *Inabyp* as the dependent variable (eq. 1), we find that the variable *centerelec* is significant at the 5 percent level and is positive. This means that the ratio of Actual by Projected (*abyp*) on average increases by 18.9 percent in the central election windows as compared to the other months, holding other variables constant. This could be due to the states which have national parties ruling in the state and would want to use this advantage to improve their chances of winning more seats in the Lok Sabha elections. The national parties BJP and the INC that are operating in the states would want to generate more *persondays* on the supply side near the central elections. The variable *rainexcess* as expected is negative and highly significant at the 1 percent level suggesting an inverse relationship between a good rainfall and the number of *persondays* generated under

the scheme. The result suggest that holding other variables constant if the actual rainfall is greater than the normal by 1 percent, then on average the ratio of *aby* falls by 3 percent. Confirming with our expectations the variable *centerelec_regional* shows a negative sign and is significant at the 5 percent level. This suggests that on average the ratio of *aby* is 23.9 percent lower for a regional state than for a non-regional state, *ceterus paribus*. The regional states hold a much smaller stake in the center compared to the non-regional states and thus are not as active in generating work days during the Lok Sabha elections. The variable *stateelec_regional* is showing a positive sign as per our expectations but is not significant. Interestingly, the variable *loglandless* has a negative and significant coefficient whereas, the variable *logrural* is positive and significant. This leads us to conjecture that the government budget planners may be under estimating actual *persondays* that are generated in a year. The projected *persondays* may not be accounting for the additional demand that is coming out of rural population other than the number of landless agricultural labourers such as women and other adults.

Table 4 also reports the results of equation (2) which takes *Inpd* as the dependent variable. Here, we find that the variable *stateelec* is coming out to be negative and significant. This is not something we expected but this could be due to the fact that the variable *Inpd* which is demand side variable might not only be active at the time of the state elections but could also be active during the other months of the year. Especially, in the event of natural calamity or a lean agricultural season, we might see a spike in the demand for work. These factors seem to overweigh the welfare motives that arise due to political considerations during state elections. Here again, we find that the variable *rainexcess* turns out to be significant and negative suggesting that a good rainfall leads to lower demand for work under the scheme.

Table 4: Regression Results for Equation (1) and Equation (2)

	(1)	(2)
	lnabyp	lnpd
stateelec	0.016	-0.313***
	(0.088)	(0.087)
centerelec	0.189**	0.107
	(0.093)	(0.092)
Rainexcess	-0.039***	-0.028**
	(0.013)	(0.013)
Aligned	0.069	0.082*
	(0.049)	(0.048)
stateelec_aligned	-0.157	0.015
	(0.135)	(0.134)
centerelec_aligned	-0.124	-0.066
	(0.110)	(0.109)
stateelec_regional	0.090	0.277**
	(0.128)	(0.127)
centerelec_regional	-0.239**	0.070
	(0.113)	(0.111)
Regional	0.086	0.464
	(0.079)	(0.316)
loglandless	-0.141*	
	(0.074)	
logrural	0.192*	0.696***
	(0.098)	(0.107)
constant	-1.433**	1.023
	(0.670)	(1.819)
Observations	1914	1914

Note: (1) Standard errors are in parenthesis, *** p<0.01, ** p<0.05, * p<0.1;

(2) lnabyp: log (Actual Persondays/Projected Persondays), lnlpd: log (Persondemand)

The variable *aligned* gives a positive and significant result suggesting that ceterus paribus, the states which are being run by aligned parties are on average likely to generate 8.15 percent more demand for work than the non-aligned states. Aligned parties have the advantage of not losing goodwill to a rival party in the center. This prompts them to be more active on the ground and attempts are made to nudge people towards applying for work under the scheme. The

variable *stateelec_regional* is confirming our hypothesis. It is positive and significant at the 5 percent level suggesting that a regional state on average is 27.7 percent more likely to generate demand for work during the elections than a non-regional state, holding everything else constant. This clearly suggests that a regional party operating in a specific state is more likely to be highly active during the state elections as any efforts in the state would favourably be attributed to the incumbent regional party and not to the party at the center. Lastly, the variable for population *logrural* is positive and significant as expected, suggesting that a 1 percent increase in the state population leads to a 0.69 percent increase in the demand for work in the state, *ceterus paribus*.

CONCLUSION

After every five year term a representative is chosen by the citizens who they believe will fight for their rights and work for the development and prosperity of the country. Over the last few decades more and more states in India are seeing the dominance of regional parties in governing their respective state. Sometimes there could also be a coalition of the regional and central parties governing a particular state. Alongside this, the national parties are usually dominant in the Indian Parliament at the center or there is a coalition government in the center as well.

The federal governance structure and multi-party political system leads to competition at the time of elections in India. This competition and outcomes may play out differently between a central and state election. For instance, when the elections for the state assembly and central Parliament happen together or within a small time gap, it has been observed that a regional party would get majority votes for the state elections and an opposing central party may win majority seats for the Parliament from the same state. There can thus be surprises in an electoral outcome from uncertain voter behaviour. In order to reduce the impact of anti-incumbency and to remain in power, political parties (in power) could use their privileged position to bring in additional benefits

from an existing welfare scheme or announce new schemes to woo the voters, thereby turning elections into a festival in democracy. The myopic behaviour of the voter partly explained by the peak-end rule could work in their favour in garnering a higher vote share and sometimes a comfortable win. Nordhaus (1975) and several subsequent studies have shown evidence of political business cycles on account of this.

Continuing on similar lines, this study has attempted to explore patterns if any in the MGNREGA scheme prior to the central and state elections between April 2012 and June 2019. It is one of the first studies that attempts to find differential pattern of labour days and labour demand generated under the scheme prior to an assembly or Parliamentary election. As an initial foothold, we categorised states based on the incumbent political party operating in the state. A major finding that comes out of the current study is that after controlling for rainfall, rural population and landless agriculture labour, the states which are ruled by regional political parties see a significantly higher demand for work under the scheme near the state election. However, on the supply side we find that near the central election such states become significantly less active in creating more labour days of work. Similar to previous studies on center-state alignment, we find a significantly higher demand for jobs coming in from states where the incumbent political party is in alignment with the central party.

The analysis in this study did not attempt to link the enticement of the political party to the electoral outcomes like share of votes received, gap between the leading party and the next in rank and/or the winning outcome. This could be continued as further research including the age and gender composition of the MGNREGS work prior to the election window of five months. Further political parties including the incumbent could have other means to woo the voters including freebies and that could also dampen the MGNREGS work. In this study, we look at the days of labour generated and demand for employment instead of wage expenditure as it gives a granular and meaningful picture of high

and unanticipated scheme activity right before the elections. We hope that our study provides an initial step towards deeper analysis in understanding electoral motives through the lens of large centrally sponsored schemes.

REFERENCES

- Arulampalam, W., S. Dasgupta, A. Dhillon and B. Dutta (2009), "Electoral Goals and Center-State Transfers: A Theoretical Model and Empirical Evidence From India", *Journal of Development Economics*, 88(1), 103-119.
- Bhanumurthy, N. R., H. Nath, A. Verma and A. Gupta (2014), *Unspent Balances and Fund Flow Mechanism under Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS)*, New Delhi, India: National Institute of Public Finance and Policy.
- Bonner, K., J. Daum, J. Duncan, E. Dinsmore, K. Fuglesten, L. Lai, ... and R. Quinn (2012), "MGNREGA Implementation: A Cross-state Comparison", *Woodrow Wilson School, Princeton University*.
- Das, U. and D. Maiorano (2019), "Post-clientelistic Initiatives in a Patronage Democracy: The Distributive Politics of India's MGNREGA", *World Development*, 117, 239-252.
- Greene, W. H. (2003), *Econometric Analysis 7th Edition International Edition*.
- Gupta, B. and A. Mukhopadhyay (2016), "Local Funds and Political Competition: Evidence from the National Rural Employment Guarantee Scheme in India", *European Journal of Political Economy*, 41, 14-30.
- Healy, A. and G.S. Lenz (2014), "Substituting the End for the Whole: Why Voters Respond Primarily to the Election-Year Economy" *American Journal of Political Science*, 58(1), 31-47.
- Kapur A. and M. Paul (2019), "Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) GoI, 2019-20", *Centre for Policy Research Budget Briefs*, 11(9).
- Khemani, S. (2000), *Political Cycles in a Developing Economy: Effect of Elections in Indian states*, The World Bank.

- Manjhi, G. and M. Keswani Mehra (2018), "Political Transfer Cycles from the Centre to the States", *Ensayos sobre Política Económica*, 36(86), 207-241.
- Min, B. and M. Golden (2014), "Electoral Cycles in Electricity Losses in India", *Energy Policy*, 65, 619-625.
- Ministry of Rural Development (MoRD), (n.d), "User Manual for NREGA", Retrieved from https://nrega.nic.in/netnrega/Data/Draft_User_Manual_MIS.pdf, [Accessed on 20-03-2019]
- Ministry of Rural Development (MoRD) (2013a), "Frequently Asked Questions (FAQs) on MGNREGA Operational Guidelines". Retrieved from https://nrega.nic.in/Circular_Archive/archive/nrega_doc_FAQs.pdf, [Accessed on 20-03-2019]
- Ministry of Rural Development (MoRD) (2013b), "Operation Guidelines 2013". Retrieved from https://nrega.nic.in/Circular_Archive/archive/Operational_guidelines_4thEdition_eng_2013.pdf, [Accessed on 20-03-2019]
- Ministry of Rural Development (MoRD) (2016), Guidelines/ Frameworks for "Planning for Works and Preparation of Labour Budget", Under the Mahatma Gandhi NREGA for the FY 2018-19 (No. G-31011/10/2016). Retrieved from https://nrega.nic.in/netnrega/writereaddata/Circulars/2199Guidelines_for_Planning_for_works_Labour_Budget-2018-19.pdf, [Accessed on 18-02-2019]
- Narayanan, R., S. Dhorajiwala and R. Golani (2019), "Analysis of Payment Delays and Delay Compensation in MGNREGA: Findings Across Ten States for Financial Year 2016–2017", *The Indian Journal of Labour Economics*, 62(1), 113-133.
- Nordhaus, W. D. (1975), "The Political Business Cycle", *The Review of Economic Studies*, 42(2), 169-190.
- Pattanayak A. and K.S. Kumar (2019), "Fiscal Transfers, Natural Calamities and Partisan Politics - Evidence from India", *Madras School of Economics Working Paper*, 184.

- Rao, M. G. (2017), "The Effect of Intergovernmental Transfers on Public Services in India", Working Paper No. 218, National Institute of Public Finance and Policy, New Delhi.
- Sen, K. and R.R. Vaidya (1996), "Political Budget Cycles in India", *Economic and Political Weekly*, 31(30), 2023-2027.
- Subramanian K. (2014, June 17), "A Prime Ministerial form of Government", *The Hindu*, Retrieved from <https://www.thehindu.com/opinion/op-ed/a-prime-ministerial-form-of-government/article6120400.ece>
- Sharma, A. and K. Anshuman (2019, April 10), "PM Modi Stays Popular in Uttar Pradesh, But it's too Close", *The Economic Times*, Retrieved from <https://economictimes.indiatimes.com/news/elections/lok-sabha/uttar-pradesh/pm-modi-stays-popular-in-western-uttar-pradesh-but-its-too-close/articleshow/68803910.cms?from=mdr>
- Vaidya, D. S. and K. Kangasabapathy (2014), "Playing with Fiscal Arithmetic: Interim and Non-Interim Budgets Since 1990-91", *Economic and Political Weekly*, 49(14), 111-112.
- Vaishnav, M. (2015), *Understanding the Indian Voter*, Carnegie Endowment for International Peace.

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