Development or Rent-Seeking?:

How Political Influence Shapes Infrastructure Provision in India

Anjali Thomas Bohlken[1]

Codebook

1 Construction of Analysis Datasets

1.1 Description of Data Source

The data on road provision used in this paper were scraped from the Online Management, Monitoring and Accounting System (OMMAS) of the PMGSY.[2] The initial dataset included all projects sanctioned under the PMGSY from 2000 until the time of data collection in October 2014 from the seven states that are the focus of this research - Bihar, Chattisgarh, Jharkhand, Madhya Pradesh, Rajasthan, Uttar Pradesh and Uttarakhand.

1.2 Procedure for Merging with State Assembly Constituencies

To match the individual road projects from the Online Monitoring System of the PMGSY to individual assembly constituencies, information obtained from the online system on which

[1]Assistant Professor, Sam Nunn School of International Affairs, Georgia Institute of Technology.

[2] The data were downloaded from `omms.nic.in` in October 2014.

habitation(s) each road benefited was utilized. Information from the National Habitation Survey published in 2003 by the Ministry of Drinking Water and Sanitation was then used to locate each habitation within a village. Incidentally, this was the same survey used by PMGSY officials to identify and locate habitations.[3] To match the habitation names, a program for fuzzy matching developed in R was used that matched the habitation name contained in the PMGSY online monitoring system to the habitation name in the National Habitation Survey containing information on the villages to which the habitations belonged.[4] Matching of habitations was done by block and district. Where there was more than one benefited habitation listed on the website, the program looped through each of the names to obtain a match. If there was more than one match obtained, only the first match on the list of benefited habitations was used. Thus, each road project is assigned to only one constituency. Section **??** presents additional analyses showing, however, that the main results are not an artifact of this assignment procedure.

While the fuzzy matching program was used to generate the initial matches, the matches were manually checked and retained only if they were accurate. A conservative approach was used whereby matches were discarded if there were doubts about the similarity of the names or because there was more than one habitation within the block and district that bore the same name. The remaining accurate matches then provided information on the villages in which the relevant roads were located. This list of village names was then matched with a list of census villages geocoded by MLInfomaps. Using GIS maps of state assembly constituencies

[3]Interview (on behalf of the author) with PMGSY Assistant Engineer, Bihar, December 2015.

[4]Where there were no benefited habitations listed, the name of the road was used to provide information on the benefited habitations.

also provided by MLInfomaps, each of the villages was located in the relevant assembly constituencies. The procedure yields accurate results because, although the information on roads was available by habitation and not village, assembly constituency boundaries do not cut across village boundaries. Using this procedure, 74% of the total roads in the sample could be identified in terms of their village location.

For the remaining roads whose village location could not be identified, GIS maps of 2001 block boundaries were used to examine the overlap between the block in which the road was located and the assembly constituencies. While there is in general a relatively weak overlap between administrative blocks and assembly constituencies, some blocks are almost perfectly contained by a single assembly constituency. By selecting those blocks whose areas overlapped with a single state assembly constituency by at least 99%, an additional 11% of road projects were matched.

In addition to information on roads, this dataset included information on 525 bridges which were excluded from the sample. The dataset also included duplicate entries for road projects in cases where more than one contractor was assigned to an initial road project. While this information is taken into account for the *Total Contract Value Won by Contractor Won by Contractor* variable below, the duplicate entries were otherwise removed from the analyses. The analyses in the paper are restricted to the road projects in the seven states that took place in the time period before the first state elections under the newly delimited state electoral boundaries took place. In this sample, the state assembly constituency location of 85% road projects could be identified.

To match individual road projects to time-varying characteristics such as the partisan identity of the legislator in the constituency, information on the fiscal year in which the road was sanctioned and on the month and year in which the state election took place was used. If the fiscal year in which the road was sanctioned occurred during an election year, the road was assigned to the electoral term that had the greatest overlap with the fiscal year.[5] Using this procedure, each of the road projects could be matched with constituency level electoral information. While the partisan affiliations of the individual legislators were available from the Election Commission of India[6], the identification of which legislators were ministers required additional data collection. The variables identifying the ministerial status of legislators were coded based on information from the archives of the websites of the respective state governments as well as news sources located through the *Factiva* and *Lexis Nexis* databases.

1.3 Constituency-Level Data

The first set of results in the paper pertain to data that is aggregated at the level of the constituency-electoral term. Table **??** below shows how the sample used in the constituency-level dataset are broken down by state and election year. Note that since the goal is to identify the effects of alignment and ministerial status while holding constituency level factors constant, the analysis is limited to the time period before the first election in the state held under newly delimited constituency boundaries. This delimitation of constituencies

[5]For example, suppose a road was built in the fiscal year 2002-2003, and an election was held in August of 2002. Since the Indian fiscal year begins on April 1st, the road would be assigned to the legislator that took office after the July 2002 election and not before.

[6]Data from the Election Commission of India were compiled by the Bhavnani State Election Dataset.

took effect in 2008 and elections in all states in the sample held after 2008 used the newly constituency boundaries with the exception of the election in Jharkhand in 2009 which used the old constituency boundaries.

Note that the differences in the number of constituencies between elections for Bihar, Madhya Pradesh and Uttar Pradesh reflect the fact that the states Chhattisgarh, Jharkhand and Uttarakhand were carved out of these states in 2000. There were 90 constituencies in Madhya Pradesh that became part of Chhattisgarh in 2000 and there were 81 constituencies in Bihar that became part of Jharkhand in 2000. Since the boundaries of these constituencies remained unchanged, these constituencies could be treated as single units comparable across multiple electoral terms. Thus, the first-differences analysis compared the data for the constituencies Chhattisgarh (Jharkhand) after 2000 with the same constituencies that were part of Madhya Pradesh (Bihar) prior to 2000. For Uttarakhand, however, the number of constituencies significantly increased and, thus, the constituencies in Uttarakhand in 2002 were not comparable to the constituencies in Uttar Pradesh in 1996. Thus, the data for Uttarakhand in the electoral term beginning in 2002 are omitted from the first differences analysis. They are, however, included in the other analyses.

1.4 Variable Descriptions and Sources

1.4.1 Constituency Level Variables

State: The name of the state. Source: PMGSY monitoring system.

Table 1: States and Election Years in the Sample

State	Start of Electoral Term	Number of Constituencies
Bihar	2000	324
Bihar	2005*	243
Chhattisgarh	2003	90
Jharkhand	2005	81
Madhya Pradesh	1998	320
Madhya Pradesh	2003	230
Rajasthan	1998	200
Rajasthan	2003	200
Uttar Pradesh	1996	424
Uttar Pradesh	2002	403
Uttar Pradesh	2007	403
Uttarakhand	2002	70
Uttarakhand	2007	70

∗:There were two elections held in Bihar in 2005 - one in February and one in October. This paper uses the data from the election in October 2005.

Administrative District: The name of the administrative district. Source: PMGSY monitoring system.

Administrative Block: The name of the administrative block. Source: PMGSY monitoring system.

State Assembly Constituency: The name of the state assembly constituency.

Total Road Completed in Term: This variable is calculated by summing up the road lengths for all individual road projects in the constituency that were sanctioned during the relevant electoral term and that had a completion date prior to the end of the electoral term in question. Source: Constructed from PMGSY Monitoring System.

New Connectivity Proportion: The proportion of road projects in the constituency sanctioned in the given electoral term that involved establishing new connectivity rather than upgrades of existing roads. Source: PMGSY monitoring system.

Domestic Collab. (Proportion): The proportion of road projects in the constituency sanctioned in the given electoral term that involved a domestic collaboration rather than a collaboration with an international agency such as the World Bank. Source: PMGSY Monitoring System.

Village Illiteracy (Average): The average illiteracy rate in the villages that were served by the road projects in the given constituency and the given electoral term. Source: Census of India (2001)

SC/ST Proportion (Average): The proportion of Scheduled Caste and Scheduled Tribe population in the habitations that were served by the road projects in the given constituency and the given electoral term. Source: National Habitation Survey (2010).

Habitation Size (Average): The average population size of the habitations (in thousands) that were served by the road projects in the given constituency and the given electoral term. Source: National Habitation Survey (2010).

State-Electoral Term: A dummy for the state and electoral term to which the given constituency-electoral term belongs. Source: Constructed.

Average Sanction Year: The average of the sanctioning year of the road projects allocated in the given constituency and electoral term (rounded). Source: PMGSY Monitoring System

Minister: A dummy variable coded 1 if the winner of the most recent election in the constituency belonged to the state council of ministers for more than one year during the electoral term, and 0 otherwise. Source: Coded by the Author Based on Information from State Government Website Archives and News Sources.

Vote Margin: The difference in the votes obtained by the winning and runner-up candidate in the constituency as a proportion of the total vote in the constituency. Source: Election Commission of India as compiled by Bhavnani (2014).

Forcing: This variable is equal to the vote margin of the candidate from the chief minister's party in the constituency in the most recent state election as a proportion of the total votes in the constituency in the most recent state election. The variable is positive if the candidate from the chief minister's party won the election in the constituency and negative if the candidate from the chief minister's party was the runner-up in the election in the constituency. It is missing if a candidate from the chief minister's party was neither the winner nor the runner up in the constituency in the most recent election. Source: Election Commission of India.

Forcing ^{2}: The square of the variable *Forcing* described above. Source: Same as Above.

Forcing ^{3}: The cube of the variable *Forcing* described above. Source: Same as Above.

Forcing ^{4}: The variable *Forcing* raised to the fourth power. Source: Same as Above.

CM Party Alignment: This variable is coded 1 if the winner of the most recent election in the constituency was aligned with the chief minister's party for the majority of the electoral term, and 0 otherwise. Source: Election Commission of India as compiled by Bhavnani (2014). Information on Chief Ministers and their parties was obtained from `http://www.worldstatesmen.org/India_states.html`.

Forcing* CM Party: The interaction of the variable *Forcing* and the variable *CM Party*

Alignment.

Forcing^2* CM Party: The interaction of the variable *Forcing*^{2} and the variable *CM Party Alignment*.

Forcing^3* CM Party: The interaction of the variable *Forcing*^{3} and the variable *CM Party Alignment*.

Forcing^4* CM Party: The interaction of the variable *Forcing*^{4} and the variable *CM Party Alignment*.

Winning Party: The party of the candidate in the state assembly constituency who won the most recent state election. Source: Election Commission of India.

Runner-Up Party: The party of the candidate in the state assembly constituency who was the runner-up in the most recent state election. Source: Election Commission of India.

Forcing C: This variable is equal to the vote margin obtained by the candidate in the constituency from a party in the state governing coalition as a proportion of the total votes in the constituency in the most recent state election. It is positive if a candidate from the governing coalition in the constituency won the most recent state election and negative if a candidate from the governing party in the constituency was the runner-up in the most recent state election. The variable is missing if a candidate from the governing coalition was neither the winner nor the runner up in the constituency. Source: Election Commission of India.

Forcing C^2: The square of the variable *Forcing C* described above. Source: Same as Above.

Forcing C^3: The cube of the variable *Forcing C* described above. Source: Same as Above.

Forcing C^4: The variable *Forcing C* raised to the fourth power. Source: Same as Above.

Ruling Coalition Alignment: This variable is coded 1 if the winner of the most recent election in the constituency was aligned with either the chief minister's party or another party in the governing coalition for the majority of the electoral term, and 0 otherwise. Source: Election Commission of India as compiled by Bhavnani (2014). Information on Chief Ministers and their parties was obtained from `http://www.worldstatesmen.org/India_states.html`.

Forcing* Ruling Coalition: The interaction of the variable *Forcing C* and the variable *Ruling Coalition Alignment*.

Forcing^2* Ruling Coalition: The interaction of the variable *Forcing*^{2} and the variable *Ruling Coalition Alignment*.

Forcing^3* Ruling Coalition: The interaction of the variable *Forcing*^{3} and the variable *Ruling Coalition Alignment*.

Forcing^4* Ruling Coalition: The interaction of the variable *Forcing*^{4} and the variable *Ruling Coalition Alignment*.

Total Amount Sanctioned for Road Projects: The total value of road projects 'sanctioned' or approved in the constituency during the current electoral term. Source: PMGSY monitoring system.

State Ruling Party in Constituency (Previous Term): A dummy indicating whether the winning state candidate in the constituency in the previous electoral term was aligned with the chief minister's party. Source: Election Commission of India.

State Ruling Coalition in Constituency (Previous Term): A dummy indicating whether the winning state candidate in the constituency in the previous electoral term was aligned with the chief minister's party or another party in the governing coalition. Source: Election Commission of India.

Total Road Completed in Constituency (Previous Term): The total length of PMGSY road projects in the constituency that were sanctioned and completed in the previous electoral term. Source: PMGSY monitoring system.

Total Road Sanctioned in Constituency (Previous Term): The total length of PMGSY road projects in the constituency that were sanctioned during the previous electoral term. Source: PMGSY monitoring system.

Total Amount Sanctioned in Constituency (Previous Term): The total amount of funds sanctioned for PMGSY road projects in the constituency during the previous electoral term. Source: PMGSY monitoring system.

Total Expenditure in Constituency (Previous Term): The total expenditure incurred on PMGSY road projects in the constituency during the previous electoral term. Source: PMGSY monitoring system.

Vote Margin in Constituency (Previous Term): The difference in vote share between the winning candidate and the runner-up candidate in the state assembly constituency in the state election prior to the most recent state election. Source: Election Commission of India.

Winning Vote Share in Constituency (Previous Term): The vote share received by the winning candidate in the state assembly constituency in the state election prior to the most recent state election. Source: Election Commission of India.

Illiteracy Rate of Overlapping Block: The proportion of illiterate adults in the popu-

lation as reported in the 2001 Census in the administrative block most closely overlapping the relevant state assembly constituency. Source Census of India 2001 and MLInfoMaps.

Rural Population of Overlapping Block: The proportion of the rural population as reported in the 2001 Census in the administrative block most closely overlapping the relevant state assembly constituency. Source Census of India 2001 and MLInfoMaps.

Winning Party Change: A dummy variable indicating whether the party of the winning candidate in the constituency changed from the previous electoral term. Source: Election Commission of India.

Incumbent Change: A dummy variable indicating whether the winning candidate in the constituency changed from the previous electoral term. Source: Election Commission of India.

Δ CM Party Alignment: The variable is equal to 1 if *CM Party Alignment* changed from 0 in the previous electoral term to 1 in the current electoral term, it is equal to -1 if *CM Party Alignment* changed from 1 in the previous electoral term to 0 in the current electoral term and is equal to 0 if there was no change in *CM Party Alignment*. Source: Constructed.

Δ Ruling Coalition Alignment: This variable is analogous to the one above but is based on the variable *Ruling Coalition Alignment* which is coded 1 if the winner of the most recent election in the constituency was aligned with either the chief minister's party or another party in the governing coalition for the majority of the electoral term, and 0 otherwise. Source: Constructed.

Δ Ministerial Status: This variable is equal to 1 if the variable *Minister* described above changed from 0 in the previous electoral term to 1 in the current electoral term, it is equal to -1 if *Minister* changed from 1 in the previous electoral term to 0 in the current electoral term and is equal to 0 if there was no change in the variable *Minister*. Source: Coded by the Author Based on Information from State Government Website Archives and News Sources.

Δ Total Road Completed in Term: The difference between the value of the variable *Total Road Completed in Term* in the constituency for the current electoral term and its value in the constituency for the previous electoral term. Source: Constructed.

Δ Total Expenditure in Term: The difference between the total expenditure incurred on PMGSY road projects in the constituency sanctioned and completed during the current electoral term and the total expenditure incurred on PMGSY road projects in the constituency sanctioned and completed during the previous electoral term. Source: Constructed.

Δ Total Sanctioned Cost: The difference between the total amount sanctioned for PMGSY road projects in the constituency during the current electoral term and the total amount sanctioned for PMGSY road projects in the constituency during the previous electoral term. Source: Constructed.

Δ Total Expenditure to Date: The difference between the total expenditure incurred on PMGSY road projects in the constituency sanctioned during the current electoral term and the total expenditure incurred on PMGSY road projects in the constituency sanctioned during the previous electoral term. Source: Constructed.

Δ New Connectivity Proportion: The difference between the value of the variable *New Connectivity Proportion* in the constituency for the current electoral term and its value in the constituency for the previous electoral term. Source: Constructed.

Δ Domestic Collab. (Proportion): The difference between the value of the variable *Domestic Collab. (Proportion)* in the constituency for the current electoral term and its value in the constituency for the previous electoral term. Source: Constructed.

Δ Village Illiteracy (Average): The difference between the value of the variable *Village Illiteracy (Average)* in the constituency for the current electoral term and its value in the constituency for the previous electoral term. Source: Constructed.

Δ SC/ST Proportion (Average): The difference between the value of the variable *SC/ST Proportion (Average)* in the constituency for the current electoral term and its value in the constituency for the previous electoral term. Source: Constructed.

Δ Habitation Size (Average): The difference between the value of the variable *Habitation Size (Average)* in the constituency for the current electoral term and its value in the constituency for the previous electoral term. Source: Constructed.

Δ Vote Share: The difference between the vote share of the winning candidate in the constituency in the current electoral term and the vote share of the winning candidate in the constituency in the previous electoral term. Source: Constructed.

Δ Vote Margin: The difference between the vote margin of the winning candidate in the constituency in the current electoral term and the vote margin of the winning candidate in the constituency in the previous electoral term. Source: Constructed.

Δ MP State Government Alignment: An Indicator for whether the Member of Parliament (National Legislator) whose constituency encompasses the relevant state constituency shares the same party as the Chief Minister. Source: Same as Above.

Δ MP National Government Alignment. An Indicator for whether the Member of Parliament (National Legislator) whose constituency encompasses the relevant state constituency shares the same party as the Prime Minister. Source: Same as Above.

1.4.2 Individual Road Project Variables

State: The name of the state in which the road project is located. Source: PMGSY Monitoring System.

Administrative District: The name of the administrative district in which the road project is located. PMGSY Monitoring System.

Sanction Year: The year in which the road project was sanctioned. Source: PMGSY Monitoring System.

Sanctioned Cost: The total amount allocated for the road project in lakhs of Indian rupees. 1 lakh is equal to a 100,000. Source: PMGSY Monitoring System.

Road Length (Kms): The length of road in Kilometers sanctioned under the road project. Source: PMGSY Monitoring System.

Total Expenditure till Present: The total expenditure actually incurred on the given road project until data collection in 2014 in lakhs of Indian rupees. 1 lakh is equal to a 100,000. Source: PMGSY Monitoring System.

Habitation Size: The total population of the habitation (in thousands) connected by the road project. Source: National Habitation Survey (2010).

State Assembly Constituency: The name of the state assembly constituency in which the road project is located. Source: Constructed by author from information in the PMGSY Monitoring System, the National Habitation Survey and Assembly Constituency Shapefiles from MLInfoMaps.

Vote Share: The vote share received by the winning candidate in the state assembly constituency in the most recent state election. Source: Election Commission of India.

Vote Margin: The vote margin share received by the winning candidate in the state assembly constituency in the most recent state election. Source: Election Commission of India.

Time to Completion: The number of years between the year the road project was initially sanctioned and the year it was completed. Source: PMGSY Monitoring System.

New Connectivity: An indicator for whether the road project provides new connectivity as opposed to being an upgrade of an already existing road. Source: PMGSY Monitoring System.

Illiteracy of Village: The proportion of illiterate adults in the village connected by the

road project. Source: Census of India 2001 as made availably by MLInfoMaps.

Years Since Sanctioned: The number of years between the year the road project was initially sanctioned and the year of data collection (i.e. 2014). Source: PMGSY Monitoring System.

Domestic Collaboration: An indicator for whether the road project involves a domestic collaboration rather than a collaboration with an international agency. Source: PMGSY Monitoring System.

SC/ST Proportion: The proportion of members of Scheduled Caste and Scheduled Tribe in the habitation connected by the road project. Source: National Habitation Survey (2010).

Member of Chief Minister's Party: An indicator for for whether the road project located in constituency i was sanctioned in a fiscal year during which the representative in the constituency was a member of the chief minister's party. If the chief minister changed during a given legislator's electoral term, alignment is coded according to the chief minister that was in office during the majority of the electoral term. Election Commission of India.

Project in Multiple Habitations: An indicator for whether the road project is described as benefiting multiple habitations. Source: PMGSY Monitoring System.

Total Value of Contracts Won by Contractor in State: The variable pertains to the contractor hired to execute the given road project. It is calculated by adding up the sanctioned cost for each road project in the state won by the contractor hired for the given road project during the period prior to delimitation. The variable is missing in cases where the name of the hired contractor is missing. Source: PMGSY Monitoring System.

Road Quality Rating: The variable reflects the rating of the quality of the road project done by an independent monitor - either the State Quality Monitor or the National Quality Monitor. In cases where ratings by both monitors exist and there is a discrepancy, the rating of the State Quality Monitor is used. The variable is coded 1 if the road is rated as being "Satisfactory" and 0 if the road is rated as 'Unsatisfactory' or 'Required Improvement'. Source: PMGSY Monitoring System.

Minister: An indicator for whether the road project located in constituency i was sanctioned in a fiscal year during which the representative in the constituency belonged to the state's council of ministers. This variable is coded 1 even if the representative resigned from her ministerial position in the middle of the fiscal year. Source: Author's Coding based on Fisman et. al. (2014) and State Government Website Archives and News Sources.

Chief Minister: An indicator for whether the road project located in constituency i was sanctioned in a fiscal year during which the representative in the constituency was the state's chief minister. This variable is coded 1 even if the representative resigned from her position in the middle of the fiscal year. Source: Author's Coding based on Fisman et. al. (2014)

and State Government Website Archives and News Sources.

Road Works Minister: An indicator for whether the road project located in constituency i was sanctioned in a fiscal year during which the representative in the constituency was a minister associated with a department that was either partially or wholly responsible for rural roads provision under PMGSY in the state. The relevant departments in each state were identified through a perusal of PMGSY websites for the given states and through interviews with PMGSY officials. To guard against misattribution of expenditures (since these are not available by fiscal year), the variable captures only those road works ministers who remain in their position for more than two years. The departments include the PWD (Public Works department), Rural Development and Rural Engineering Services. Source: Author's Coding based on State Government Website Archives and News Sources.

Electronic Procurement: An indicator for whether the state had rolled out electronic procurement at the time the road project was sanctioned. Source: Lewis-Faupel et. al. (2015).

MP in PM's party: An indicator for whether the state assembly constituency in which the road project was located was part of a national parliamentary constituency for which the MP was a member of the Prime Minister's party at some point during the electoral term in which it was sanctioned. Source: Election Commission of India. Information on boundaries of state assembly constituencies and parliamentary constituencies were obtained using maps from MLInfoMaps.

MP in CM's party: An indicator for whether the state assembly constituency in which the road project was located was part of a national parliamentary constituency for which the MP was a member of the state chief minister's party at some point during the electoral term in which it was sanctioned. Source: Election Commission of India. Information on boundaries of state assembly constituencies and parliamentary constituencies were obtained using maps from MLInfoMaps.

Minister (CM's party): An indicator for whether the road project located in constituency i was sanctioned in a fiscal year during which the representative in the constituency belonged to the state's council of ministers and was a member of the chief minister's party. This variable is coded 1 even if the representative resigned from her ministerial position in the middle of the fiscal year. Source: Author's Coding based on Fisman et. al. (2014) and State Government Website Archives and News Sources.

Minister (Coalition Partner): An indicator for whether the road project located in constituency i was sanctioned in a fiscal year during which the representative in the constituency belonged to the state's council of ministers and was a member of a party other than the chief minister's party. This variable is coded 1 even if the representative resigned from her ministerial position in the middle of the fiscal year. Source: Author's Coding based on Fisman et. al. (2014) and State Government Website Archives and News Sources.

Administrative District of Road Works Minister: An indicator for whether the road project is located in an administrative district that contained a constituency of a road works minister at some point during the electoral term during which the road was sanctioned. The variable is coded as 1 only if the road works minister remained in her position for at least two years.Source: Author's Coding based on State Government Website Archives and News Sources.

Member of Coalition Partner: An indicator for for whether the road project located in constituency i was sanctioned in a fiscal year during which the representative in the constituency was a member of a party that was a coalition partner in the state government (but not the chief minister's party). Source: Election Commission of India. Information on Membership in the Governing Coalition coded from news sources.

Expenditure Premium: The expenditure incurred on the individual project over and above the sanctioned cost. If the expenditure incurred was less than or equal to the sanctioned cost, this variable is coded as 0. Source: PMGSY Monitoring System.

Cabinet Minister: An indicator for whether the road project located in constituency i was sanctioned in a fiscal year during which the representative in the constituency belonged to the state's council of ministers and was of cabinet rank. Source: Author's Coding based on State Government Website Archives and News Sources.

State Electoral Term: A string variable listing the name of the state in which the road project is located and the year of the most recent state election prior to the year in which the road project is sanctioned. The variable is used to create state-electoral term dummies used in the analyses. Source: Constructed based on PMGSY Monitoring System.

Administrative District of Road Works Minister: An indicator for whether the road project is located in an administrative district that contained a constituency of a road works minister in the state government during the electoral term during which the road was sanctioned. The variable is coded as 1 only if the road works minister remained in her position for at least two years. Source: Author's Coding based on State Government Website Archives and News Sources.

Administrative District of Road Works Minister (CM's Party): An indicator for whether the road project is located in an administrative district that contained a constituency of a road works minister belonging to the chief minister's party during the electoral term during which the road was sanctioned. The variable is coded as 1 only if the road works minister remained in her position for at least two years.Source: Author's Coding based on State Government Website Archives and News Sources.

Member of CM's party $*$ Administrative District of Road Works Minister (CM's Party): The interaction of the variable *Member of Chief Minister's Party* and the variable *Administrative District of Road Works Minister (CM's Party).* Source: Constructed.

Opposition Party Constituency: An indicator for whether the road project located in constituency i was sanctioned in a fiscal year during which the representative in the constituency was a member of a party that did not belong to the state governing coalition. Source: Election Commission of India. Information on Membership in the Governing Coalition coded from news sources.

Opposition Party Constituency $*$ Administrative District of Road Works Minister: The interaction of the variable *Opposition Party Constituency* and the variable *Administrative District of Road Works Minister*. Source: Constructed.

Completed: An indicator for whether the road project is recorded as having been complete at the time of data collection in 2014. Source: PMGSY Monitoring System.

Minister $*$ Vote Margin: The interaction of the variable *Minister* and the variable *Vote Margin*. Source: Constructed.

Member of Chief Minister's Party $*$ Vote Margin: The interaction of the variable *Member of Chief Minister's Party* and the variable *Vote Margin*. Source: Constructed.

Vote Margin Squared: The square of the variable *Vote Margin*. Source: Constructed.

Minister * Vote Margin Squared: The interaction of the variable *Minister* and the variable *Vote Margin Squared*. Source: Constructed.

Chief Minister's Party * Vote Margin Squared: The interaction of the variable *Member of Chief Minister's Party* and the variable *Vote Margin Squared*. Source: Constructed.

Duplicate Entry with Diff. Contractor: A variable indicating whether the entry for the given road project is identical to another project in the PMGSY monitoring system with the exception of the name of the assigned contractor. Source: Constructed based on the PMGSY Monitoring System.

Expenditure- Unproductive Project: This variable records the total expenditure incurred on a given road project until data collection in lakhs of Indian rupees[7] for projects that were sanctioned at least five years prior to data collection but that remained incomplete at the time of data collection. The variable is missing for projects that were complete at the time of data collection and for projects that were sanctioned less than five years prior to data collection. Source: PMGSY Monitoring System.

Expenditure- Productive Project: This variable records the total expenditure incurred on a given road project until data collection in lakhs of Indian rupees[8] for projects that were completed at the time of data collection and that took two years or less to complete. The

[7] 1 lakh is equal to a 100,000

[8] 1 lakh is equal to a 100,000

variable is missing for projects that were incomplete at the time of data collection and for projects that took more than two years to complete. Source: PMGSY Monitoring System.