# Do Coalition Governments Provide Better Developmental Outcomes in the Indian States?

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**Abstract**

There is an increasing interest in understanding the influence of political structures on economic variables. In particular, there has been quite some focus on understanding the effects of government composition on outcomes. However, there are certain gaps in the literature. Do coalition governments differ from absolute majority governments with respect to such indicators? This paper tries to analyse the relationship between coalition governments and developmental outcomes for Indian states over the period 2000-2019. We find that coalition governments are statistically different from absolute majority governments in terms of development performance. We find that the former are negatively related to development outcomes; coalition governments lead to lower developmental progress as opposed to single- party/absolute majority governments.

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# 1 Introduction

What is the role of a government? This age-old question has many answers. Some of the most common responses include being responsible for maintaining law and order, enforcing civil rights, providing security and defence against foreign invasion etc. From an economic perspective, governments correct for market failures, redistribute resources and offer public goods which the citizens might not be able to provide for themselves (Stiglitz & Rosengard 2015; Hindriks & Myles 2013) This is particularly true for democratic governments. They are concerned with the welfare of the citizens, not entirely due to altruistic reasons but because they want to get re-elected to public office (as the public choice theorists tell us). Consequently, they undertake activities that aim to raise overall living standards in the hopes of influencing voters.

Electoral processes bring out different types of governments. This can range from absolute majorities where a single political party alone wins comfortably more than the required number of seats to win the elections to coalition governments that see the coming together of several parties to form a majority, based on some common ground, ideological or otherwise. Be it the Bharatiya Janta Party (BJP) in India, Maldivian Democratic Party in the Maldives, Awami League in Bangladesh or the Druk Nyamrup Tshogpa in Bhutan — over the past few decades, there has been a rising trend in the creation of Majority and Absolute Majority Governments[1] in South Asia. With South Asia hosting roughly a quarter of the world's population and being considered the new face of the world's emerging economies, it is imperative to critically analyse the socio-economic and developmental implications of the political environment of these countries.

This is an important question to consider since previous literature tells us that the composition of government has a bearing on the type of policies that are chosen. We lay our focus on India. The country follows the federal system of government, with legislative power divided into two levels, the Union government and State governments. Each level's jurisdiction is laid out in the Seventh Schedule of the Constitution which divides the powers of the two into the Union List, the State List and the Concurrent List. State Legislature can be divided into 2 houses: the Legislative Assembly (popularly known as the Vidhan Sabha) and Legislative Council (known as Vidhan Parishad). The Vidhan Sabha is the real authority of power and decision-making in a state. Its members are chosen directly by the people. As for the Vidhan Parishad, it is the upper house of the state legislature whose members are selected via indirect means. Furthermore, all states have a Vidhan Sabha but not necessarily a Vidhan Parishad (only 6 states have it). Therefore, our study focuses on the Legislative Assembly election outcomes.

"Indian states provide us with an unusual microcosm and macrocosm for studying the processes of development: a microcosm since the states are constituent units of a larger system, and a macrocosm because the units are themselves so large that they can be studied as

[1] An absolute majority government is one in which one contesting party holds a comfortable majority of seats in a legislature. The majority is a 'working majority' and it is usually large enough to have its legislation passed without any risk of parliamentary defeat.

total systems" (Wiener 2015). This presents us with the perfect opportunity to compare patterns of development in varied political systems functioning within the single framework of a country. All states have the same legal system, constitution and administration but the internal compositions of the governing parties can vary.

For a long time since its independence in 1947, India saw a dominant role played by one single party both at the national and regional levels of politics. It was the Indian National Congress (INC). Associated with the freedom struggle, INC enjoyed great popularity amongst the masses. In the first general elections held in 1951-52, the party won 364 of the then 499 seats in the Lok Sabha. Its dominant run at the national level continued till the 1970s. However, the elections following the imposition of the Emergency in the mid-1970s saw the creation of the first-ever coalition government in Indian politics led by the Janata Party under Morarji Desai.

Although the INC did return to power in the early 1980s, there were intermittent periods of both majority and coalition governments. However, the period from the late 1990s to 2014 saw the emergence of what is called "coalition politics" on the national level. The first coalition government to complete a full 5-year term was under Atal Bihari Vajpayee from 1998 to 2004. This was followed by the Congress-led United Progressive Alliance (UPA) which won the elections in 2004 and 2009. In both 2014 and 2019, the BJP secured a majority on its own and formed governments at the Centre with the National Democratic Alliance (NDA). At the State Level, the first coalition government was set up back in 1952 in Kerala. This indicates that there is greater electoral competition amongst political parties at the state level. Another important feature of state-level politics is the dominant role played by regional parties. However, it has grown immensely since the advent of coalition politics at the national level (Ziegfeld 2012) Given the rather long association of Indian politics with coalition governments, it becomes imperative to study how (if any) developmental outcomes differ across coalition and majority governments.

The main objective of this paper is to understand how the political composition of state governments affects and influences human development outcomes. If one party has an absolute majority, it can freely implement policies and actions without any dependence on other political parties. On the other, if no single party has control over half of the seats, parties will have to form coalitions and make the decisions together. In essence, we aim to answer the following question: Do coalition governments perform better with respect to development indicators? If so, why and by how much? This is an important question that previous literature has not answered satisfactorily. While there are studies that focus on different economic aspects of coalition governments in India, (Lalvani 2005; Dutta, n.d.) to the best of our knowledge no paper has tried to understand the developmental outcomes of coalition governments at the state level. Our study tries to fill this gap.

Our paper is structured in the following manner: Section 2 entails our review of the existing literature, and Section 3 expands on the data and methodology used. In Section 4, we present and discuss the findings of our research. We conclude our paper in Section 5 and provide the scope for further research.

## 2 Literature Review

Through our review of current literature, we believe that there are two potential outcomes of having a majority government, both of which will have opposing results.

Firstly, we believe that by exploiting their majority status, governments can easily pass various policies and other initiatives and measures to improve development outcomes. After all, if there is no effective or 'real' opposition, there is a scant scope for policies or laws to not be passed. Khemani and Wane (2008) find that, under reasonable assumptions, single-party governments incur greater public expenditure and impose higher taxes. Such governments provide public goods for reaping electoral benefits. This can improve the standards of living of the people as greater investments are made in areas like education, healthcare, social security etc.

Further, the concentration of political power with one party creates an aspect of indivisibility in terms of indivisibility of spending and decision making, which can lead absolute majorities to spend more (Ronny & Odendahl 2012), and make faster decisions. Extending this, coalition governments may not be able to quickly and effectively pass policies and make decisions for the development of the region. Differing party interests or motivations can result in the tabling of bills, and the prevention of desired development outcomes. Therefore, a coalition may not be able to agree on projects and ends up implementing few or none.

Secondly, it is plausible that due to the Common Pool Problem and the externalisation of costs in coalitions, coalition governments may provide better developmental outcomes. The model suggests that when coalition governments are formed, all of its constituent parties wish to target spending to their core electoral groups. Costs, however, are externalised and spread across and shared by all parties of the coalition. This results in higher spending than in the case that one party would be governing. This implies that there is an increase in spending to deliver targeted benefits when coalitions form governments (Meriläinen 2013).

Supporting this, the research of Bawn, K. and Rosenbluth F (2006) suggests that the more parties in government at the budget-passing time, the larger is the public sector. Similar to Meriläinen (2013), they state that "a government coalition of many parties behaves differently than a single-party coalition of many interests because of electoral accountability. A single party in the government is accountable for all policy decisions it makes; if it wants to keep its majority, it must promote the collective interest of a broad support base (Cox 1987). Participants in multi-party coalition governments, by contrast, are held primarily responsible for only a subset of policy decisions, for the policy areas in which they have the biggest stake, and the biggest impact."

We believe these differences in expenditures are crucial in shaping developmental outcomes. This is a fairly straightforward assumption one can undertake. Countries that have higher expenditures may be in a better position to ensure that their citizens are able to access a better standard of living. Going by this logic, governments that incur higher expenditures also enjoy better development outcomes. Gupta et al (1999) find that expenditure allocation is crucial for health and education services in society. In a similar manner, Rajkumar and

Swaroop (2008) show that public spending and outcomes are linked in the desired manner when good governance prevails.

This study is unique on two fronts. Firstly, it studies the impact of concentration of political decision-making power on development indicators in an Indian context. While there have been studies that analyse the impact of local governments and their formations on public spending, taxation, etc, we believe this might be the first study to do an in-depth analysis of Indian State governments. Secondly, the paper further contributes to the existing research in the intersecting fields of development economics and political science. Instead of national, cross-country comparisons, it emphasises the comparison of development outcomes of units within the same political system, with the same institutional background.

# 3 Data and Methodology

## 3.1 The Model

$$Y = f(C) \tag{1}$$

Where Y is a measure of developmental outcome such as the Human Development Index (HDI).

It is considered to be a better proxy for overall development as compared to other yardsticks like per capita Gross Domestic Product (GDP). This is because HDI is multifaceted in the sense that it takes into account a broader definition of development. It takes 3 dimensions namely:

1. Long and healthy life;
2. Knowledge and;
3. Standard of Living.

The calculation of the HDI can be seen in Appendix A.2.

C in equation (1) refers to a coalition government. We consider coalition governments that are forced coalitions. While a coalition exists when multiple parties come together to form a government, there are instances where one party alone in the coalition captures enough seats to form a majority[2]. We do not consider this form of a coalition in our study since there is no real coercion, political or otherwise, for such a government to take into account the

[2]An illustration from our data might be useful here: The Left Front Alliance in West Bengal consists of various parties including the Communist Party of India (Marxist). A party requires 148 out of 294 seats to win a majority in the state assembly. In the 2006 West Bengal State Assembly elections, the Left Front amassed 233 seats in the assembly elections out of which 176 seats alone were won by the Communist Party of India (Marxist). We consider such instances to form a majority government despite being under coalition or alliance.

consideration of other groups. As long as it satisfies the demands of its core constituency, the possibility of reelection is high. A forced coalition, in this paper, refers to a coalition that is formed when no single party has garnered enough seats to form a majority and seeks the support of other parties to form a government. Such a government will be forced to distribute any gains across different groups in order to increase their chances of re-election.

We augment equation (1) by including other factors that influence development. In a recent paper, Tripathi (2021) studies the relationship between urbanisation and development in a cross-country analysis. While urbanisation enhances economic activity, its relationship with people's capabilities and well-being is largely understudied. The study finds that the relationship between the two depends on how one measures urbanisation. For some proxies like the total urban population, the relationship is positive. While for others, such as the urban population growth rate, it is negative. Overall, the study argues for promoting measures of urbanisation to achieve higher human development.

In a similar cross-country analysis, Shah (2016) finds that fertility is negatively associated with HDI. The relationship between fertility rates and development is rather ambiguous. Many cross-sectional studies have found a negative relationship between the two. However, some authors conclude that the relationship turns positive beyond a certain level (HDI value of 0.86) (see Myrskala et al 2009, Harttgen and Vollmer 2013). In a study based in Pakistan, Qasim and Chaudhary (2015) analyse disparities in development. They employ various indicators of industrialisation and social development. The study finds that population density is also an essential factor in promoting development. Various studies also include a measure of material prosperity like per capita income or its growth rate to understand the developmental process better (Bhowmik 2019).

$$Y = f(C, TFR, UR, PD) \tag{2}$$

where TFR is total fertility rate, UR is urbanisation and PD is population density.

## 3.2 Data and Variables

Our study considers a panel dataset of 20 states[3] in India over the period 2000-2019. The main data source for our study is GlobalDataLab. It is a repository of subnational developmental indicators for various countries across many years. It is hosted by Radboud University. For coalitions, we have seen election results available on the Election Commission of India website and other internet sources. The variables chosen in the analysis undertaken here are defined in Table 1.

[3]Data of newly formed states and their original states during this time period was not considered. For example, in 2014 Andhra Pradesh was split into Telengana and Andhra Pradesh. The data of both these states is not considered.

**Table 1: Variable Description**

| **Conceptual Variable** | **Observable Variable** | **Variable Type** | **Definition** | **Source** |
|---|---|---|---|---|
| Development | Subnational Human Development Index (SHDI) | Dependent | It is the average of the subnational values of 3 dimension indexes- education, health and standard of living. It is similar to the HDI produced by the UNDP, only that it is applied to the subnational level. | Global Data Lab |
| Coalitions | Coalition | Independent | Forced coalition as described in section 3.1. | Election Commission of India |
| Fertility | Total Fertility Rate | Control | Average number of children born to a woman if they were to experience the exact age-specific fertility rates throughout life. | Global Data Lab |
| Urbanisation | Population in Urban Areas | Control | Percentage of population in urban areas in the state | Global Data Lab |
| Population Density | Population Density | Control | Number of people living in a place divided by its total area | Global Data Lab; for total area we have taken Census 2011 data. |

***Source:*** Authors' descriptions.

## 3.3 Econometric Model and Estimation

Based on the discussion in the paper so far, we estimate the following equation:

$$Y_{it} = \beta_1 + \beta_2 Cogov_{it} + \beta_3 Urbani_{it} + \beta_4 Density_{it} + \beta_5 Totalfer_{it} + u_{it} \quad (3)$$

i=1,2,3...20

t=1,2,3...20

Here, i refers to the cross-sectional subjects in the dataset i.e., states of India while t refers to the time dimension starting from 2000 to 2019. For descriptive statistics, please see Table 1. Y stands for the subnational HDI, urbani refers to the percentage of people living in urban areas of a state, density refers to population density and totalfer stands for total fertility rate. U is the error term. Our main variable of interest is Cogov which stands for coalition governments. It is a dummy variable specified as: Cogov = 1, if in a given state in a given year there is a coalition government and 0, otherwise.

**Table 2: Descriptive Statistics**

| Variable | Mean | Maximum | Minimum | Median | Observations |
|---|---|---|---|---|---|
| shdi | 0.619 | 0.782 | 0.455 | 0.621 | 400 |
| cogov | 0.4 | 1 | 0 | 0 | 400 |
| urbani | 32.39 | 84.3 | 8.81 | 30.95 | 400 |
| density | 350.75 | 1155.77 | 13.45 | 321.99 | 400 |
| totalfer | 2.49 | 6.2 | 0.93 | 2.325 | 400 |

***Source:*** Authors' calculations.

We have a balanced panel with N = T. We estimate equation (3) using pooled OLS estimation, random effects estimation and fixed effects estimation. Pooling estimates are very likely to be erroneous in our case since they do not take into account the inherent heterogeneity amongst our cross-sectional units. In intuitive terms, we believe that fixed effects are the most suitable method of estimation since our sample does not constitute a random drawing. Furthermore, econometric theory tells us that fixed-effects estimates are also consistent (Gujarati and Gunasekar 2017). We nonetheless estimate the equation using all 3 methods and decide on the most appropriate method based on statistical testing.

# 4 Results and Interpretation

## 4.1 Regression Results

**Table 3: Estimation Results**

| Variables | Pooled Estimates | Fixed Effects Estimates | Random Effects Estimates |
|---|---|---|---|
| intercept | 0.69825*** | - | 0.74762*** |
| | (0.012092) | | (0.016179) |
| cogov | 0.012636* | -0.014392*** | -0.01438*** |
| | (0.0049622) | (0.0031177) | (0.0032044) |
| urbani | 0.0020867*** | 0.00028904 | 0.0012287*** |
| | (0.00018) | (0.00039196) | (0.00033649) |
| density | -0.00005517*** | 0.00014232*** | 0.000051471* |
| | (0.00000) | (0.000029057) | (0.000022934) |
| totalfer | -0.053011*** | -0.07439*** | -0.072278*** |
| | (0.00336) | (0.0023089) | (0.0023216) |
| Adjusted $R^2$ | 0.54693 | 0.81955 | 0.80796 |
| F-statistic (p-value) | 121.414 | 458.789 | |
| | (0.000000) | (0.000000) | |
| F-statistic(p-value) | - | - | 1682.69 |
| | | | (0.000000) |

***Source:*** Authors' calculations using R.
Significance codes 0'***', 0.001 '**', 0.01 '*', 0.05 '.' Standard errors are in brackets.

In order to choose which estimation method (amongst the 3) is the best, we conducted the Hausmann test and the LM test. The test statistics along with the respective hypotheses are mentioned in the Appendix (see A.1). As per the BP-LM test and Hausmann test, we conclude that the Fixed Effects method is the most appropriate one for our study.

## 4.2 Diagnostic testing

Before interpreting the results, it is suitable to conduct diagnostic tests to get accurate estimates. We test for multicollinearity, serial correlation and heteroscedasticity. The results from the tests are in the following tables. For testing heteroscedasticity, we use the Breusch Pagan test while for serial correlation, we use the Breusch-Godfrey test. All 3 tests were run on R.

**Table 4: Multicollinearity**

| Variable | Variance Inflation Factor |
|---|---|
| cogov | 1.007488 |
| urbani | 2.050223 |
| density | 1.669374 |
| totalfer | 1.374421 |

***Source:*** Authors' calculations.

**Table 5: Heteroscedasticity Results**

| Test | Test Statistic | p-value | Result |
|---|---|---|---|
| Breusch Pagan Test | 24.418 | 6.586e-05 | Evidence of Heteroscedasticity |

***Source:*** Authors' calculations.

**Table 6: Serial Correlation Results**

| Test | Chi-Square Statistic | p-value | Result |
|---|---|---|---|
| Breusch-Godfrey | 310.13 | $<$ 2.2e-16 | Evidence of Serial Correlation |

***Source:*** Authors' calculations.

As far as the issue of multicollinearity is concerned, our VIFs are less than 4. This indicates that this should not be an issue with our results. However, the BP-LM test tells us that our model suffers from heteroscedasticity. Additionally, there is the presence of serial correlation in our results. Due to this, our estimates are not reliable. In order to get precise and reliable estimates, we need to account for these issues. Therefore, we compute serial correlation and heteroscedasticity consistent standard errors. The results of the same are mentioned in Table 7.

The variable of interest in our study is cogov. From Table 7, we see that the coefficient of cogov has a negative sign. Our estimates, therefore, suggest that there exists a negative relationship between coalition governments and development. The estimate of cogov reveals that coalition governments, on average, have an HDI value of 0.00144 units lower than that of a non-coalition or majority government ceteris paribus. The result is statistically significant. The signs of our control variables are correct and as per our expectations. Our results are consistent with the findings of previous studies, which concur that coalition governments are associated with lower levels of development.

**Table 7: Serial Correlation and Heteroscedasticity Corrected Estimates**

| Variable | Estimates | Standard Errors |
|---|---|---|
| cogov | -0.01439216*** | 0.00278449 |
| urbani | 0.00028904 | 0.00079179 |
| density | 0.00014232 | 0.00007528 |
| totalfer | -0.07438974*** | 0.00619468 |

***Source:*** Authors' calculations using R.
Significance codes 0'***', 0.001 '**', 0.01 '*', 0.05 '.' Standard errors are in brackets.

# 5 Conclusion

The purpose of our paper was to understand if and how coalition governments affect overall development. This is an important question to consider since the political composition of a government has bearing on the type of policies undertaken by them. Our study aimed at answering this question in the context of India. We find that coalition governments are, on average, negatively associated with developmental outcomes. This result corroborates the findings of previous studies. In terms of Indian literature, our findings resonate with Lalwani (2005) who argues that although the fiscal performance of coalitions government is impressive, they do not take politically hard decisions which might be necessary to improve the overall standards of living.

Our study can be improved upon via further research. While we do not make any causal claims, it is necessary to understand the underlying mechanisms which are responsible for such a negative relationship. There are many directions in which this study can be expanded into study governments across countries, specifically analysing the trends prevalent in South Asian countries that are increasingly moving towards majority governments. Further, the study can be made more rigorous using advanced tools.

# A Appendix

## A.1

(a) Hausmann Test (for choosing between Fixed and Random Effects)

$H_0$: Both methods give consistent estimators

$H_A$: Random Effects Method gives consistent estimators

**Table 8: Hausmann Test**

| Test | Chi-Square Statistic | p-value | Appropriate Method |
|---|---|---|---|
| Hausmann | 23.288 | 0.0001109 | Fixed Effects |

***Source:*** Authors' calculations.

(b) Breusch Pagan Lagrange Multiplier (BP/LM) Test (for choosing between Pooled OLS and Random Effects)

$H_0$: Both methods give consistent estimators

$H_A$: Random Effects Method gives consistent estimators

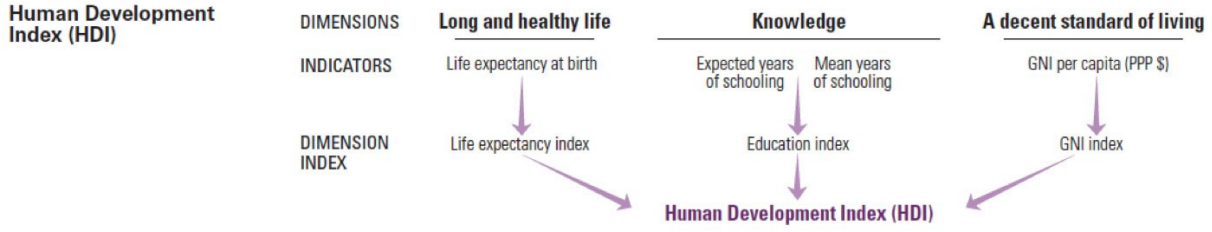
**Table 9: Breusch Pagan Lagrange Multiplier (BP/LM) Test**

| Test | Chi-Square Statistic | p-value | Appropriate Method |
|---|---|---|---|
| BP-LM | 1556.9 | 0.0000 | Random Effects |

***Source:*** Authors' calculations.

## A.2 Calculation of HDI

**Figure 1: Calculation of HDI**



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