Coordinating the Competition

Pre-electoral Coalitions in the Indian General Elections

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I, Christiane Bjerglund Andersen, confirm that the work presented in this thesis is my own. Where information has been derived from other sources, I confirm that this has been indicated in the thesis text.

The thesis is set in Baskerville. All graphs and tables were created by me for the purpose of this thesis, using the ggplot package in R.

ABSTRACT

Coordinating the Competition: Pre-electoral Coalitions in the Indian General Elections

The number and variety of pre-electoral coalitions in the Indian general elections make India a prime case to examine why parties chose to join forces with their rivals during elections. Yet, existing theories, which emphasise narrow definitions of party size and shared ideology, are unable to explain the tangled alliances that emerge between Indian political parties. In order to examine why parties pursue certain pre-electoral coalitions, I employ a mixed-methods strategy that combines statistical network analysis (exponential random graph models) with case study analysis, using a new dataset of pre-electoral coalitions 1999-2014.

The network analysis suggests that pre-electoral coalitions in India are driven by the parties' wish to increase their odds of winning in particular constituencies and, to a smaller degree, their wish to combine their parliamentary strength afterwards. The analysis also suggests that the network structure of the party system has a significant impact on pre-electoral coalition formation in that parties are attracted to 'high-connector parties' that allow them to form indirect alliances with a number of parties, and that parties build denser, regional coalitions that allow smaller parties to buy leverage against bigger allies. Finally, even though pre-electoral coalitions in India appear highly changeable, parties are more likely to renew an existing pre-electoral coalition than to build a new one.

I explore the implications of the network analysis in three case studies, namely a pre-electoral coalition that took place as the model predicted (a true positive case), one that did not take pace despite being predicted (a false positive case), and one that took place despite not being predicted (a false negative case). The case studies corroborate the statistical findings but also demonstrate that network structures can both encourage and hinder pre-electoral coalitions.

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USEFUL TERMS AND ABBREVIATIONS

Constituency	Electoral districts in India
ERGM	Exponential Random Graph Model
FPTP	First-past-the post electoral rules
Fragmentation	The extent to which a party system consists of multiple parties
Lok Sabha	The Lower House of Parliament in India
PEC	Pre-electoral coalition
SMSP	Single-member simple plurality
State	The federal sub-units in India
	(though technically a union territory, I count Delhi as a state)
Rajya Sabha	The Upper House of Parliament in India
Vidhan Sabha	The state parliaments, also known as State Assemblies

A NOTE ON PARTY ACRONYMS

This thesis refers to the political parties by their acronyms. Beyond the ease of use, there are two more weighty reasons for this. First, the use of acronyms follows common practice. In writing, parties like the Dravida Munnetra Kazhagam and the Telangana Rashtra Party are seldomly referred to as anything else than DMK and TRS. The only notable exception to this rule is the once-dominant Indian National Congress, which is almost universally referred to simply as 'Congress'. In this thesis, I instead refer to the Indian National Congress by the more uncommon electoral acronym INC. The reason for this is partly to avoid confusing readers for whom the term 'congress' might primarily have other connotations, but also to avoid conferring the privilege of being referred to by name only on a single party.

The second reason to use acronyms is that unpacking acronyms into party names is not necessarily any easier to keep track of. Many party names are built over a similar pattern in a variety of languages, loosely translating as the National People's Party, (e.g. the [Rashtriya/Bharatiya/Indian] [Lok/Dal/Satta/Katchi]). Another large group of parties

contain the name Congress, which can be confusing. For example, beyond the Indian National Congress (INC), we meet the Nationalist Congress Party (NCP), the All India Trinamool (grassroots) Congress Party, the Jammu & Kashmir National Congress, and the Arunachal Congress, all of which are separate parties.

In a majority of cases, I have adopted the acronym registered with the Electoral Commission of India, although these acronyms sometimes change over the years (e.g. TMC/AITC). For data processing reasons, it was necessary to ensure that an acronym consistently referred to the same party throughout the time period. In these situations, I tend to adopt the most recent acronym. When two acronyms are used interchangeably, I have generally adopted the simplest variation (e.g. ADMK rather than AIADMK). When different parties have used the same acronym in different elections, I assigned a modified acronym to one of them.

Within the thesis text and in the graphs, I use the same name throughout even if this was not in the acronym in use at the time (e.g. I refer to the Viduthalai Chiruthaigal Katchi, previously known as the Dalit Panthers of India, DPI, as VCK throughout).

PARTY ACRONYMS

AAAP	Aam Aadmi Party
AC	Arunachal Congress
AD	Apna Dal
ADMK	All India Anna Dravida Munnetra Kazhagam
AGP	Asom Gana Parishad
AIFB	All India Forward Bloc
AIMIM	All India Majlis-E-Ittehadul Muslimeen
AITC	All India Trinamool Congress
AJSU	All Jharkhand Students Union
AUDF	Assam United Democratic Front
BBM	Bharipa Bahujan Mahasangh
BJD	Biju Janata Dal
BJP	Bharatiya Janata Party
BLSP	Rashtriya Lok Samata Party

BOPF	Bodaland Peoples Front
BSP	Bahujan Samaj Party
BVA	Bahujan Vikas Aaghadi
CPI	Communist Party of India
CPIMLL	Communist Party of India (Marxist-Leninist) (Liberation)
CPM	Communist Party of India (Marxist)
DMDK	Desiya Murpokku Dravida Kazhagam
DMK	Dravida Munnetra Kazhagam
FPM	Federal Party of Manipur
HJCBL	Haryana Janhit Congress (Bhajan Lal)
HVC	Himachal Vikas Congress
HVP	Haryana Vikas Party
IFDP	Indian Federal Democratic Party
IJK	Indhiya Jananayaga Katchi
INC	Indian National Congress
INL	Indian National League
INLD	Indian National Lok Dal
INPT	Indigenous Nationalist Party of Twipra
IUML	Indian Union Muslim League
JDS	Janata Dal (Secular)
JDU	Janata Dal (United)
JKNC	Jammu & Kashmir National Conference
JKPDP	Jammu & Kashmir Peoples Democratic Party
JMM	Jharkhand Mukti Morcha
JPP	Jharkhand People's Party
JVM	Jharkhand Vikas Morcha
KEC	Kerala Congress
KECM	Kerala Congress (Mani)
KMDK	Kongunadu Makkal Desiya Katchi
LJP	Lok Janshakti Party
MAG	Maharashtrawadi Gomantak
MAMAK	Manithaneya Makkal Katchi
MD	Mahan Dal
MDMK	Marumalarchi Dravida Munnetra Kazhagam
MNF	Mizo National Front
MNS	Maharashtra Navnirman Sena
MPC	Mizo People's Conference
MPP	Manipur People's Party
MSCP	Manipur State Congress Party
MTD	Makkal Tamil Desam
NCP	Nationalist Congress Party

NPEP	National People's Party
NPF	Nagaland Peoples Front
PMK	Pattali Makkal Katchi
PPA	People's Party of Arunachal
PT	Puthiya Tamilagam
PWPI	Peasants and Workers Party of India
RJD	Rashtriya Janata Dal
RLD	Rashtriya Lok Dal
RPI	Republican Party of India
RPIA	Republican Party of India (Athawale)
RSP	Revolutionary Socialist Party
RSPS	Rastriya Samajwadi Party (Secular)
SAD	Shiromani Akali Dal
SDF	Sikkim Democratic Front
SDPI	Social Democratic Party of India
SHS	Shiv Sena
SJD	Socialist Janata Democratic
SP	Samajwadi Party
SWP	Swabhimani Paksha
TDP	Telugu Desam Party
TMCM	Tamil Maanila Congress (Moopanar)
TRS	Telangana Rashtra Samithi
UDP	United Democratic Party
UGDP	United Goans Democratic Party
VCK	Viduthalai Chiruthaigal Katchi

LIST OF FIGURES

LIST OF TABLES

IMPACT STATEMENT

This thesis contributes substantively and methodologically to our understanding of how political parties work together during elections in the following ways:

First, in terms of methodology, the thesis introduces major recent advances in network analysis to the study of coalition politics. Most past approaches have assumed alliances between political parties can be understood as fundamentally independent observations, disregarding the fact that parties operate within a party system where they interact strategically with multiple partners and competitors. The introduction of inferential network analysis greatly improves our ability to make valid assumptions when analysing relational data statistically.

Second, the thesis proposes a new strategy for case selection based on quantitative probability estimates. Rather than comparing events/non-events *or* predicted/unpredicted cases, the true/false positive/negative approach demonstrates a way to combine these logics coherently.

Third, the thesis creates a comprehensive new dataset of pre-electoral coalitions in the Lok Sabha elections 1999-2014, which extends previous efforts substantially. The dataset builds on an extensive database of contemporary sources, which has been indexed by search terms. Both the dataset and the secondary source database can facilitate a variety of future research projects.

Substantively, the thesis's fourth contribution lies in developing a unifying framework for pre-electoral coalitions that clarifies the interaction between parties' fundamental objectives and their structural context. The framework demonstrates that the diverging expressions of pre-electoral coordination can be explored within the same frame of understanding. This helps us reconcile the sometimes-contradictory conclusions that were reached by previous studies.

Fifth, the thesis explains a critical but theoretically underexplained case, which has constituted a stubborn puzzle from the perspective of our existing theories on party coalitions. India is an exceptionally strong exponent of pre-electoral coordination; thus, the inclusion of this case in the study of pre-electoral coalitions has been long overdue. Traditional explanations founded on ideological compatibility or strict calculations of coalition strength clearly do not suffice. Nor can we explain away pre-electoral coalitions as a feature of a recently democratised countries.

India, with close to seven decades of experience as an independent democracy, challenges the view of flexible alliances as a temporary aberration and compels us to examine them as a regular mode of political interaction.

Sixth and finally, the thesis makes a contribution by explicitly engaging with complex aspects of multi-party politics that are becoming increasingly difficult to ignore. Electoral coordination is hiding away in the corners of even the most orderly party systems, including in countries where we traditionally do not to expect it to occur, such as the UK and the US. As power balances shift and traditional party politics are being challenged in recent years, understanding how parties coordinate at the margins is crucial.

LIST OF CONTENTS

1. INTRODUCTION

In the months prior to an Indian election, the news media hum with reports about parties who are about to strike a deal, who have just struck a deal, who renege on deals, and who ought to strike a deal to form a pre-electoral coalition. The extraordinary fragmentation of the Indian political landscape into a multitude of parties means that ambitious politicians will almost always need to cooperate across party lines to secure power. The contemporary period of Indian politics is widely heralded as 'the Coalition Era'. Nowhere is this as pronounced as in the electoral arena. As rarely do a few months go by without an election at some level of the federal system, the hum of pre-electoral coalition rumours in Indian politics never truly stops.

At the same time, pre-electoral coordination between political parties is emerging as a focus of research in its own right in political science. Changing political conditions in advanced democracies draw our attention to the ways that parties strike deals and coordinate when they cannot achieve majorities electorally. The comparative study of pre-electoral coalitions has so far skirted the Indian example, which is unfortunate for at least two reasons. First, the combination of a strongly disproportional electoral system and an extremely populous party system creates the perfect conditions for pre-electoral coordination. Few settings offer us a more generous opportunity to observe pre-electoral coalitions. Second, the Indian pre-electoral coalitions push us to cast a critical eye on some of the received wisdoms on the party coalition behaviour, many of which are inherited from a European context. Despite the Indian case being a conspicuous exponent of pre-electoral coalition, from a traditional coalition perspective the coordination playing out between the Indian parties is a puzzle.

By starting from this substantively central but theoretically deviating case, I argue that we can develop a much more robust framework to explain pre-electoral coalitions more generally. I focus less on some of the traditional explanations of coalition formation, such as narrowly defined notions of party size and ideology, and instead focus on the practical

ways in which parties are able to influence how their votes are transformed into seats and, in turn, how their seats are transformed into government influence. Whatever decision the parties face, they will be influenced by what competitors and prospective allies are doing around them; pre-electoral coalition formation is an interactive game. I therefore reach for methods that allow us to take this into account, drawing on a combination of network analyses and party-centred case studies.

1.1. Puzzle, research questions, and argument

The central question of the thesis can be stated simply: what shapes pre-electoral coalition formation? In order to answer this, however, I look to a specific empirical case, asking what shaped pre-electoral coalition formation in the general elections in India 2004-2014? In order to examine this still-broad research question, I disaggregate it into four components. The first two questions are prompted by a chain of objectives, from votes to seats to government influence, that I identify in the theoretical framework:

- How is pre-electoral coalition formation shaped by the objective to win seats?
- How is pre-electoral coalition formation shaped by the objective to form the government?

The next two questions look at factors that are thought to temper and modify the parties' pursuit of these objectives, namely the parties' regional priorities and their recent experiences in previous elections:

- How is pre-electoral coalition formation (in national elections) shaped by parties' regional objectives?
- How is pre-electoral coalition formation shaped by past patterns of political competition?

The last two questions are of particular interest for the Indian case as they touch on issues that are thought to be characteristic of the Indian parties' coalition behaviour. Parties are

assumed to be strongly influenced by how they are 'anchored' in the regional politics of their home states. Parties are also assumed to be relatively 'faithless' in their alliance behaviour. Constrained to a smaller degree by formal expectations of ideological purity, parties can flit between a variety of partners, teaming up with a new opposition partner in every election.

I argue that pre-electoral coalitions are driven by the parties' expectation that they will face a coordination problem in two successive rounds of competition: first, as the parties attempt to get elected as one of several competitors in the constituency, and second, as they attempt to influence government formation, as one of several parties in the legislature. Cox (1997) argues that we can only understand political coordination if we consider how it plays out in both of these two contexts, i.e. the competition to win seats, and the competition to gain government power. When Cox refers to political coordination, he is referring to the formation of parties by political entrepreneurs. I argue that it is this same dual-level set of incentives that shapes the formation of pre-electoral coalitions by political parties.

In addition, I suggest that two further factors are likely to influence the parties' pre-electoral strategies, namely their regional political priorities and their recent electoral experiences. With respect to the regional level, I suggest that, for the many parties in the Indian federal system who are strongly anchored within a single state, their pre-electoral preferences will be circumscribed by circumstances such as their size within this home state as well as how closely the home state's party system and electoral cycle mirrors those of the national election. With respect to the role of past events, I argue that that parties who come out a bruising experience in the last election will be more disposed toward pre-electoral coalitions; that parties who have built trust and familiarity in a previous pre-electoral coalition are more likely to repeat it; and that as pre-electoral coordination becomes more entrenched in the party system over time, parties will become increasingly willing to form pre-electoral coalitions.

In order to explore these arguments empirically, I devise a two-prong strategy consisting of statistical network analysis followed up by a set of three case studies, each of which

examines an opportunity to form a pre-electoral coalition in the Indian Lok Sabha (Lower House of Parliament) elections in 2004, 2009, and 2014. My empirical analyses support the larger argument of thesis. Parties are clearly motivated by the incentives and constraints they face in the competition to win seats and influence government formation. Parties strongly consider how other rivals and potential allies organise themselves, which emphasises the value of using network analysis to understand coalitions between political parties, as introduced here. While the regional dimension did not manifest itself in the thesis findings, parties are shown to be influenced by their recent electoral experiences, including how their own performance and their pre-electoral partnerships in the most recent election. In the time period examined in this study, the practise of pre-electoral coordination appears to have reached a stable level; parties are equally likely to form pre-electoral coalitions in all three elections 2004-2014. The analysis indicates further venues for examining pre-electoral coalitions in the future; in particular, the role of alliance networks in not just facilitating but also constraining pre-electoral coalition formation.

1.2. Key concepts and definitions

The arguments of the thesis revolve around a set of central ideas that each deserve to be introduced here.

The research builds on the assumption that parties operate dynamically within a larger party system. When parties devote themselves to what in India is popularly referred to as 'alliance arithmetic' in order to decide their coalition strategies, they do not solely consider the advantages of any single prospective ally at a time. Rather, I suggest that parties look to the wider network of existing and potential pre-electoral coalitions surrounding them and any prospective partner. One way in which I capture this is by explicitly modelling this using recent advances within inferential network analysis.

Throughout the thesis, I refer repeatedly to the circumstances of electoral competition, in particularly the dual forces of fragmentation and rules. By *fragmentation*, I am referring to what might also be called the multi-party nature of a party system. Following Sartori

INTRODUCTION

(1976), I use the term fragmentation to imply that not only are there a number of parties within the party system, but also that none of them can be certain of wielding a decisive mandate (be it to win a seat or form a government). When parties cannot wield decisive power unilaterally, they face a *coordination problem*. In order to obtain the elusive decision-granting mandate, parties will have join forces and coordinate. However, how this coordination takes place – and how much coordination is required – is determined by the prevailing *rules* of competition (which at various levels include the electoral system and rules relating to government investiture).

I define pre-electoral coalitions as instances of mutually agreed coordination between political parties that are in place at the time of the election, with the objective of enhancing their post-electoral circumstances. Breaking this definition down to its constituent parts clarifies what this definition does and does not cover:

Agreement implies that this coordination does not emerge spontaneously or arbitrarily. Coordination takes place because a conscious decision has been made.

Mutual means that both parties in a coalition have recognised the pre-electoral coalition. This condition excludes unilateral support from one party to another, without the element of coordination between the parties.

Parties means political organisations that field candidates under a common banner. This unitary actor assumption is justifiable approximation, a circumstance that I will discuss in further detail in later chapters. Practically this means that the decision to enter a pre-electoral coalition must be taken by party leadership.

In place at the time of the election means that the decision to have entered a pre-electoral coalition must precede the election: parties enter into to these deals with their eyes closed to the electoral outcome. What differentiates pre-electoral coalitions from post-electoral coalitions is in a fundamental sense that the parties play the pre-electoral coalition game without knowing what cards they have on their hands.

With the objective of enhancing their post-electoral circumstances emphasises that the objectives of pre-electoral coalitions lie beyond the election itself. The decision to ally is pre-electoral, but the full impact of the parties' coordination only becomes apparent once the polling booths have closed.

The research takes a 'supply-side' approach to studying political phenomena, focusing on parties rather voters. Here, the role of the electorate is limited to the extent that parties are concerned with winning their favour. However, there is clearly work to for other projects to explore how voters experience pre-electoral coordination, and how their reactions can encourage or constrain the parties' strategies. Similarly, the thesis stops short of peeking into the internal workings of parties, though this would undoubtedly be fertile ground for discovery. Instead of looking into the party organisation, this thesis looks to the relationships between the parties, in particular to the network of groups that we call the party system.

The research here has in many ways more in common with the civil conflict literature than it does with the classic party coalition literature. The similarities include challenges relating to conceptualisation and data availability that come with studying the behaviour of complex groups of actors, many of which are underdefined and understudied and who operate in a constant flow of splits and mergers (e.g. Christia 2012; Sambanis 2004; Bakke, Cunningham & Seymour 2012). Like many of these studies, I am interested in finding answers by drawing on methods that cross (or challenge) the quantitative/qualitative divide.

1.3. Relevance and contribution

Why should we concern ourselves with the deals that parties strike in the run-up to elections? Pre-electoral coalitions matter because they have a profound impact on the shape of electoral competition, including by affecting who the electorate can vote for and which parties are allowed access to the government formation game. This impact is neither wholly positive or negative. Pre-electoral coalitions allow parties to gain efficiency

through coordination, but the way they do so often constrains the democratic options available to voters. In elections where pre-electoral coalitions take place, they have a significant effect on which government forms (Martin & Stevenson 2001). This can, on one hand, increase the transparency over government options to voters (Golder 2005), but, on the other hand, marginalise parties that are not willing to engage. Finally, pre-electoral coalitions are exceedingly common across the globe[1]. If we want to understand how political parties operate, we need to understand pre-electoral coalitions.

This study contributes to the emerging literature on pre-electoral coordination methodologically and substantively in the following ways. Methodologically, the thesis's first contribution consists of introducing major recent advances in inferential network analysis to the study of coalition politics, which greatly improves our ability to make realistic assumptions in analysing relational phenomena such as inter-party coalitions. The second methodological contribution of the thesis lies in proposing a new strategy for case selection based on quantitative probability estimates. This strategy gives us a stronger understanding of why cases comply to a theoretical argument, by suggesting a way to coherently combine logics of selecting either predicted/unpredicted cases or events/non-events. The third methodological contribution is the creation comprehensive new dataset of pre-electoral coalitions in the Lok Sabha elections 1999-2014, which extends previous efforts considerably. The dataset builds on careful examination an extensive database of contemporary sources, which has been indexed by search terms. The possibilities for further research from the dataset or the qualitative database have not been exhausted by this thesis.

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[1] Between Golder's (2006a) sample of over 20 advanced industrialised countries, Ibenskas' (2015) study of Central and Eastern Europe, Resnick's (2014) survey of Africa, and studies of pre-electoral coalitions in the presidential systems in Latin America (e.g. Kellam 2015), there is abundant evidence that pre-electoral coordination is widespread geographically and under a number of democratic systems. Nor does pre-electoral coordination only take place at the margins of mainstream politics. For example, Kadima (2014) observes that both pre- and post-electoral coalitions "have become the rule of the democratic game in a sizeable number of African countries and are increasingly seen by citizens as a democratic mechanism for accessing or retaining power" (2014:20).

INTRODUCTION

Substantively, the thesis contributes by developing a unifying framework for understanding pre-electoral coalitions, which clarifies the interaction between parties' fundamental objectives and their structural context. The framework draws on the work of Duverger (1954), Cox (2007), and Golder (2006a), as well as invaluable recent contributions to the study of pre-electoral coalitions in specific regions and systems (e.g. Blais & Indridason 2007, Choi 2012, Resnick 2014, Ibenskas 2015). The framework demonstrates that the diverging expressions of pre-electoral coordination can be explored within the same conceptual frame. The objectives of pre-electoral coalitions remain the constant, but the outward expression varies with the structural context in fairly systematic ways. This helps us reconcile the sometimes-contradictory conclusions that have been reached in previous studies.

The second substantive contribution consists of the analysis a critical but theoretically underexplained case. India is perhaps the strongest exponent of pre-electoral coalitions available; yet we cannot predict the composition of the alliances based on easy headcounts of parliamentarians or ideological similarity, as traditional coalition literature would suggest. India is also not a *new* democracy, which means that we cannot resort to explaining away theoretically abhorrent behaviour as the quirks of a consolidating political system that lacks democratic experience or reels from the recent shock of regime change. It is tempting to interpret pre-electoral coalitions as a characteristic of democracies in flux, with parties resorting to temporary rather than stable mergers, as the party system self-adjusts into a sustainable level of fragmentation. India, with close to seven decades as an independent democracy, challenges this view of flexible alliances as a temporary aberration and compels us to examine them as a regular mode of political interaction.

The thesis' third substantive contribution consists of explicitly engaging with complex aspects of multi-party system politics that are becoming increasingly difficult to ignore. Electoral coordination is hiding away in the corners of even the most orderly party systems, including party systems where we have been told not to expect it, such as the UK and the US. As power balances shift and traditional party politics are being challenged these years, understanding how parties coordinate at the margins is crucial.

1.4. Organisation of the chapters

So far, this chapter has provided an account of the puzzle that motivates this research and crystallised it into four guiding research questions. In way of a preliminary answer, I have outlined the general argument of the thesis, and described my strategy for exploring this empirically. I have also made the case for why we need to address this puzzle and how doing so will helps us in understanding party behaviour beyond the immediate context of the Indian elections. Finally, I have introduced some of the key ideas and terminology that will be used in this thesis. The rest of the thesis proceeds as follows.

Chapter 2: Theory

In this chapter, I explore the phenomenon of pre-electoral coalitions from the perspective of five, simple questions. Why do pre-electoral coalitions take place? How do pre-electoral coalitions operate? Where do we observe pre-electoral coalitions? When do pre-electoral coalitions take place? Who are the actors behind pre-electoral coalitions? Based on the answers I find, I provide a general account of what parties are trying to achieve when they choose to coordinate, rather than compete, ahead of an election. The main argument of the framework is that parties form pre-electoral coalitions in order to optimise the future transfers of votes-to-seats and of seats-to-government leverage. The shape that these coordination efforts take is determined by the conditions set by the party system fragmentation and rules of competition (e.g. electoral system or investiture rules).

Chapter 3: Hypotheses

The third chapter develops four lines of hypotheses for pre-electoral coalition formation in India's Lok Sabha elections 2004-2014. The first two sets of hypotheses relate to the two sites of future competition indicated by the framework, namely the attempt to pool votes to win seats, and the attempt to pool seats to win government leverage. The next two sets of hypotheses take into account two effects that the framework did not consider for sake of parsimony, but which will be relevant to a range of democratic systems, namely the effect that regional politics can have on coalition formation in national politics, and the effect of the parties' past experiences with electoral competition.

INTRODUCTION

Chapter 4: Empirical Strategy

The fourth chapter presents the methodological choices that underpin the research in the network analysis and case studies in empirical chapters. First, I clarify the research approach and the multi-method research design. I then account for the scope of the research in terms of the choice of the Indian polity as a site to explore pre-electoral coordination; the timeframe consisting of the three Lok Sabha elections in 2004, 2009, and 2014; and the specific group of political parties featuring in the study, out of India's thousand-strong population of political outfits. Next, I introduce the empirical data, which is drawn from three sources: first, an extensive database of news coverage and other secondary sources, collected specifically for this research; second, two sets of national and regional quantitative electoral data from the Electoral Commission of India (ECI), from which I calculate a range of indicators; and third; a set of interviews with political actors and analysts that served to refine the theoretical framework. Finally, I describe the process of identifying and coding pre-electoral coalitions based on these qualitative and quantitative sources, the first step of which was to identify an appropriate conceptual model of political relationships.

Chapter 5: Network Analysis

The first of the two empirical chapters takes an inferential, statistical network approach to explore the patterns of pre-electoral coalitions within a party system. The exponential random graph model (ERGM) approach to network analysis is singularly well suited to this purpose, as it allows us to look at both exogenous and endogenous characteristics of party interactions. Though network analysis is not intended as a prediction tool, the model was able to correctly identify 96% of all pre-electoral coalition opportunities.

The analysis supports the hypothesis that parties are motivated by the prospect of pooling votes to win seats more cost-efficiently. The more intense the competition between a specific pair of parties in the previous election, the more likely they are to form a pre-electoral coalition. However, if the competition involves a high number of competitors, the parties struggle to identify optimal coordination opportunities and become less likely to enter pre-electoral coalitions.

INTRODUCTION

In contrast to traditional approaches to party coalitions, I find that the size of the parties has a relatively small effect on pre-electoral coalition formation, compared to indicators that capture network synergies. These network effects turn out to be strongly predictive of coalition formation. Parties seek out highly connected partners that enable them to leverage the strength of a large number of indirect allies. They also tend to cluster together in more densely connected groups that allow smaller parties to become jointly relevant as partners in larger pre-electoral coalition structures.

Finally, the analysis suggests that the state-specific context of the parties matter less than generally assumed. Neither a party's regional size nor the differences between the states' party systems or electoral cycles have clear, significant effects on pre-electoral coalition formation. However, parties are significantly influenced by their most recent electoral experiences. Parties who experienced electoral defeats in the previous election were more likely to enter pre-electoral coalitions. Coalition familiarity turns out to have a strong preserving effect as parties were on average more likely to reaffirm their partnerships from the previous election. This modifies a common perception of the Indian parties' strategic behaviour; parties appear to be relatively less opportunistic and more constant than the more spectacular examples of coalition defections suggest.

Chapter 6: Case studies

In the second empirical chapter, I explore the network analysis findings from the perspective of three dyadic (pair-wise) party relationships during the 2004-2014 period. Each relationship is selected based on how well it was predicted by the model, in order to gauge how far we can extend the findings of the previous chapter. The first relationship is a 'true positive' case, a pre-electoral coalition that took place and was predicted by the model. This case, the 2004 pre-electoral coalition between the Indian National Congress (INC) and the Nationalist Congress Party (NCP), exemplifies a lot of aspects emphasised by the theoretical framework and the hypotheses. The parties had a clear incentive to pool their votes in order to optimise the number of seats each was able to win, following elections where the absence of coordination had affected both parties negatively. Having made a pre-electoral commitment to seek executive power together, they were also able to make a successful bid to form the government. The analysis also revealed how the INC-

INTRODUCTION

NCP partnership was notably entrenched in the party system network structures. Both parties were strongly active in forging pre-electoral coalitions, thereby providing each other with a cast of indirect allies that strengthened their common cause. The parties also came to share several pre-electoral partners. In sum, the 'true positive' case support the findings of the statistical network analysis. The strength of this explanation is further underlined by the fact that the party leaders overcame considerable personal unease in order to form what would become a lasting partnership.

The second case study considers a 'false positive', that is, a pre-electoral coalition that the model predicted would take place, but which failed to materialise for reasons not detected by the theory. I analyse the 'non-occurrence' of a pre-electoral coalitions between the All India Trinamool Congress (AITC) and the Indigenous Nationalist Party of Twipra (INPT) in the 2009 Lok Sabha election. These two parties were allied in the 2004 election, but in 2009 the pre-electoral coalition did not come off despite very similar initial conditions. The primary explanation for this 'missing pre-electoral coalition' turns out to be an unpredicted effect of the inter-party relations within a party system. Even though the quantitative analysis suggested that having shared partners made a pre-electoral coalition more likely between two parties, the reason for the non-occurring agreement between AITC and INPT is to be found in the fact that both parties were allied with the same party, INC. In 2009, AITC and INC had a local 'rift' in their pre-electoral partnership: while the two parties agreed to coordinate in most states, they settled on what is known as 'friendly fights' in the state of Tripura. Forced to choose between the two allies, the Tripura-based INPT chose to support INC ahead of AITC. The 'false positive' case thereby reveals that while the surrounding network structures of a pre-electoral coalition opportunity can incentivise and solidify it into existence, they can also have to opposite effect. Future studies should look for ways to take both the constraining effects of network structures and the local impact of 'friendly fights' into account.

The final case is the 'surprise appearance' of a 'false negative' pre-electoral coalition. This pair of parties were not predicted by the model to enter an agreement in the election, yet the parties still found sufficient common ground to work together. My examination of the pre-electoral coalition between the Bharatiya Janata Party (BJP) and Lok Janshakti Party

(LJP) in the 2014 Lok Sabha election reveals that this case has much in common with the 'true positive' case. In both cases, the pair of parties had clear electoral incentives, relating both to their ability to improve their prospects of winning more seats by pooling support in the constituencies through seat-sharing agreements; and to their prospects of securing government power by making early, pre-electoral commitments. While the incentives were very similar in the two cases, they were less pronounced for the 'false negative' pre-electoral coalition of BJP and LJP in 2014. The BJP-LJP pairing was also less entrenched in the network structures, though the leadership exhibited by BJP in forging a number of pre-electoral coalitions clearly raised the attractiveness of the pre-electoral coalition opportunity. These findings suggest that while the explanations offered by the general theory are valid, it is difficult to predict the thresholds at which incentives trigger firm pre-electoral commitment and coordination.

Chapter 7: Conclusion

The final chapter casts its eye back to summarise how thesis reached its conclusions and to indicate where we can take these efforts in the future.

2. THEORY

The objective of this chapter is to present a theoretical framework that allows us to examine what drives the formation of pre-electoral coalitions. At its core, this is a simple story: A group of people want to achieve a particular outcome, but in order to succeed they will need to pool their resources. Individually, none of them can be sure of having sufficient resources to reach the objective on their own. This is the very essence of a coordination problem. What determines how much these people will have to coordinate depends on two circumstances. The first circumstance is the existing criteria for achieving the desired outcome, i.e. 'the rules of the game'. The other circumstance involves how widely the resources required to win are distributed. If many people each control a small amount of resources, but the rules dictate that achieving the desired outcome requires control over a considerable share of those resources, extensive coordination will be necessary. This is essentially the story of all coalitions.

The key to pre-electoral coalitions is that they can anticipate two competitive situations that take place immediately following each other within and shortly after an election. In other words, pre-electoral coalitions come together in the "shadow of the future" (Axelrod 1970). The first anticipated competitive situation involves process of turning votes into parliamentary seats; the second competitive situation involves the process of turning parliamentary seats into a (new) government. This thesis argues that political parties employ pre-electoral coalitions to optimise the outcomes of both of these competitive situations to their own advantage.

When attempting to optimise how votes secure seats and how seats in turn secure government control, the extent of the parties' pre-electoral coordination is determined by the same structural circumstances that shape all coalitions, namely fragmentation and the rules of competition. The *fragmentation* of the party system determines how many parties will need to coordinate in order to achieve the desired outcome. The *rules of competition*,

such as the electoral system and the investiture rules, determine what qualifies as a victory – i.e. who is the winner of a parliamentary seat, and who gets to form the government.

This chapter develops four broad propositions for the formation of pre-electoral coalitions, which are developed into a set of specific hypotheses in the subsequent chapter. Each proposition is a response to one of the four research questions posed in Chapter 1: Introduction. The propositions relate specifically to pre-electoral coalitions that form in Indian general elections in the 2004-2014 timeframe, in particular the regional proposition which reflects the federal nature of the Indian political system. However, the general features of this framework apply to pre-electoral coordination widely.

- Proposition 1: The formation of pre-electoral coalitions is contingent on the anticipated competition in the *constituencies*[1] during the electoral round. This argument is developed into Hypotheses 1a and 1b.

- Proposition 2: The formation of pre-electoral coalitions is contingent on the anticipated competition in the *legislature* during the post-electoral round This argument is developed into Hypotheses 2a, 2b, and 2c.

- Proposition 3: The formation of pre-electoral coalitions is contingent on the parties' *regional* priorities in their home states. This argument is developed into Hypotheses 3a, 3b, and 3c.

- Proposition 4: The formation of pre-electoral coalitions is contingent on *past* patterns of competitiveness and previous pre-electoral coalitions. This argument is developed into Hypotheses 4a, 4b, and 4c.

The chapter unfolds as follows. The first part, 2.1., introduces the theoretical framework. I introduce the central phenomenon, in parts 2.2.-2.6, by considering what a pre-electoral

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[1] The term 'constituency' refers to the electoral districts, i.e. the geographically demarcated area within which voters elect one or more legislators, depending on the electoral rules. An electoral system with 'no constituencies' can be understood as a single, polity-wide constituency.

coalition from the perspective of five questions,.: why do pre-electoral coalitions form; how do pre-electoral coalitions work; where do pre-electoral coalitions take place; who are the key actors in pre-electoral coalition formation; and when do pre-electoral coalitions form? The framework that emerges from the answers has relevance for pre-electoral coalitions from a comparative perspective. The conclusion, part 2.7., sums up the theoretical arguments.

2.1. Theoretical framework: What are pre-electoral coalitions?

Despite being a common occurrence in democratic elections across the globe, there are no widely applied definitions for the agreements that parties reach to coordinate their electoral efforts. I develop a definition of these agreements − that is, pre-electoral coalitions, by asking five seemingly simple questions: *Why* do parties coordinate pre-electorally? *How* do pre-electoral coalitions address the coordination problem posed by combined pressures of fragmentation and electoral rules? *Where* do different types of pre-electoral coalitions emerge? *Who* are making the decisions to coordinate pre-electorally? And, finally, *when* does all this take place?

More specifically, the first section, *why*, focuses on what parties *want* to achieve when they compete in elections and when they decide to coordinate with each other during this time. This section focuses on three interlinked, key objectives − votes, seats, and government − that have also been proposed in different ways by the coalition literature. I argue that pre-electoral coordination aims to optimise party outcomes at two moments of transformation: from votes-to-seats and from seats-to-government. The second section, *how*, discusses the two main roles of pre-electoral coalitions, reflecting respectively the competition for votes-to-seats and for seats-to-government. I focus on the two contextual factors, *fragmentation of the party system* (i.e. multiparty system degree) and the *rules of competition* (e.g. the electoral system and the government investiture rules) that I argue shape both competitive processes. The third section, *where*, extends this argument by discussing where different types of pre-electoral coordination is likely to occur, given that they respond to particular combinations of contextual structures. The fourth section, *who*, discusses the actors involved forming pre-electoral coalitions. The framework of the thesis

relies on the assumption that we can refer to the multitude of individuals and interests organised around a political ambition as 'one party'. This section nuances this assumption in the particular context of pre-electoral coalitions. Finally, the fifth section, *when*, clarifies the timeline of pre-electoral coalitions, especially when they are formed, when they exert their power, and what happens afterwards.

2.2. Why: objectives of pre-electoral coalitions

What are parties trying to achieve in elections, and how do pre-electoral coalitions, which after all require them to cooperate rather than compete, help them accomplish this? Academic debates over party behaviour have tended to contrast policy-seeking explanations against office-seeking explanations (e.g. Laver & Schofield 1990, Strøm & Müller 2000, Cook 2002). *Policy-seeking* theories suppose that politicians are ideologically motivated. Parties compete in elections because they want to enact a particular vision for how society should function. In the words of a main proponent of this approach, "considerations of policy are foremost in the minds of the actors […] the parliamentary game is, in fact, about the determination of major government policy" (De Swaan 1973:88). Were we to judge party objectives solely from speeches and manifestos, this is a reasonable conclusion. In contrast, *office-seeking* theories assume that politicians are ambitious and value political positions for their own sake. By extension, this line of thinking assumes that politicians take a malleable view of what an optimal policy agenda looks like, as "parties formulate policies in order to win elections, rather than win elections in order to formulate policies" (Downs 1957:28).

In general, to both the policy-seeking and the office-seeking approach, 'winning an election' implies to form the government as this maximises the (policy or office) pay-offs that parties can achieve. What specifically these pay-offs consist off can be interpreted in different ways. First, being in government might hold *intrinsic* value. This explanation builds on the concept of "ego-rent" (Rogoff 1990), i.e. the satisfaction that the office-holder draws from the sense of prestige or personal achievement that comes with the position. However, it is generally more convincing that parties seek office for its the

instrumental value, i.e. for what they can achieve with power that comes with office. Ministers are after all unlikely "to sit around in a permanent pink cloud of euphoria, simply enjoying the sheer delight of being a government minister" (Laver & Schofield 1990:38). The instrumental aspect of office-seeking behaviour need not be in conflict with policy objectives. Both the office-seeking and the policy-seeking approaches tend to focus on the attainment of government power because both assume that this unlocks access to the ulterior objective, be it policy or something else. To some extent, the main difference between the two approaches lies in how far parties are constrained by pre-existing ideological principles. This is fundamentally difficult to discern, in part because the ulterior motives of human behaviour are arguably hidden even to the individual, in part because parties tend to behave as if they are guided by policy-seeking objectives. Even if politicians are office-oriented, they will typically need to behave *as if* they have a vision for how to run the country (Laver & Schofield 1990).

If having influence over government processes is instrumental rather than intrinsic valuable, what is government leverage an instrument *for*? Scholars of Western democracies assume that politicians largely use the power that comes with office to shape policy, but power can be yielded for other purposes in ways that can make it difficult to make sharp demarcations around different types of motivation. Politicians might have a vision for how a just and prosperous nation should be organised, but they are also likely to want to improve conditions for their particular supporters. If the primary way of doing so is through providing access to public spending, we know this by terms such as clientelism or pork-barrel politics, depending on whether supporters are grouped by socio-demographic or geographic characteristics. Such particularised efforts might in turn be motivated by personal gain, e.g. to increase the politician's standing in the community and/or to benefit them financially personally (i.e. rent-seeking). The distinction between the altruistic and the personal objectives is gradual. As Strøm & Müller argue, it is mostly "beyond our capacity as analysts to identify the ultimate purpose for which office is sought" (2000:6).

If office-seeking and policy-seeking party behaviours to most practical extents and purposes look 'alike', it is not strictly necessary decide the 'latent motivation' question in

order to carry out meaningful research of party behaviour. For the purposes of the research in this thesis, I allow myself to be relatively agnostic as to how parties weigh these underlying objectives. An advantage of this assumption is that we do not need to presume that parties have clear-cut or even homogeneous preferences. Motivations can shift over time according to the context in which the party finds itself. Moreover, within the same party system, political parties can strike different balances between their latent motivations. Fundamentally, this thesis leans closer to the office-seeking approaches than the policy-seeking approaches, in that I assume that parties prioritise political office for instrumental purposes that are largely not defined by ideology. However, by easing the assumption of what specifically the ultimate objective in the case of each party, I allow the possibility that some parties and political actors care keenly about ideological objectives.

As implied, parties pursue votes, seats, and government leverage for their instrumental value. In the following, I clarify how these three elements relate to each other and how parties try to optimise their pursuit of the three using pre-electoral coordination. The linked relationship between votes, seats, and government leverage can be expressed as a chain (Figure 2.1.), consisting of the three instrumental objectives tied together at two moments of transformation, from votes-to-seats (1) and from seats-to-government leverage (2).

Votes ⟹ Seats ⟹ Government leverage

(1) (2)

FIGURE 2.1. The transformation of three political objectives across two stages of political competition: (1) Votes-to-seats (described in part 2.2), and (2) Seats-to-government leverage (described in part 2.3). Parties use pre-electoral coordination in order to optimise the effective transformation at both of the two stages.

The two moments of transformation are crucial to the first main argument of this thesis, namely that pre-electoral coalitions are formed in anticipation of the transformation of vote-to-seats in the constituencies (proposition 1) and transformation of seats-to-

government leverage in the legislature (proposition 2). These two contexts and rules that govern each of them are outlined in detail in sections 2.2 and 2.3., but in the following I will briefly outline the general logic of the instrumental value of votes, seats, and government leverage.

To political parties, *votes* hold very little intrinsic value except as a popularity measure if not for the fact that they translate into elected positions as members of the legislative body (transformation 1 in Figure 2.1). Because parties value votes instrumentally, they are not strictly vote-maximisers but vote-optimisers. The puzzle that every political party must solve is translating votes into the highest numbers of seats. How this transformation is done is determined by the electoral rules.

Seats in turn hold intrinsic value only to the extent that elected politicians derive personal satisfaction from sitting in parliament. The instrumental value of seats from a party perspective is that they are, in fact, votes by another name. Each parliamentary seat constitutes a legislative vote that can decide matters of national policy. Following an election, the very first role of these legislative votes is to decide the identity of the new government[2] (transformation 2 in the Figure 2.1). But is it not the voters who elect the government? In parliamentary democracies, the answer is, strictly speaking, no. Rather, "elections do not choose governments, they alter the power relations between the parties" (Bogdanor 1983:272). Voters elect legislators who in turn vote to accept or reject a new government. This second act of voting, from seats to government, can be formal or informal; take place in the halls of assembly or in private offices; and last anywhere from a few hours to several months (as illustrated by the drawn-out processes of government formation in Belgium 2010-11 or Sweden 2018-2019). Where the votes-to-seats transformation was shaped by the electoral rules, the transformation of seats-to-

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[2] This thesis, which deals with the period preceding an election and up to the point a new government is formed, focuses heavily on government-determining particular role of the parliament. In contrast I spend relatively little time on the regular term-time legislative function of parliaments. I argue that in the context of pre-electoral coalitions, the main legislative objective is to impact the immediate aftermath of voting. However, this is not to say that the larger role of legislative votes lies in deciding matters of policy is not paramount in most other political contexts.

government are determined by the rules regarding the proposal and investiture of a new government.

Finally, I use the term '*government leverage*' rather than 'government participation' for a very specific reason. Typically, a party's leverage is often assumed to be maximised if the party is 'a part of the government', i.e. if it holds ministerial posts. The party heading the government will hold the post of prime minister, and other ministerial portfolios are then distributed among the government parties in descending order. The leverage associated with specific portfolios differs from country to country, and presumably also in accordance with the parties' individual agendas[3]. However, government leverage is more divisible than is generally recognised in formal models. I differ from most office-seeking and policy-seeking approaches (e.g. Riker 1976, Laver & Shepsle 1996) with respect to the relationship between instrumental value and the positions from which it can supposedly be yielded. From either perspective, 'winning an election' generally implies forming the government[4], but as Strøm (1986, 1990) points out, parties can hold considerable leverage (for policy or rent-seeking purposes) if they can influence the fate of the government by supporting it legislatively outside the government.

Since minority governments depend on the legislative support of parties that are not part of the government, parties can technically be outside the government but still extract pay-offs (policy or otherwise) in exchange for their continued support. The potential threat of withdrawing support that these parties hold can be more credible as they have no ministerial seats to lose. Given that influence can be extracted outside of the government at a potentially lower cost, parties might not solely steer towards becoming a part of the government itself. As a consequence, when discussing what parties are trying to achieve when agreeing to 'pool' their future seats in the immediate aftermath of an election, I assume they are trying to *gain influence over the government* by extending support rather than

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[3] For example, in India, the position of Minster of Railways is typically considered a highly attractive post, as it entails control over a large budget, one of the biggest workforces globally, and leeway over considerable discretionary spending.

[4] Both schools of thought can in principle accommodate that pay-offs can also exist just outside the inner echelon of government, but in practice and possibly due to the requisites of formal modelling, most studies assume that there is a sharp drop-off in utility beyond the government.

necessarily *gain access to the government*. Many parties undoubtedly try to do both, the larger parties being especially motivated by the prospect of government leverage, but this adjustment from 'being the government' to 'having some measure of leverage of the government' allows us to capture the motivations of a range of smaller (or simply non-government aspiring) parties as well. In a fragmented political system with many small but actively participating parties, this vastly improves our ability to account for coalition politics.

To summarise, parties can enter pre-electoral coalition agreements in order to optimise their individual and collective outcomes in *both* the process of transformation of votes-to-seats (1) and the process of transformation of seats-to-government (2) that follows immediately after the announcement of the election results. In both cases, the extent and nature of coordination depends on two contextual circumstances, namely the *fragmentation* of the party system and the rules of competition. How this plays out is discussed in the following part.

2.3. How: practises of pre-electoral elections

The shape and extent of pre-electoral coordination depends on two contextual factors, namely the fragmentation of the party system and the rules of competition. Together, these circumstances determine *how* and *how much* parties will need to coordinate in order to achieve their objectives.

The first circumstance shaping the need for rivals to coordinate is *fragmentation* of the party system, i.e. the extent to which the party system is a multiparty system. The severity of a coordination problem depends on the number of rivals. A single party that can be sure of 100% of the votes has no need to coordinate with others. When only two parties compete, one of them will almost certainly secure a majority over the other, if only by a margin, likewise removing the pressure to coordinate. However, once there are three parties and each holds less than a majority of votes, victory can always be secured by the two parties

that form a coalition[5]. The more a party system is fragmented into smaller units with less-than-majority share of the votes, the more parties will need to form a coalition in order to reach the winning criterion, be it a majority or a plurality. Thus, in a general sense, the more fragmented a party system is, the more the parties have an incentive to form coalitions.

The second circumstance that shapes the need to coordinate is the set of *rules* that define the level of support that is required to secure a victory. Put differently, how large a share of a population of decision-makers (be it voters or legislators) need to agree in order for a solution to be accepted. The simplest winning criterion is the *majority*, i.e. above 50% of the votes, but different rules can establish different winning criteria. The majority is powerful because it is by definition greater than all other groupings of decision-makers, but in is in a sense only the boiler-clad version of a more general winning criterion, namely a *plurality* (sometime referred to as a relative majority). The plurality is the largest group that is able to agree, but it is not necessarily more than half of the votes. Rules that set the wining criterion as a plurality rather than the majority allow for a much smaller shares of the votes to come out victorious. For example, if 20% of a group of decision makers are able to agree on a common solution, and no other group of decision makers are able to reach a similar size, this 20% group will be the plurality winner. The incentive to coordinate can therefore be weaker under plurality rules than under majority rules, since only a smaller level of aggregation can be required to win. Crucially this depends on how united other competitors are. The plurality threshold is a moving target – if competitors decide to join forces, they can jointly become the new plurality winner. As we will see, rules relating to winning criteria shape the pressure to coordinate both when parties fight to win seats in constituencies and when they fight to form a government in parliament.

The key to pre-electoral coalitions is that these two contextual factors, fragmentation and rules, shape the coordination *both* when votes are added up to decide who wins a seat *and* when seats are added up to decide who forms a government. Figure 2.2. re-arranges the

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[5] Even in electoral systems that are dominated by single, authoritarian parties that sure to secure a majority on their own, smaller opposition parties form pre-electoral coalitions to fight elections more effectively, cf. Van der Walle 2006, Wahman 2011, and Gandhi & Reuter 2013.

information of Figure 2.1. from the perspective of a party considering a pre-electoral opportunity. At (1), parties coordinate pre-electorally to make "votes count" to win seats (Cox 1997); at (2), parties must "make candidates count" to win government leverage (Blais & Indridason 2007). At both stages, how the parties do so, is dictated by the presence of competitors (fragmentation) and what is required to win (rules).

	When	Context	Objective
	Voting stage (1)	given *rules* and *fragmentation*	making votes count to win seats
Parties anticipate			
	Government formation stage (2)	given *rules* and *fragmentation*	making seats count to form a government
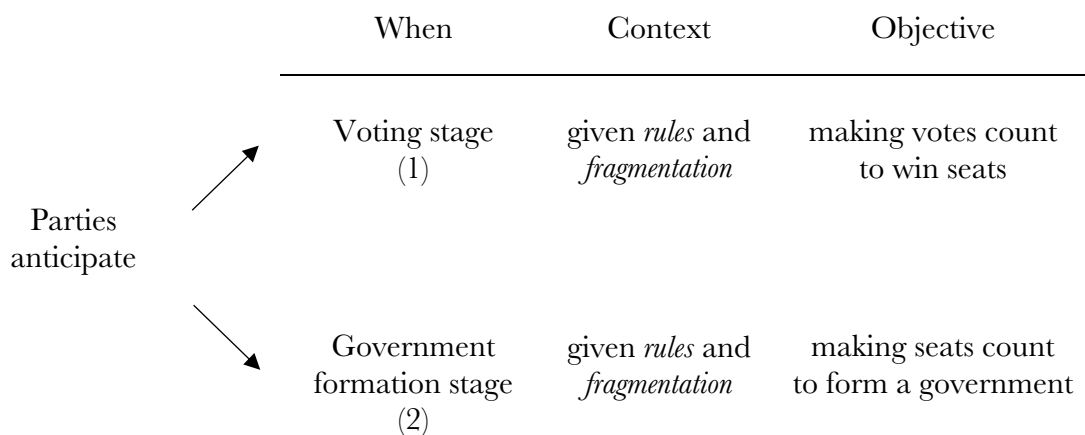
FIGURE 2.2. Parties form pre-electoral coalitions in anticipation of two future moments of competition. The first takes place at the election stage when votes are transformed into parliamentary seats. The second takes place immediately after the election when the parliamentary seats serve as votes deciding the new government.

In the following, I focus on how rules shape the scope for coordination for first the votes-to-seats competition and then the seats-to-government leverage competition, assuming a sufficient level of party system fragmentation. Later, in Chapter 3: Hypotheses, I develop the logic at these two stages given the context of the Indian Lok Sabha elections.

COORDINATION AT THE VOTING STAGE

If we follow the upper arrow in Figure 2.2, we reach the voting stage marked (1). At the voting stage in highly fragmented party systems, a considerable obstacle to being elected is that the many competitors will split the votes between them. The purpose of pre-electoral coordination at this stage is to avoid this situation. Depending on the electoral system, parties have different options available to them to 'move around' and pool their votes. Here I briefly describe the variations that follow from three common electoral

systems: party-list proportional representation (PR) systems, multiple-round majority run-off systems, and first-past-the-post systems.

Under PR electoral rules where parties supply a (ranked or unranked) list of their candidates, parties will usually have to secure a minimum share of the votes in order to win representation in the legislature. The way to calculate this threshold varies from system to system, but typically falls between 2 and 6%. In order to pass this threshold, small parties can avoid splitting the vote by coordinating to field their candidates on 'joint lists'. Larger parties, however, also have an interest in pursuing this type of pre-electoral coalition, if they want to be able to rely on the support of a smaller party post-electorally. For this reason, joint list pre-electoral coalitions tend to be characterised by an asymmetry in the size of the pre-electoral partners (Ibenskas 2015). A variation of this logic can be extended to 'rental vote' coordination, wherein the larger party instructs its supporters to vote for its smaller pre-electoral coalition partner in order to help it past the threshold (Gschwend, Stoetzer & Zittlau 2016).

In majority run-off elections that take places over multiple rounds, parties can in principle coordinate how they field candidates in both rounds, but they will more commonly resort to pre-electoral coalitions in the second round (Blais & Indridason 2007). Duverger observes that "in all countries where the second ballot has been working there are more or less clear traces of electoral alliances" (1954:328). The shape that coordination takes under these rules requires the participating parties to agree on a single joint candidate per constituency Blais & Loewen 2009). The effect of the first ballot is to indicate who the more viable candidate is; the candidate of the less popular party withdraws and endorses the new coalition candidate.

Under first-past-the-post rules, more formally single-member simple plurality rules (SMSP), parties engage in a very similar type of pre-electoral coordination. Under first-past-the-post rules, only the candidate who wins more votes than any other candidates in the constituency will win the seat. A plurality is moving winning criterion; if many candidates secure similar shares of the votes, the winning vote share can be very small. This creates an incentive for the parties to pool their votes by agreeing to field a single,

common candidate. In elections across many single-member constituencies, the priority for the seat-optimising party is not inherently to win a plurality of all votes, but to win a plurality in as many constituencies as possible[6]. Realising this, parties can optimise the transfer of votes into seats by entering 'non-competition agreements', where they agree to mutually relinquish the opportunity to compete certain constituencies in favour of the other. The overall effect is to divide the sum of constituencies into two parts, each of which only fought by candidates from one of the parties. This type of pre-electoral coordination is referred to by a variety of names, including 'mutual candidate withdrawal', 'seat adjustments', and 'seat-sharing' agreements. This thesis will use the latter term, which is the prevalent term in South Asia. In part 3.1. in the following chapter, this type of pre-electoral coalition coordination will be treated in more detail.

The coordination practises described above all aim primarily at the same thing, namely to pool the coalition partners' prospective votes to ensure that at least one of them will win a seat. They all achieve this by effectively choosing between their candidates before the votes are given the opportunity to do so. In essence, by "forming electoral pacts, the politicians reduce the number of alternatives available to the voter and thereby avoid some of the punishing aspects of the electoral system" (Blais & Indridason 2007:193). When parties succeed in coordinating their votes-to-seats efforts in this way, the advantages are that each party has a higher degree of certainty of winning seats, often at a lower cost of campaigning. In the short term, the associated disadvantage is a loss of autonomy. A party competing independently decides how many candidates to wants field and where. When parties agree to a pre-electoral coalition agreement aimed at optimising the vote-to-seats transfer, they compromise on this right. In the long term, parties will have to disappoint some prospective candidates, who do not get run, and potentially risk inter-party rebellions. Moreover, by voluntarily stepping aside, the party incur an opportunity cost associated with building visibility and loyalty in parts of the electorate. These circumstances limit the party's growth potential in future elections.

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[6] Merely increasing the number of votes overall is meaningless, if the increase does not contribute to securing constituency pluralities. Winning votes below the plurality threshold offers no pay-offs whatsoever, but winning votes above the plurality threshold is also waste of resources, as only one seat can be one per constituency after all.

COORDINATION AT THE GOVERNMENT FORMATION STAGE

Returning to Figure 2.2. and following the lower arrow, we re-encounter the situation marked (2) in Figure 2.1. This type of coordination aims at pooling the pre-electoral partners' legislative votes (their seats), by making "advance statements about forming a coalition government together" (Allern & Aylott 2009).

This pre-electoral coordination type aims explicitly at influencing the formation of the *post-electoral* government, in the potentially short window between the seat distribution being known and a government being appointed. However, these are unambiguously pre-electoral coalitions in the sense that the parties' coordination commitment takes place in advance to the election result[7].

Commitment-based pre-electoral coalitions are typically interpreted as proto-government, but as this section explains this is not inherently the case. In most systems, the parties in government is not required to control a majority of the seats themselves. In general terms, the government's survival depends on it being supported by a majority in parliament, i.e. including parties that are not themselves part of the government. As Strøm (1990) points out, governments can several different models of legislative support that combine internal and external support. The successor to pre-electoral coalitions is therefore not the government coalition; rather, it is the legislative coalition.

By extension, parties do not necessarily enter commitment-based pre-electoral coalitions expecting to be in government. Rather, in a more general sense, they aim to decide the

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[7] Indeed, to some scholars, the presence of government-seeking commitment is a necessary criterion to the definition of pre-electoral coalitions, to the point where pre-electoral coordination agreements that do not feature post-electoral commitment are excluded from the definition (e.g. Carroll 2007, Allern & Aylott 2009, Christiansen, Nielsen & Pedersen 2014, Wager 2017). These studies tend to demote the vote-to-seat coordination to 'technical coordination'. In contrast to these definitions, and in common with Golder (2005, 2006a, 2006b), Wilson (2009, Gandhi & Reuter (2013), and Resnick (2014), I allow pre-electoral coalitions to include either or both types of coordination. A small group of studies limit their definition of pre-electoral coalitions only the votes-to-seat coordination (e.g. Choi 2012).

government by contributing to its legislative coalition, the pay-off for which may or may not be ministerial seats. Once we recognise that government leverage is more fungible and divisible than the focus on ministerial portfolios suggest, the pre-electoral commitments to provide legislative support make sense.

Within a pre-electoral coalition, parties can therefore have very different expectations in terms of their respective post-electoral roles. Some parties will expect to lead the government or at least take weighty ministerial roles.[8] Yet, when parties commit to supporting the same bid, they do not necessarily make their support contingent on their own inclusion in the future government. Some parties realise that their contribution is unlikely to warrant pay-offs in form of office. Instead, by supporting the government externally from the legislature, they can expect to extract pay-offs in the shape of ad hoc policy initiatives or localised funding[9]. To some parties, these alternative pay-offs from government leverage are more attractive than formal portfolio pay-offs. It is possible to observe parties that would be able to extract ministerial seats in return for their support, voluntarily turning these down and choosing to provide external legislative support instead.

Thus, the post-electoral coalition that the pre-electoral coordination aims to establish may be a coalition government, in which all parties supporting the cause gets ministerial posts, or it may be a legislative coalition of parties supporting the government. Rather than proto-governments, pre-electoral coalitions of this type should therefore be seen as negotiating blocks.

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[8] Carroll & Cox (2007) who examine the allocation of office portfolios in governments that form after pre-electoral coalitions found that pre-electoral commitment increased the proportionality of allocations, i.e. larger parties were less able to extract a higher share of the pay-offs due to their size dominance.

[9] Informal pay-offs can take a variety of shapes. One party worker interviewed suggested that support can be secured against political pressure to drop charges or otherwise affect outcome of criminal cases pending against candidates. Potentially, pay-offs can extend to direct financial payments. In 2000, a former Indian prime minister and a cabinet ministers were sentenced for bribing four MPs to support the government in a vote of no confidence in 1993. Similar cases involving cash-for-votes transactions exist against the governments in power in 2001 and 2008.

THEORY

The pre-electoral allies commit to negotiating together, throwing their lot behind the same government bid. A further nuance to this, is that the partners might not immediately choose to identity a particular future government or government leader. Under high degrees of party system fragmentation, pre-electoral coalitions based on commitments to pool legislative votes can be built stepwise, with parties coming together in subgroups before pledging their joint support to other parties or coalitions.

The central question of the commitment-based pre-electoral coalitions is why parties are willing to commit to joint legislative future before they know their respective legislative sizes. To understand the benefit of early commitment, I look to the rules of competition at the government formation stage. As with votes-to-seats coordination, the incentives for the seats-to-government coordination are shaped by the degree of party system fragmentation, which this section takes as a given, and by the rules determining who can be declared a winner.

The rules that decide government formation in parliamentary democracies do not vary as drastically as the electoral rules discussed above, where we were able distinguish rather different types of coordination in correspondence with the electoral systems. The main aspects of the government formation rules concern the winning criteria (the investiture rules) and the order in which parties get to attempt forming a government (the proposal rules). Together, the investiture and proposal rules can incentivise parties to commit to a joint bid for government even before the election.

In parliamentary democracies, a prospective government faces a formal or informal investiture vote in parliament before it can be confirmed (the specifics of this can vary depending on the legislative design; the following describes a generalised case). The investiture rules determine the winning criteria for winning this vote. A typical assumption is that a prospective government will need to control a majority of the legislators in parliament. This assumption is fundamental to a large part of the coalition literature (e.g. Riker 1962, Axelrod 1970, De Swaan 1973, and Dodd 1974), and forms the foundation for the size-oriented minimum and minimal winning coalition theories. These theories

predict that coalitions will be exactly large enough to constitute a majority but no larger, avoiding taking on unnecessary partners above this point.

The majority assumption is flawed in at least two ways. First, as pointed out, a government is usually not required to be in possession of a majority of seats *on its own* but can rely on the support of a looser legislative coalition. The second reason the majority assumption is misplaced is that, in many countries, the winning criterion for government formation is not strictly a majority. Bergman (1993) distinguishes between positive majority and negative majority requirements. Under positive majority rules, the government must demonstrate the explicit support of at least 50% of the parliament. Under negative majority rules, the government must merely demonstrate that it is not explicitly opposed by 50% of the parliament, i.e., the government need only be tolerated by the majority of the parliament. The negative majority requirement is a less demanding criterion, and it has several effects on the parties' coalition incentives. In particular, negative majority rules are much more likely to encourage minority governments relying on external support (Bergman 1993:62).

Negative parliamentarism allow governments to form on a much more flexible basis. The government-seeking parties need only be tolerated by other legislative parties, a very low requirement of being preferred ahead of the alternatives. The drawback to negative parliamentarism is that this low-level legislative support can be tenuous. If pivotal parties change their position from tolerance (abstaining from voting) to outright rejection (voting against the government), the government can fall. While the requirements of government formation appear less demanding under negative parliamentary rules, government-seeking parties will still need to insure themselves against defections, with the added challenge that they have less hold over more this less securely attached legislative coalition of support.

The proposal rules determine the order of proposal, that is, which party gets to act as the formateur, i.e. the party charged with forming a government. Typically, the role of formateur is offered first to the largest party, who in the absence of a pre-electoral coalition then begins to negotiate with the other parties. If the largest party is unsuccessful, the role

of formateur then passes to the second largest party. This recognition rule is known as the ASB protocol (after Austen-Smith & Banks 1988). An alternative form of this party-centric ASB protocol recognises the leader of the largest *coalition* first, rather than the largest party. If this condition applies, there is little benefit in being the largest party if a rival has already secured enough allies to be the largest coalition. Anticipating this prospect, parties have an incentive to engage in "strategic sequencing" (Cox 1997:194). This alternative coalition-centric ASB practise therefore gives parties a strong incentive to commit pre-electorally because this enables them to *change* the order of proposal to their advantage (Bandyopadhyay, Chatterjee & Sjöström 2011)[10].

If the parties are able to accept that their allies' future endowment is inherently uncertain, they can reduce the uncertainty of their future support. By making a pre-electoral commitment, the parties can limit the range of potential outcomes in the post-electoral coalition formation game in their favour even before the window for post-electoral negotiation has begun. When "uncertainty and the threat of opportunism generate large transaction costs, coalition members have an incentive to seek restrictive arrangements (i.e., contracts that provide at least some coalition members with minimal flexibility)" (Lupia & Strøm 2010:69).

The time window between counting the votes and determining a new government is unpredictable. If the election result turns out to be decisive or close to decisive, the window will be fleetingly short, barring many parties from trying to exert their influence on the outcome. Under rules that favour the largest coalition rather than the largest party, parties who have chosen to hedge their bets and not commit their support pre-electorally risk being shut out from existing government bids.

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[10] The variation of the ASB protocol that offers the role of formateur to the leader of the biggest pre-electoral coalitions is the accepted practise in Israel (Golder 2006:18). Israel is particularly notable in this context because the electoral rules are extraordinarily proportional, leaving little scope of vote-to-seat optimisation using nomination agreements. On their own, these relatively modest electoral incentives cannot explain the pervasive tradition for pre-electoral coalitions that characterises Israeli politics. These are much better explained by the strong incentives that the coalition-friendly variation of the ASB protocol imposes.

THEORY

From the perspective of small parties, joining a pre-electoral coalition committed to influencing government formation is often their only chance at getting access to the bigger pay-offs from government influence. In countries where pre-electoral coalitions are prevalent, parties competing outside pre-electoral coalitions often have no prospect of influencing government formation (Wilson 2009:59). Following the election, a small party who is one among many has a miniscule chance of finding itself in a pivotal position that would allow it to access the spoils of office, in the absence of a pre-electoral coalition. By committing pre-electorally, the party increases its odds of a pay-off, provided that it has chosen the winning pre-electoral coalition. From the perspective of large parties, Falcó-Gimeno & Indridason (2013) show that, in uncertain and complex bargaining situations, large parties that would otherwise have a bargaining advantage due to their size will have a difficult time leveraging this advantage. Large parties therefore trade-off parcels of their future legislative pay-offs (e.g. ministerial posts or informal pay-offs) pre-electorally in exchange for an increased opportunity to make the first credible attempt at forming the government (Kailash 2009)[11]. When the government seeking parties are fundamentally unsure of the commitment or size of their prospective legislative coalition, they will need to take on more partners as an insurance policy. Uncertainty therefore encourages parties to be more proactive in the pre-electoral coalition game, than they would be if they were able to predict how many seats they and their partners would eventually control. If prospective government wants to ensure its survival in the future, they will need to take on high number of allies as an 'insurance policy' against the blackmail and defection (Luebbert 1986:79).

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[11] This explains the theoretically curious outcome of 2014 Lok Sabha. BJP was expecting a strong performance at the polls, but still chose to engage several pre-electoral allies. When the BJP, somewhat unexpectedly, was able to secure a majority of Lok Sabha seats on its own, the party did not form a single-party majority government, as would be the expectation of classic government formation theories. Rather, a small number of ministerial portfolios were allocated to BJP's pre-electoral coalition partners, resulting in an outcome the classic coalition theories would never predict; a single-party majority *coalition* government. Without the existence of pre-electoral commitments, the inclusion of the smaller partners would make little sense (even considering calculations regarding other legislative chambers). However, the pre-electoral coalition provided both sets of partners with an attractive trade-off: BJP increased the likelihood of making a first, successful bid for government based on the legislative support of the pre-electoral coalition; and the smaller parties secured access to ministerial portfolios that would otherwise have been outside their reach.

In sum, parties anticipate the coordination problem that awaits them once the results of the voting become known. To this end, they commit pre-electorally to pool the legislative weights of their future seats. This pre-electoral commitment enables parties to negotiate government formation as blocks. The pay-offs for this pre-electoral commitment can be ministerial posts, though this is not inherently the case. The advantage of making the commitment *pre-electorally* is to minimise the risk of being marginalised in the potentially very short window for government formation, where a number of complex negotiations to fall into place under multiparty fragmentation. The pressure to commit pre-electorally is stronger under recognition rules that favour the largest coalition, which benefit the group of parties that can demonstrate the largest pool of legislative votes first.

2.4. Where: context of pre-electoral coalitions

At this point, the theoretical framework has addressed the 'why' of pre-electoral coalitions, by pointing to the chain of instrumental objectives from votes to seats to government leverage. It then addressed the 'how' by arguing that the conditions of competition in terms of rules and party system fragmentation shape how parties can pursue these incentives. This section seeks to strengthen the argument by considering where different forms of pre-electoral coordination emerges. This ties together a range of country-specific studies[12], indicating that the explanation suggested so far is valid more widely.

The premise for this variation is that each democratic system has a different combination of rules and fragmentation, which in turn shapes electoral competition and the existence of incentives to coordinate pre-electorally. If the conditions create an incentive for parties to coordinate the transformation from votes to seats, we would expect parties to engage in pre-election coalition practises that target this, such as joint lists or seat sharing. If the

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[12] Country specific studies include: Germany (Gschwend, Stoetzer & Zittlau 2016), France (Blais & Indridason 2007, Blais & Loewen 2009), Italy (Bartolini, Chiaramonte & D'Alimonte 2004), Belgium (Gschwend & Hooghe 2008), Hungary (Benoit 2001, Nikolenyi 2004). Larger multi-country studies include: Central and Eastern Europe (Ibenskas 2015), Sub-Saharan Africa (Kadima 2006, Kadima et al 2014, Resnick 2014), and industrialised, advanced democracies (Golder 2005, Golder 2006a, Golder 2006b).

conditions create an incentive to optimise the seats-to-government leverage transformation, we would expect parties to engage in pre-election coalitions consisting of commitments to a future government bid. Some systems create only one of these incentives, but others offer both, in which case pre-electoral coalitions tend to combine both types of coordination practises. In such cases, the coordination and the payoffs relating to each level of inventive can interact and become difficult to disentangle entirely. In the following, I discuss how different variations of pre-electoral coordination occur, independently and concurrently, in response to the demands of the competitive context.

The most fundamental condition of pre-electoral coordination is fragmentation of the party system. Without this, there would be no coordination problem that wold require solving. The potential for coordination exists latently in all electoral systems, but it only comes to the surface if the competition is fragmented. In countries with very low party system fragmentation, i.e. few parties, parties will tend to be able to secure majorities more easily. Not only will they have fewer potential partners to cooperate with, but they will have little need to cooperate in the first place. However, we tend to underestimate party system fragmentation, especially at the margins or at the lower levels of democratic competition. The electoral systems of the US and UK are usually considered low fragmentation party systems, but looking to the margins of these systems, we not only find fragmentation but also pre-electoral coordination[13].

Votes-to-seats coordination and seats-to-government leverage coordination can take place independently of each other. In countries the electoral rules are permissive, in the sense that votes are translated into seats on a very proportional basis, we can expect to see

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[13] This is the case in both the US and the UK. In the US, Golder (2006a:25) notes the widespread use of fusion candidates in several states in the 19th century and the practise persists in the state of New York, where the Democrats and the Working Families Party, a minor political party, usually coordinate to fusion candidate. (As a quirk of this tradition, when the incumbent Representative for New York's 14th congressional district, Joe Crowley, lost the Democratic primary to Alexandria Ocasio-Cortez in June 2018, Crowley remained on the ballot as the candidate of the Working Families Party.) In the UK, during the 2017 elections, the Green Party championed a "progressive electoral alliances" with Labour, the Liberal Democrats, and a number of small parties, which entailed that participating parties jointly endorsed the most likely progressive challenger to the Conservative candidate in a given seat. Though Labour rejected the idea, the Liberal Democrats did step aside in two constituencies and the smaller parties did stand aside in several seats (Lythgow 2017).

very little votes-to-seats coordination. In the three Scandinavian countries, the proportional representation electoral rules provide little incentive to coordinate the transfer of votes-to-seats. However, the relatively fragmented party systems (typically as many as 8-10 parliamentary parties) means that the parties have a strong incentive to optimise the seats-to-legislative leverage transformation. In these countries, we accordingly observe a strong norm that parties commit their legislative support pre-electorally (cf. Allern & Aylott 2009 on Norway and Sweden, and Christiansen, Nielsen & Pedersen 2014 on Denmark).

In contrast, we observe pre-electoral coalitions that coordinate the votes-to-seats transfer but entail no further post-electoral commitment, when parties have no interest in, or little real prospect of, making a joint bid a bid for government leverage. Parties that explicitly turn down offers to join a government-seeking commitment-based pre-electoral coalition are not averse to coordinating the entry of their candidates in the constituencies with other parties. In contexts where many parties are barred from making realistic claims to government leverage, e.g. in authoritarian democracies, we also observe parties engaging in the constituency-targeting type of pre-electoral coalitions (Gandhi & Reuter 2013). Finally, pre-electoral coordination in mixed electoral systems that employ different electoral rules simultaneously to elect different segments of legislators, are characterised by the simultaneous occurrence of several types of coordination[14], further supporting the argument that has been proposed so far[15].

The final aspect to consider is how the coordination of votes-to-seats and seats-to-government leverage interact, when both incentives are present. In democratic systems where parties have the incentive to coordinate pre-electorally in anticipation of both the votes-to-seats stage and the seats-to-government leverage stage, pre-electoral coalitions

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[14] Systems that use mixed electoral systems are therefore particularly interesting from a pre-electoral coordination perspective in that the different rules gives rise to several co-existing and interacting practises, cf. Benoit 2001, Nikolenyi 2004, Bartolini, Chiaramonte & D'Alimonte 2004, Ferrara & Herron 2005, Wilson 2009, and Montero 2016.

[15] One further piece of support for suggested connection between pre-electoral coalitions and rules of competition, we can consider how pre-electoral coordination respond to electoral systems reforms, e.g. Italy post-1994 (Wilson 2009), or Denmark following the 1910 electoral reform from first-past-the-post to proportional representation rules (Duverger 1954).

will tend combine both practises under the same aegis, as is frequently the case in the pre-electoral coalitions in the Indian Lok Sabha elections. When votes-to-seats stage and the seats-to-government leverage coordination co-occur, the two roles tend to support each other. (We saw this very clearly in the 'joint list' pre-electoral coalitions under PR rules, when these took place between very small and very large parties, of whom at least the latter are clearly incentive improve its seats-to-government leverage prospects). Coordinating votes-to-seats is difficult to negotiate, because it usually requires parties to give some of their own candidates in favour of allied candidates. Not only do parties risk internal rebellions, they also have to give up definitively any hope of winning the constituencies that they have withdrawn from. Parties therefore always have to consider the opportunity cost that they could have won more constituencies than they settle for. The difficulty is indicated by the fact that pre-electoral negotiations frequently fail at this stage or are left incomplete. However, if the pre-electoral coalition also includes a commitment to pool the parties' legislative strengths, this opportunity cost is potentially offset: a party might end up with somewhat fewer MPs in the legislature than it could have achieved on its own under optimal circumstances, but at the very least it can be reassured that these seats are held by allies. If the pre-electoral coalition secures government power, debts from the electoral stage can be directly paid in the form of ministerial portfolios. Cox & Carroll (2007) suggest that, once in power, pre-electoral partners "need to 'pay' one another not just for contributions in the legislative arena (voting weight, formateur status) but also for contributions in the electoral arena (seats)". Under these circumstances, it is difficult to disentangle to what extent the incentives driving the pre-electoral coalition relate to the votes-to-seats coordination or the seats-to-government influence coordination. (The practical challenge that this poses for the identification of pre-electoral coalitions is discussed in *Chapter 4: Empirical Strategy*.)

In sum, whether parties employ pre-electoral coalitions to optimise their prospects of securing seats, government leverage, *or both*, depends on the combined circumstances of party system fragmentation and the competitive rules. The validity of this argument concerning the dual incentive-structure is strengthened by the fact that when we consider the evidence provided by studies of pre-electoral coalitions in country-specific settings, we observe a variation in coordination that corresponds to this pattern.

2.5. When: timeline of pre-electoral coalitions

The term 'pre-electoral' draws out attention to the temporal aspects of these coalitions. When do pre-electoral coalitions take place and how do they relate to 'the election', an already ambiguously defined period of time? In the Introduction, I defined pre-electoral coalitions as coordination agreements agreed between a set of political parties *prior to an election* in order to enhance their post-electoral bargaining power. Can we specify this?

The 'pre' of pre-electoral coalitions signify that these coalition agreements that were formed before the election. However, pre-electoral coalitions *anticipate* future situations, and the impact of pre-electoral coalitions plays out in the future as well. This future can be divided into two distinct stages. The first stage is electoral, i.e. it takes place during the election, as voters choose their legislative representatives. The second stage is post-electoral stage, but pre-government formation, as legislators directly or indirectly choose the government. Figure 2.3. illustrates this time horizon, based on the Indian Lok Sabha elections. The stretched-out nature of the Lok Sabha elections is ideal for examining the individual phases of competition, which are easy to overlook in countries where the voting, the counting of the votes, and identification of a new government can be over in days.
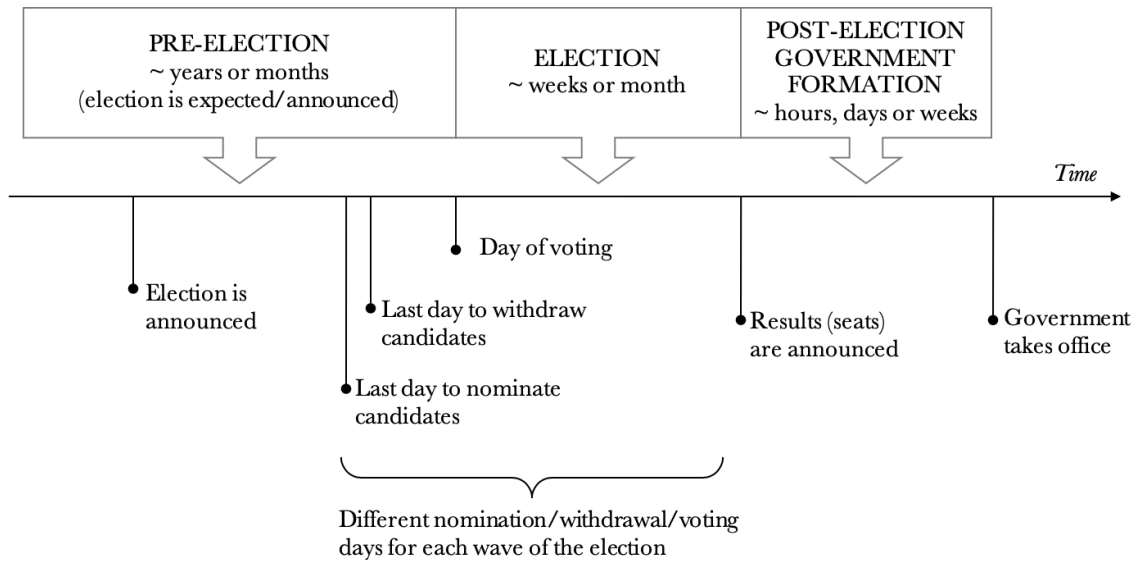
FIGURE 2.3. A generalised timeline of the processes of pre-electoral coalitions, based on the Indian Lok Sabha elections. The pre-electoral coalitions are formed at the pre-election stage in anticipation the election stage the post-election government formation stage.

The pre-election phase begins once the parties begin to plan their electoral strategies in expectation of an upcoming election. With set term limits, the last possible day that this can take place is known to all parties. If an election is called unexpectedly before the end of the term, this pre-election phase is kickstarted at this point. Under normal circumstances, in the case of the Lok Sabha elections, this phase begins approximately 18 months before the expected announcement, according to interviews I carried out with party workers; though I did find some examples of agreements being negotiated earlier than this.

Usually when we refer to an 'election', we are thinking of the very act of voting. The election begins when the polls opens and ends once the polls close. This voting period is itself a phase rather than a discrete moment time. In some countries, the voting for a general election can be carried out in the span of single day, but in others voting takes place over an extended period of time, in which different parts of the country go to the polls on different days spread over several weeks. In these cases, the 'election' refers to a much longer timeframe. The effect of these staggered voting periods is to create different

timelines for electoral coordination in different regions of the country. If we assume that the deadline for seat-sharing agreements is the last day to withdraw candidates from the election, staggered voting means that there are different deadlines depending on which wave the constituencies are part of. (This aspect is discussed further in Chapter 3: Empirical Strategy.)

The third and final phase begins once all votes have been counted and made public. (In the Lok Sabha elections, the results are not made public until all votes from the different waves have been counted.) At this point, parties learn how many Lok Sabha seats each of them has won and with that, how close they are to forming a government. Golder (2010) points out that "significant delays in forming governments are not rare. It is simply part and parcel of most parliamentary systems that election results do not regularly determine the identity of the government" (2010:4)[16]. Parties are well aware the length of this window can vary considerably and that it can close before they are given the opportunity to make a bid at forming the government. They prepare accordingly in anticipation of the bargaining that this stage will involve, primarily in the shape of commitments embedded in pre-electoral coalitions. Thus, even though this phase where parties attempt to leverage their newly-won mandates into governmental influence seem purely post-electoral, the pre-electoral commitments that many parties have already made, radically affect the odds of who will govern.

The lifespan of the pre-electoral coalition is over once the new government has been confirmed. The winning pre-electoral coalition can live on as a government coalition, but unsuccessful pre-electoral coalitions are not bound by any further commitments to act together in the parliamentary term. Pre-electoral coalitions might be resurrected in future elections, including regional elections, and parties might have a strong expectation that they will be the case. However, for all practical purposes, the pre-electoral coalition has served its purpose once normal legislative life resumes.

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[16] Though we tend to assume that government formation will (or at least ought to) take place immediately after the election result becomes known, Golder (2010) found that, on average, it took about a month (31.3 days) to form a government in a sample of 17 industrialised democracies, 1944-1998.

In summary, pre-electoral coalitions are born prior to the election, operate during the campaign period, and exert their influence in the moment of election itself as well as its immediate aftermath, i.e. in the period between votes being counted, seats distributed, and a government appointed.

2.6. Who: actors of pre-electoral coalitions

Over the past pages, the actors of pre-electoral coalitions have been referred to as 'parties'. In this section, I challenge this notion from an intra-party perspective, looking into the group of actors that collectively make up the party, and then from an inter-party perspective, looking at the network that parties in turn constitute, namely the party system.

Referring to the individuals involved in pre-electoral coalitions as 'the parties' is a terminological short-cut. Parties are made up of people – of leaders, candidates, officials, financial backers, and a diffuse layer of volunteers and supporters. How can this diverse set of human beings be said to be incentivised or to make decisions as if they formed one body?

The unitary actor assumption is an approximation, but it is a very useful one, in that it allows us to talk about these collections of individuals *as if* they choose a single line of action based on a common set of objectives. As Laver & Schofield (1990) point out, in the context of certain research questions, the fact that political parties are not unitary actors is "true but trivial, in precisely the same sense as it is true that the chair you are sitting on as you read this is not really a solid object at all but a collection of molecules with vast open space between them" (1990:15).

There are some constraining circumstances that make the unitary party assumption easier to accept. Parties are at least to some extent hierarchical organisations. When members join a party, they implicitly agree to grant the party leadership some leeway in pursuing the members' shared strategic objectives (parties are of course themselves in that sense

coalition (cf. Cox 2007); though, this is an aspect that this thesis unfortunately will not be able to explore further). While leaders potentially face rebellion at multiple lower levels from local branches to the individual supporters when they make decisions on behalf of the party, they can anticipate how different internal groups and a take this into account before making decisions. In extremis, the party leadership can penalise or expel members who act in discordance with the party line. While expelling members costs the organisation resources in the short term, doing so can in principle deter future rebellions. Some systems impose external sanctions on intraparty conflicts. For example, in India, anti-defection legislation was introduced in 1985 (Nikolenyi 2012), which disqualifies legislators that split from the party or lend their legislative support to other parties. These party rebels will have to leave their parliamentary seats and wait until the next election before they can stand for re-election as independents or on a new party ticket. Thus, while the unitary actor assumption clearly does not hold in all situations it is a reasonably meaningful approximation of how political organisations operate.

Instead, the arguments in this thesis are more concerned with the relations between parties than the relationships within them. A "party system is precisely the *system of interactions* resulting from inter-party competition" (Sartori 1976:44-45). This means that the way a party interprets its options is defined, in a static sense, by its position relative to other parties, and in more dynamic sense, by what it perceives that other parties are doing. The decision to enter a pre-electoral coalition is inherently shaped by the actions of other parties; in a sense, the decision is never an independent action taken by any two parties. Rather, it is the outcome of a series of decisions taken by the party system as whole.

2.7. Theory conclusion

In this chapter, I accounted for the linked relationships between votes, seats, and government leverage, and how the parties' ambition to secure these interlocking objectives shape their decisions to coordinate before elections. I outlined a basic assumption of the thesis, namely that parties value these objectives for their instrumental, rather than their intrinsic value. With enough votes in the right locations, a party will win

seats in the legislature. Seats in the legislature in turn amount to parliamentary voting rights that are used to pick a government and, in the slightly longer run, influence legislative outcomes to different ends.

Pre-electoral coalitions are born prior to the election, operate during the campaign period, and exert their influence in the moment of election itself as well as its immediate aftermath, i.e. in the period between votes being counted, seats being distributed, and a government being appointed. The formation of these alliances is motivated by parties' strategic anticipation of a coordination problem at either, and in some cases both, stages of competition. In order to optimise their electoral achievements, parties will need first to transform votes into seats, and then to transform seats into government leverage. There is a change in the political currency between the first and the second round, as the legislative round of coordination requires the parties to pool seats rather than votes, but in other ways the two stages mirror each other. The benefit of coordinating these efforts with other parties is greater cost-efficiency and an increased chance of securing the intended outcome, but parties will have to compromise in terms of how great a share a price they can expect. At either stage, the nature of coordination is determined by the degree of party system fragmentation (prompting the coordination problem) and the rules of competition (which determines what is required to win). Table 2.1. summarises the coordination at the two stages.

PRE-ELECTORAL COALITION ROLES

	Votes-to-seat optimisation	*Seats-to-government leverage optimisation*
Objective	Winning seats by pooling electorate votes	Influencing government formation by pooling legislative votes (seats)
Rules	Electoral rules	Proposal & investiture rules
Fragmentation	Candidates in the constituency	Parties in the legislature
Negotiation Stage	Pre-election until last day to withdraw candidates	Pre-election until results are published
Target Phase	Voting phase	Government formation phase

TABLE 2.1. The objectives, circumstances, and timing of pre-electoral coalitions, distinguishing between the two main roles.

The chapter analysed the central phenomenon of pre-electoral coalition by breaking down into five question. The 'why' section outlined the relationship between three instrumental objectives, votes, seats, and legislative leverage. The 'how' section then explained how competition for these objectives are shaped by fragmentation and by rules. The 'where' section underlined this point by taking a brief comparative view of where different types of pre-electoral coordination would occur given national variation in fragmentation and rules. The 'when' section clarified the timeline of pre-electoral coalitions, underlining the point that even though part of the objective lie after the election, parties still coordinate pre-electorally. The 'who' section accounted for the actors behind pre-electoral coalitions by discussing the notion of parties both from an intra-organisation and an inter-organisation perspective.

An important aspect that emerged as part of this discussion is that the formation of a pre-electoral coalition is a process that extends well beyond the specific set of parties trying to reach an agreement. Parties are well aware of other alliances being forged elsewhere in the party system. They are also keenly aware how these alliances can affect their own

competitive situation. A potential pre-electoral coalition can become both more or less attractive, depending on whether other parties decide to support it or rally in opposition to it. As the election draws nearer and negotiations intensify, parties keep an eye on prospective rivals as well as allies are positioning themselves. As I proceed to develop theoretical focus and research design to explore the formation of pre-electoral coalitions in following chapters, this element of interaction must necessarily be taken into account.

In sum, the framework argued that extent and shape of pre-electoral coordination depends on the rules and the degree of fragmentation of the party system in two moments of competition. In the following chapter, *Chapter 3: Hypotheses*, I consider this as two distinct propositions, each of which can be developed into a set of testable hypotheses in the contexts of the Lok Sabha elections 2004-2014. I also add a further two propositions, relating to the existence of regional political priorities and the influence parties' past experiences, which in different ways serve to modify the parties' pre-electoral coalition behaviour.

3. HYPOTHESES

In this chapter, I turn to four propositions on the formations of pre-electoral coalitions and develop a set of testable for hypotheses for each, in order to address the research questions that were posed in *Chapter 1: Introduction*. The propositions are general in nature, but the hypotheses speak specifically to the formation of pre-electoral coalitions in India.

The first two propositions follow directly from the incentive structure identified by the theoretical framework in the previous chapter. The first proposition therefore focusses on how parties pool votes in order to win seats at a constituency level (part 3.1.). I argue that fragmentation creates the basic incentive for parties to coordinated, but that the coordination problem can also become too large under severe fragmentation. From this follows two hypotheses (*H1a* and *H1b*). Second, I focus on how parties commit to pooling the voting power of their expected parliamentary seats in order to increase their chance at forming a government (part 3.2.). Based on this I develop three hypotheses: one that concerns the expected size of the two parties negotiating a deal (*H2a*), and two that take into account the parties' indirect allies (i.e. their immediate networks), both the indirect partners either one of the parties have (*H2b*) and the partners that are shared by both parties (*H2c*).

Next, I turn to two mitigating factors with the power to shape pre-electoral coalitions. In part 3.3., the third proposition considers the role of regional politics. The pre-electoral coalitions that this thesis examines take place in the arena of national politics, but parties are also acutely involved in the political competition that goes on India's federal states. This is particularly the case for the majority of parties, who compete entirely within the confines of a single state. I refer to this as 'home states'. I suggest that the parties' size in these home states (*H3a*), the degree of similarity between the party system of the home state and the national party system (*H3b*), and amount of time passing between national and regional elections all influence the parties' pre-electoral coalition preferences (*H3c*).

The fourth and final proposition relates to the parties' recent experiences with electoral competition and coordination, in part 3.4. I develop three hypotheses based on this, that hinges on the parties most recent performance at the polls (*H4a*), their familiarity with a prospective ally from a previous pre-electoral coalition (*H4b*), and party system's familiarity with pre-electoral coalitions overall (*H4c*).

Before closing the chapter, in part 3.5. I address an aspect that is generally assumed to affect coalition formation yet does not play a major part in this thesis, namely ideological preferences. The conclusion in part 3.6. sums up the hypotheses.

3.1. Proposition 1: Making votes count in the constituencies

The first role of pre-electoral coalitions concerns how the coordination for seats is shaped by the electoral system and the fragmentation of the party system. In this part I first account for the state of party system fragmentation at the constituency level in India, and then explain how India's first-past-the-post electoral rules give rise to a type of vote-to-seat coordination that is known as seat-sharing. Based on the observable implications of this argument, I develop two hypotheses of constituency-oriented coordination, one reflecting how coordination is incentivised by the parties' prospective gain from bringing down fragmentation in the constituencies, but also one reflecting that high levels of constituency fragmentation can make parties less able to identify pre-electoral coalition opportunities.

FRAGMENTATION IN THE LOK SABHA CONSTITUENCIES

Party system fragmentation at the constituency level is a basic condition for votes-to-seat coordination to take place. If the competition in the constituencies tends toward bipolarity (i.e. only two candidates per single-member constituency), there is little scope for coordination to take place in the constituencies.

The emergence of multi-party systems is often assumed to be restricted under first-past-the-post electoral rules. Duverger's Law states that, on a constituency where only one winner can be selected (the mechanical effect), voters are unwilling to vote for unviable

candidates and unviable candidates are unwilling to keep competing (this double mechanism is known as the psychological effect). As a result, only the two front candidates persist[1]. However, since there is no guarantee that the same two parties will emerge from all the constituencies make up the national polity, fragmentation into multi-party systems can still occur under first-past-the-post rules. As pointed out by Riker (1976) and later elaborated by Cox (1997), the mechanisms described by Duverger therefore only explain the reduction of fragmentation at the constituency level. As a result, even when a two-party system emerges in each constituency, nationally the result can be a multi-party system.

The existence of an extreme multiparty system of India is sometimes explained with reference to this constituency dynamic. This line of explanation argues that while the fragmentation of the party system is high at the legislative level, i.e. in the Lok Sabha, the competition is concentrated around a much more modest number of competitors in most constituencies (e.g. Chhibber & Kollman 1998, Sridharan 2012). There is some virtue to this argument in the sense that the number of average competitors in the Lok Sabha constituencies is indeed much lower in the constituencies than at the at the national level overall, that is in the Lok Sabha itself. However, there are a number of limitations to this account of the constituency-level party system fragmentation. First, this explanation overstates the degree to which these numbers indicate that the party systems in the constituencies are bipolar (unfragmented). Second, the explanation disregards that the data already reflects pre-electoral coalitions.

To the first point, Diwakar (2007) shows that fragmentation does exist within the constituencies as well, demonstrating that the average number of competitors in the Lok Sabha constituencies clearly exceeds bipolarity. Even when we measure the number of

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[1] While the supposed regularity of Duverger's Law is often presented as one of the few iron-clad laws of political science, Duverger discussed exceptions to this rule in detail, pointing out that while first-past-the-post rules "works in the direction of bipartism; it does not necessarily and absolutely lead to it in spite of all obstacles. The basic tendency combines with many others which attenuate it, check it, or arrest it" (1954:227). For extensions of this argument to explain the occurrence of multiparty systems under disproportional electoral laws, see Cox (1997) and Hicken (2009).

competitors using the conservative effective number of parties (ENP) estimate[2], which inherently discounts fragmentation, the number of parties is much closer to 3 than to 2, which would indicate bipolarity. Diwakar's data covers the period between 1952-2004, so in order to see whether the pattern holds for the period of the empirical focus of this research, I calculated the equivalent estimates for 1999-2014 period. Table 3.1. shows that Diwakar's point clearly does extend to the 1999-2014 era with an average ENP was close to 3 parties. A large majority of constituencies have a far larger number of credible competitors, with the most competitive constituency having 8.17 effective parties. Only the least competitive quartile of constituencies, with 2.34 effective parties or less, can be said credibly to have a limited incentive to coordinate.

Minimum	1st quartile	Median	Mean	3rd quartile	Maximum
1.10	2.34	2.81	2.94	3.36	8.17

TABLE 3.1. Average effective number of parties (ENP by seats) in the Lok Sabha constituencies 1999-2014.

Figure 3.1. breaks this data down across time period and adds the average number of competitors according to two alternative measures, the average number of parties and the average number of parties. Similar to Table 3.1., Figure 3.1. shows that the average ENP in the Lok Sabha constituencies is close to 3 in all elections. We can compare this with the average number of parties in total, which is considerably higher in the 6-12 party range. The average number of candidates including independents is higher yet, with the average number of candidates per the constituency in the range of 11-18 candidates between 1999 and 2014[3]. These two total measures of parties and candidates do not consider the differences in relative strength between the competitors the way the ENP

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[2] Laakso & Taagepera's (1979) formula is $ENP = 1/\sum P_i^2$, where P is party i's share of either votes or seats.

[3] The Lok Sabhas between 1999 and 2014 included 5.75 independent legislators on average. Collectedly, independent candidates won on average 3.8% of the votes, which would typically be the equivalent of the fifth-largest party. Independents can therefore not be dismissed as unelectable out of hand.

measures, but they give a better indication of the barrage of choice facing voters in the polling booth.

Competition at the constituency level, 1999-2014

By effective number of parties (ENP), total number of parties, and total number of candidates.
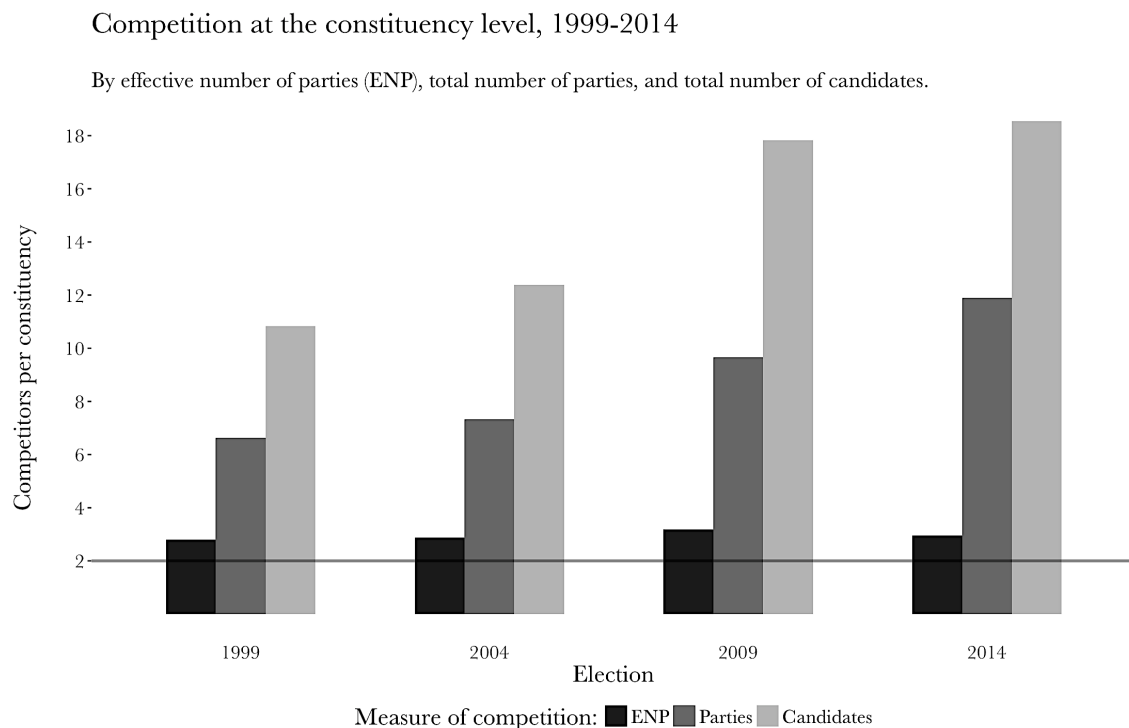
Own calculations, based on ECI data.

FIGURE 3.1. Three measures of average constituency fragmentation between 1999 and 2004. The effective number of parties, ENP measured by seats, is indicated by the dark grey bars. Even though parties only field one candidate per constituency, the presence of independent candidates mean that the number of candidates overall (light grey bars) exceed the number of parties (medium grey bars). The horizontal line indicates the level representing perfect bipolarity (two candidates).

The second piece of evidence against the claim that fragmentation does not apply to the Indian party system at the constituency level, is that the data necessarily capture the competitive situation in the constituencies *after* seat-adjustment coordination. Seat-adjustments serves to bring down the number of candidates. This practise, which will be discussed in detail shortly, serves to bring down the number of candidates in the constituencies temporarily, i.e. in a single election, but it does not reflect the nature of the party system. Ziegfeld (2014) shows that to the extent bipolarity exists in the Lok Sabha constituencies, it can largely be attributed to seat-sharing agreements. The real question suggested by these figures is not whether there is sufficient fragmentation to incentives

pre-electoral coordination in the constituencies, but rather why pre-electoral coalitions are not able to bring down party system fragmentation further.

In conclusion, the evidence of Table 3.1 and Figure 3.1. demonstrate that fragmentation exist in the constituencies. On this basis, I argue that political parties in India have a clear incentive to coordinate the votes-to-seat transformation.

ELECTORAL SYSTEM

With the previous section establishing that constituency-level fragmentation is a feature of electoral competition in India, what type of coordination should we expect given the country's electoral rules? As established in the previous chapter, under first-past-the-post rules, constituencies are won according to plurality rules rather majority rules, meaning that the candidate winning the most votes is the sole winner. In order to increase their odds of winning, parties coordinate pre-electorally in order to avoid splitting the vote. The previous chapter described how this coordination takes the form of mutual candidate withdrawals, or seat-sharing, "designed strategically to increase each party's vote share by pre-empting competition" between the pre-electoral coalition partners. (Choi 2012:66).

In order to understand the seat-sharing logic, Figure 3.2. presents a simplified example beginning with a single constituency in which the parties A, B, C, D, and a number of smaller parties compete. Under scenario 1, party A wins the constituency seats, ahead of parties B, C, and D. Under scenario 2, party B and party D form a pre-electoral coalition agreeing to coordinate their strategies. Party D does not field a candidate but instead instruct its supporters in the constituency to support the candidate from party B. Assuming that the parties are able to persuade the voters, the candidate from party B wins the seat. Under scenario 3, upon realising that parties B and D have or about enter a pre-election coalition, Party A has devised a counter-move and negotiated an equivalent deal with party C. With the support of party C, party A's candidate wins the constituency seat. (We could also imagine a scenario, where Party B had instead secured the support of party C, and Party A the support of Party D, with the only difference in outcome being that the final result would be closer.)

HYPOTHESES

SCENARIO 1				SCENARIO 2				SCENARIO 3		
#	NAME	%		#	NAME	%		#	NAME	%
1	Party A	30		1	Party B *supported by Party D*	40		1	Party A *supported by Party C*	50
2	Party B	25		2	Party A	30		2	Party B *supported by Party D*	40
3	Party C	20		3	Party C	20		3+	Others	10
4	Party D	15		4+	Others	10				
5+	Others	10								

FIGURE 3.2. *The logic of pre-electoral seat adjustments in first-past-the-post systems explained in three scenarios set in the same hypothetical constituency. Scenario 1 shows competition without seat coordination. Scenario 2 shows the situation with one seat coordination deal between parties B and D. Finally, scenario 3 shows the outcome with two seat coordination deals, one as before between B and D, as well as counter-move between A and C.*

The reason why Party D agrees to abandon the constituency in favour of Party B is that the withdrawal takes place as part of an exchange. Candidates are withdrawn "in exchange for some sort of compensation in other constituencies" (Duverger 1954:224). Seat-adjustments are typically reciprocal deals where party D steps down in favour of party B in some constituencies, in exchange for Party B stepping down in favour of Party D in a set of constituencies elsewhere. The agreements however need not be perfectly reciprocal and split the set of shared constituencies 50/50. The allocation of constituencies is likely to take into account which party has the greater chance of carrying the constituency. The fact that Party B appears to be the more popular party is likely to be reflected in the allocation of constituencies, e.g. reserving 60% of the constituencies to Party B and the remaining 40% to Party D[4]. However, there are no standard formulas

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[4] The reciprocal compensation can take other forms, especially if one party is so small that it has few constituencies to 'trade' in the general election. Instead, the exchange can extend to constituencies regional elections or other types of pay-off. The currency of political agreement is typically more fungible than formal models usually allow for. One explanation for the high numbers of candidates in many constituencies in the Indian elections is that some candidates register their intention to run for the election in a constituency in the expectation that they will be bought off by more credible contenders. These candidates might not have the constituency-wide support needed to win, but they might provide (or claim to provide) the support of a particular village or neighbourhood.

for how to divide seats, and it can be difficult to establish exactly how well each party can expect to do. As a result, negotiations over which constituencies to include in a deal and how to allocate them are often fraught.

As a 'competition-avoiding device' (Kailash 2014:89), the seat-sharing coordination tilts the playing field toward the pre-electoral partners in several ways. First, it strengthens the remaining candidate under the assumption that the supporters of the party withdrawing from the constituency will transfer their vote to the allied party's candidate. This will improve the odds of the remaining candidate and increase the pressure on rival candidates. Second, by focusing their efforts on smaller number of candidates each, both parties are able to allocate their campaign resources more efficiently. If both parties had fielded the numbers of candidates that they had originally intended, they would have had to spread their resources more thinly. Parts of these resources would have been devoted to fighting each other, as well as other rivals. At the very least, even when a party fails to attract the supporters of its pre-electoral rival, the lower number of competitors could mean that the party has a better chance of recouping the deposit made to the Electoral Commission, which is only returned to candidates who achieve at least a sixth of the constituency votes.

There is relatively little research into how parties can trust their voters to go along with seat-sharing deals, but we can imagine two main explanations, which need not be mutually exclusive. First, if the party system is ideologically organised, we might expect that the voters' willingness to vote for a coalition partner rely on the ideological compatibility between the parties[5]. However, given that the nature of ideological salience in party systems fluctuates globally, the assumption that voters are ideologically constrained in this particular way might not apply widely. The other explanation rests on supporter loyalty. If voters trust that their preferred party has their best interest at heart, they might be willing to go along with their recommendations and transfer their support.

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[5] In a survey experiment that measured voter willingness to support to coalition partners, ideological similarity did make the respondents more likely to transfer their vote though the effect was annulled if the respondent disliked the party on other grounds (Gschwend & Hooghe 2008).

Parties have various ways promote a pre-electoral coalition to their supporters[6]. In India, examples include joint appearances by leaders at mass rallies; murals that visually tie together the party symbols and colours of the coalition partners; and handing out 'voter slips' close to the polls to remind supporters how to vote (cf. Banerjee 2014).

Parties can ultimately never be certain that a seat adjustment strategy will turn out successful. Voters might be unwilling to follow the parties' recommendations. If they find the choice of coalition partner unpalatable, they might vote for a rival candidate, but voters are also sometimes confused by the shifting alliances (Banerjee 2014:78) and end up abstaining from voting altogether. Moreover, parties face a more imminent obstacle from within their own ranks. Candidates that had expected to run for election in a particular constituency are likely to be unhappy to cede the opportunity to a candidate from a coalition partner. Disappointed, they can abandon the party and seek nomination instead for a rival party or as an independent candidate. Finally, if parties renew their pre-electoral coalition and allocate constituencies between them in a stable pattern, both parties run the risk of eroding their electoral appeal in those constituencies, over time. Thus, while seat-adjustments offer opportunities, they can also be a risky proposition for parties. The wide and persistent presence of seat-sharing in Indian elections is a strong indicator that parties are incentivised to coordinate, but each deal come with a certain degree of inbuilt instability.

CONSTITUENCY-ORIENTED HYPOTHESES

What are the observable implications of this logic? If parties enter pre-electoral coalitions in order to overcome coordination problems caused by the presence of multiparty competition in first-past-the-post constituencies, we would expect parties to seek out partnerships that would allow them to target these opportunities specifically in the constituencies that are competing in. The large majority of parties only compete in subsets

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[6] Parties employ equivalent practises under different electoral rules. In some list systems, this can be simply be done by stating both parties' names appear on the ballot next to the name of their joint candidate (Nikolenyi 2004:1046). In the case of 'rental vote' coordination, parties can issue explicit voter instructions (Gschwend, Stoetzer & Zittlau 2016). Similarly, under the alternative vote rules such as Australia, parties hand out 'how-to-vote' cards outside polling stations that instruct voters how to best support the coalition partners (Golder 2006a:20).

of the 543 Lok Sabha constituencies (indeed, not a single party fields candidates in all the constituencies), usually in distinct geographic regions, mostly within one state. Since parties operate in distinct pockets, many do not face each other directly in the competition for the same constituencies. By extension, these parties do not have an incentive (or opportunity) to coordination their vote-to-seat strategies.

Simply being present in the same constituencies is not necessarily a strong incentive to coordinate. Parties must be relatively competitive in order for their votes to make a difference to who will win within the constituency. Sridharan (2004) suggest a logic that creates a special category of a 'coalitionable parties', that is, parties that have a particular incentive to join forces: The main rivals in a constituency will be the two front-runners, who each have an incentive to reach out to the competitor running in third. As a counter-reaction, the un-allied front-runner will reach out to the fourth-placed competitors. As a result, the four parties who are set to win the most votes will be most 'coalitionable' in the constituency. Extending this across a number of constituencies, the more frequently a pair of parties find themselves being competitive in the same constituencies, the more attractive a pre-electoral coalition opportunity between them will seem. This leads to our fist constituencies:

H1a – the higher the degree of credible competition between a pair of parties, the more likely the parties are to form a pre-electoral coalition

Will fragmentation always lead to more coordination in the constituencies? Figure 3.1., which showed the number of candidates at the constituency level, revealed that seat-adjustments do not eradicate constituency fragmentation entirely. Parties do not respond to all opportunities, and some seat-sharing agreements are partial, the so-called "friendly fights", in which parties agree to not compete against each other in some but not all of their shared constituencies. One reason that parties might not respond fully the optimisation incentives at the constituency level, is that the sheer extent of competition within some constituencies can make it difficult to identify promising opportunities. If a constituency has a high number of competitors, and if voter support is relatively evenly divided between them, it is very difficult to identify both who is likely to win and who is

able to make a worthwhile contribution. In such circumstances, optimistic parties are more likely to try their luck on their own. In the example in Figure 3.2. between five parties in a constituency, Party B with 30% of the prospective votes might not be able to persuade Party C or Party D, at respectively 25% and 20%, to give up their candidacy in its favour, if there is great uncertainty about the forecasts[7]. Not only is it relatively difficult to predict the final seat share of political parties under first-past-the-post rules, but the difficulty is compounded in India by a number of factors, starting with the size and heterogeneity of the electorate. This is not a reflection of lack of skill of the Indian polling profession, but rather that most Lok Sabha constituencies very large and logistically challenging to poll well due to both geographical and digital infrastructure. Given that the parties face a considerable risk in seat-sharing agreements if the coordination does not have the intended impact, the complexity that comes with too many competitors will make parties less likely to engage in pre-electoral coalitions. This leads us to our second hypothesis.

H1b – the higher the degree of party system fragmentation experienced by the parties at the constituency level, the less likely the parties are to form a pre-electoral coalition

3.2. Proposition 2: Making seats count in the legislature

The second proposition suggested that pre-electoral coalitions are motivated by the prospect of pooling enough legislative votes, i.e. parliamentary seats, to have a say over government formation. As in the previous section, I begin by examining the premises of this argument in the Indian context. What is the state of party system fragmentation in the Lok Sabha, and what rules of competition decide who gets to form a government? Based on this, I develop three hypotheses, labelled *H2a*, *H2b*, and *H2c*.

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[7] Even seemingly safe seats can fall in the course of a single election. For example, in the constituency of Purnia in Bihar, the BJP candidate Uday 'Pappu' Singh secured 51.5% of the votes, with the next runner-up only securing only 25%. Yet in the following Lok Sabha election in 2014, otherwise a very successful year for BJP, this formerly dominant candidate secured only 30% of the votes in Purnia, finishing in second after the winning candidate's 41% of the constituency votes.

FRAGMENTATION IN THE LOK SABHA

In contrast to the question of constituency-level party system fragmentation, the existence of a fragmented multi-party system at the national polity level is much less disputed. Figure 3.3. shows the effective number of parties, measured by votes shares and by seat shares, as well as the total numbers of parties represented in the Lok Sabha terms of 1999, 2004, 2009, and 2014.

Competition at the Lok Sabha level, 1999-2014

By effective number of parties, total number of parties, and total number of candidates.

Own calculations, based on ECI data.
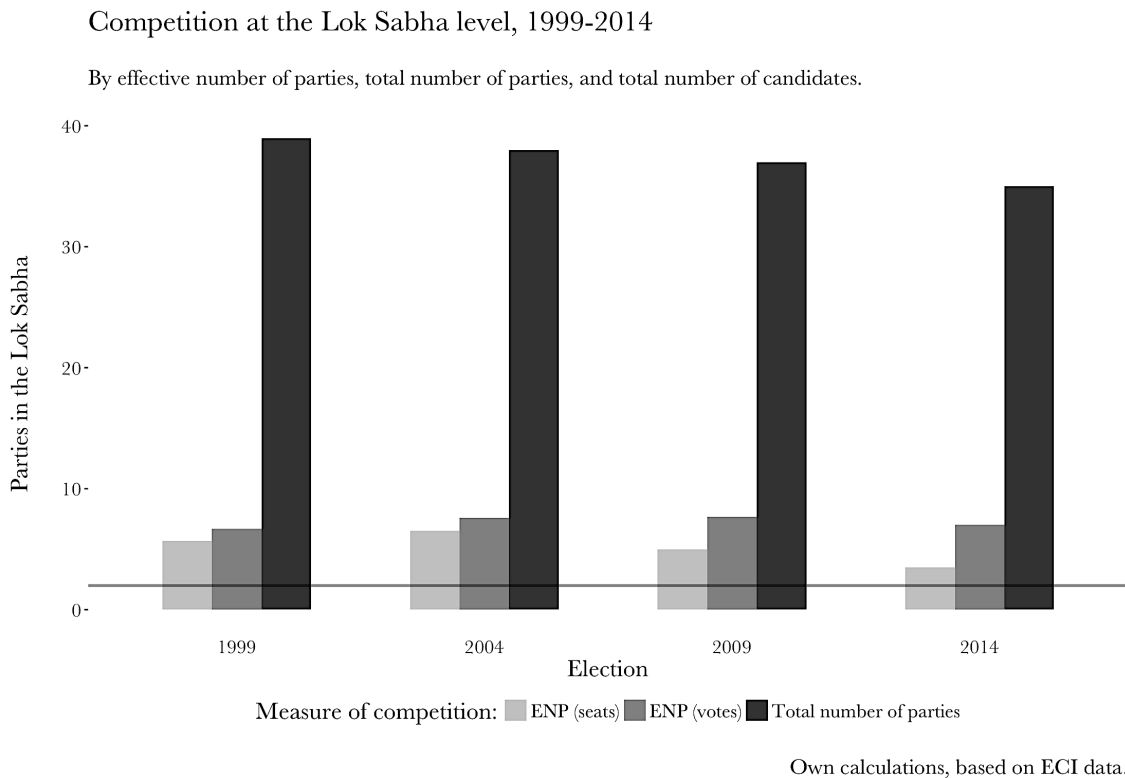
Figure 3.3. Party system fragmentation in the Lok Sabha 1999-2014. The light grey bars represent the effective number of parties, measured by their vote seats shares. The medium grey bars represent the effective number of parties, measured by their vote seat shares. The dark grey bars represent the total number of parties. The horizontal line indicates a two-party system. The total number of elected members of Lok Sabha is 543.

The party system is highly asymmetric in the sense that a few parties are exponentially larger than the majority of parties represented in the Lok Sabha, but up until the 2014 election (i.e. at the moment the empirical scope of this thesis ends) none of these large parties could be said to be independent of the support of smaller parties, potentially even

very small ones. Tellingly, the 1999 Lok Sabha election was triggered by the sitting government losing a vote of confidence when it fell short by a single vote. Governing parties that want to ensure their hold of power will therefore do well to take on a higher-than-strictly-necessary number of allies as an insurance policy against blackmail and defections (Luebbert 1986:79).

In line with this level of legislative fragmentation, in past decades India has exhibited some of the largest observed government coalitions anywhere, consisting of between 6-12 parties not counting independent members of the Lok Sabha (Sridharan 2012). Yet despite their numerical size in terms on membership, the nature of party system fragmentation in the Lok Sabha means that these governments actually still do not constitute the majority on their own. In the 1996-2014 period, all Indian governments were minority coalitions dependent on external legislative support. The majority of the government's external support is supplied by erstwhile pre-electoral coalitions (Nikolenyi 2015:280), though governments often will have to scramble to secure further post-electoral support (Sridharan 2012). Typically, between 5-6 parties that took part in pre-electoral coalitions will end up supporting the government from the outside (Sridharan 2012:320-322).

While membership of pre-electoral coalitions does not automatically equal the membership of the post-electoral coalition, being a part of the winning pre-electoral coalition greatly raises the party's chances of securing post-electoral pay-offs from government leverage. The historical record strongly indicates that parties that aspire to ministerial office will need to take part in pre-electoral coalitions. Only exceedingly rarely have parties managed to join the government coalition in the window following the election. Since 1977, over the course of the thirteen Lok Sabha elections, only four parties ever managed to secure a ministerial seat in a coalition government without having been part of a pre-electoral coalition (Sridharan 2012:320-322). Parties that choose to stay out of pre-electoral coalitions therefore accept that they are unlikely to obtain any ministerial seats.

HYPOTHESES

In sum, by any measure in the Lok Sabha the degree of party system fragmentation is considerable. Anticipating this, parties are well aware that they will have to form coalitions eventually and that collectively they can expect a complex negotiation situation involving multiple parties before this coordination problem can be solved. However, if they do participate in a successful pre-electoral coalition, this will greatly increase their chances of accessing government leverage.

LEGISLATIVE RULES

Previously, Chapter 2: Theory discussed how the rules relating to government formation are likely to shape parties' incentives to commit pre-electorally. First, if parties are not required to demonstrate that the explicit support of a majority of the legislators in order to form a government, they can rely on looser coalitions of legislative alliances. This circumstance makes it worthwhile for government-seeking parties to pursue coalitions that fall short of the majority mark, with allies who might not willing to follow them all the way into the ministerial offices. On the other hand, the element of the government formation rules that determines the order of proposal adds a time imperative to the process of assembling allies, if they favour the first grouping to demonstrate a viable legislative majority. Coalition formation then becomes a race that rewards the parties' willingness to finalise commitments before the election has determined their eventual voting weights.

The Indian constitution provides relatively few formal rules for the investiture of the government, leaving much to the discretion of the president[8]. Nikolenyi (2015) describes how these investiture requirements were increasingly softened in the so-called 'coalition era' of Indian politics that began in 1989. Up until 1998, governments were instated according to "informal positive parliamentarism", where prospective governments were required to seek a parliamentary vote of confidence within a specified time frame. However, in 1999, the requirements shifted to a negative parliamentarism, where president was satisfied with evidence to the effect that the government would not have a

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[8] Technically, there is no constitutional requirement for parliamentary input on the identity of a new government, as Article 75 of the Constitution of India grants the president the authority to appoint the prime minister as well as the cabinet (the Council of Ministers). Practically, however, the office of the president is mostly ceremonial.

majority against it. In 2004, the practise relaxed further towards a 'limited negative' model (Nikolenyi 2015:279), where evidence needed only be demonstrated as letters of support rather than a formal vote in parliament. An implication of less than strictly positive majority rules, is that it can be worthwhile for government-seeking parties to pursue coalitions that fall short of the majority mark, with allies who might not willing to follow them all the way into the ministerial offices.

In terms of recognition order, the president again has discretion whether to grant the role of formateur to either largest single party or to the party that heads the largest pre-electoral coalition. Traditionally, the largest party received the right to attempt to form a government first, in line with the traditional party-centric ASB model. However, in practise, this has led to the defeat of the attempted government on every occasion where the largest party was not also the leader of the largest coalition. In 1989, 1990, and 1996 (i.e. elections that form part of the immediate frame of experience for the party behaviour 1999-2014) the largest party coming out of the election tried in vain to gather sufficient support[9]. The next steps were clarified in a presidential communiqué in 1998: If the single largest party fails to form a government, the president opens *simultaneous* discussions with the leaders of the other larger parties, giving them the opportunity to demonstrate a working majority coalition in the Lok Sabha. These procedures create a highly competitive situation, where parties must race to demonstrate the largest possible coalition of 'non-resistance', according to the negative majority rules.

In sum, what compels parties commit pre-electorally rather than wait until their respective voting weights have been established following the election? The expectation of a fragmented party system in the Lok Sabha means that parties know they will most likely have to work together if they want to have a say in who forms the government. The rules governing this process mean that parties are better off by negotiating this early, before the hectic window of government formation begins once the election result is known. In practise, the Indian recognition rules benefits the party than can demonstrate the biggest

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[9] The issue also comes up at the level of state government formation, where the governor plays a role equivalent of the president, most recently following the Vidhan Sabha election in Karnataka 2018.

coalition first. This pushes the timing of committing to ahead of election. Parties know they can almost only get ministerial posts if they are in pre-electorally coalition, but they also know that the pre-electoral coalitions can provide them with pay-offs outside the government even if they are not given ministerial post. By striking a deal in advance of the elections, the parties lower the costs of negotiating anew in the potentially hectic window between the result being announced and the government being formed.

LEGISLATURE-ORIENTED HYPOTHESES

The above provides a generalised explanation for pre-electoral commitment, but what are the more specific factors that shape these structures? What explains the particular pre-electoral coalitions that we see? I suggest that *national size* matters, but that under circumstances of high fragmentation, parties will look to other indications of the alliance's future strength than simply adding together the expected sizes of themselves and their prospective partner. In particular, I suggest that parties look at the number of the indirect allies that a prospective partner brings with it. The more *leadership* a party exhibits by securing other partners, the more attractive the pre-electoral coalition will be. The other effect of fragmentation on size is that small parties will have to team up in order to access the coalition game, creating tight clusters of pre-electoral coalitions characterised by a high degree of *shared partners*.

Traditional coalition theories assume that parties are occupied with the precise size of government, but there are several reasons to assume that this is less applicable to pre-electoral coalitions. Forming coalitions that aim to hit very precise targets (such as those implied by minimal and minimum winning coalitions) requires parties to know when they reach and exceed such a target. When parties operate under information constraints, these precise calculations are not possible (Dodd 1972, Riker & Ordeshook 1973). The mere fact that pre-electoral coalitions are formed *before* the election result is known constitutes one such information barrier. In India specifically, the "number, diversity and fluidity of parties and factions that [comprise the] successive coalition experiments, and the minority parliamentary status of many of the latter, [undermine] the possibility of strict rational calculation" (Ruparelia 2015:10).

HYPOTHESES

Despite the uncertainty that surrounds the parties' future legislative sizes, I fundamentally agree that parties do look to the prospective size of a potential pre-electoral partner. The objective of this type of coordination is after all to pool the parties' legislative weights to gain influence over the government formation process. The more legislative votes, i.e. seats, that a party is likely to command after the election, the more attractive it will be as an ally. This leads us to the following hypothesis.

H2a – the more votes the parties won in the previous national election, the more likely the parties are to form a pre-electoral coalition

When the Indian parties devote themselves to what is popularly known as 'alliance arithmetic' in order to identify the most promising coalition strategy, they do not solely consider the size of any single prospective partner at a time. Rather, I argue that parties look to the wider network of existing and potential pre-electoral coalitions. In particular, I suggest there are two specific manifestations of network structures that parties take into account. The first network dynamic is the existence of particular parties that are highly active in forging pre-electoral coalitions, a characteristic I refer to as coalition leadership. The second network dynamic is the tendency towards of subgroups of allies who form close clusters of pre-electoral coalitions between themselves, resulting in a high degree of shared partnerships within the group. Both of these dynamics are extra-dyadic, meaning that they are influenced by allies outside the two parties forming the pre-electoral coalition.

By entering a pre-electoral agreement with a partner, who in turn is highly connected through pre-electoral coalitions, a party can expect to draw on the strengths of other allies indirectly at the seat-to-government leverage stage, on the assumption that they will all support the coalition leader's bid to become formateur. Even if coalition leader's eventual share of the legislative seats is uncertain to prove decisive after the election, the combined size of this party's allies might secure the right to form the government, under the coalition-centric ASB recognition rules.

HYPOTHESES

Beyond increasing the participant's odds of having a stake in a future government, there are at least two advantages to forming pre-electoral coalitions in these star-shaped or hub-and-spoke like patterns. First, from a negotiation cost perspective, the majority of participants will not need to negotiate directly with each other. In highly fragmented party systems, where multiple parties are potentially required to solve a coordination problem, the burden of negotiation will be considerable. Letting one party take the lead and act as the 'conductor' allows parties to circumvent this burden. Secondly, the indirect relationships enable parties to rhetorically distance themselves from other allies if they wish to do so, especially in front of the electorate. Kailash (2014) recounts a situation in the 1989 election, where one party, the Janata Dal "acted as a node around which the parties came together. This allowed parties to claim that their alliance was with the JD and not necessarily with the other parties" (Kailash 2014:93).

Allern & Aylott (2009) point to the role of so-called "decisive parties" in taking the initiative to forming government-seeking commitment-based pre-electoral coalitions. Size is likely to play an indirect role in the formation of these hubs, in that larger parties are likely to play the role of the initiators that form the hubs of these pre-electoral coalition networks. As the parties that have the best chance of being in government due to their size but who are still potentially vulnerable against competitors leading larger legislative coalitions, large parties have the greatest incentives to lead pre-electoral government formation based on this incentive. From the perspective of smaller parties seeking legislative influence, large parties are inherently attractive pre-electoral coalition partners, as their size makes their government-formation bid more credible. From the perspective of the 'decisive party' at the centre of the pre-electoral coalitions, this is dynamic characterised by leadership, whereas from the perspective of the partners of the 'spokes', the dynamic is characterised by popularity.

However, while the size can be factor in who initiates and gathers pre-electoral allies, we need to consider that this is a distinct effect, which is not inherently tied to party size. Assuming that parties evaluate the prospect of pooling enough legislative seats to form a government not only based on the joint size of itself and its prospective partners, the mere

existence of extra-dyadic allies will make the pre-electoral coalition opportunity more attractive. This leads us to the following hypothesis:

H2b – the more parties are allied with other partners, the more likely the parties are to form a pre-electoral coalition

The second way that parties can leverage their size collectively can in some ways be seen as the opposite dynamic. In highly fragmented party systems, some parties are too small for them to efficiently engage larger parties pre-electorally. From the perspective of large parties engaging with smaller parties, while still potentially marginally profitable, will be a relatively low-value proposition when held against the cost of negotiating, over and over with each small party separately. It can therefore be efficient for small parties to band together early and present themselves as united negotiation partner to pre-electoral coalitions. While not large enough to from a viable government on their own, these pre-committed blocks are sizeable enough that they constitute an attractive pre-electoral coalition partner. Because these groups of parties tend to be made up of more than two parties, they internally share partnerships (i.e. in a group of four parties, any pair, or dyad, of parties within it will share two partners, etc.). This leads us to the following hypothesis:

H2c – the more parties are allied with the same partners, the more likely the parties are to form a pre-electoral coalition

3.3. Proposition 3: The effect of regional electoral politics

In a federal polity like India, parties tend to be very invested in the regional politics that take place within the federal states, often to the point where parties prioritise attaining regional influence above national influence. To further complicate this, 'regional politics' cover a range of very different political worlds, as each federal state will have its unique party system and its electoral cycle. How does the fact that parties tend to be 'anchored' in the political requirements of particular states affect the formation of pre-electoral coalitions at the national level, in the Lok Sabha elections?

HYPOTHESES

The Indian polity is set up as a 'quasi-federal state' (Wheare 1963) with two main levels of government. The constitution establishes the country as a Union of States with a strong central authority but with considerable competencies and fiscal privileges devolved to the states, especially following the period of liberalisation and decentralisation that began in the early 1990s (Chhibber & Kollman 1998, Diwakar 2009). More than half of public spending is carried out by the states, who have wide discretion in terms of spending allocation, including high-profile public works. Survey data from the National Election Surveys suggest that the electorate is aware of the role of federal states: more than half of voters hold the state government as accountable or more accountable for the key policy issues affecting their daily lives than the central government (NES 2009, 2014).

Yadav & Palshikar (2009) suggest that the states have emerged as the principal arena of political contestation in contemporary India. At the very least, while state politics does not predetermine national politics, regional priorities "shapes and filters" the national outcomes (Yadav & Palshikar 2009:56). If national politics is 'derivative' of regional politics, as Yadav & Palshikar suggest, the pre-electoral coalitions in the national Lok Sabha elections will also be affected. However, 'regional politics' have very different implications for different sets of parties, as most parties are only active in single or a few states, where they hold very different levels of influence. A corollary of the Indian party system fragmentation is that most parties entranced in small regions, each with its own party system and electoral cycle, which in some cases are very dissimilar from those of the next state. This means also that the aggregated political system of the nation overall, i.e. the sum of all parties and their interactions, can be radically different from the political worlds of Assam, Karnataka, or West Bengal. Due to this "spatial fractionalisation of political behaviour in India" (Nuna 1988), parties operate in very different regionally-anchored political realities.

If parties exist in political arenas that only intersect intermittently in the national legislature, this is likely to have a profound effect on their coalition incentives and potential. In the following, I consider the impact on pre-electoral coalitions of three manifestations of regionalised politics. First, that parties can be dominant in their home state even though their size on the national stage is negligible; second, the fact that the

party system that the parties experience nationally can differ substantially from the party system of their home states; and third, that there is considerable difference between how soon parties must face the electorate again in the regional elections in their home state.

It is likely that that the regional parties are more concerned about an entirely different set of elections, namely those for state government[10]. A party that is small nationally yields relatively little power at this level, but the party can face a radically different power balance in its 'home state'. (How such a 'home state' can be defined for different parties, excepting a small number of truly pan-national Indian parties, is explained in *Chapter 5: Network Analysis*.) To illustrate the considerable variation between the parties' regional and national size, Figure 3.5. shows differences between the Lok Sabha and Vidhan Sabha vote shares for a selection of parties. The two graphs show the same data, but the order of the parties is re-arranged according to national size (top) and regional size (bottom).

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[10] The weight that some parties attach to the subnational level can be gleaned from the way that party elites prioritise positions of regional influence relative to positions of national influence. While cabinet posts in the central government are prestigious and can considerable access to discretionary spending, politicians have left office in order to become Chief Ministers at the state level, or simply to contest state elections. Regional party leaders sometime prefer to remain in their state, sending junior colleagues to take up cabinet post in the national coalition government.

HYPOTHESES

Comparison of national and state performance by party

Black bars are the average vote share in Lok Sabha elections 1999-2014 for a selection of parties.
Greys bars are the parties' average vote share in Vidhan Sabha (state) elections 1999-2014 in their key state.
The Vidhan Sabha shares for BJP and INC are averaged across all states.
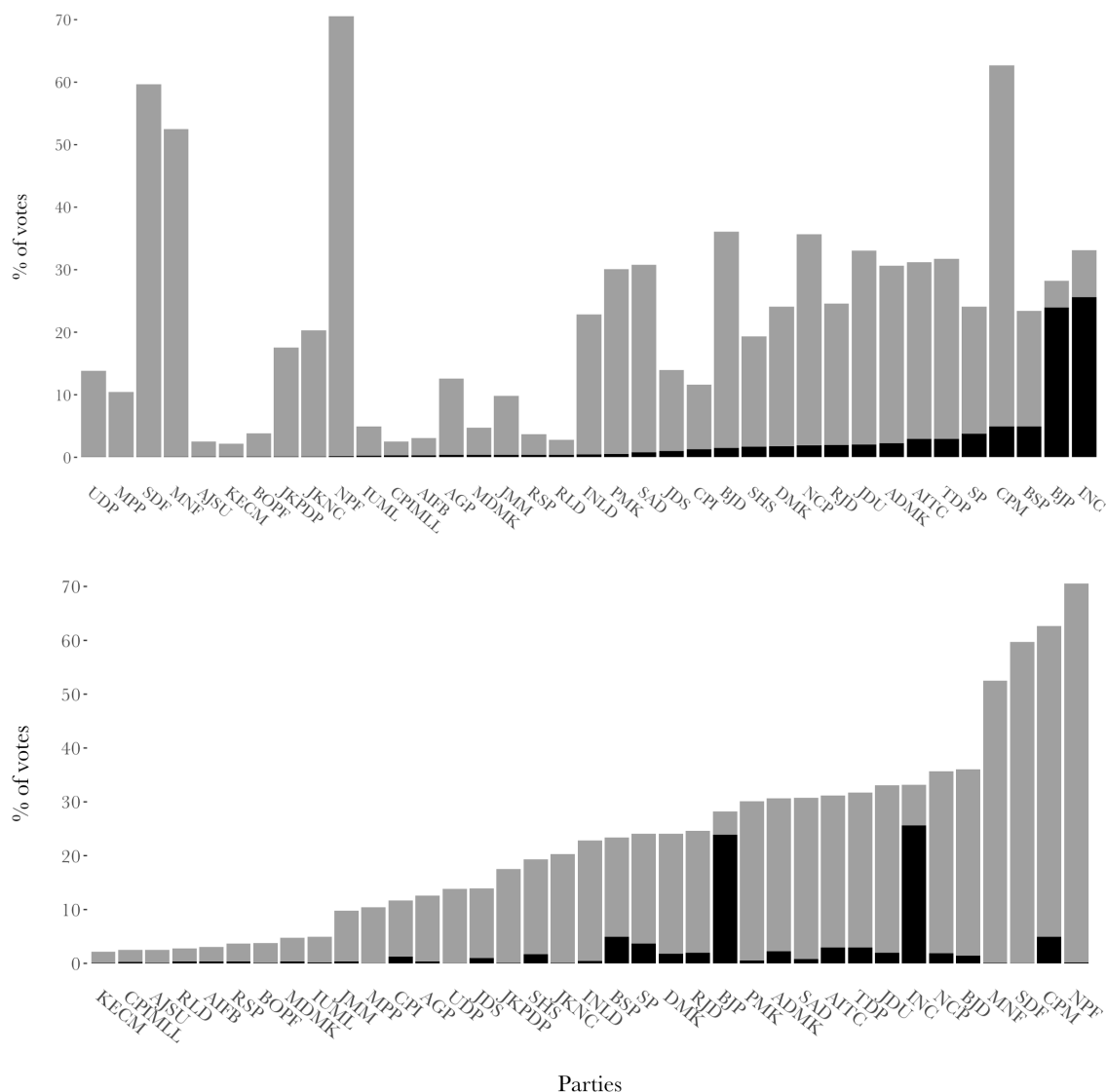
FIGURE 3.4. *Average vote shares in Lok Sabha elections (in black) and Vidhan Sabha elections (in grey) 1999-20014 for a selection of parties, arranged national size (top) and regional size (below). A party like Nagaland Peoples Front (NPF) wins only a miniscule share of the votes nationally in the Lok Sabha elections, but it is a regional giant in its home state of Nagaland, where it wins over two thirds of the votes in the Vidhan Sabha elections.*

It is reasonable to think that parties are especially attracted to pre-electoral coalitions that could be extended from the sphere of the national Lok Sabha elections to sphere of the

regional Vidhan Sabha elections in the future. If parties are incentivised by the prospect of forming alliances that will enable secure power regionally as well nationally, the same logic that we encountered in hypothesis *H1a* will hold. A party's regional size, which can be operationalised as its vote share in the most recent Vidhan Sabha election in its home state, will then be likely to affect its attractiveness in even in pre-electoral coalitions at the national level. This leads us to the following hypothesis:

H3a – the more votes the parties won in the previous regional election in their home states, the more likely the parties are to form a pre-electoral coalition

As discussed, territorial fragmentation creates a system of distinct party systems in different regions of a polity. This created the possibility of highly differential and sometimes contradictory patterns for pre-electoral coalitions (Kailash 2014:90). The relationship between two different party systems, e.g. a regional and a national party system, can be described by estimating the party system congruence between them, i.e. the similarity between the sets of parties appearing in each (Roberts 1989, Thorlakson 2006). (The way to calculate congruence will be described in *Chapter 5: Network Analysis*.) I argue, in the Indian context, that regional party systems that are very dissimilar from the national system will be more likely to encourage pre-electoral coalitions. The reason for this is that the national party system is characterised by the competition between the two polity-wide parties, INC and BJP, which opens up a particular, but finite number of opportunities and associated incentives. However, when this is combined with a very dissimilar regional party system, the opportunities multiply as parties team up both in particular state-specific constellations and in combinations that span the two party systems. As a result, a state party system that is relatively similar to the national party system, such as Madhya Pradesh, will offer few further pre-electoral opportunities, whereas highly dissimilar systems, such as Tamil Nadu, will offer many. This leads us to the following hypothesis:

H3b – the smaller the degree of the similarity between the national party system and the party system of the parties' homes states, the more likely the parties are to form a pre-electoral coalition

HYPOTHESES

The parties' pre-electoral preferences might also be influenced by the unique electoral cycle of their home states. Comparatively, we know that political actors who face elections at different point in the future have "their different time horizons, which lead to different behavioural incentives at any given point in time" (Willumsen et al 2017). Specifically in the context of coalitions, Däubler & Debus (2009:74) found that, as a national general election drew nearer, parties wanted to avoid forming alliances at the state level that could turn out to be problematic for them nationally. Here, I suggest a similar process but in reverse: parties that face an election in their home state will be more wary of entering pre-electoral coalitions in the

The majority of the Vidhan Sabha elections are not held concurrently with the Lok Sabha election; nor do all the Vidhan Sabha elections take place at the same time. Both Lok Sabha and Vidhan Sabha terms are scheduled to last five years, but whenever a legislature has been dissolved ahead of schedule, its election cycle has become un-synced from remaining election cycles. The early Lok Sabha election in 1971 decisively delinked the national Lok Sabha election cycle from regional election cycles, and similar disruptions of the Vidhan Sabha terms, has resulted in a multitude of distinct electoral cycles across the country, what Yadav & Palshikar (2009:57) refers to as a "complex and somewhat random criss-crossing of state level political calendars". Since 1987, at least one state election has taken place every year in India. Figure 3.5. illustrates the overlapping timelines of the Lok Sabha elections in 1999, 2004, 2009, and 2014 (on top and vertical bands) and the multiple, overlapping Vidhan Sabha elections intersect.

The tight calendar of elections serves to contract the electoral time frame, forcing parties to focus on short-term payoffs. Progressing through the electoral calendar is akin to a visit at the optometrist's office, where different lenses bring objects at different distances into focus. Parties' focus switch between the two level of competitions, according to which type of election is imminent. With sufficient time between the elections, conflicts between these different arenas of interests can be managed. However, when the elections are expected to follow closely after each other, reconciling opposing incentives will be more difficult to achieve.
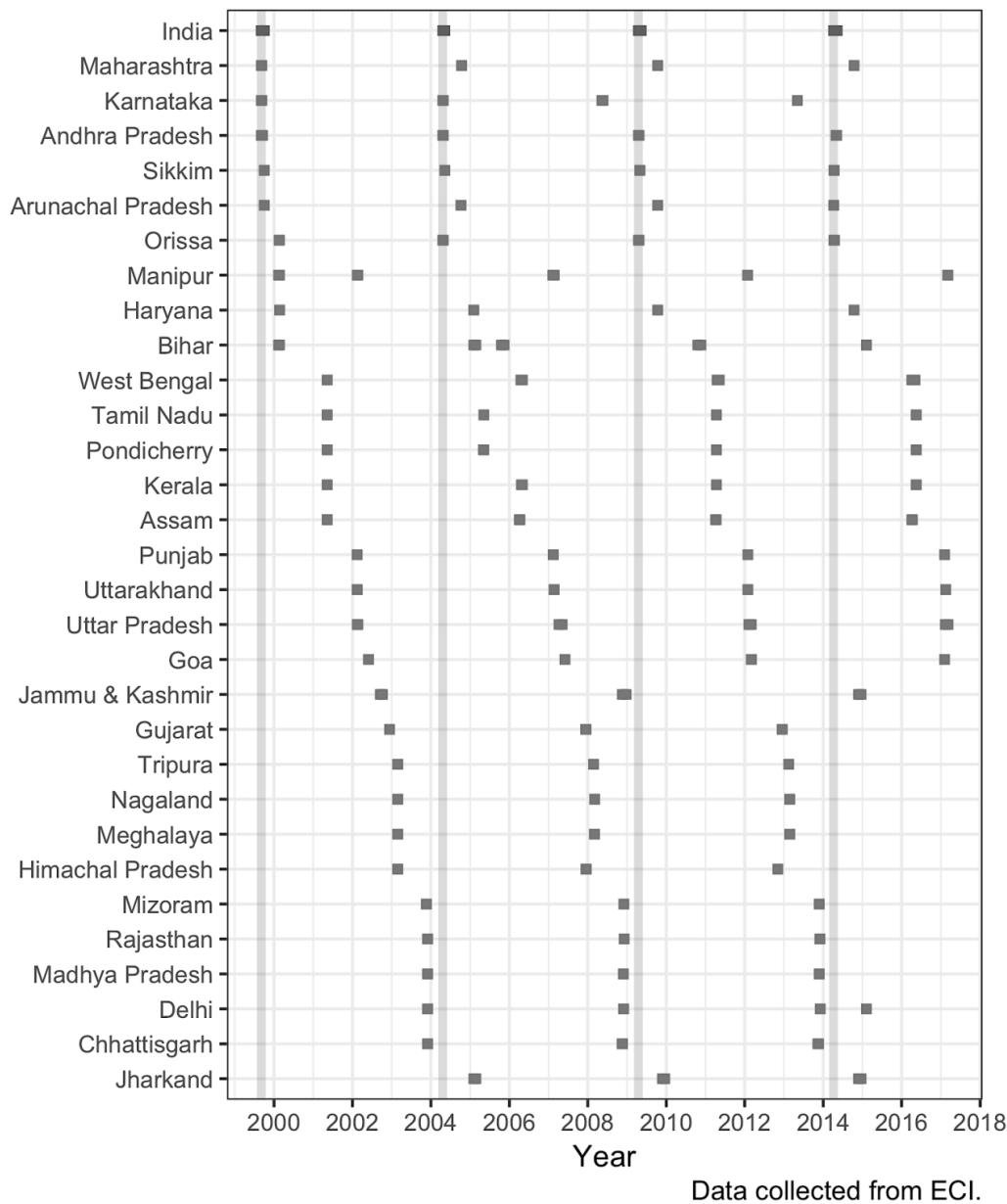
FIGURE 3.5. Electoral cycles of Lok Sabha and Vidhan Sabha elections 1999-2018. The four Lok Sabha are pictured at the top of the figure ('India'). The vertical lines indicate the timespan of the Lok Sabha elections in order to highlight concurrent Vidhan Sabha elections.

The proximity of a state election is likely to affect whether a party is willing to accept an electoral coalition in the national election even though it is at odds with its regional objectives. Parties are social organisations and susceptible to the same cognitive barriers as individuals. This includes 'temporal discounting', the tendency to prioritise imminent situation and discount those further ahead. An imminent challenge looms larger than a potential challenge two or three years into the future, in the much same way that

windmills in the distance look smaller than the windmill rushing past your car window. Temporal discounting implies that parties will be more willing to put potential conflicts aside to in order to coordinate in the national election, if the next state election in their home state is towards the end of the Lok Sabha term. From the party's perspective, this can be a reasonable gamble: If the next state election is far away, the party has time to reassess the situation after the national election, and either extricate itself from the alliance or attempt to persuade voters of the benefits of its alliance decision.

Assuming that political actors have short-term risk horizons, parties that compete in Vidhan Sabha elections shortly after the Lok Sabha election, will be more risk averse and less inclined to form pre-electoral coalitions. This suggests the following hypothesis.

H3c – the longer the amount of time between the national election and the next regional elections in the parties' homes states, the more likely the parties are to form a pre-electoral coalition

3.4. Proposition 4: The effect of previous electoral politics

Like all human behaviour, the decision to enter a pre-electoral coalition is likely to be informed by the actors' previous experiences in similar situations. Clearly, each formation opportunity does not represent a "totally new start" (Warwick 1996:499, in a critique of formal models of party coalitions). I consider three ways in which the experiences from past elections shape pre-electoral coalition behaviour; from the perspective of the party, from the perspective of the pair of prospective allies, and from the perspective of the party system overall.

First of all, parties are likely to be affected by how well they did in the previous election. This is not strictly a question of objective size, i.e. how many seats a party have won, as much as it is a question of how well the party performed relative to their expectation. One indication of this is how many of the party's candidates were elected. Fielding candidates is expensive, and parties risk losing not only the deposit made to the Electoral Commission, but also time and resources spent on campaigning. Unsuccessful candidates

presumably also have an effect on party morale. Extensive defeats are likely leave party cadre and supporters feeling dejected. Following an unsatisfying election outcome, parties face a decision in the next election. Undaunted, they might be optimistic about their candidates' prospects, but they can also choose to reduce their risk and form a pre-electoral coalition. I argue that parties whose candidates were unsuccessful in the previous election are more likely to choose the latter option and enter a pre-electoral coalition. This leads us to the following hypothesis.

H4a – the higher rate of defeat the parties experienced in the previous election, the more likely the parties are to form a pre-electoral coalition

The second aspect of past experiences that I consider relates to trust and familiarity. If a pair of parties were in a pre-electoral coalition in the previous election, all other things equal, they are more likely to repeat this alliance in the next election There are several reasons to believe this to be the case[11], which I discuss in brief below.

Franklin & Mackie (1983) argue that once political parties have formed an alliance is in place, the arrangement is likely to stay place due to the twin effects of familiarity ("better the devil you know than the devil you don't") and inertia ("once something has been established it can require considerable effort to change it") (1983:277). Familiarity works at a general and at a personal level. Repeating an alliance provides the parties with a clearer sense of how party cadres and voters will react to the partnership, since they have already been able to observe this once. Familiarity also contributes to the personal trust between party elites. Parties need to be able to trust that their coalition partner will hold up their part of agreement. If coordinating at the voting stage, the parties need each other to encourage their respective cadres and supporters to work on behalf of the alliance. At the government formation stage, the parties need to trust each other not to defect once the result are known and offer legislative support to a rival instead.

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[11] Of course, the same motives for forming a pre-electoral coalition that existed in the first election might simply continue to be present in next election. If so, there is no real effect of having been allies previously, and we could in principle view the two pre-electoral coalitions, then and now, as independent occurrences. In a party system like the Indian, where the circumstances of parties can change relatively fast, this level of stability seems unlikely.

Inertia on the other hand refers to the cost of forging alternative partnerships in place of the existing ones. Parties incur transaction costs every time they have to identify, assess, and negotiate with a new potential partner. In contrast, "[r]e-running a previously formed coalition is less costly, because parties can follow a previous agreement on the division of election candidacies, or at least use the existing mechanisms for reaching a new agreement" (Ibenskas 2015:751). The costs of new partnerships can be especially high in relation to seat-sharing coordination, where parties have to make painful choices to stand down from particular constituencies. It is often at this stage that negotiations break down, either fully or partially. As Ibenskas points out (in the context of joint lists), having a previous arrangement form the last election can be useful benchmark. Sridharan observes that pre-electoral seat-sharing allotments tend to be "sticky" in stable pre-electoral coalitions, with the partners' share remaining stable or fluctuating within a narrow band (Sridharan 2015:255).

Finally, stable pre-electoral coalitions lower the voters' information costs. Banerjee observes that "every election brought with it new configurations and these, in return, caused confusion and ambivalence on the ground" (2014:78). If voters are confused about the changing patterns of alliances, they might be discouraged from voting altogether. Proponents of renewing pre-electoral coalitions, in contrast, would expect voters to reward consistency and loyalty (Wilson 2009). For these reasons, keeping on the same partner can be a rational decision, even if the underlying incentives has shifted since the previous election.

Yet, familiarity and inertia do not imply absolute path dependence. A premise of the argument is that the original partnership performed at least modestly well, in the sense that the parties do not feel worse off, specifically as a result of the pre-electoral coalition. There are probably limits to how much the underlying incentives can change too, before renewing the partnership is no longer an attractive option to one or both of the partners. Moreover, as touched upon previous, as opposed to party mergers, pre-electoral coalitions are inherently intended to be temporary. Parties need to differentiate themselves from each other, and close long-term partnerships offsets this. Electorally, parties will

eventually want a measure of their respective strengths, independently of their electoral allies (Wilson 2009). A particular concern in the case of seat-adjustments is that this type of coordination can erode a party's support in the constituencies that it cedes. Without competing, over time, the party's local organisation and visibility will wither. Thus, the stabilising effects of familiarity is counter-acted by the parties' incentives retain a degree of autonomy.

Which of these effects is likely to be strongest can be difficult to determine à priori in dynamic party systems where coalition breaks are conspicuous. In similar context of relatively volatile post-communist democracies, Ibenskas (2015) found that pre-electoral coalitions were not as fluid as generally assumed. While a "substantial number of alliances fall apart by the next election, overall, co-operation in the previous election strongly increases the probability of parties re-forming their alliance" (Ibenskas 2015:758). On balance, I expect parties in the Lok Sabha election to be more likely to form a pre-electoral coalition if they had a pre-electoral coalition in the previous election. From this I draw the following hypothesis.

H4b – parties that had a pre-electoral coalition with each other in the previous election, are more likely to form a pre-electoral coalition

The final effect of past patterns of competition and coordination relates to the party system overall. If parties are generally becoming more familiar with pre-electoral coordination, either through their own experience or through observing the behaviour of other parties (i.e. due to diffusion and learning effects), pre-electoral coalitions can emerge as a norm. Even if parties are not automatically drawn to the same pre-electoral coalition partners (as suggested above), they are more amenable to pre-electoral coordination overall. Contributing to this is a dynamic of action and reaction, where parties that do not participate in pre-electoral coalitions will find it increasingly hard to compete against parties that are taking advantage of opportunities from coordination. Recent decades of Indian party politics are often described as an "era of coalition" (e.g. Thakurta & Raghuraman 2007, Palshikar 2009) that began in 1989 but accelerated in the early 2000s. If so, we should be alert to the possibility that parties might in general have an increasing

propensity to form pre-electoral alliances during the period. The leads us to the final hypothesis.

H4c – as the party system becomes more familiar with pre-electoral coalitions over time, the parties become more likely to form a pre-electoral coalition

3.5. A note on ideological compatibility

In the statistical analysis presented later in this thesis in *Chapter 5: Network Analysis*, ideology is not included as an explanatory variable. Nor does the discussion in *Chapter 6: Case Studies* consider the ideological or party programmatic foundations of party behaviour in much detail. Yet, ideological compatibility is often held up as a condition of the political alliances in the traditional coalition literature. This section addresses the possible ideological aspects of pre-electoral coalitions in order to clarify why this thesis takes a different approach

We saw that a branch of classic coalition literature centred on the role of shared policy objectives or ideological compatibility. The main argument is that parties choose ideologically similar pre-electoral partners because they would otherwise have to compromise on the policy agendas that they hope to carry out while in office (e.g. Golder 2005 and 2006a; Blais & Loewen 2009). Another line of reasoning argues that voters are attracted to ideologically harmonious pre-electoral coalitions and/or are likely to punish ideologically disparate PECs (e.g. Golder 2006a and 2006b; Carroll 2007; Ibenskas 2015). From the voter perspective, Gschwend & Hooghe's (2008) survey experiment found that voters were more likely to support pre-electoral coalitions that were ideologically compatible, echoed by Debus & Müller's (2014) conclusion that voters prefer governments that are relatively ideologically homogenous.

The arguments of ideological compatibility are logically sound and mostly well supported empirically in the context of mainly Western democracies in the post-WWII period. In light of this, a study of pre-electoral coalitions that does not address this can easily seem

deficient. Surely, ideological compatibility affects pre-electoral coalition formation, both from a constituency and a legislative perspective? In the context of constituency competition, parties that have very different appeals should find it difficult to persuade voters to transfers their votes. In the context of government formation, parties that disagree on the political agenda will presumably not only find it difficult to achieve anything politically, but also have a more unstable executive coalition subsequently.

In response, it is worth remembering that the ideological structure and salience of party systems vary considerably across countries. Many of our expectations are built on experiences from the Western-European and Anglo-Saxon democracies during periods where the ideological spectrums of democratic competition were relatively well-ordered. These spectrums are typically understood to be oriented around an economic left-right axis, sometimes accompanied by a cross-cutting axis representing social values. The clear coordinates of such an ideological landscape make it relatively easy for parties and other observers to assess the ideological compatibility of any two parties. Moreover, we tend to assume that, allowing minor variations, parties generally care about the same policy areas even if they disagree about the optimal solutions. For example, we assume that parties will have a position on national policies regarding redistribution of wealth, trade, healthcare, education, defence, and foreign relations. This, too, makes it easier to assess where and how parties differ or agree. These assumptions do not hold globally, however, as parties within the same party system can have radically different agendas that do not neatly map on to the same cartesian representation of ideology.

The question of the nature of ideological partisanship in the Indian political system deserves a more nuanced and comprehensive discussion than it would be possible to devote to it within the scope of this chapter. For present purposes, I will only sketch the main points.

It is possible to distinguish some policy-based political cleavages in Indian politics relating to the role of religion in society, economic policy, and federal division of power. However, far from all parties take a position on these issues. Voters, too, are not clearly oriented towards ideology in making political decisions. Sridharan observes that "party

identification in India is relatively weak both among politicians and voters, and parties tend to be clientelistic, lacking well-defined social bases compared to most western democracies" (2004:5418). In a post-poll survey in 2009, only 11.2% of respondents indicated their vote choice was motivated by their approval of the parties' political agenda (by comparison, a higher share of respondents pointed to party leadership or the fact that their family traditionally supported the candidate/party) (NES 2009). In the large and heterogenous Indian electorate, voting behaviour appear to be motivated by a number of very different logics. Whereas some voters do vote ideologically, others are likely to cast their vote based on clientelistic relations. If a party can make the case to its supporters that a certain pre-electoral coalition will help the party secure greater advantages to its supporters than by going it alone, the clientelist supporter has no reason to withdraw her vote.

Most parties position themselves in relation to the characteristics of the people that they see themselves as representing, which can be related to caste, religious, or ethnic identities[12]. For most part, however, the relationship is highly localised and does not indicate nation-wide affinities. For example, the two parties All India United Democratic Front (AUDF) and Indian National League (INL) both identify as Muslim parties, but despite of what the names might suggest, each party only operates mostly in small pockets at opposite ends of the country, in respectively Assam and Kerala. The priorities of AUDF and INL reflect faith-based ideological beliefs but they are first and foremost rooted in the particular interests of their (Muslim) constituents in Assam and Kerala.

Some parties clearly do have well developed political agendas. Some even present the coherent philosophical underpinnings of these priorities. However, many parties do not

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[12] While caste or other ethnic identities are politicised in elections, they do not constitute clear-cut, nation-wide electoral fault-lines. As Manor points out, the Indian electorate has "a wide array of identities available to them. These include at least three different kinds of caste identities (varna, jati-cluster and jati), religious identities (including loyalties to sects within larger religious groups) and identifications with clans and lineages – as well as linguistic, class, party, urban/rural, national, regional, sub-regional and local identities, and sometimes varying types of 'tribal' identities" (Manor 1996:463). Findings from an analysis of Muslim voters in Uttar Pradesh also suggest that the behaviour associated with vote banks more complex and more localised than frequently assumed (Dhattiwala & Susewind 2014.)

have detailed, comparable national policy agendas. Overall, there is little to suggest that the Indian party system overall navigates according to a shared understanding of ideological space.

By extension, it is not clear that pre-electoral coalitions are motivated by programmatic or ideological similarity between the parties. Most assessments of the ideological nature of party alliances tend to discount this very conclusively (e.g. Kugler & Swaminathan 1999; Sridharan 2003; Chakrabarty 2006; Carrol 2007; Choi 2012). For example, Bueno de Mesquita argues that one "does not find evidence of ideological considerations in the coalition formation. process" (1975:101). Roy argues that for Indian parties, "untouched as they are by ideology", when it comes to coalition formation "programmatic divides are easily crossed" (2011:27-28). Pai likewise concludes that the party coalitions are "neither ideological nor do they have a common programme" (2013:9). These assessments are similar to many we find outside of the Western sphere of party systems. For example, Lodge (2014:241) concludes that "[i]deological proximity is not a common feature of coalition partners" in Africa, and Kadima (2006, 2014) likewise argues that ideology "has not been an essential factor in party coalition-building or splitting in African countries." (2014:8)) Ideological or party programmatic compatibility is therefore not inherently the global norm for pre-electoral coalitions.

Carroll (2007:61) suggests that the relatively low level of consistent ideological positioning in the Indian party system appears to lessen the reputational cost that the parties incur from allying with opposing partners. This point, from a comparativist perspective, was first raised by Dodd (1972), arguing that parties who are keenly invested in specific policy areas are less likely to compromise. Differences in salience can therefore actually allow parties to form alliances easier, as their interest are *tangential* to each other. This circumstance can be emphasised by a geographical aspect that I touched upon in the previous section, namely the territorial fragmentation of the political competition. Carroll suggests that, in countries such as Germany, Croatia, and India, parties whose electoral strategies involve distinct electoral bases "can reduce their sensitivity […] to an alliance, in that the joint campaigning need not directly target the same voters" (Carroll 2007:79).

HYPOTHESES

Considering these arguments empirically, the conclusion is not that no Indian pre-electoral coalitions are built on ideological foundations, at least in part. The Left Front, a long-standing block of socialist parties, based primarily in the state of West Bengal, are clearly united in their shared politics. Likewise, there are many points of agreements between the Hindu-nationalist priorities of the BJP and the Marathi-first regional party SHS. INC and its erstwhile splinter-party NCP are also coalitions partners with relatively similar centrist policy outlooks. These partnerships also happen to be some of the longest-standing pre-electoral partnerships, some reaching back several decades. While the data might not allow this to be tested statistically, there does seem to be a correlation between ideological compatibility and the longevity of coalition partnerships. However, it is difficult to determine the direction of this causal arrow. Not only can long-time partners can become more alike over time, they can also be *construed* to be more alike by dint of their association. In a different context, Fortunato & Stevenson (2013) show how coalitions can function as heuristic for policy similarity, even when not strictly warranted. If we explore the three cases above, the evidence comes with several exemptions: another communist party, CPIMLL, has on occasion sided with the Left Front but has just as often opted out. Another long-standing BJP partner, the Punjab-based Sikh party SAD, tend to be grouped with BJP and SHS, but the ideological similarity is less striking on closer examination. While INC and NCP tend to cooperate, there are a number of other INC offshoots that do not side with the INC, despite their shared roots.

We also observe alliances that are not clearly ideologically compatible or even close to incompatible. The state-level coalition formed in 2015 between the BJP and the Muslim Jammu & Kashmir People's Democratic Party (JKPDP) was described by the party leaders as the "coming together of the North Pole and the South Pole" and a "miracle of democracy" (AFP 2015). The partnership did break down, supporting the previous argument by indicating that too large divergences are a barrier to longevity. However, this data point also indicates that such divergences are not inherently a barrier to entry. (There are some examples of party-specific 'cordons sanitaires' on ideological basis, in particular the communist parties' dislike of the BJP, though it is not clear if this is driven by voter sentiment, or as appears to be the case, party sentiment.) In contrast, some parties that have almost overlapping political agendas are very unlikely to ever cooperate, e.g.

HYPOTHESES

DMK and ADMK who share a strong commitment to Tamil identity but are in fact long-standing rivals.

A statement that seems to capture the ideological constraints of the pre-electoral coalitions in India stems from a very different context, namely Cristia's (2012) observation that, in alliances between rebel groups in civil wars, "In reality, there appears to be no alliance that is impossible because of identity differences. If relative power considerations dictate that two groups unite in an alliance, then the elites involved will always find some characteristic that they share and construct a justifying narrative around that attribute" Christia (2012:240).

Compared to the explanations discussed so far in this chapter, ideology will from now on play a relatively small part in this thesis. The main reasons have been discussed above, but on a merely pragmatic note, we also lack dependable, comprehensive measurements of Indian party ideologies on a party system wide basis. There are comprehensive and insightful accounts of the historical and moral histories of political leaders and movements, in particular in regard to the long-established movements around and within the Congress Party, BJP and the Hindutva organisations, as well as certain regional movements such as the Tamil cause. Some parties, such as the Communist parties publish detailed policy clarifications themselves. However, there are not currently any comparable party-system wide estimates that could help us test whether pre-electoral coalition partners in India are alike or unalike along different dimensions of policy, in what way that the Common Manifesto Project data allow us to do elsewhere. The main reason for this is that the comparable written material that would serve as input for these estimates do not exist on a party system wide basis. Relatively few parties publish manifestos, and campaign speeches are not widely available or are not easily comparable due to language differences. The main attempt at mapping the Indian ideological landscape is still constituted by the India section of Huber & Inglehart' (1995) cross-national expert survey in 1994. The Indian estimates, however, cover only twelve parties whose positions are estimated with considerable uncertainty, based on the rankings of small number of experts. Some parties were ranked by as few as two experts. In addition, I previously carried out a quantitative text-analysis of all available English-language party

manifestos between 2004 and 2014, which produced the ranking illustrated in Figure 3.6. However, these 22 estimates, spread across three elections, account for only a small subset of the parties that the research in this thesis is concerned with.

Programme estimates of party manifestos
Lok Sabha elections 1999-2014
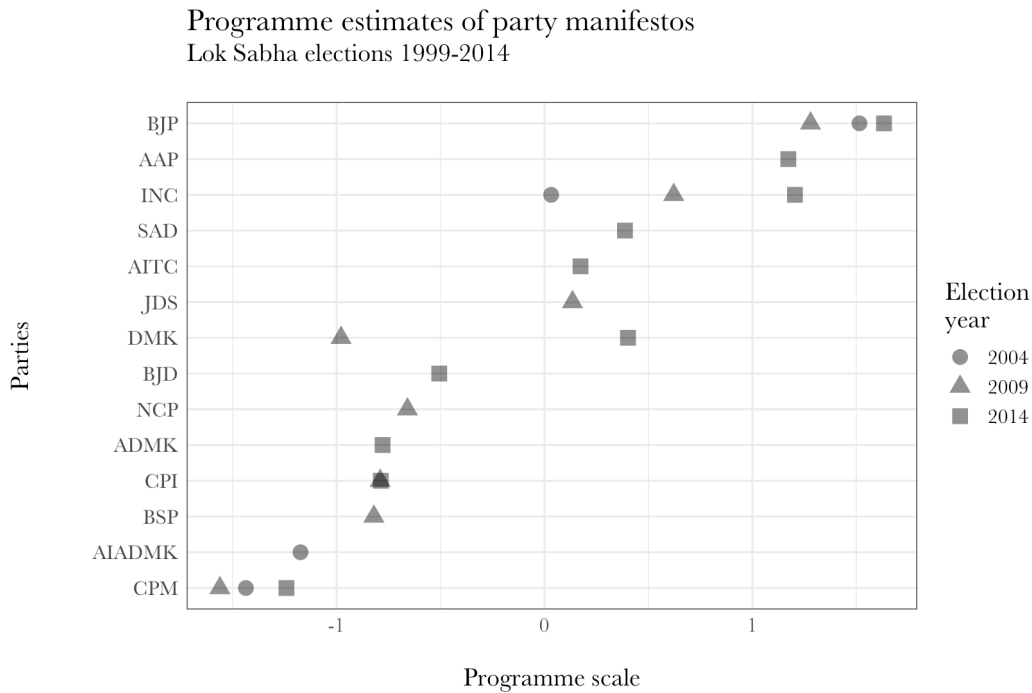
FIGURE 3.6. Programmatic scores for 14 parties in 2004, 2009, and 2014, based on comparative, computerised text analysis of 22 English-language party manifestos. Confidence intervals were calculated but not shown in this figure; they are all equivalent to, or smaller than, the symbols used. The scores for the Communist Party of India (CPI) manifestos overlap in the graph but do differ slightly numerically. Estimates are calculated using the Wordfish R package.

When considering the potential omitted variable bias that can arise from neglecting ideology in this study, it worth considering the impact of another potential explanatory which is even more elusive from a data perspective, namely personality and personal relationship. We know that Indian parties tend to leader-centric and/or dynastic, and we can infer that this is likely to have some effect on which coalitions parties pursue, reject, or maintain. However, we generally assume that the impact of this is too idiosyncratic to be captured reliably (one notable exception is Bueno de Mesquita 1975). Likewise, while the question of ideology and programmatic priorities in Indian party alliances calls out for further attention, this thesis will put these issues aside for now.

3.6. Hypotheses conclusion

This chapter developed the arguments of the previous chapter into two propositions. I accounted for the fact that party system fragmentation exists at both the constituency level and at the Lok Sabha level in India. This suggests that the Indian parties face a considerable coordination problem, both in the context of being electing and in the context of forming a government. The anticipation of these coordination problems encourages parties to cooperate with their supposed competitors. We can therefore draw a preliminary conclusion that it is not inherently puzzling that parties in the famously fragmented Indian party system resorts to pre-electoral coalitions.

Based on this, and the development of two additional propositions regarding the role played by regional politics and by the parties' recent electoral experiences, I developed the following hypotheses with respect to the formation of pre-electoral coalitions in the Lok Sabha elections 2004-2014.

PROPOSITION 1: ANTICIPATION OF CONSTITUENCY COMPETITION

- *H1a* – the higher the degree of credible competition between a pair of parties, the more likely the parties are to form a pre-electoral coalition

- *H1b* – the higher the degree of party system fragmentation experienced by parties at the constituency level, the less likely the parties are to form a pre-electoral coalition

PROPOSITION 2: ANTICIPATION OF LEGISLATIVE COMPETITION

- *H2a* – the more votes parties won in the previous national election, the more likely the parties are to form a pre-electoral coalition

- *H2b* – the more parties are allied with other partners, the more likely the parties are to form a pre-electoral coalition

- *H2c* – the more parties are allied with the same partners, the more likely the parties are to form a pre-electoral coalition

PROPOSITION 3: EFFECT OF REGIONAL ELECTORAL POLITICS

- *H3a* – the more votes the parties won in the previous regional election in their home states, the more likely the parties are to form a pre-electoral coalition

- *H3b* – the smaller the degree of the similarity between the national party system and the party system of the parties' homes states, the more likely the parties are to form a pre-electoral coalition

- *H3c* – the longer the amount of time between the national election and the next regional elections in the parties' homes states, the more likely the parties are to form a pre-electoral coalition

PROPOSITION 4: EFFECT OF PREVIOUS ELECTORAL POLITICS

- *H4a* – the higher rate of defeat the parties experienced in the previous election, the more likely the parties are to form a pre-electoral coalition

- *H4b* – parties that had a pre-electoral coalition with each other in the previous election are more likely to form a pre-electoral coalition

- *H4c* – as the party system becomes more familiar with pre-electoral coalitions over time, parties become more likely to form a pre-electoral coalition

In the following chapter, *Chapter 4: Empirical Strategy*, I suggest a mixed-methods research strategy designed to explore the hypotheses and I discuss a range of specific methodological choices relating to scope, data, and operationalisation.

4. EMPIRICAL STRATEGY

This chapter follows up on the framework developed in the previous chapters by presenting this thesis's strategy for exploring the propositions. I focus on four aspects, namely the overall research approach, including the ontological, epistemological, and causal assumptions of its mixed-methods design in part 4.1.; the empirical scope in terms of timeframe and actors in part 4.2.; the data sources in part 4.3.; and finally, the process of defining and identifying of pre-electoral coalitions in part 4.4.. Part 4.5. concludes.

This general outline of the research approach and strategy feeds into both empirical chapters, *Chapter 5: Network Analysis* and *Chapter 6: Case Studies*. The more specific methodological approaches that the network analysis and the case studies built on are discussed within their respective chapters.

4.1. Research approach

Research projects that link quantitative and qualitative inference must take extra care to answer the question "by which rules" they do so (Tarrow 1995). There are "gains to be had from integrative multi-method research designs, i.e., research in which diverse techniques are carefully designed to compensate for each other's weaknesses in testing a well-developed causal hypothesis" (Seawright 2016:20), but only as long as they rest on a shared conception of causation and inference. This section accounts for the thesis' ontological and epistemological assumptions in brief.

This project is rooted in what might be called a 'soft' positivist position. This approach does not claim that the concepts and categories that we navigate by are not socially-constituted phenomena. However, we can make a claim to a pragmatic 'mind world dualism', which allows us to observe meaningfully objective, causal relationships, given appropriate precautions against observer bias. Social behaviour, ranging from individual

decisions to the formation and entrenchment of societal structures, occurs stochastically but we can make reasonable assumptions about the distribution of reoccurring patterns of events. Crucially, in the context of this project which is concerned with the strategic decisions within networks, I view structure and agency as complementary forces in shaping events. *Structure* sets up incentives and also facilitates and constrains the options for incentives can be pursued. *Agency* is the individual scope for choice that exists within these structures. Individuals (and the organisations that they lead) can always defy expectations, ignore incentives, and break constraints. Structure is therefore not invariable deterministic. Structures set up patterns of regularised behaviour, but there are multiple tipping points within these trajectories where actors can choose whether and how to respond to incentives. The relationship between structure and agency is unescapably endogenous: structure is the entrenched patterns of self-reinforcing acts of agency; agency, even when actors radically reinterpret their categories of meaning and their scope for action, is a reaction to a pre-existing structure.

The methodological choices in this thesis reflect this view on agency-structure integration. The framework of *Chapter 2: Theory*, and somewhat less so *Chapter 3: Hypotheses*, was oriented towards accounting for these structural contexts. In *Chapter 5: Network Analysis* the focus remains on the structural aspects as the framework is operationalised into a statistical model. Theoretical models should reflect the incentive structures, but like the structures they aim to capture, they are not deterministic[1] as causal forces will exert themselves with slight variation for each observation. From a network analysis perspective, we do not expect a social principle that shapes a network structure will apply equally to every social tie within it. On the other hand, we do not seek a unique explanation for each observation.

As the sections on data generation in this chapter and the later use of quantitative indicators to underpin the case studies suggest, I do not subscribe to the idea of a sharp dichotomy between qualitative and quantitative methods, agreeing with Gerring (2017) that, rather than "conceptualizing qualitative and quantitative research as separate

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[1] If an independent binary variable perfectly predicts a dependent variable, we not only have a statistical problem of perfect separation on our hands, but presumably also a very uninteresting substantive finding.

research designs, we might regard them as integral components of the same design". This dichotomy does however offer a useful terminology in clarifying the individual components and contributions within a mixed-methods research. The mixed-methods design echoes the oft-repeated reminder that "[e]ssentially, all models are wrong, but some are useful" (Box & Draper 1973:424). I analyse the theoretical model's performance quantitatively in *Chapter 5: Network Analysis* to gauge the 'wrongness' of the mode, but I also explore the model's 'usefulness' qualitatively in *Chapter 6: Case studies*, where I examine whether the "higher-level" story advocated by model is also discernible in the particular, concrete cases (Fearon & Laitin 2008:1167). This quant-to-qual research design is similar to the nested analysis (Lieberman 2005) or sequential analysis (Teddlie & Tashakkori 2006).

4.2. SCOPE

In this part I discusses three aspects of empirical scope of the research, namely the choice of the Indian Lok Sabha elections as a site for pre-electoral coalition formation; the timeframe focusing on the three elections in 2004, 2009, and 2014; and finally, the particular set of parties that are studied within this research.

4.2.1. Country setting

Single-country studies run the risk of falling into the trap of misguided exceptionalism. The advantage to single country studies, however, is that by doing so, we keep the institutional and cultural context constant. Laver argues that "to conduct anything other than a country-specific analysis of the [coalition] phenomena involved is to do great violence to reality" (1986:33). Whereas *Chapter 2: Theory* took a relatively country-neutral approach, *Chapter 3: Hypotheses* considered the casual implications from the specific context of the Indian Lok Sabha elections in the contemporary era. This chapter and the two empirical chapters that follow maintain this country-specific focus.

EMPIRICAL STRATEGY

India is an exceptionally strong exponent of pre-electoral coordination; thus, the inclusion of this case in the study of pre-electoral coalitions has been long overdue. The "most distinctive characteristics of coalitions in India has been that alliance and coalition making have predominantly been an electoral exercise" (Kailash 2014:89). However, as Tillin (2013) argues, we must find the avoid the two extremes of 'false exceptionalism', which treats India as a sui generis case, and 'false universalism', which ends up with fit-all-fit-none explanations[2].

The Republic of India is a parliamentary democracy[3], with a legislature consisting of a president and two houses of parliament. In practise, the role of president is mostly ceremonial and while proposed by political parties the president tend not to be overtly partisan. He or she is elected by an electoral college, consisting of members from both houses of parliament and from the state parliaments, and serves a five-year term. The lower chamber of parliament is called the Lok Sabha, the 'assembly of the people', and has 545 members, of which 543 members are elected by the general public under first-past-the-post rules, every five years[4].) The upper chamber of parliament is called the Rajya Sabha, the 'assembly of the states,' and has 245 members. The members of the Rajya Sabha are elected indirectly under single-transferable vote rules by the members of the state legislatures. Members serve six-years terms, but replacement takes place on a rolling basis where a third of the seats are up for election every two years. In principle, the two chambers have largely equal powers, but in practise the Rajya Sabha only intermittently tempered the decisions of the Lok Sabha. The state governments are known as Vidhan Sabhas, legislative assemblies. This thesis focuses exclusively on pre-electoral coalitions taking place during the elections to the Lok Sabha. However, I draw on data

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[2] Coalition studies seem highly prone to dual problems posed by of exceptionalism vs. universalism. Despite coalition theories being developed from the empirical background of European multiparty systems, to an extent that has been referred to as an "incestuous relationship" between theory and data (Laver 1989:16-17), country-specific studies of party coordination frequently point out how the case in question diverges from the supposedly general theories, e.g. "alliance formation in France remains distinctly different from that in other electoral systems" (Blais & Loewen 2009:355).

[3] A parliamentary democracy is a system of government where the executive cannot have a majority of the legislature against it.

[4] Two members from the Anglo-Indian community are appointed by the president

from the Vidhan Sabha elections, when considering the potential impact of regional politics at the national level.

4.2.2. Timeframe

The substantive focus of the research is on the three Lok Sabha elections in 2004, 2009, and 2014; more specifically the periods that immediately precede each election, ending with the investiture of a new (possibly returning) government. I assume that this is the period that most saliently guide the parties' pre-electoral coalition strategy in the run-up to the imminent election. In practice, I focused the qualitative data collection efforts on a period beginning approximately 18 months before each election. In terms of quantitative records, I used electoral data from the previous Lok Sabha election as well as the most recent Vidhan Sabha election for each state prior to the election in question. Taking the 2009 Lok Sabha election as an example, I used data from the 2004 Lok Sabha election, and all the Vidhan Sabha elections preceding it in the period 2004-2009. I did not use data from 2009 election itself however, as these are post-facto to the formation of the pre-electoral coalition. Rather, the 2009 Lok Sabha results to feed into the analysis of the 2014 election.

The three elections periods leading up to 2004, 2009, and 2014 are comparable in the sense that they all succeed full or practically full legislative terms. The specific political context of the elections naturally varies due to the incumbent government, foreign policy events, or political scandals. Structurally, the most serious point of divergence within the time frame took place in 2008, when the geographical delimitations of Lok Sabha constituencies were redrawn, which affected the parties' familiarity with the local configurations of electoral support. When I use electoral data from 2004 to estimate covariates thought to affect the 2009 pre-electoral coalition formation, I therefore consider the pre-delimitation 2004 data the best available proxy for the counter-factual estimates (as the parties would have done in 2009). I examined the election periods individually and comparatively in order to ensure that the elections within the timeframe were sufficiently homogenous to make valid inferences across the period.

EMPIRICAL STRATEGY

As I focus on the period leading up to each government formation, the research period ends on 20 May 2014 with the investiture of the government led by Narendra Modi and the Bharatiya Janata Party (BJP). This government formation was highly incongruous with the experience of past decades as well as with the 'fragmentation premise' of this research, in that BJP had secured a majority of the Lok Sabha seats (though not of the electoral votes). How does this circumstance affect the premise of the thesis and the validity of the empirical time frame?

The first point to note is that the election data from 2014 election do not actually feature in the analysis. While parties are anticipating the post-electoral situation, the actual 2014 election outcome is post-facto to the events that the analysis is concerned with, namely to formation of pre-electoral coalitions. However, if a single party were to become so dominant after the election as to secure power in its own, would this not have been apparent before the election, thereby affecting the formations pre-electoral coalitions? While the BJP was the favourite to form the post-electoral government, the possibility of a single-party majority was an outside bet. If we look at the contemporary polls, this outcome was not expected even late in campaign period. Due to the first-past-the-post electoral system, election results are difficult to predict, as very small changes in the distribution of electoral votes can unleash big differences in the seat totals. Given that no party had won a majority since 1989, and that the polls had tended to point to the eventual loser in previous elections, the BJP majority was not widely expected. A close examination of the contemporary news sources confirmed that the pre-electoral period in 2014 very much progressed as usual. Both the patterns of pre-electoral elections and the overall propensity to coordinate remained stable. Finally, it is worth noting that the 'coalition-as-usual' mode at this point was so entrenched that the BJP distributed ministerial seats to its erstwhile pre-electoral allies. The Modi government that was instated in 2014 is not a single-party majority government but a rather a surplus majority coalition, consisting of five parties. The outcome of the 2014 Lok Sabha election should therefore not be interpreted as a bookend to 'coalition era' of Indian politics.

4.2.2. Party sample

The Indian party system of the modern era is notoriously large. In 2014, 1866 political outfits had registered as political parties with the Electoral Commission of India (PTI 2015), though far from all of these parties compete in all elections. The question of why so many parties exist in India is often considered resistant puzzle of political science. While pre-electoral coordination offers a very small, partial solution in the sense that pre-electoral coalitions can be seen as 'temporary mergers' that allow the many parties to 'survive another day' as nominally independent parties, it is beyond the scope of this thesis is to provide a definitive answer to this puzzle. However, a practical question remains in terms of how to define which parties are included in the study and which should be considered irrelevant for its purposes.

While this study intentionally excludes a large number of parties from the outset, the dataset includes a wider range of parties than most analyses of Indian elections. Going by the ECI data for 2004, 2009, and 2014, a total of 691 named parties competed in the course of the three elections, with an average of 335 parties per election (the difference between these two numbers indicate the extent of entry and exit into the party system).

A vast majority of these parties can be considered marginal, in part because they are very short-lived and only field a single or very few candidates, but also because they are not considered sufficiently credible by other parties to play a role in the pre-electoral coalition game. However, it is not uncomplicated to impose a size criterion to constrict the number of parties in the sample. India has many exceedingly small parties, many of which are essentially one-man-parties (Ziegfeld 2016:153). Yet, some of these parties do sometimes have a significant impact on political outcomes. As Rasmussen (1991) puts it, very small parties "serve too". In the coalition literature, the common way of limiting the size of the dataset is to impose a cut-off based on the parties' share of the seats, e.g. 1% or 5% of the seats. The assumption is that these parties will be too small to be relevant to the formation of coalitions. As Franklin & Mackie (1984) admit, such cut-off points make the work of the researcher easier, especially as we tend to have worse data for these parties. Excluding small parties means that we do not have to concern ourselves with information that

potentially does not exist, e.g. sufficient material to derive a party's ideological agenda. However, Franklin & Mackie also point out that these "exclusions certainly affect the findings" (1984:676), arguing that not only does "it seem unnecessary to exclude all small parties just because some of them are hard to code [… ,] strange anomalies can result from strict application of cut off points", pointing to the existence of several coalition governments that have included parties with representing less than 1% of seats. Franklin & Mackie refer to Italy but transferred to India this issue becomes more acute. All governments in India 1989-2014 included parties (and independent candidates) representing less than 1% of the seats (as well as the votes) [5]. In conclusion, exclusion from the sample based on size criteria is not an easy or appropriate procedure in this case.

Instead, the sample of parties was established in following way. I limited my initial focus to parties to parties that won representation in the Lok Sabha in 1999, 2004, and 2009 (the three elections preceding the elections under scrutiny), as well as parties that won representation in the Vidhan Sabha elections in the same period, leading up to 2014. I then included parties that the examination of news archives (described below) unambiguously indicated took part in the pre-electoral coalition negotiations in 2004, 2009, and 2014. I began with a thorough search centred on each of the parties, which produced an initial list of dyads involved in pre-electoral coalition negotiations. If the search indicated parties that had not appeared in the initial sample, I added these to the sample, and researched their behaviour for each of the four elections. Once I no longer encountered any mentions of pre-electoral coalition opportunities that I had not already registered, I stopped the search.

This process wielded a total of 80 relevant parties. However, not all parties competed in all three elections. Some parties were founded after 2004 and others became defunct as independent entities before 2014. This entry-and-exit flow is illustrated in Figure 4.1. The number of parties in the sample increases with each election, which is in line with the overall increase in the number of parties competing in the Lok Sabha elections.

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[5] As a non-Indian comparison, consider the Democratic Unionist Party (DUP) who won 0.9% of the votes and 8 out of 650 seats in the 2017 UK general elections yet had a decisive impact on Theresa May's ability to remain as Prime Minister.

1999 (59 parties): AC, AD, ADMK, AGP, AIFB, AIMIM, AITC, AJSU, BBM, BJD, BJP, BOPF, BSP, CPI, CPIMLL, CPM, DMK, FPM, HVC, HVP, INC, INL, INLD, INPT, IUML, JDS, JDU, JKNC, JKPDP, JMM, JPP, KEC, KECM, MAG, MDMK, MNF, MPC, MPP, MSCP, NCP, NPF, PMK, PT, PWPI, RJD, RLD, RPI, RPIA, RSP, SAD, SDF, SHS, SP, TDP, TMCM, UDP, UGDP, VCK

NEW: IFDP (*2001), LJP (*2000), MTD (*2000), PPA (*2003), TRS (*2001)

OUT: TMCM (**2002)

2004 (62 parties): AC, AD, ADMK, AGP, AIFB, AIMIM, AITC, AJSU, BBM, BJD, BJP, BOPF, BSP, CPI, CPIMLL, CPM, DMK, FPM, HVC, HVP, IFDP, INC, INL, INLD, INPT, IUML, JDS, JDU, JKNC, JKPDP, JMM, JPP, KEC, KECM, LJP, MAG, MDMK, MNF, MPC, MPP, MSCP, MTD, NCP, NPF, PMK, PT, PWPI, RJD, RLD, RPI, RPIA, RSP, SAD, SDF, SHS, SP, TDP, TRS, UDP, UGDP, VCK

NEW: AUDF (*2005), BVA (*2009), DMDK (*2005), HJCBL (*2007), JVM (*2006), MAMAK (*2009), MNS (2009), PPA (*2008), SDPI (*2009), SWP (*2004)

OUT: FPM (**2006), HVC (**2004), HVP (**2004), IFDP (**2008), KEC (**2010), MTD (**2006)

2009 (65 parties): AC, AD, ADMK, AGP, AIFB, AIMIM, AITC, AJSU, AUDF, BBM, BJD, BJP, BOPF, BSP, BVA, CPI, CPIMLL, CPM, DMDK, DMK, HJCBL, INC, INL, INLD, INPT, IUML, JDS, JDU, JKNC, JKPDP, JMM, JPP, JVM, KECM, LJP, MAG, MAMAK, MDMK, MNF, MNS, MPC, MPP, MSCP, NCP, NPF, PMK, PPA, PT, PWPI, RJD, RLD, RPI, RPIA, RSP, SAD, SDF, SDPI, SHS, SP, SWP, TDP, TRS, UDP, UGDP, VCK

NEW: AAAP (*), BLSP (*2013), IJK (*2011), KMDK (*2013), MD (*2009), MDPF (*2009), NPEP (*2012), RSPS (*2003), SJD (*2010)

OUT: AC (**2009), MSCP (**2014)

2014 (72 parties): AAAP, AD, ADMK, AGP, AIFB, AIMIM, AITC, AJSU, AUDF, BBM, BJD, BJP, BLSP, BOPF, BSP, BVA, CPI, CPIMLL, CPM, DMDK, DMK, HJCBL, IJK, INC, INL, INLD, INPT, IUML, JDS, JDU, JKNC, JKPDP, JMM, JPP, JVM, KECM, KMDK, LJP, MAG, MAMAK, MD, MDMK, MDPF, MNF, MNS, MPC, MPP, NCP, NPEP, NPF, PMK, PPA, PT, PWPI, RJD, RLD, RPI, RPIA, RSP, RSPS, SAD, SDF, SDPI, SHS, SJD, SP, SWP, TDP, TRS, UDP, UGDP, VCK

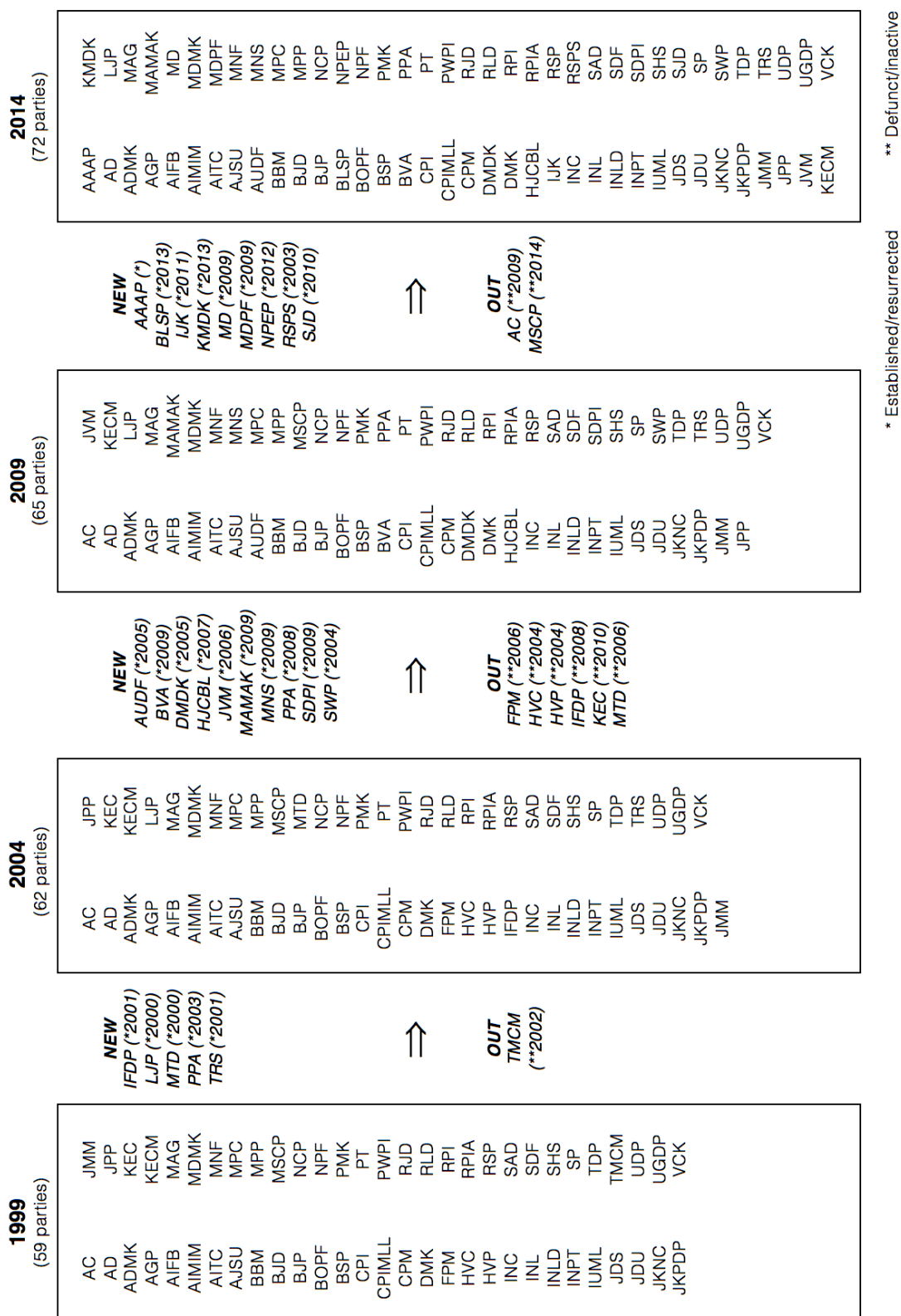* Established/resurrected ** Defunct/inactive

FIGURE 4.1. *Parties included in the dataset as they appear in the elections 1999, 2004, 2009, and 2014. (Not all parties participated directly in Lok Sabha elections).*

4.3. DATA

In order to build a comprehensive new dataset of pre-electoral coalitions, I collected contemporary accounts from the time periods preceding each of the four elections 1999-2014, mainly in the form of newspaper articles and other secondary sources including book excerpts and party communications.

The qualitative database is stored in Evernote, which is a data organisation software that can import, store, display, and organise a wide array of data types, including text, photos, webpages, and file attachments. When importing data, I tagged each evidence note with the parties, states, and years to which it related, and with search terms indicating particular phenomena of interest (examples include 'seat negotiation', 'defection', 'hidden candidates', and 'friendly fights). I annotated each note with a short summary of the main points. As I went through the coding process, I used Evernote's internal linking to create reference documents and chronologies of each recorded pre-electoral coalition opportunity.

4.3.1. Newspapers and other secondary sources

The decision to use newspaper articles, cause for caution (e.g. Ortiz et al. 2005) Naturally occurring data (Griffin 1993:1128). I focus on detecting events and discerning the sequence in which they take place. The account of political event relayed by news media admittedly differs from the lived experience of the actors involved, especially from the perspective of the electorate[6]. In the following I address potential issues with newspapers as sources.

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[6] Banerjee argues that the "cynicism, sensationalism, and superficiality" of much of the media coverage is a world apart from "Reading about an Indian election campaign in English language dailies or watching television debates, is a world apart from experiencing it from the vantage point of the voter in a small town or village. The earned, engaged and often profound ways in which my informants discussed politicians, campaign styles or the work of the ECI were in stark contrast to the in much of the media" (Banerjee 2014:11)

Newspapers, like any other narrative sources, epistemological problem. "They are necessarily selective and possibly erroneous owing to limited information even in primary sources, to faulty recall, and even to deliberate prevarication. Accounts, in brief, are constructions of events rather than necessarily truthful accounts of what really happened. Moreover, narratives formulated explicitly by the investigator from any source, for the purpose of further analysis, as in my case, are doubly constructed." (Griffin 1993:1128)

Earl et al (2004) define this as a dual problem of description bias and selection bias. The former aspect, description bias, concerns the veracity of the coverage. As Woolley (2000:157) puts it, since newspapers code reality, the task for the researcher is to 'decode' the coverage to learn about events. The latter aspect, selection bias, Earl et al (2004) argue, is more frequent but less recognised. Selection bias are caused by only a subset of 'real-world' events receiving coverage by the news media. This is problematic is the "selection of news is not random [but] reflects the intentions, will, and interests of dominant economic groups" (Franzosi 1987:5). However, not all types of coverage are not equally affected by these issues. "Soft news" dimension, i.e. inferences and impressions of journalists and commentators, is subject to more bias than the "hard news" dimension, i.e., the who, what, when, where, and why of events (McCarthy et al. 1999). As the treatment of news data in this project is mostly concerned with registering events (as difficult as this may be), the threat of bias does not invalidate the prospect of uncovering reliable information from these sources. A related issue of bias-through-omission concerns to the coverage smaller regional parties, of whom there are markedly fewer sources. I addressed this through triangulation with local editions, and fine-combing the day-by-day online archives in weeks preceding the elections.

Nonetheless, as secondary source data, newspaper stories have one all-important advantage, namely the fact that the accounts are contemporary to the events they relate to. The events that this research is concerned with stretches back several decades. Here, it is a benefit that the contemporary accounts are not coloured by the subsequent success or failure of an alliance decision or faded by time. "The historical record is the only body of knowledge both deliberately created to account for the real part and inadvertently displaying the tracks of that past" (Griffin 1993:1129). Reading through the timelines

conveyed an immense sensation of these time periods. A censored view, blinkered from most of other ongoing events (though I did make a note of these, too). Possible to outweigh incomplete information, and contradictory reports through structured triangulation of sources.

A large share of the news stories was written by news agencies, such as the Press Trust of India (PTI), Reuters India, or the Indo-Asian News Service (IANS). In contrast to the subscribers of the news agencies, which include the English-language newspapers such as The Hindu, Times of India, the Indian Express, the Hindustan Times, and The Tribune, the news bias are not associated with any particular political position. I did not detect any selection effects in terms of which outlets reproduced which PTI stories. (I did not use these news services sites directly as some databases were not fully searchable or did not include key information. For example, the PTI online archive does not consistently display the publication year.)

I combed the online archives of the major national news outlets in the relevant time periods, such as Times of India, Hindustan Times, The Hindu, The Telegraph, The Economic Times, and The Tribune, as well as magazines such as Outlook and Frontline. Many national newspapers have city- or state-specific editions, where information on smaller, regional parties and politicians was found, but to counter the greater attention directed towards the larger parties, I also went through the coverage of smaller regional news outlets. Often, these sources, such as The Shillong Times, in the North-Eastern state of Meghalaya, provided useful information about the movements of smaller regional parties.

A separate issue relating to bias-through-omission concerns the language of the sources. I relied on English language sources. Along with Hindi, English is one of two official languages in India. Though English is spoken by fewer people than Hindi, the English coverage more evenly spread across regions, compared to Hindi, which is generally not spoken or read in many parts of the country. English-language media is however centred in urban centres, and while I used English-language regional news coverage whenever available, including sources in Hindi, as well as any of other 22 recognised languages,

such as Assamese, Bengali, Gujarati, Kannada, Marathi, Tamil, or Telugu, would unquestionably contribute to the richness of secondary data dataset.

In addition to news stories, I added party communications, such as press releases, manifestos, or documents lodged with Electoral Commission of India, as well excerpts from memoirs. In the end, the secondary database consisted of 1085 texts. (Identical articles from the news services were only logged once.)

Election year	# of articles
Pre-1999	189
1999	218
2004	337
2009	361
2014	378

Table 4.1. Number of sources by relevant election year in the qualitative database. There were 1085 sources in total, some of which related to multiple years.

In almost all cases, it proved less difficult than expected to find satisfactory information. Negotiations are intensively covered, politicians talk very freely about the negotiations. In the end, I was able to find information on every party in the dataset.

4.3.2 Election data

The study of Indian politics has experienced a 'data revolution' in in recent years (Jensenius & Verniers 2017:269). Jensenius & Verniers' own two datasets aggregating ECI data were not available when the statistical analysis presented here was conducted. I draw on equivalent data, directly from ECI for the Lok Sabha data and from data made available by Bhavnani (2017) for the Vidhan Sabha elections. I supplemented this with data on the Vidhan Sabha election dates. The electoral datasets are extensive, but information was missing for some elections, which had to be substituted. For the purpose

of the data analysis it was necessary that all state IDs and party IDs (abbreviations) were consistent, which required some recoding.

I also calculated a range of new variables in order to explore patterns in these datasets. Key amongst these were

- party vote share by state in Lok Sabha and Vidhan Sabha elections
- the effective and total number of parties and candidates by state and by constituencies
- the ratio between winning candidates and total candidates by party
- congruence between national and state-level party systems
- the number of expected days between the national election and the next state-level election by state
- matrices for the number of shared constituencies for every combination of party, as an indicator for potentially competitive constituencies (defined as constituencies were the vote tally of the third-placed candidate was more than the different between the winner and the runner-up)
- electoral volatility by state and by party in national and state elections
- Extent of 'friendly fights', i.e. number of constituencies where two professed allies fielded competing allies.

Some of these estimates appear the statistical analysis described in *Chapter 5: Network Analysis*, but others informed the early explorations of party interactions that went into shaping the direction of the thesis.

4.3.3 Interviews

In order to test the assumptions of the theoretic framework, I carried out a small number of interviews in the autumn of 2017. The motive of these conversation was to clarify the following:

- exploring the validity of the concept of pre-electoral coalitions, especially given the ambiguity of how these deals are communicated. To what extent is it possible

> to distinguish different types of pre-electoral coalitions based on whether they focus on constituency coordination or future legislative commitments?
>
> - What is the time-line of pre-electoral coalition negotiations? Who is involved in the negotiations and the decision-making? What role does existing alliances and past relationships play?
>
> - How do parties form a sufficient 'knowledge base' to make the pre-electoral coalition decision? For example, how do parties assess whether voters are likely to 'vote along' with seat-sharing agreements or support a party's pledge to a specific future government?

I talked to an MP and senior party leader from a small regional party; a headquarter-based party worker involved in strategy and communications for a national party; an MLA from a medium-sized regional party; a strategic consultant for a different national party involved in state-level negotiations; a senior editor, author, and journalist who had covered party politics over several decades; as well as two senior academics based in Delhi.

The interviews did not feed into the secondary data database and did not form the foundation for any coding decision. However, they informed several decisions regarding the theoretical framework. Notably, while the interviews supported the notion that the separate motives exist from constituency- and legislature-based competition, the interviews confirmed the practical decision not to form separate categories for pre-electoral coalitions motivated by either. The decision to include a measure of constituency competition in order to estimate the effect on barriers to knowledge was also motivated by the interview material.

4.4. Operationalisation of pre-electoral coalitions

In this part of the chapter, I discuss an important conceptual and methodological decision with far-reaching implications for the direction of the research in this thesis, namely how to think about the structure of relationships between parties (section 4.4.1). Here, I first contrast two alternatives approaches to this, the bilateral and multilateral models, each of which have been employed extensively in the existing literature. Both models have

produced useful insights, but both suffer from having to make very unsatisfactory assumptions about the interdependence of relational data generated by social actors. I suggest a third option approach that address this issue by explicitly incorporating the endogeneity of relational data, namely the network approach. In the second half (section 4.4.2.), I discuss the measures, I took to address the practical challenges of identifying pre-electoral coalitions through thorough, structured explorations of the qualitative and quantitative data material.

4.4.1. Conceptual model of relational data

How can we conceptualise pre-electoral coalitions as units of analysis? Pre-electoral coalitions are fundamentally relationships, but should we think of these as bilateral relationships or possibly as multilateral relationships? If the latter, do we assume that all members have the same relationship to all other members? In the following, I highlight the implications of three approaches to modelling party coalitions in political science. The first two, the bilateral approach and the multilateral approach, make up the majority of studies on this topic. I argue that there are clear advantages to a third approach that conceptualises alliances as networks. This approach has yet to employed to analyse party coalitions prior to this thesis.

THE BILATERAL APPROACH

Most recent studies have modelled pre-electoral coalitions as *bilateral formation opportunities* between two parties (e.g. Golder 2006a, Blais & Loewen 2009, Ibenskas 2015). These pairs are usually referred to as dyads (dy- referring to two). In principle, a formation opportunity exists between any dyad in an election. This means that the datasets generated as part of this approach consist of all pair-wise combinations of parties within a party system. To illustrate the differences between the three approaches, I employ a simple example hypothetical party system consisting of five parties, named A to E. The bilateral or dyadic is illustrated on the left in Figure 4.2. The units of analysis are the pairs of parties, and the tendency to form a pre-electoral coalition, given various independent variables, can then be calculated using logistic regression (typically random or mixed

logit/probit estimation), where the dependent variable is a binary variable that takes the value 1 if a pre-electoral coalition took place between the pair in the election and 0 if a pre-electoral coalition did not take place.

DYADIC APPROACH

5 parties
10 dyadic formation opportunities
3 empirical dyadic alliances

A – B	B – D
A – C	B – E
A – D	C – D
A – E	C – E
B – C	**D – E**

FIGURE 4.2. Dyadic representation of coalitions. The party system pictured consists of five parties, A, B, C, D, and E. There are three pair-wise (dyadic) relationships, A-B, A-C, and D-E.

There two problematic assumption of the bilateral approach. The first assumption is that the operational definition of pre-electoral coalitions as isolated pairs of exactly two parties is a good approximation of pre-electoral coalition formation in the real world. For Golder (2006a), this assumption can be rationalised by the fact that 68% of the observed pre-electoral coalitions in her dataset did consist of two parties (2006a:88). However, even for Golder, this still leaves a relatively high share – almost a third – of observations that violate the two-party assumption[7]. The assumption becomes harder to accept if the share of extra-dyadic groupings is higher. In the case of the Indian Lok Sabha elections, where the occurrence of isolated two-party pre-electoral coalitions is rare, this assumption becomes untenable.

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[7] The average size of the pre-electoral coalitions in Golder's sample is closer to three parties (2.8) In 16 of the 21 industrialised countries the average size of pre-electoral coalitions exceeded two parties (Golder 2006a:15).

The second, related assumption of the bilateral approach is that parties decide to form pre-electoral coalition largely without regard the existence of other pre-electoral coalitions, including those that any of the partners might be part of themselves. In other words, the bilateral model assumes that each pre-electoral coalition observation is an independent event. In the example of Figure 4.2., if Party A has a pre-electoral coalition with Party B as well as a pre-electoral coalition with Party C, the bilateral approach suggests that this can be thought of as two independent relationships. Moreover, had Party B and C also formed a pre-electoral coalition, this would be interpreted as a third, independent relationship. This assumption, too, is difficult to maintain. A party that already has another coalition partner is likely much more or much less attractive to other prospective parties, though the precise direction of this effect can in principle go either way[8].

THE MULTI-LATERAL APPROACH

The second approach to thinking about coalitions argue that "[s]cholars should reconceptualize all alliances, bilateral and multilateral, as originating from a multilateral process" (Fordham & Poast 2014:2). This multilateral alternative is also known as the k-adic approach. Whereas the dy-ad consisted of two entities, the k-ad can contain any number of entities, where 'k' is standing in for any number. With a k-adic approach, the unit of analysis is still the formation opportunity, but the formation opportunities represent groups of all possible sizes, rather than just two. Applied to our five party example, this creates a dataset consisting of all hypothetical combinations of any size of parties in the party system, as illustrated in Figure 4.3.

---

[8] For example, as Poast (2010) points out, a coalition between the Communists and Green parties in France would be implausible if we did not consider that both were in a pre-electoral coalition with the Socialists.

MULTILATERAL APPROACH

5 parties
26 multilateral formation opportunities
2 empirical multilateral alliances

	A – B – C	A – B
A – B – C – D – E	A – B – D	A – C
	A – B – E	A – D
A – B – C – D	A – C – D	A – E
A – B – C – E	A – C – E	B – C
A – B – D – E	A – D – E	B – D
A – C – D – E	B – C – D	B – E
B – C – D – E	B – C – E	C – D
	B – D – E	C – E
	C – D – E	**D – E**

FIGURE 4.3. *Multilateral representation of coalitions. The party system pictured consists of five parties, A, B, C, D, and E. Including a 'grand alliance' of all five parties, there are 26 possible alliances that can form (some of which are mutually exclusive). The three dyadic coalitions in the previous figure are here counted as two multilateral coalitions (k-ads), [A, B, C] and [D, E].*

From the multilateral perspective, now only two coalitions are coded as present, one consisting of [A, B, C] and another of [D, E]. To analyse this dataset, we can again employ logistic regression techniques, approaching the coalition formation process as an unordered discrete choice problem between distinct options (e.g. Martin & Stevenson 2001).

Compared to the purely dyadic approach the k-adic approach is much better equipped to handle multilateral phenomena, e.g. situations where pre-electoral coalitions involve more than two parties. However, this k-adic approach introduces another set of issues. First, the multilateral approach is fundamentally unable to distinguish differences in relationships within the coalition. In our example, representing the alliance formations patterns as a three-party coalition fails register the fact that Party A plays a different role

than Party B or C, or that the relationship between the latter two is not equivalent to the relationships that either shares with Party A. Within the multilateral group, all members are assumed to have the exact same relationship to each other. Moreover, the parties involved are assumed to have chosen this specific combination of parties over others that contained one less ally or one more. The multilateral approach assumes that the universe of coalition opportunities can be treated as independent observations, despite the fact that they 'recycle' the same potential members. The likelihood of the coalition opportunity consisting of Party A and Party B is not unrelated to the likelihood of the coalition opportunity consisting of Party A, B, and C.

From a computational perspective, as we see from Figure 4.3., the number of units of analysis is much larger for the for the k-adic approach than it is for the dyadic approach, despite the fact that there are still only five parties. Both representations of the coalition opportunities are correct, but they imply different ways of disaggregating real-world phenomena. Even though the underlying phenomena (e.g. the number of parties and pre-electoral coalitions in one election) is unchanged, the number of formation opportunities has escalated. By extension, the ratio of events, i.e. alliances that took place, to non-events, i.e. alliances that did not take place, is much smaller. According to the dyadic approach, 3 out of 10 hypothetical events took place; under the multilateral approach, 2 out of 31 hypothetical events took place. For each party that joins the party system, this condition is heightened, as the number of multilateral coalitions that are substantively likely to take place will be much smaller, and the number of actual empirically observed coalitions smaller yet[9]. A dataset where the number of non-events vastly outnumber the number of events (class bias) is known as a rare events dataset. Rare events data are not inherently problematic, but in extreme cases, statistical analysis becomes exceptionally computationally taxing, which requires the researcher to make difficult decision in order

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[9] For example, in a party system of 15 parties, the number of formation opportunities (15^{2-1}) is 32,767. At 30 parties, the number of hypothetical formation opportunities will be 1,073,741,823. At the same time, the number of positive events remains small: For example, if two large, multilateral coalitions are forms in the 15-actor party system, this creates a dataset where the dependent variable (whether a pre-electoral coalition took place) takes the value '1' only twice and the value '0' 32,765 times. In the 30-actor party system, the ratio of events-to-non-events will be 2 to 1,073,741,821.

to reduce the number of observations. One way to ameliorate this challenge is to sample within the non-events observations by excluding large number of 'non-interesting', low-probability non-events (King & Zeng 2001), but this creates a further set of issues in deciding à priori what defines 'interesting' non-events, which is likely to introduce bias. The Indian multi-party system constitutes one such 'difficult' case from a k-adic perspective[10].

THE NETWORK APPROACH

The third approach to modelling relational data is the networked approach. This way of thinking about coalitions retains the fundamental dyadic (pair-wise) relationships of the bilateral approach, but explicitly models the interdependence between a dyadic relationship and other dyadic relationships in the network, including those of the participants themselves. This means that in the network approach the relationship between Party A and Party B is assumed to be affected by whether or not Party A also has a relation to Party C.

---

[10] As Figure 2.5 highlighted, the number of parties elected to the Lok Sabha, usually a conservative measure of party system size, far exceeds the usual benchmarks for multi-party systems. For example, Dodd (1972) uses ten parties as an example of a hyper-fragmented party system. By contrast, in 2009, 38 parties were elected to the Lok Sabha, excluding 9 independent members, who in all other ways are equivalent to one-man parties. 38 parties suggest more than two hundred seventy-four billion possible multilateral combinations. Though the vast majority of coalitions would be too small to be form a government, we would still have to make an arbitrary decision in order to apply King & Zeng's sampling exclusion criteria based on size, since Indian governments in the modern era tend to be minority governments that have included even single-member parties and independents.

NETWORK APPROACH

5 parties
10 dyadic formation opportunities per network
1024 potential networks
1 empirical network

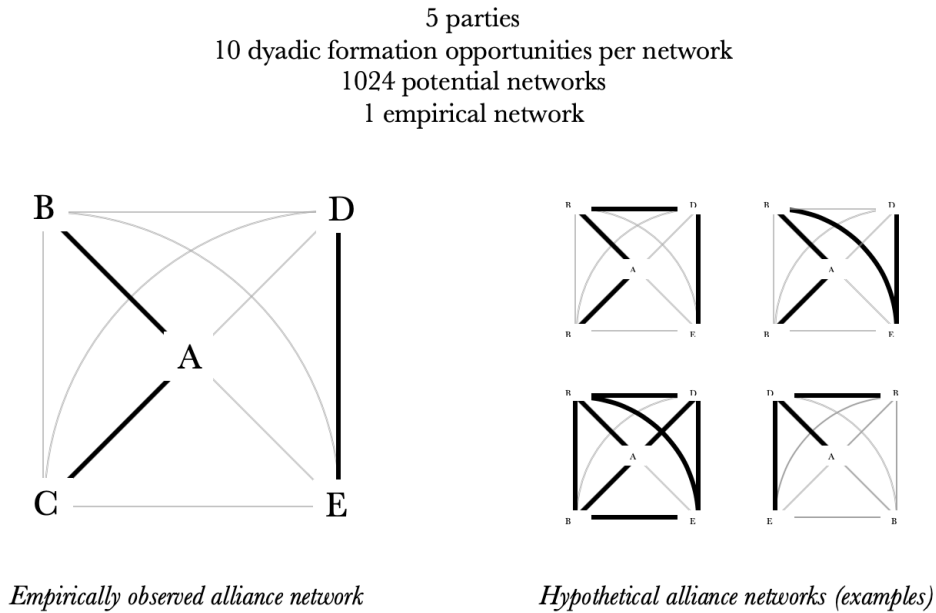*Empirically observed alliance network*   *Hypothetical alliance networks (examples)*

FIGURE 4.4. *Representations of coalitions according to a network approach. With a party system consisting of five parties, A, B, C, D, and E, there are three dyadic relationships, A-B, A-C, and D-E, forming two connected groups, in the alliance network. As a whole, this set of alliances (edges) and parties (nodes) is considered one single network observation, out of 1024 networks that could hypothetically have formed. On the right are a further four examples of network structures that could have emerged between the five parties.*

Another difference between the bilateral and multilateral approaches on one hand and the network approach on the other concerns the unit of analysis. In the former two approaches, the units of analysis were the formation opportunities. With the network approach, the unit of analysis is entire network. This network is one realisation out of a large number of potential networks that could emerged, given the number of parties. In the example from Figure 4.4., there are 10 bilateral formation opportunities (potential pre-electoral coalition agreements) that could take place between any pair of the five parties, as indicated by the lines (edges) in the figure, three of which exist. With 5 nodes (parties), there are 1024 possible networks, only one of which is realised[11]. The statistical

---

[11] To calculate the number of formation opportunities (edges) we use the formula N x (N-1)/2, where N is the number of nodes. The formula for the number of potential networks given the

methods that allow us to estimate how this specific network is likely to have emerged are described in *Chapter 5: Network Analysis*.

4.4.2. Empirical identification process

Detecting pre-electoral coalitions is a complex task. Wager suggests that a "principle reason why pre-electoral agreements are notably absent from the mature field of coalition theory is that they are difficult to pin down and classify" (2017:129). In the following, I describe how my coding criteria and process for identifying pre-electoral coalitions.

The coding criteria stem from the definition established in Chapter 1: Introduction, which defined pre-electoral coalitions as instances of mutually agreed and acknowledged acts of coordination between political parties that are in place at the time of the election, with the objective of enhancing their post-electoral circumstances. The individual elements of this definition have already been discussed in Chapter 1, but here I want to unpack how the aspects relating to 'mutuality', 'parties', and 'at the time of the election' were operationalised:

The 'mutuality criterion' of the definition states that both parties in a coalition have recognised the pre-electoral coalition. This excludes unilateral coordination. An example can illustrate this decision process. Prior to the 2014 Lok Sabha election, the small regional party Jharkhand People's Party (JPP) announced that it was revoking an earlier decision to field its own candidates. Instead JPP would actively campaign for the Aam Admi Party (AAP) in 14 parliamentary constituencies. However, this pre-electoral coalition agreement was contradicted by statements by the AAP leadership in May 2014, to the effect that AAP entered no alliances of any sort for the 2014 Lok Sabha election. This implied the JPP's action was a unilateral decision. It does therefore not qualify as a pre-electoral coalition according to my criteria.

---

number of nodes is 2^E, where E is the number of possible dyadic alliances (edges). This means that there are $2^{N \times (N-1)/2)}$ shapes that the network can take, of which only one actually takes place.

My definition also relies on the pragmatic assumption that parties can be conceptualised as approximately unitary actors. This means that according to my criteria the pre-electoral coalition must be sanctioned by *party leadership* on both sides in order to be registered. This criterion is necessary since lower-ranking, local leaders have on occasional indicated their support or refusal of a pre-electoral coalition opportunity that is at odds with the decision made by the party's central leadership. In example involving JPP and AAP above, identification was complicated by the fact that representatives from both parties had in fact met to discuss the decision and that a local AAP representative was present at the JPP's announcement (PTI 2014). However, for the purposes of parsimony, the decision of the party leadership outranks the signals of a local representative and I did not code this as a pre-electoral coalition.

I only registered pre-electoral coalitions that existed on the first day of the relevant election schedule. The reason for doing so relates to a common problem that appears to have affected most previous datasets, namely that pre-electoral coalitions are sometimes reported to take place based on an initial announcement from the parties but then subsequently called off. Resnick points out that while, in theory, forming alliances early should allow parties to "articulate their common message, raise financial resources and increase awareness among the population", in practice, early formation merely provides the pre-electoral coalition more time and opportunity "to fragment before elections as squabbles over leadership have time to emerge" (2014:52). Even after an agreement has been reached and coordination begun, parties can change their mind and call off the pre-electoral coalition, sometimes at the last possible moment[12].

This issue is difficult to pick up on without paying a close attention to chronology both in the data collection phase and in the coding phase. For each opportunity, I collected data from the earliest mention of the dyadic relationship and up until the confirmation of the new government. I then created timelines for each election period that chronicled the negotiation, formation, and dissolution of each pre-electoral coalition. Negotiations often

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[12] As chapter 2 pointed out, due to the fact that the elections take place in several phases with different deadlines for registering and withdrawing candidates, parties that are not competing until the later phases continue to negotiate after the first official day of voting. In these cases, I paid careful attention to the relevant deadlines for the parties in question.

began long before the election has officially announced. In many cases, the first reports of negotiations appeared about a year before the actual election.

In practise, the PEC negotiations can be highly complex process. Party elites need to negotiate with each other while simultaneously ensuring internal compliance by the party cadres. Since parties often agree to the precise details of a seat-adjustment deal very late, they are not always able to divide constituencies before the deadline for fielding candidates. This means that candidates that have already entered the race must be withdrawn. Last minute rebellions occur when local candidates refuse to withdraw their names. Candidates defect and run as independent candidates, if they do not join a rival party. Entire branches can resist or defect. The inter-elite negotiations can be equally contentious, and we see parties negotiate up to the very last deadline.

In order to address the issue of parties reneging on pre-electoral coalitions after an announcement, I paid careful attention to the specific deadlines that the parties faced in each pre-electoral coalition opportunity. As mentioned, the Lok Sabha elections are held in several 'waves' of a time period stretching over approximately three to four weeks in order to allow election officials from Electoral Commission of India (ECI) to travel across the country to assisting with polling. The staggered "waves" of voting in India complicate the timeline for electoral coordination. If the parties seek to coordinate with each other where they field candidates as part of their agreement, the date is the last day to amend candidate nomination. For the political parties this means that pre-electoral window close

at different times based on their electoral location[13]. If the agreement was called off before voting begins, I did not classify it as pre-electoral coalition[14].

The newspaper sources sometimes contradicted each other whether a pre-electoral coalition had been finally agreed or whether negotiations had fallen through or not. In these cases, I took into account whether particular party officials were quoted by name, and if so where they were placed in party hierarchy. I also considered whether both parties had acknowledged the agreement. For each pre-electoral coalition, I checked whether public statements concerning the agreements matched the actual election data. If particular constituencies were named, I checked whether the parties had followed through on their seat-sharing announcements. If particular candidates were named, I checked whether they actually ran in the indicated constituency and for the indicated party.

With regards to ascertaining seat-sharing agreements, I consulted the ECI electoral data. For every likely pre-electoral coalition, I examined how the two parties competed against each other, both in the given election year and in the preceding and subsequent elections. (In order to do so, I wrote a set of commands in R that effectively turned the ECI data into an easily searchable database, able to return customised reports for every dyad.) However, it is mostly impossible to counterfactually determine how many candidates a party would have fielded in the absence of past and present seat-sharing agreement. Ultimately, for approximately 70% of the pre-electoral coalitions in the dataset, it was

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[13] The following hypothetical example illustrates this point: When INC and the Assam-based Bodoland People's Front (BOPF) negotiated a pre-electoral coalition in 2009, the very last, relevant deadline to strike a deal involving withdrawal candidates was 16 April, in the first wave of voting in the general election. However, in order for INC to strike an equivalent deal with the Tamil Nadu-based Dravida Munnetra Kazhagam (DMK), the parties would not strictly need to conclude their negotiations before shortly before the fifth and final wave of the election, in 13 May, when voters in Tamil Nadu went to the polls. For mostly state-based parties, such BOPF and DMK, this means that their respective deadlines are very different. For INC, who has a nation-wide presence and competes in every wave of the elections, there are multiple deadlines in play. (The underlying assumption here is that the INC supporters who vote in later phases in different waves are not adversely influenced by the earlier agreements struck in other regions.)

[14] These short-lived pre-electoral coalitions are substantively interesting on their own for what they reveal about why alliances are not formed. This aspect of ongoing, if not ultimately durable, alliances and close negotiations was something I paid close attention to while researching the case studies in Chapter 5.

possible to make a distinction, but for the rest there was too much uncertainty to make an exact call. While it was clear that the parties were committed to a pre-electoral coalition within the criteria of the project's definition, the exact details were not possible to ascertain.

Practically, it can be surprisingly difficult to discern whether a pre-electoral coalition is targeting the votes-to-seats transfer, the seats-to-government leverage transfer, or both, reliably from the available data material. Gandhi & Reuter (2013), who also use a dual definition of pre-electoral coalitions as both "a public statement of mutual support or a division of electoral districts for each party to contest", find that their sources simply did "not allow us to distinguish between [the two types of] commitments" (Gandhi & Reuter 2013:147). This difficulty also applied to the coding process in this thesis. Parties would often refer to a pre-electoral coalition existing without sufficient information to determine whether the agreement specified seat-sharing and/or post-electoral commitment. A key issue is that there is no agreed terminology to differentiate different levels of commitment and coordination behaviours, not only in only in the academic literature, but also amongst the political actors themselves.

The terminological indistinctiveness seems at least in part to be due to the fact that parties prefer a certain strategic ambiguity about coalitions when communicating with the electorate. According to the requirements of the situation, a seat-sharing agreement can thus be dismissed as a 'practical understanding' or elevated to 'a close partnership'. For example, in 1999, leader of the AITC party, Mamata Banerjee was able to "point out that her party had not entered an alliance with it but had merely made seat adjustments" (Chaudary 1999). Banerjee's rhetorical ambiguity is striking for two reasons: not only does it downplay the meaning of the parties' seat-sharing coordination, it also obscures the fact that the agreement is obviously future-oriented, in as much as AITC publicly committed to supporting BJP, in what might be termed a post-electorally exclusivity agreement ("Even in the event of a hung Parliament, Trinamul [AITC] will not desert the BJP and join any other political formation that may require our support to form a government", Chaudary 1999). (AITC did indeed join the BJP-led government that formed after the election.) By any criteria, a pre-electoral coalition took place between AITC-BJP,

targeting both the votes-to-seats and the seats-to-government leverage levels of transfers, even though the AITC leader in this situation chose to phrase it differently.

Based on this definition and a close examination of the secondary sources and the electoral data, I coded pre-electoral coalitions at three different points in time, in May 2015, in October 2016, and in March-April 2017), in addition to an initial coding based solely on a survey of the existing literature, in November 2014. Between the survey of existing studies and first coding based on the contemporary news coverage, I found numerous differences in the status of several pre-electoral coalitions. However, in the subsequent rounds of coding, I found minor differences between my own datasets. Only when I found no major deviations between the coding rounds, did I accept the dataset.

4.5. Empirical strategy conclusion

This chapter established the research approach, empirical strategy; the scope; the data sources, and process of conceptualising and identifying pre-electoral coalitions. The next two chapters, *Chapter 5: Network Analysis* and *Chapter 6: Case Studies*, see this set of choices is put into action.

5. NETWORK ANALYSIS

This chapter takes a quantitative network approach to exploring the propositions developed in Chapter 3: Hypotheses. The four propositions argued that parties are driven by 1) the prospect of gathering votes to win seats and 2) gathering seats to form a government. Pre-electoral coordination allows them to pursue these objectives more cost-efficiently and with a greater degree of certainty in the outcome. Moreover, the choices that the parties make with regards to pre-electoral coalitions are influenced by 3) their recent experience with regards to electoral performance, past partnerships, and the party systems familiarity with pre-electoral coordination overall. Finally, the pre-electoral coalition decisions are influence by 4) the parties' involvement in regional politics, especially as this relates to their size in their home states, the similarity between regional and national party systems, and the imminence of regional elections.

In order to capture these propositions as well as the interdependent nature of party alliances, I employ a network analysis approach known as exponential random graph models (ERGMs) that are well suited to investigate both party-specific and party system-wide dynamics of the pre-electoral coalition formation. The analysis reveals that the constituency and legislative predictors are correlated with pre-electoral coalition formation, supporting the first two propositions. Parties do seem to respond to opportunities to reduce vote-splitting through coordination; however, if constituencies are 'over-crowded', parties have a harder time identifying and finalising agreements to coordinate. Parties are also motivated by the prospect of firming up government-formation commitments ahead of the election; however, the variable traditionally employed to capture a coalition's post-electoral ambitions, namely their joint party size, turned out to be much less significant than the indirect ways in which parties gathered through network structures. The third proposition did not find support in this analysis: regional considerations, such as regional size, similarity between party systems, and days

between regional and national elections, were not shown to have any significant impact on pre-electoral coalition formation in the Lok Sabha elections in this analysis. The fourth proposition which considered how parties were affected by their recent electoral experiences was supported: Parties were more likely to form pre-electoral coalitions if they underperformed in the previous Lok Sabha election, and they were more likely to repeat pre-electoral coalition with a recent partner. However, there was no indication that the party system overall became more likely to from pre-electoral coalitions over time during the 1999-2014 elections; the practise of pre-electoral coalitions during these elections appears to be highly stable throughout this period.

The chapter proceeds in the following way. Section 5.1., Exponential Random Graph Models, introduces the inferential network analysis approach. Section 5.2., The Pre-electoral Coalition Networks, presents the empirical networks from the 1999-2014 Lok Sabha elections using visualisations and descriptive network statistics. Section 5.3., Covariates, describes the decisions behind the operationalisation of the hypotheses. Section 5.4., Network Analysis, builds the models and discuss their findings, followed up by a thorough examination of the model performance in Section 5.5. The final section, 5.6., Chapter conclusion, summarises the findings and indicates the scope for next part of the empirical exploration, this time from a qualitative perspective in Chapter 6: Case Studies.

5.1. Exponential random graph models

The analysis in this chapter makes use of a more recent development of network analysis that can be seen as hybrid form between network analysis and logistic regression. This type of inferential network analysis is known as exponential random graph models (ERGMs).

The ERGM approach is rooted in traditional network analysis but differs from it in key ways. Traditional network analysis builds on the insight that the relationships between individuals add up to a greater structure, which can be analysed using a range of

visualisations and descriptive statistics (Wasserman & Faust 1994). E.g., we might describe a network in terms of its density (i.e. how frequent are social relations), the tendency towards assortative mixing (i.e. are partners alike or unalike), or the centrality of particular nodes (e.g. who connects other actors to each other). From such observations, we can draw a number of useful insights. Padgett & Ansell (1993)'s classic study of clan politics in medieval Florence used descriptive network analysis to show how the rise of the Medicis was predicated on their unique position within economic and marital networks of the city's noble families. Traditional network analysis is fundamentally descriptive; in contrast, ERGM analysis (and related techniques such a latent space models and stochastic actor-based models) are inferential, i.e.

ERGM also differs from the more recent use of network estimates as input variables. In this approach, the researcher calculates the network estimates, such as node centrality, and then employs these as exogenous variables in a regression analysis. For example, Maoz (2006, 2010) used such a technique to analyse the international system of cooperation and conflict between nation states. Recognising network effects in this way is an improvement on analysing relational data without acknowledging the ways that actors are entrenched in social hierarchies. However, this approach finds itself in the contradictory position of recognising the endogeneity of network structures but then proceeding to treat them as exogenous.

The development of the inferential network models began in the 1980s, but they have only recently been applied to political science. In 1986, Frank & Strauss proposed a random graph model whose key innovation was a Markov dependence assumption that specified that the likelihood of a connection between a set of actors is conditional on the presence of any other connections that the nodes might have (Frank & Strauss 1986). Frank & Strauss' model only incorporated endogenous network terms, such as shared partners or uneven distribution of connections, but it did not consider any non-network factors. This was redressed with Wasserman and Pattison's (1996) introduction of the so-called p* models, which could be accommodated to include the attributes of the actors (e.g. age or gender), alongside network characteristics. The models were initially difficult to apply reliably to empirical research due to computational degeneracy (Harris 2014).

The introduction of new estimation methods (in particular Hunter & Handcock 2006, Snijders et al. 2006) made the ERGMs practically applicable in a wide empirical context, from organisational sociology (Harrigan & Bond 2013) to archaeology (Brughmans, Keay & Earl 2015). In a political science context, the approach was introduced by Cranmer & Desmarais (2011), who demonstrated the ability of ERGMs to uncover network effects in the patterns of co-sponsorship of congressional bills, and in the evolution of alliances between countries over several decades. A further extension, temporal exponential random graphs (TERGMs, developed by Hanneke, Fu & Xing 2010), takes into account how past network structures shape later the formation of later networks. This enables ERGMs to examine network formation over time in a panel data sense (Cranmer, Desmarais & Kirkland 2012; Cranmer, Desmarais & Menninga 2012). ERGM analysis has subsequently been applied to wide range of relational data within political science.[1].

ESTIMATION

The purpose of ERGM analysis is to establish the features that are most likely to have led to this manifestation of the network. These features can be both exogenous and endogenous to the network structure, i.e. the models assume that the shape of the network "emerges from both the distribution of [node-level] attributes and the dynamics of interaction" (Goodreau, Kitts & Morris 2009:103). ERGM incorporates statistical inference directly into network analysis by creating stochastic models of the network structures and their covariates. Like traditional regression models, the inferential network approach tries to fit parameters to empirical data with probabilistic models, but with radically different assumptions as to the independence of the data.

These effects can be estimated by Maximum Likelihood Estimation (MLE), using a simulation-based approach known as Markov Chain Monte Carlo (MCMC). For a non-technical explanation, we can compare this process to a test kitchen that is trying to recreate a dish from an incomplete recipe. In this example, we have a physical version of

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[1] Examples include collective action problems in river management (Berardo & Scholz (2010); homophily in regional planning networks (Gerber, Henry & Lubell 2013); informal political discussion networks (Song 2014); states' choice between bilateral or multilateral agreements (Hollway & Koskinen 2015); and terrorist networks before and after 9/11 (Ouellet, Bouchard, & Hart 2017).

the dish, say a bowl of goulash, available to us. This is the empirically observed network. We also have a good theoretical understanding of the ingredients and processes that went into creating the dish (braised steak, chopped onions, paprika, etc.) This would be the equivalent of independent variables. What we do not know for sure is whether these ingredients really were used or what the exact quantities were. (In ERGM terms, we have specified the statistics, but we still need to fit the parameters.) Based on our hypotheses, we devise a recipe (i.e. a theoretical model) and, cooking from this recipe, we will try to see how close the outcomes are to the original dish. Here, the computational power of statistical modelling gives us a considerable advantage over the chefs in the test kitchen, as we are able to generate an immense number of hypothetical versions of the dish (or networks) based on the recipe. With each new simulated version, we make a marginal change from the last one. For every new dish, we stop and compare whether or not we are closer to original dish. If it is closer, we update the quantities in the recipe based on the new version. If there is no improvement, we go back to the previous version and try again. After a while, we are likely to find that our amendments to the recipe change relatively little. At this point, we can be relatively sure that the amended, filled-in recipe is relatively certain to produce a goulash like the one we originally observed. Of course, we might have missed an ingredient in the theoretical recipe (omitted variable bias) or inadvertently picked an inadequate version of an ingredient (an operationalisation issue). The test kitchen, having only the ingredients available that were indicated in the recipe, would not be able amend this; likewise, statistical estimation cannot identify an omitted variable or detect a measurement problem.

More specifically, the aim of maximum likelihood estimation in inferential network analysis is to find the parameter values that would make the observed networks most likely, given the model. (Parameters are the weights applied to the statistics that indicates how much a given pattern likely affects the network formation; the statistic being the counts of the particular network pattern.) Maximum likelihood estimation, however, can be intractable for complex models, including network models. The MCMC approach to maximum likelihood estimation (originally suggested by Geyers 1991) solves through a stochastic simulation process, that generates a large number of networks based on the features that are thought to be theoretically relevant or generally observed. Each new

network that is generated differs from the previously generated network only with respect to a single tie that is 'toggled' on or off. The MCMC technique employs an algorithm called Metropolis-Hastings in order to sample within this distribution. The algorithm proceeds stepwise by (a) selecting a network from the sample of simulated networks, (b) comparing the likelihood of the two networks, and c) deciding whether to accept the new network or discard it, in which case it holds on to the previous version (Hunter et al. 2013). The process repeats over a large number of iterations, moving through the generated universe of potential networks. We can control the sample size (typically between 2,000 and 10,000), the maximum number of iterations (typically 20), and how far apart they are (typically 2,000), by adjusting the sample size, the number of iterations, and the interval. As we begin from a completely empty network, it takes a number of iterations to before the simulated networks become moderately likely; for this reason, we also specify a burn-in period. In this way, the parameters of the model are fitted until they reflect the version most likely to have given rise to the observed network. Once the algorithm draws networks from a stationary distribution, it is said to have converged (Koskinen & Snijders 2013:145). In order to accept the estimates, the ERGM procedure requires that convergence takes place twice within the specified maximum number of iterations.

The output of this estimation can be interpreted much like the output of a logistic regression statistical model. Coefficients represent the change in the (log-odds) likelihood of a connection being formed given a one-unit change in the predictor. We can gauge the precision and certainty of the coefficients from their standard errors. The key difference is that we are modelling the joint distribution of all edges (relations in the network), meaning that any conclusion we draw with respect to any particular relationship in the network is conditional on the overall structure of the network. The empirical network is seen as a single realisation of a distribution of the random variables proposed by the theoretical model. As is the case in traditional network analysis, the unit of analysis is the whole network itself (Wasserman & Faust 1994:5). This means that the dependent variable is the full, empirically observed network rather than the individually observed edges, e.g. instances of pre-electoral coalitions. (An ERGM analysis of a single network can therefore be seen as a curious instance of a single-N quantitative analysis.) Theoretically, approaching the network as a unified outcome parallels the assumption

that the formation of pre-electoral coalitions is contingent on developments in the entire party system, as proposed in *Chapter 2: Theory*, and the balanced structure-agency position, that I outlined in *Chapter 4: Empirical Strategy*.

LIMITATIONS

The ERGM approach used here has three main limitations. The first limitation is the often considerable, practical challenges in achieving model convergence. When simulating networks from the model, the majority of the parameter values generated indicate highly unrealistic networks, that are either fully connected (all possible relationships exist) or completely empty (no relationships exist at all). At this point, it becomes difficult for the algorithm to work its way back to more realistic networks. This problem is also known as degeneracy, and it applies broadly to stochastic network models. Degeneracy can be a sign of a poorly specified model, but even theoretically and empirically sound models can have features that make them insolvably degenerate (Luke 2015). Recent advances, such as introduction of geometrically weighted terms, which will be discussed later, have gone a long way to reduce degeneracy problems. Based on my own experience, temporally dependent models also appear to be considerably less degeneracy prone. All analyses reported in this thesis converged, but some earlier specifications had to be abandoned[2].

The second limitation is substantive as well as practical. The temporal versions of ERGMs are currently not able to handle missing nodes or covariates very well. The Indian party system is in constant flux, as new parties emerge, either from new or due to party splits, and disappear, due to mergers or simply becoming defunct (cf. Heath & Ziegfeld 2017). This extensive exit and entry of parties means that the pre-electoral coalition networks have a high extent of missing information, especially as the temporal analysis needs information about how the party behaved in the previous network iteration. The technical restrictions of TERGMs mean that parties with insufficient information will not feature in the statistical analysis, even though these parties, marginal as the may seem, still play a

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[2] In particular, an earlier effort to model the pre-electoral alliance networks as multi-level networks using MPNet software had to be abandoned due to persistent degeneracy issues. A separate factor that counted against multilevel modelling was that it would not have been possible to analyse the effect of past networks at the time.

part in the formation of the empirical pre-electoral coalition networks. The conclusions of the temporal analysis therefore come with the caveat that they apply only to the more constant elements of the party system, at the risk of overestimating the degree of stability. (For this reason, I also present the results of 'pooled' ERGM analysis, where the effects of past alliances are not considered, to assess the robustness of the findings with a larger number of parties.)

The third limitation of the approach is that each network represents only a static snap shot of the pre-electoral coalitions. This representation does not consider the order in which pre-electoral coalitions were entered or dissolved. Such aspects relating to sequence and context will instead be examined in the case study component instead.

5.2. Empirical pre-electoral coalitions networks

Before embarking on the ERGM estimation, in part 5.3., I will briefly describe the empirical networks and covariates, and point out a few insights that we can gleam from this data, before the actual analysis. The data consists of four networks that capture the pre-electoral coalitions in the Lok Sabha elections between 1999 and 2014, as well as the range of contextual information that the theoretical model identified as relevant explanatory covariates. The collection and construction of this data was based on the comprehensive research detailed previously in part 3.3. of Chapter 3: Empirical Strategy.

ERGM analysis specifies the probability of a set of *edges* given a set of *nodes* and *covariates*. Translated to the context of this research project, I use ERGM analysis to examine the probability of a set of *pre-electoral coalitions* given a set of *political parties* and their contextual attributes. The relationship between these elements is illustrated in Figure 5.1. and described below.
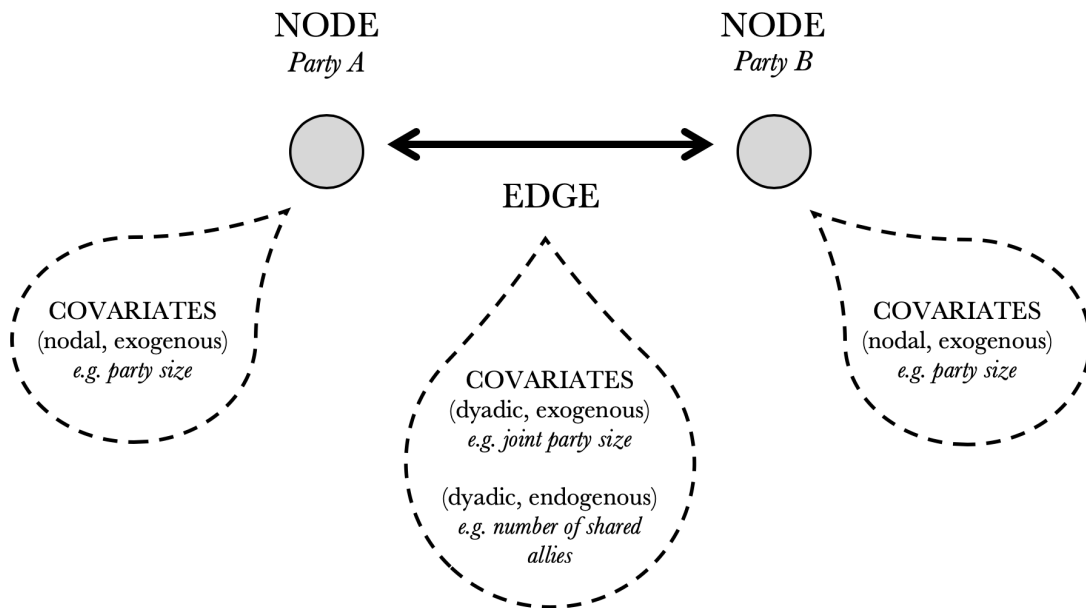
FIGURE 5.1. Data elements in an inferential network analysis: nodes, edges, and covariates.

Nodes, also known as vertices, refer to the set of actors. Nodes can represent any type of entity, including individuals or locations, but they can also represent organisations, such as political parties, as is the case here.

Edges, also referred to as ties, are the connections between the nodes. The edges in this analysis represent the pre-electoral coalitions formed by the political parties. Each pair of parties (dyad) has a binary outcome, 1 or 0, indicating whether they had committed to a mutual pre-electoral coalition on the first relevant day of voting. The edges are undirected, since I define pre-electoral coalitions as mutual relationships (i.e. party A does not have a unilateral alliance towards party B.)

Covariates, or attributes, represent characteristics related to either each individual party (node covariates) or to the pre-electoral coalition opportunities between them (edge or dyadic covariates) that are thought to have an effect on the network formation. Networks have exogenous covariates, which are the equivalent of independent variables in a traditional regression sense. However, they also have endogenous covariates, relating to the network structure, that cannot strictly be said to be independent variables.

In the following sections, I focus on the overall networks consisting of nodes and edges. The covariates are covered in part 5.3.

The network data consists of four empirical pre-electoral coalition networks observed in the 1999, 2004, 2009, and 2014 Lok Sabha elections. The 1999 network is not of direct interest to this research project. Instead, in the temporal analyses, it serves as a covariate for the 2004 network. We can draw some initial information by examining these networks both from their descriptive network statistics and their visualisations. The main network statistics of the four networks are presented in Table 5.1.

The number of components, or separate network structures, grow from two in 1999, three in 2004 and 2009, and four in 2004. Within these structures, every network has five to six cut-off points. These are nodes that alone bridge otherwise unconnected sections of the networks. If cut-off points are removed or cease forming ties, the network structures would be bisected into isolated parts. The critical positions of the cut-off points suggest that these parties potentially act as brokers or catalysts for cooperation. Each election network has a number of isolates, reflecting that there are a number of parties that do not participate in any pre-electoral coordination in each election.

Election year	1999	2004	2009	2014
Nodes (parties)	58	62	65	71
Edges (dyadic alliances)	78	106	95	105
Density	0.04719	0.05605	0.04567	0.04225
Components, excl. isolates	3	4	4	3
Cut-points	5	4	6	7

TABLE 5.1. *Descriptive statistics of the pre-electoral coalition networks 1999-2014.*

Density indicates the parties' propensity to form pre-electoral coalitions. It is defined as the sum of the edges that exist in the network divided by the number of all possible edges in the network. While the number of nodes (parties) increase over the four networks, the density of networks remains around 0.05 (average density 0.048), indicating that the parties' propensity to form pre-electoral coalitions is stable across the four elections. A

density of 0.05 indicates a sparse network on average 5% of all hypothetical pre-electoral coalitions actually took place. This level of density is very common in empirically observed networks.

For sake of comparison, Figure 5.2. illustrates what networks with a 0.048 density looks like, if no network dynamics or other factors influence which connections are formed (i.e. if edge formation happens at random. The layouts of the two graphs, and in all network graphs in the thesis are determined by the Fruchterman-Reingold force-directed algorithm, which attempts to space out the network structures with a minimum of overlapping edges or nodes (Fruchterman & Reingold 1991). The specific length of an edge between two nodes do not have any substantive interpretation, nor do the position of isolated nodes indicate 'how close' they are to other nodes in a meaningful way.

The two graphs in Figure 5.2. show that some characteristic network patterns occur randomly. Some nodes will have more connections than others merely by chance; in both networks there are some nodes that are connected to three, four, or fives nodes, as well as a number of nodes with no connections (isolates). The more nodes a network contains the more these random patterns will occur. High-density networks will inherently have a number of closed triangles and star-shaped hubs. Given that the formation of edges in these graphs is random, we could not for example conclude that the high-connected nodes are exhibiting leadership. When examining empirical networks, the question is therefore whether particular patterns are emerging at a higher rate than we would expect to observe in a truly random network.
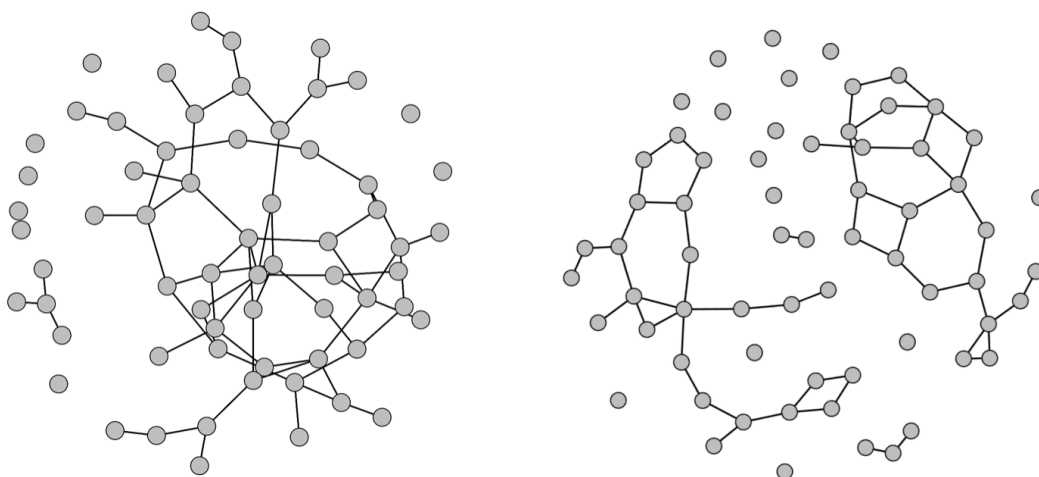
FIGURE 5.2. Examples of two graphs consisting of 64 nodes, indicating what pre-electoral coalition formation might look like in a party system, if the parties had a basic propensity to form alliances but were indifferent to all features of their partners, such as their size or other allies. The figure on the left is a true random graph with a density of approximately 0.048. The figure on the right imposes the assumption that party systems will have primary axis of competition (e.g. a left bloc and a right bloc); in order to bisect the graph, I generated two separate random graphs with 0.048 densities. Layouts according to the Fruchterman-Reingold force-directed algorithm.

The four empirical networks based on the pre-electoral coalition dataset are visualised in Figure 5.3-6. As before the layouts are determined by the Fruchterman-Reingold algorithm. The positions of the parties are not fixed across the plots; the pre-electoral coalitions edges simply change so much over time that the network plots become unreadable, when created with fixed coordinates. The size of the nodes reflects the logged share of votes that each party received in the previous election. (The vote shares are logged for the pragmatic reason that the largest parties, INC and BJP, are vastly larger than all other parties. The visual representation of the nodes would be more accurate if the vote shares were not logged, but practically the larger nodes overlap the other nodes and edges to such an extent that it is difficult to see the network structures.)

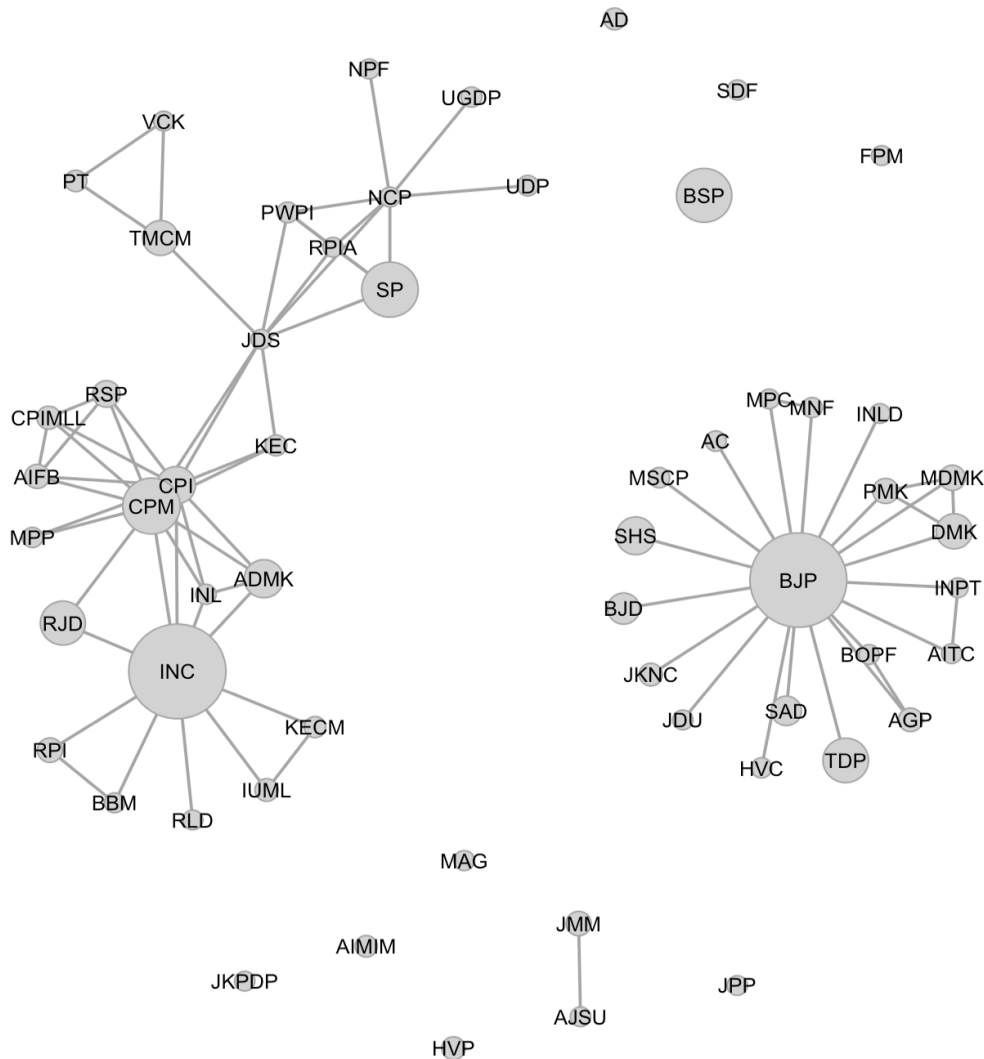## Pre-electoral coalitions, Lok Sabha 1999

FIGURE 5.3. Pre-electoral coalition networks in the 1999 Lok Sabha election. Layout according to the Fruchterman-Reingold algorithm. For more information on the use of party acronyms and the parties' full names, see note at the beginning of the thesis.

In the first pre-electoral network from the September 1999 election (figure 5.3.) we see considerable network activity around BJP, the incumbent government leader. The previous election had taken place only 18 months previously, in February 1998. While BJP had lost the support of regional ally triggering the new elections, many of the BJP's pre-electoral coalition partners were existing legislative allies, either within or outside the government, accounting for the well-developed network structures around this party. In

contrast, INC, who from first election in 1952-3 to 1989 been the dominant party, was at this point still wary of pursuing coalitions with other parties. However, as the figure also reveals, the party did engage in 'local understandings' with smaller regional parties. The two main communist parties, the Communist Party of India (CPI) and the larger Communist Party of India (Marxist) (CPM), show a pattern that will remain stable over the next three elections, namely that their pre-electoral coalition patterns closely mirror each other. The so-called Left Front, consisting of CPI, CPM, and two other socialist parties, the All India Forward Block (AIFB) and the Revolutionary Socialist Party (RSP), is the most stable multi-party constellations across the four elections[3]. Alliances between the smaller parties have a strong regional character, e.g. the Tamil Nadu based clusters between DMK, MDMK, and PMK, and between TMCM, VCK, and PT. When we examine the cut-off points, we can see that they are not so much brokers, as network theory might suggest, but rather, that they are parties who operate in more than one regional context, forming pre-electoral coalition in both. The NCP, a party that only recently split from INC in 1999, had founders in both the North-East region and in Maharashtra. JDS's main presence is in Kerala, where the party formed alliances with CPM, CPI, and KEC, but also via its presence in Maharashtra and in Tamil Nadu, JDS also participated in pre-electoral coalition in these states.

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[3] The similarity in network behaviour around CPM and CPI suggest that, in a pre-electoral coalition context, the two parties could be considered a single party. However, as I observed that the two parties did occasionally differ on specific pre-electoral coalition decisions, the two were coded as separate entities. The mirror behaviour of the Left Front parties is however likely to contribute to some of the network parameters, especially the number of 'triangles' (edgewise shared partners) in the network.

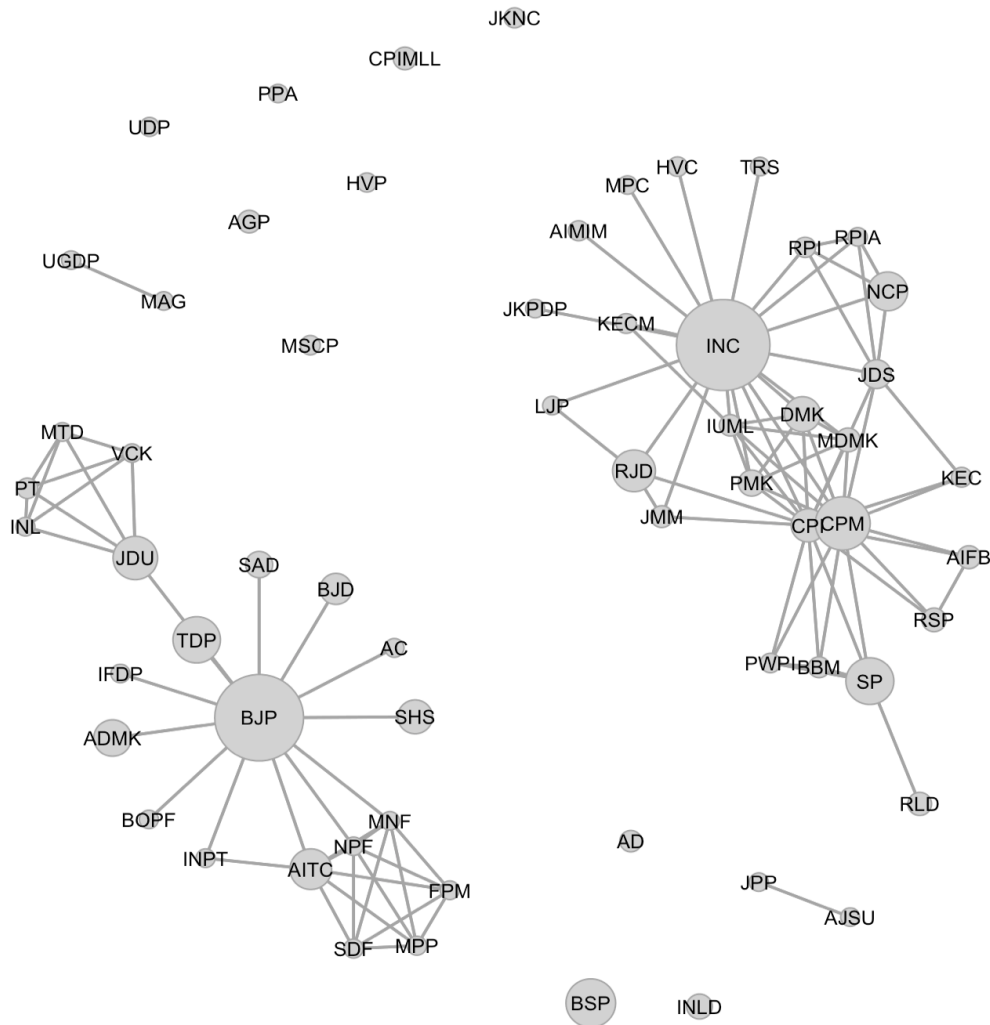**Pre-electoral coalitions, Lok Sabha 2004**

FIGURE 5.4. Pre-electoral coalition networks in the 2004 Lok Sabha election. Layout according to the Fruchterman-Reingold algorithm.

The 2004 pre-electoral network (figure 5.4.) show even stronger regional clustering between smaller parties, e.g. the alliance of between the parties of the north-eastern states, incl. NPF and SDF, and two Tamil Nadu based alliances, one involving DMK and one the small Dalit parties, incl. VCK and PT. We can see how these clusters have attached themselves to the network structures dominated by the larger parties (in line with the expectations of hypothesis *H2c*). This other strong network tendency towards 'hubs' around leader parties (expressed as hypothesis *H2b*) is also very pronounced in the 2004 network. Both BJP and INC, spurred by its defeat in 1999, actively pursue alliances with

smaller partners. However, as before we also see a similar hub-like behaviour centred around CPM (shadowed by the smaller CPI). There are two unattached dyadic pre-electoral coalitions, one in Jharkhand between JPP and AJSU, and one in Goa between UGDP and MAG.
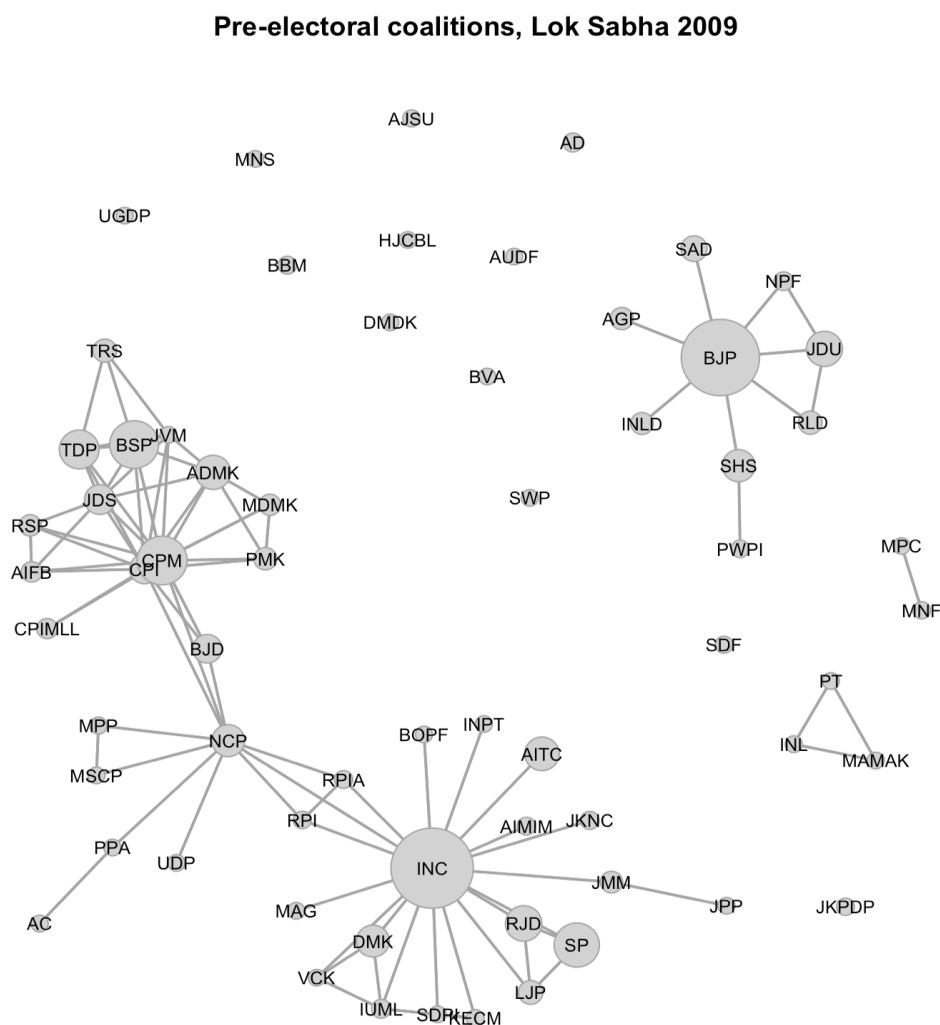
Pre-electoral coalitions, Lok Sabha 2009

FIGURE 5.5. Pre-electoral coalition networks in the 2009 Lok Sabha election. Layout according to the Fruchterman-Reingold algorithm.

The 2009 pre-electoral coalition network in Figure 5.5. presents a similar picture to that of the 2004 network. Again, we observe marked tendencies towards leadership hubs and shared partner clusters, especially in comparison with the random networks of Figure 5.2. Together with the two previous figures, Figure 5.5. offers visual evidence in support of the claim in *Chapter 3: Hypotheses* that hub-and-spoke structures are not inherently driven by

the size of the 'leading' party. This is particularly evident in case of parties such as the CPM and the NCP (both left-hand side of Figure 5.5.). Another pattern that becomes apparent as we begin to compare the networks over time is how many parties move between different groupings between elections.
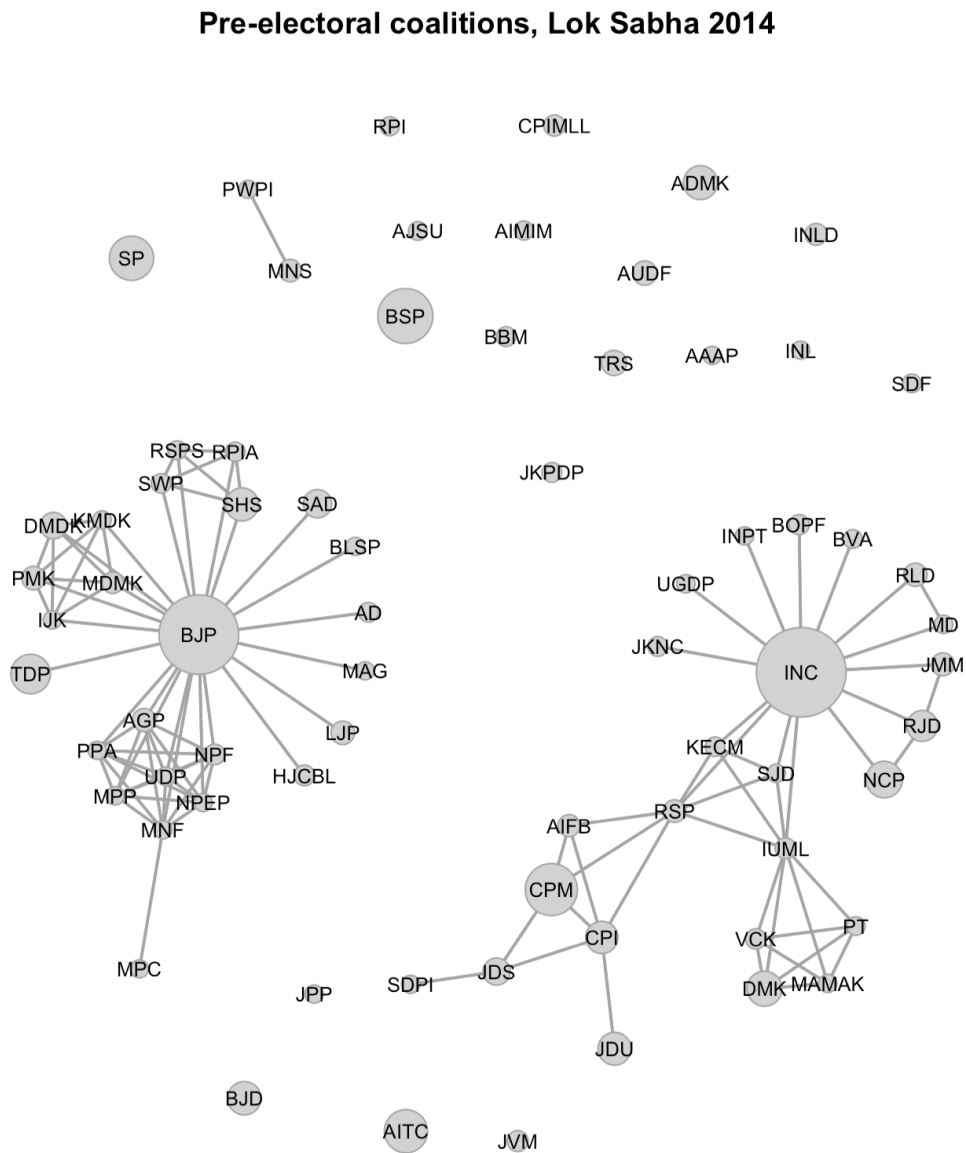
Pre-electoral coalitions, Lok Sabha 2014

FIGURE 5.6. Pre-electoral coalition networks in the 2014 Lok Sabha election. Layout according to the Fruchterman-Reingold algorithm.

Figure 5.6. shows the network of pre-electoral coalitions in the 2014 Lok Sabha election. Again, the tendency towards non-random network-driven clusters is evident. Comparing

the four empirical networks to the random graphs depicted in Figure 5.2., gives us a strong indication that these are not random graphs.

Pre-electoral coalitions overlaid, Lok Sabha 1999-2014
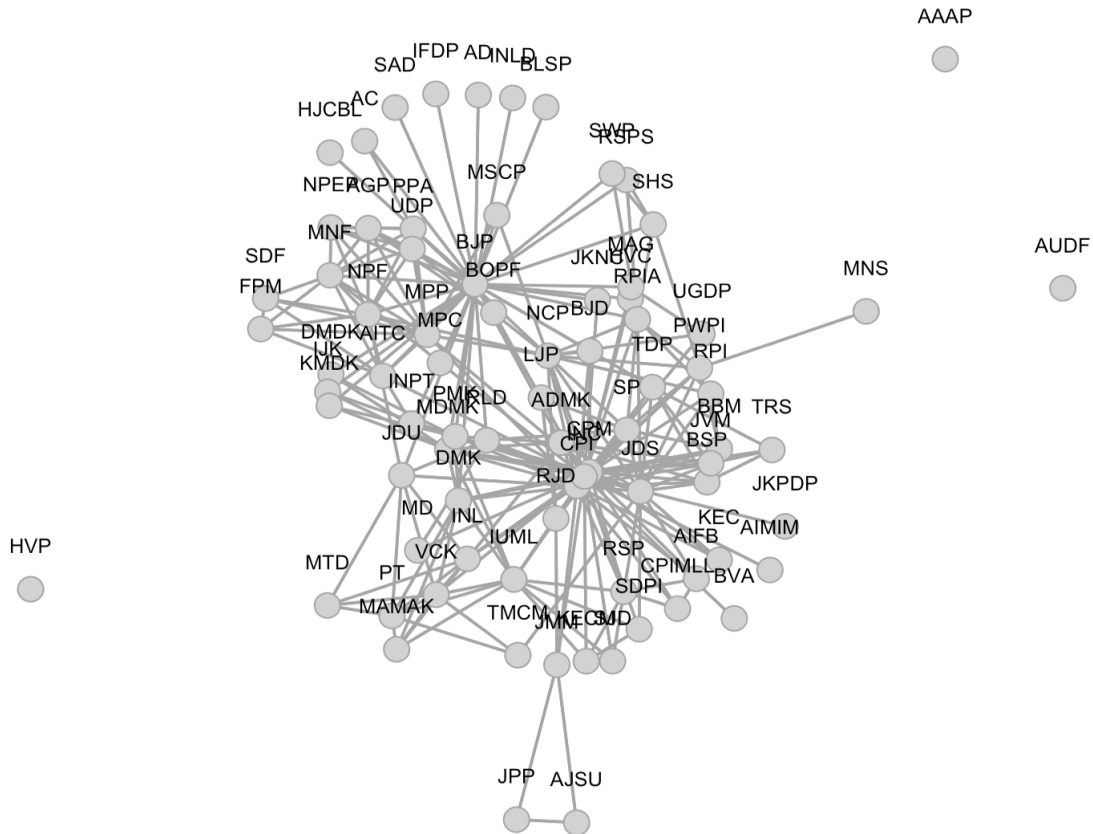

FIGURE 5.7. Pre-electoral coalitions from all four elections 1999, 2004, 2009, and 2014 overlaid in a single graph. Layout according to the Fruchterman-Reingold algorithm.

Finally, Figure 5.7. shows the pre-electoral coalitions of the four previous graphs overlaid each other. This figure shows a dense cluster of inter-party relations, where only three parties ever declined to participate entirely. The key take-away from this figure is that there is no discernible 'division' between competing blocks, a point that is emphasised by the comparison with the right-hand hypothetical party system of Figure 5.2. In other words, while the two main competitors INC and BJP never reach across their mutual

rivalry to coordinate, the other parties of the party system largely do seem to be confined a particular block or front.

5.3. Exogenous and endogenous covariates

In order to explore the formation of pre-electoral networks, I created several exogenous and endogenous covariates based on the four propositions developed in *Chapter 3: Hypotheses* and reflecting the research questions asked in *Chapter 1: Introduction*.

PROPOSITION 1: CONSTITUENCY COMPETITION

The first hypothesis, *H1a*, regarding constituency competition argued that parties have an incentive to coordinate pre-electorally, if they expect that they will lose seats due to splitting the votes between them. The more this is likely to happen, i.e. the more constituencies where the parties are likely to split the votes, the greater the incentive. The basic condition for this incentive to exist is that the parties field candidates against each other in the same constituency. I refer to this as *constituency overlap*. Since no Indian parties compete in all 543 Lok Sabha constituencies and some only in very few, the degree to which parties overlap varies widely. Some pairs of parties compete in exactly the same range of constituency, but many pairs of parties have no electoral overlap at all. In order to capture this circumstance, I calculated the dyadic (pair-wise) number of shared constituencies in the previous election for every conceivable pair of parties, in four matrices. I then imposed two constraints. First, I specified that the both parties should be credibly competitive within the constituency. Given that there can only be one winner, parties have little to gain from pooling the votes of low-performing candidates. The incentive should therefore primarily affect the constituency's front-runners. There are various ways to define this, but I follow Sridharan's (2004) argument that the seat-sharing incentive mainly affects the top 4 parties (once any two parties have entered a pre-electoral agreement, the other pair has an incentive to form one too as a counter-move)[4]. In the

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[4] I calculated different versions of this covariate, each capturing a different aspect of the competitive situations that two parties can find themselves in at the constituency level. First, I calculated the basic 'entry overlap', which express how many constituencies both candidates

absence of constituency-level polling data, I use the vote totals of the most recent Lok Sabha election to define the top 4 parties. The second constraint reflects the fact that the parties' have different sizes (also in terms of how many constituencies they compete for) and that the importance of any one constituency might differ considerably for large and small parties. I therefore divided (the matrix of) the pairs' competitive overlap measure by (the matrix of) the pairs' total number of shared seats.

The second hypothesis, *H2a*, regarding constituency competition claimed that pre-electoral coordination is less likely, when constituencies are 'crowded', i.e. when a lot of parties are splitting the votes between them. Under such circumstances, the parties will struggle to identify optimal coordination opportunities, as each party represents a relatively smaller share of the votes and as they are all more sensitive to vote swings. In order to capture this circumstance, which I refer to as the *constituency crowdedness*, I calculate the Effective Number of Parties (ENP) per constituency, using Laakso & Taagepera's (1979) formula, where *P* in this context is the share of votes won by each party in the constituency in the previous Lok Sabha election:

$$ENP = \frac{1}{\sum P^2}$$

Laakso & Taagepera's concept of ENP is often used to 'count' the number of relevant parties in a legislature. For this, the ENP is often inadequate. For example, the effective number of parties in the Indian Lok Sabha 1999-2014 was approximately 5 (by seats, 7 by votes) which is not substantively a meaningful number. However, as a measure of electoral 'crowdedness', the $ENP_{constituency\ votes}$ measure is highly suitable, since it captures the extent to which the vote is split.

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fielded candidates in, as a simple measure of dyadic rivalry. This version of the measure only indicates whether candidates from both parties were present but does not distinguish between the party that finished in 8th place in a constituency and the party that finished a second. As such it is not a strong indicator of the incentive to coordinate seat sharing. Second, on the assumption that the incumbent winner of a constituency will be less willing to compromise, I created a more restrictive version, the 'conquest overlap', that included only the last election's runner-ups and not the winner. This version of the variable performed similarly to the version used in analyses reported in this chapter, but at a lower effect size. This suggest that incumbents do not necessarily consider their position

PROPOSITON 2: NATIONAL COMPETITION

The first hypothesis relating to how parties' coordinate pre-electorally in expectation of the government-formation stage, *H2a*, concerns their prospective legislative weights, i.e. the parties' size in parliament. The larger a party, the more it will be able to contribute to the coalition's joint objective of deciding the identity of a future government. Given this basic advantage, larger parties will both be more likely to initiate pre-electoral coalitions and be more attractive as partners in pre-electoral coalitions. I operationalise this covariate, *national vote share*, as the party's share of valid votes cast in the previous Lok Sabha election, in %. The alternative to operationalising size as the party's share of votes is to operationalise it as the party's share of seats. Seat share is strictly a more direct indicator of post-electoral power, which after all is what the parties are concerned with in the government-formation context. The reason why I have chosen to use the vote share instead is that, while parties need to secure seats to affect government formation, the way that the FPTP system transforms votes into seats can lead to outcomes that do not always capture a party's underlying support. For example, even parties that win large vote shares sometimes fail to win Lok Sabha seats, if they finish second in multiple constituencies (e.g. ADMK in 2004, BSP in 2014). Going by these parties' previous share of the seats, 0, we would erroneously conclude that they have been practically eliminated as a relevant force, overlooking that the parties still command an underlying popular support that is likely to assert itself in future elections. I therefore assume that a party's previous vote share is a more reliable indicator of its future electoral performance than its current share of Lok Sabha seats.

The second hypothesis related to government formation, *H2b*, states that pre-electoral coalitions are more likely to emerge when one of the parties are highly connected. In network analysis terms this tendency is known as preferential attachment. A tendency towards preferential treatment in a network shows as 'star-shaped' patterns centred around particular nodes in the network (Figure 5.8.). This figure echoes the patterns we observed within in the empirical networks in Figure 5.2.-5.6.
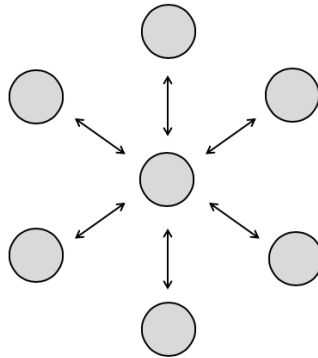
FIGURE 5.8. Preferential treatment in a hypothetical network. The degree distribution in this network is very uneven: The highly connected, central node has six degrees (allies), whereas the remaining six nodes only have one each

This hypothesis builds on the assumption that parties look beyond the dyadic pre-electoral coalition opportunity in front of them to the alliances that are taking place elsewhere within the party system during the elections. In a government-formation context, given high levels of party system fragmentation, single dyads are unlikely to be able to secure decisive power on their own. It therefore matters which other allies a prospective partner brings with it. While the size of the pair of parties directly involved in forging a pre-electoral coalition matters, as the previous hypothesis asserted, parties also consider the presence of indirect allies when evaluating the attractiveness of the opportunity. I operationalise the *H2b* hypothesis, which I refer to as *leadership*, using an endogenous network term that account for the number of degrees (connections) of the parties. This term takes a geometrically weighted form, GWDEGREE, which will be explained shortly.

The third government-formation related hypothesis, *H2c*, account for a different way in which size considerations assert themselves through network patterns. Given the extreme fragmentation of the Indian party system (cf. *Chapter 2: Theory*), many parties are too small on their own to have much impact not only on government formation, but also on negotiations to form pre-electoral coalitions (which is often a pre-condition of the former). Smaller parties can however team up in pre-electoral coalition structures of their own. Having done so, this group of parties can leverage their joint strength in negotiations with larger partners. Together, their prospective size makes them more relevant as allies, and it is more cost-efficient to negotiate with this pre-formed group than it would have been

to negotiate with each small party individually. Even if the group is not able to, or decides not to, ally itself with a larger partner before the election, the commitment to make a joint post-electoral decision on who to support in a future government, grants them more power than the sum of its parts.

These denser, mutually committed structures, or clusters, of parties are defined by a recurring pattern of network structures, where connected dyads tend to have further partners in common (figure 5.9., on the left). From a network perspective, this clustering behaviour is known as triadic closure. (The presence of the triangular patterns exists even when more than three nodes are connected. To see this, consider that if four parties are all mutually allied, four triangular patterns exist; if five parties, ten triangular patterns, etc.) I operationalise the *H2c* hypothesis, *shared partners*, using an endogenous network term that account for the number of partners that two connected nodes share, known as edge-wise shared partners (ESP). This term, too, takes a geometrically weighted form, as will be explained shortly.

The triangular ESP-pattern can be confounded by the presence of a similar pattern, namely the tendency for two nodes in the network to have partners in common, even when they do not share a relationship themselves. However, by including both statistics in an ERGM framework, it is possible to distinguish their effect. In addition to the ESP-term, I therefore also include a further network term, dyad-wise shared partner, DSP, (Figure 5.9., on the right). When both terms are present in the model specification, ESP reflects the distribution of shared partners in connected dyads, whereas DSP reflects specifically the distribution of shared partners for unconnected dyads.

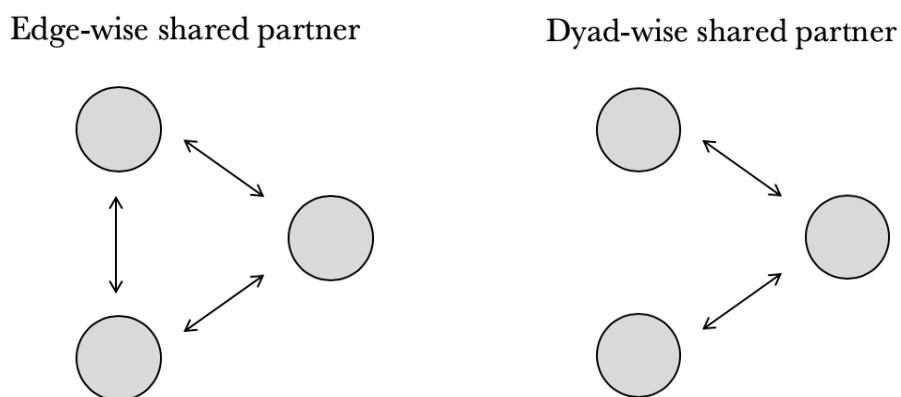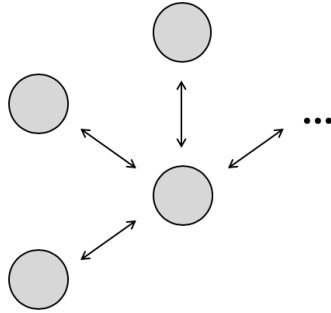Edge-wise shared partner   Dyad-wise shared partner

FIGURE 5.9. Visualisation of the edge-wise shared partner (ESP) and dyad-wise shared partner (DSP) terms. The figures should be read from the perspective of the nodes/edge furthest to the left.

In part to aid the computational convergence of the models, I used the geometrically weighted (GW) versions of for all three terms degree, GWDEGREE, GWESP, and GWDEGREE. The geometrically weighted terms reflect that each addition of the pattern is likely to have a lower marginal value on the formation of further alliances (figure 5.10.). The rate of discounting for the geometrically weighted terms is determined by a decay parameter (alpha, α) between 0 (fast discounting, further repetitions of the pattern become irrelevant fast) and 1 (slow discounting, further repetitions of the pattern are counted for longer). Practically, the algorithm will begin to reach a saturation point as it weighs new occurrences of each pattern less and less. From a theoretical perspective, this discounting is rational as well. When a political party forms a pre-electoral coalition with a new partner, this is likely to make it more attractive to further partners, but only up to a point.

Geometrically weighted degree (GWDEGREE)

Geometrically weighted edge-wise shared partner (GWESP)
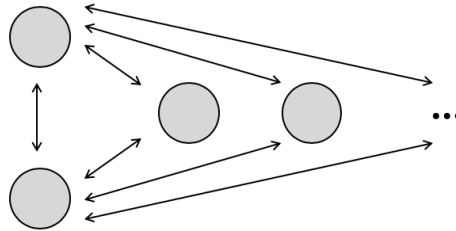
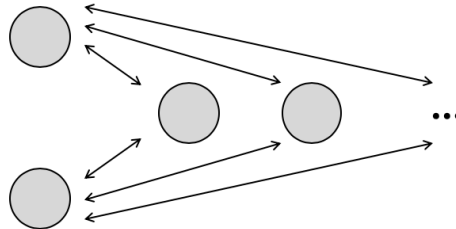Geometrically weighted dyad-wise shared partner (GWDSP)

FIGURE 5.10. Geometrically weighted versions of edge-wise shared partners, top, and dyad-wise shared partners, bottom. As before, the figures should be read from the perspective of the nodes/edge furthest to the left. The geometrically weighted terms mean that the first shared partner is weighed a bit more than the second, which in turn is weighed more than a third shared partner, etc. This makes the estimation of exponential random graph models much less computationally difficult.

PROPOSITION 3: REGIONAL CONTEXT

Chapter 3: Hypotheses identified three hypotheses relating to the effects of the parties' anchoring within regional party systems. The underlying assumption is that most parties

tend to prioritise the state in which have the strongest claim to dominance, and that this in turn affects their participation in pre-electoral coalitions.

In order to establish the covariates relating to the regional context, it was first necessary to define a 'key state' or 'home state' for each party. This assumption is necessarily an approximation. Most political parties are only present in a single state, making the identification of a home state straight-forward. However, as indicated by Figure 5.11., a handful of parties are electorally active in several states. These borderline cases (AITC, CPI, CPM, BSP, JDU, NCP, and NPF, in different elections) were classified with extreme care[5]. The two indisputably national multi-state parties, the Indian National Congress (INC) and the Bharatiya Janata Party (BJP), were assigned to a separate category, and I instead inferred their covariate values as described below.

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[5] For parties that won more than 5% of the votes in more than one state, three further circumstances were taken into consideration. The first circumstance was the distribution of votes *within* the states. Was the party significantly more dominant within one state than within any of the others? The second circumstance was the distribution of the party's votes *across* states. Did the party's share of votes coming from one state outstrip its share of votes coming from elsewhere? (To appreciate the nuance between the two points, consider the case of the Communist Party (Marxist) who was the dominant party in the small state of Tripura, but is overall more invested in the much larger state of West Bengal, from where, even though it is somewhat less dominant, the party receives more votes). The third circumstance considered whether the party was consistent in the state according to these measures across all four time periods. A party would occasionally do well in a state it did not traditionally perform well in. If so, I prioritised the state where the party was more consistently present.

Electoral participation in the Lok Sabha election 2004
Number of states in which each party competes (light grey) and wins >5% votes (dark grey).
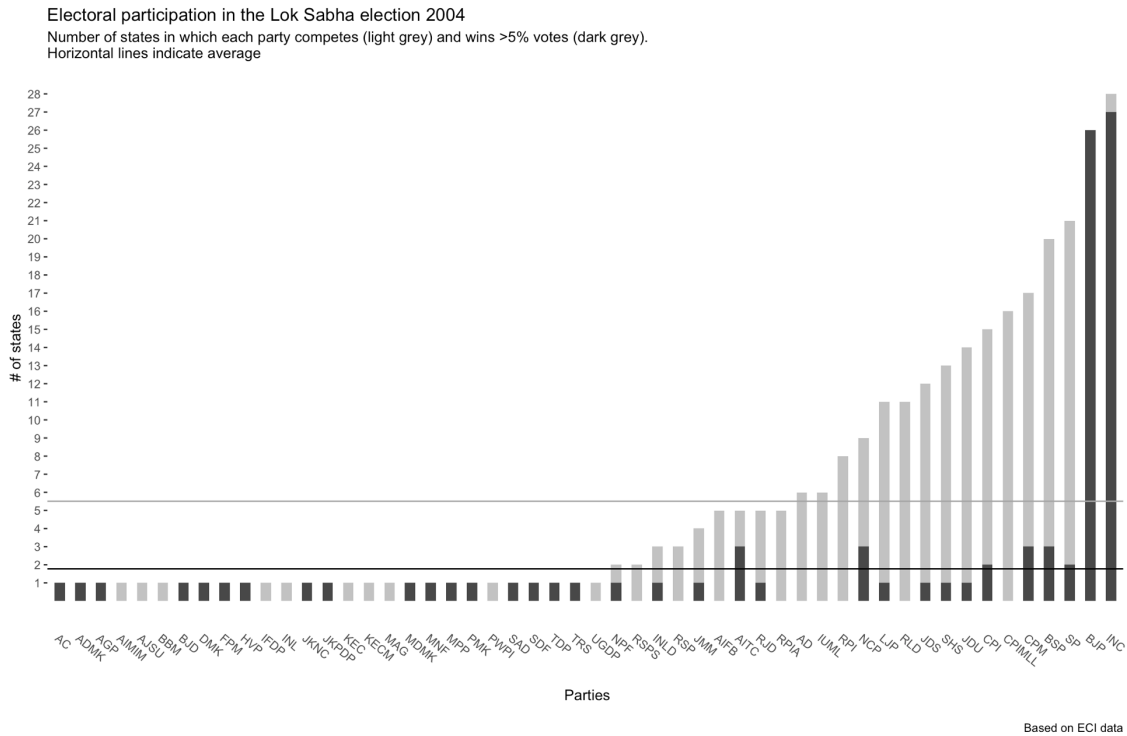Horizontal lines indicate average

Based on ECI data

FIGURE 5.11. *Extent of electoral participation and performance by parties in the Lok Sabha election 2004. (Similar figures can be constructed for other election years.) Light grey bars indicate how many states a party fielded candidates in. Dark grey bars indicate how many states the party won at least 5% of the votes.*

Once a home state had been defined, this was used as a key to associate regional covariates to each party. The first hypothesis related to the regional proposition, *H3a*, states that the larger a party is within its home state, the more attractive it will be as a pre-electoral coalition partner. The rationale behind this hypothesis is that parties assemble pre-electoral coalitions that correspond to the coalitions that can win power in the state elections. Similar to the logic that informed the national vote share covariate, the larger the party, the more likely it is that the coalition will secure power. I operationalised this covariate, *regional size*, as the party's share of the votes in the most recent state assembly (Vidhan Sabha) election in their assigned home state. The corresponding value for INC and BJP was calculated as the average of their vote shares in all the Vidhan Sabha elections that they had each competed in, in the time period between two Lok Sabha elections. Like the national vote share predictor, this covariate was logged.

The second regional hypothesis, *H3b*, argued that if the more the party system in a party's home state differs from the party system emerging nationally in the Lok Sabha elections, the more this opens up the scope for pre-electoral alliances. The similarity between regional and national party systems can be expressed in terms of the degree of 'congruence' between the party systems. Following Schakel & Swenden (2016), I calculate the variable *congruence* as the degree of similarity between the distribution of the vote totals across parties in the national election vs. the distribution of vote totals across parties in state election. This method for calculating the difference in vote shares between two elections, one national and one regional, is essentially the same as the procedure for calculating party system volatility by calculating the change in vote shares between two elections held at different points in time). I calculate the congruence of the national and the state party systems using the following formula, where *P* is the vote share of party *i* in the Vidhan Sabha election (*VS*) or Lok Sabha election (*LS*), respectively:

$$\frac{1}{2}\Sigma|P_{i\,VS} - P_{i\,LS}|$$

The resulting range goes from 0 (full congruence, no dissimilarity) to 100 (no congruence, complete dissimilarity). For INC and BJP who compete widely in both national and state elections and cannot be said to have a single home state, I apply the average congruence value in each election period.

The third regional hypothesis, *H3c*, argued that parties preparing to face the electorate again in regional elections in its home state are less likely to enter pre-electoral coalitions. If state elections follow close on the heels of the Lok Sabha election, I expect this to dampen the parties' willingness to enter into pre-electoral coalitions, because the parties will be eager to assert themselves electorally in the Vidhan Sabha election. This is captured by the covariate, *home state electoral cycle*, which indicates the number of days between the Lok Sabha election and the most likely date of the upcoming Vidhan Sabha election in the party's home state. In order to calculate this, I collected the dates for the most recent Vidhan Sabha elections held in each state in prior to each of the four Lok Sabha elections, 1999-2014. I then added the number of days corresponding to five years (the Vidhan Sabha term limit) to find the expected date for the next Vidhan Sabha

election on the other side of the Lok Sabha election[6]. This expected date might not be the same as the actual election date, as some Vidhan Sabha elections are called before the end of the term (and on a few occasions later, usually due to regional unrest). However, on principle, we cannot assume that such deviations from the expected term would have been known ahead of time to the parties involved. For INC and BJP, who compete in almost all state elections, I set this value as the lowest occurring value of days (zero, i.e. simultaneously national and regional elections). This reflects the fact that these parties are fundamentally always in election mode and must therefore constantly take into account how the election cycle constrains their choices.

PROPOSITION 4: PAST EXPERIENCE

The first hypothesis relating to the parties' past electoral experience, *H4a*, relates to the party's success in the most recent Lok Sabha election, its *past party performance*. If a party performed less well than it expected to on this occasion, it will be more willing to enter a pre-electoral coalition in the present election. In order to capture how well a party performed on its most recent outing, I create a covariate that reflects the party's 'wining ratio'. This is defined as the number of winners divided by the number of overall candidates fielded by the party, i.e. the percentage of party victories out of all the constituencies it fought. If a party won all its constituency competitions, this covariate is 100; if all its candidates lost, the number will be 0.

The second hypothesis related to the parties' recent experience, *H4b*, operates at the level of the party pair (dyad) rather than the individual party. It states that dyads are on average more likely to form a pre-electoral coalition in the present coalition, if they had a pre-electoral coalition in the last Lok Sabha election as well. I operationalise this covariate, which I refer to as *previous allies*, as a lagged, dyadic memory term in the network model (specifically a positive autocorrelation term, cf. Leifeld, Cranmer & Desmarais 2018)

The third hypothesis related to the parties' recent experience, *H4c*, operates at the level of the party system overall. I include a temporal term to account for whether there is an acceleration mechanism, i.e. a trend in the overall quantity of pre-electoral coalitions.

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[6] Due to some missing information, some data points were inferred using the method of averages.

This term captures whether parties become more likely to form pre-electoral coalitions over time as coordination practises become common more entrenched. I refer to this covariate as the *election trend.*

When looking at temporal interdependency between the networks, we lose some data (table 5.2.). First, the pre-electoral coalition network from the 1999 election is no longer a part of the analysis on its own, but instead serves as input (temporal covariates) for the 2004 network. Second, we have fewer nodes to work with within the three remaining networks, 2004, 2009, and 2014, due to the fact that some parties did not participate (e.g. was not yet founded) in the previous election.

	1999	2004	2009	2014
Nodes, pooled analysis	58	62	65	71
Nodes, temporal analysis	*N/A*	57	56	63

TABLE 5.2. Available nodes for analysis in the pooled ERGM analyses and in the temporal ERGM analyses.

For this reason, the analysis in the next part, 5.4., contains two types of models. In the *pooled* models, all four election networks are analysed alongside each other as four separate observations, but the model does not consider the time order in which they took place. In the temporal models, only the three most recent elections are analysed (with a slightly smaller number of parties); however, the analysis takes into account the how the networks develop into each other over time.

Table 5.3. summarises the predictors used in the network analysis, clarifying they relate to theoretical propositions and the empirical data.

Proposition	Predictor	Type	Exogenous or endogenous	Data source
1	Constituency overlap	Dyad	Exogenous	LS
1	Constituency crowdedness	Node	Exogenous	LS
2	National vote share	Node	Exogenous	LS
2	Leadership	Network	Endogenous	PEC
2	Shared partners	Network	Endogenous	PEC
3	Home state vote share	Node	Exogenous	VS
3	Home state party system similarity	Node	Exogenous	LS/VS
3	Home state electoral cycle	Node	Exogenous	LS/VS
4	Previous party performance	Node	Exogenous	LS
4	Previous allies	Dyad	Endogenous	PEC
4	Election trend	Dyad	Endogenous	PEC

TABLE 5.3. List of predictors. Data refers to: LS = Lok Sabha electoral data from the Electoral Commission of India; VS = Vidhan Sabha electoral data from the Electoral Commission of India, digitised by Bhavnani (2017); PEC = the pre-electoral coalition dataset created for this thesis as described in Chapter 3: Empirical Strategy.

5.4. Network analysis

As described, the network models are estimated using Markov Chain Monte Carlo maximum likelihood estimation[7] to generate random draws from the distribution with a

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[7] The main alternative to MCMC-MLE is maximum pseudo-likelihood estimation (MPLE) with bootstrapped confidence intervals. MPLE approaches MLE asymptotically as it does not rely on simulation, but standard errors can be underestimated if not corrected. The advantage of bootstrapped MPLE approach is that is less computationally demanding and therefore appropriate when large sets of network time steps are available (Leifeld, Cranmer & Desmarais 2018). The MCMC approach is more accurate and given that the computational strain is manageable when fewer time steps are analysed (here, four election years), I have opted for the MCMC approach (mtergm) over the bootstrapped alternative (btergm).

chosen set of parameters to approximate the likelihood function[8]. When estimating models, I set the simulation sample size to 10,000 with an interval of 2,000, over 20 iterations. The analysis follows a sequential approach where the models are gradually built towards greater complexity. Adding to elements to the models in this way enables us to assess robustness of the findings across models as we what changes and remains constant under different specifications (see also Harris 2013; Luke 2014).

The first three models are shown in table 5.4. The first model I specify is a baseline model, also known as the *null model*. This model consists of single term, the 'edge' term. This term represents the basic propensity to form pre-electoral coalitions in the Indian party system in the four elections, without taking any covariates or network dynamics into account. The coefficient of this model is negative, which indicates a sparse network, i.e. a network where most of the potential opportunities to form coalitions are not realised. This is of course in line with what we already know of the occurrence of pre-electoral coalitions in India. By contrast, a null model with an edge term coefficient of 0 would represent a network with 0.5 (or 50%) density, meaning that half of all possible edges in the network have been formed[9]. Based on the isolated edge term coefficient of -3.0016, we can calculate the propensity of to form pre-electoral coalitions using the logistic function. This propensity is 0.04735, equivalent to the density measured across the four networks.

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[8] MTERGM is included in the 'xergm' package (Leifeld et al. 2017) for the statistical computing environment 'R' (R Core Team 2017).

[9] Most networks, be it friendships in school classes or trade deals between countries, have a much lower density, usually no more than 5% (Harris 2013:46). Since even a 50% level of density is highly unusual, edge coefficients in ERGM analysis almost always negative.

TABLE 5.4. Preliminary models of pre-electoral coalition formation 1999-2014

	Null model	Pooled covariate model	Temporal covariate model
Baseline tendency to form PECs	-3.0016*** (0.0523)	-1.8211* (0.7825)	-1.6452 · (0.9253)
Constituency overlap		0.0024 (0.0019)	0.0104*** (0.0024)
Constituency crowdedness		-0.4215*** (0.1001)	-0.4134** (0.1326)
National vote share		0.7092*** (0.0555)	0.3805*** (0.0766)
Home state vote share		-0.1271** (0.0396)	-0.0413 (0.0568)
Home state party system similarity		0.0118** (0.0037)	0.0077 · (0.0042)
Home state electoral cycle		0.0002* (0.0001)	0.0002* (0.0001)
Previous party performance		-0.0031* (0.9015)	-0.0040* (0.0019)
Previous allies			2.5356*** (0.1732)
Election trend			-0.1540 (0.0973)
AIC	37103.1757	36765.3421	15944.3926
BIC	37119.9623	36849.2750	16036.0981
Log Likelihood	-18549.5879	-18372.6710	-7960.1963

***$p < 0.001$, **$p < 0.01$, *$p < 0.05$, ·$p < 0.1$

The edge term by itself is not particular informative, given that we are interested in examining the more substantive hypotheses developed in Chapter 3: Hypotheses and outlined at the beginning of this chapter. In order to so, I include a number of exogenous covariates to the baseline model. The next two models, the *pooled and the temporal covariate models*, are close equivalents to regular logistic models in that they do not consider any

endogenous network effects. Both models consider the effects of constituency overlap and competition, national size, the parties' regional contexts. In addition, the temporal model, which analyses only the 2004, 2009, and 2014 elections, considers whether the pairs of parties have been allied before, and whether there is an increasing or decreasing trend in pre-electoral coalition formation.

The models' findings are preliminary at this point, but they are worth examining for readers who might be sceptical of the endogenous network models. The findings of the two models differ subtly. Both models agree that the larger the parties are jointly, the more likely they are to form a pre-electoral coalition. The effect is larger in the pooled model, but in both analyses the effect is positive and significant. The models also agree that parties who find themselves in crowded constituencies on average are less likely to form pre-electoral coalitions, but only the temporal version finds that the constituency overlap itself significantly increases the likelihood of pre-electoral coordination. The regional effects are more pronounced in the pooled model, which finds weak evidence that differences between the parties' regional and national party systems makes the formation of pre-electoral coalitions more likely. There's also a very weak correlation between how imminent the regional elections are and how likely pre-electoral coordination in the Lok Sabha is. In the pooled model there is a strong, significant correlation between regional party size and pre-electoral coalition formation, which, somewhat against the expectations of the *H3a* hypothesis, suggests that parties that have a significant presence in their home state are less likely to enter pre-electoral coalitions. However, this effect disappears once we consider the impact of previous allies in the temporal model. Both models suggest that parties who saw a larger share of their candidates defeated in the last Lok Sabha elections are more willing to coordinate, at a significance level of 0.05. The temporal covariate model indicates that Indian parties are on the whole more likely to renew an existing agreement. The coefficient for past allies is positive and significant, and the effect size is largest of this model overall. The decrease in the Akaike information criterion (AIC) and Bayesian information criterion (BIC) between the two models indicate that the temporal model, which do not find the expected regional effects but highlights the role of past ties, is a considerable improvement upon the simple, pooled covariate model.

The next three models, presented in table 5.5., constitute actual network models that employ both exogenous and endogenous covariates in order to take into account how the structure of the parties' coalitions affect their likelihood of forming[10]. The sequential modelbuilding culminates with the refined temporal network model in the column on the right, and I will discuss the implications of the model findings with reference to this version.

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[10] Due to the specification of the network terms, the MCMC MLE models calculated in the btergm package cannot currently calculate log likelihood and by extension AIC and BIC estimates (email communication with Bruce Desmarais, July 2018).

TABLE 5.5. Network models of pre-electoral coalition formation 1999-2014

	Pooled network model	Full temporal network model	Refined temporal network model
Baseline tendency to form PECs	-6.9725*** (0.0384)	-6.6308*** (0.0161)	-6.0307*** (0.5836)
Constituency overlap	0.0025 (0.0018)	0.0082*** (0.0023)	0.0079*** (0.0023)
Constituency crowdedness	-0.1705*** (0.0366)	-0.2442*** (0.0614)	-0.2096** (0.0623)
National vote share	0.2730*** (0.0446)	0.1177 · (0.0685)	0.1207* (0.0560)
Leadership	2.3204*** (0.0097)	2.2836*** (0.0351)	2.1905*** (0.2653)
Shared partners	2.3245*** (0.0091)	2.1660*** (0.0827)	2.1196*** (0.1427)
(Shared partners isolation term)	0.0101 (0.0087)	0.0170 (0.0141)	
Home state vote share	-0.0571* (0.0240)	-0.0200 (0.0422)	
Home state party system similarity	0.0057** (0.0020)	0.0038 (0.0027)	
Home state electoral cycle	0.0001** (0.0001)	0.0001 (0.0001)	
Previous party performance	-0.0015 · (0.0009)	-0.0029* (0.0013)	-0.0029* (0.0012)
Previous allies		1.9650*** (0.1390)	1.9521*** (0.1343)
Election trend		0.0281 (0.0478)	

***$p < 0.001$, **$p < 0.01$, *$p < 0.05$, ·$p < 0.1$

The decay parameters of the network terms are fixed at $\alpha = 0.50$ for Leadership (gwdegree); $\alpha = 0.75$ for Shared partners (gwesp); and $\alpha = 0.35$ for Shared partners isolation term (gwdsp).

The first model in table 5.5. is a *pooled network model*, which mirrors the second model in table 5.4. The purpose of this model is essentially to see whether the regional effects, which disappeared once we considered the role of past alliances, would hold up in the context of the endogenous network terms. The two models are very similar, but the regional effects remain comparatively small and disappear once we consider the full range of

effects, including both network terms and past alliances in the next model, the fully specified network model.

The penultimate step of the step-wise model specification is the *full network model*, shown in the middle column in Table 5.5, which comprises all effects suggested by the theoretical model, including network and temporal terms. This model indicates that, when all theoretical effects are considered, constituency competition, legislative resources, and past experience all have a significant effect on the formation pre-electoral coalitions, offering support to three of our four propositions. The proposition regarding the effect of regional electoral politics, however, is not supported in this analysis, at least.

The final model, the *refined network model*, shown in the final column in Table 5.5, excludes the variables that proved insignificant in the full model. The election trend term was insignificant throughout, as the early examination of the stability of network density and baseline propensities suggested it could be. I also exclude the three predictors relating to the regional proposition, which only occasionally and never fully convincingly seem to shape the formation of the pre-electoral networks. Though this was a key line of investigation, the analyses did not find sufficient evidence in the support of the regional proposition. The reasoning behind simplifying a statistical model in this way is to increase its explanatory parsimony. In order to assess whether the refined model performs better than the full model, I carried out a comparative analysis of their performance in a manner similar to the one that is described shortly, in part 5.5. Both the full and the refined models performed well, and the substantive interpretation of the models is similar. However, the refined model performed marginally better across all measures and was accepted as the final model[11].

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[11] I undertook a full analysis of both models' performance (an example of which is presented in the next part of this chapter) for sake of comparison using graphic assessment of fit. Due to the specification of the block-diagonal matrices in the btergm package, the log likelihood and the loglikelihood-based AIC and BIC estimates cannot be calculated for MCMC MLE models (email communication with Bruce Desmarais, July 2018). However, examining diagnostics plots is preferable method to AIC and BIC estimates (Harris 2014:72). Both the full and the refined models performed well, but the refined model performed marginally better. The case selection of the next chapter, Chapter 6: Case Studies, builds on the refined model.

The final model confirms the picture that parties respond to the existence of coordination problems in the constituencies. According to the *H1a* hypothesis, the more constituencies the parties share, i.e. the greater the overlap between them, the greater their scope to reduce their internal competition, and thus, presumably, the greater their incentive to form a pre-electoral coalition. The analysis confirms that more two parties have experienced splitting votes between them in the previous election, the more likely they are to coordinate, though the effect size is small. In terms of the effect of excessive fragmentation constituencies, the analysis supports hypothesis *H1b* in that highly crowded constituencies seem to depress the number pre-electoral coalitions. With regards to the legislature-oriented proposition, we observe that the two network dynamics, leadership (*H3b*) and shared partners (*H3c*) have a strong effect on the formation of pre-electoral coalitions in the Lok Sabha elections. In contrast, the more traditional measure of how parties leverage their resources, namely their joint size in terms of national vote share (*H3a*), is only marginally significant. Together, this supports the notion that parties do employ pre-electoral coalitions in order to rally resources directly as well as indirectly.

With regards to the regional proposition, in contrast to the expectations of hypothesis *H4a*, the more home state support a party could command in the elections (measured by its Vidhan Sabha vote share in its home state), the less likely it was to join pre-electoral coalitions in the Lok Sabha elections. This result could reflect a 'small pond, big fish' dynamic parties' dynamic, whereby dominant local parties do not necessarily perceive a need to seek pre-electoral partners or achieve national influence. This idea is supported by the rhetoric we observe from the regional parties during elections. (For example, ahead of the 2004 Lok Sabha election, a spokesperson for the nationally small, but regionally dominant Sikkim Democratic Front, pointed out that while "BJP had wanted a tie-up the party has no following [in Sikkim]. How can we compromise with a weak party?" (Dam 2004).) Finally, the final model supports the two remaining hypotheses of the proposition relating the parties' recent electoral experiences. First, somewhat weakly, there's a negative correlation between the party's ratio of winning candidates and its propensity to enter pre-electoral coalitions, indicating that parties coming out of bruising recent electoral experience are more willing to coordinate with other parties (*H4a*). Second, more

strongly, parties who were previously allied with each other, are more likely to enter a pre-electoral coalition with each other again (*H4b*).

Table 5.6. reports the odds ratios of the parameters of the final model. The odds ratios indicate the impact of that a change in one of the predictors has on the likelihood of a pre-electoral coalition, with all other properties of the network held constant. If the odds ratio is above 1, the likelihood increases; if below, it decreases. An odds ratio of 1 indicates that a one-unit change in the predictor has no effect of the likelihood of a pre-electoral coalition. I also report the lower and upper reach of the 95% odds ratio confidence intervals. If the confidence intervals encompass 1, the relationship is insignificant. All predictors in the final model were significant; though some of them only barely.

PREDICTOR	LOWER	ODDS RATIO	UPPER
Constituency overlap	1.0033	1.008	1.0126
Constituency crowdedness	0.6901	0.8109	0.9529
National vote share	1.011	1.1282	1.259
Leadership	5.3149	8.9398	15.0372
Shared partners	6.2959	8.3278	11.0154
Previous party performance	0.9946	0.9971	0.9997
Previous allies	5.4134	7.0433	9.1641

TABLE 5.6. Odds ratios and confidence intervals for the predictors of the final model.

Table 5.6. underlines the picture that there is a large difference between the impact of the predictors for constituency overlap, constituency crowdedness, national vote share, and previous party performance, on one hand; and leadership, shared partners, and previous allies, on the other. The effect sizes of the former set are significant but appear relatively small. However, part of this is related to the size of the incremental change of one unit. For example, if electoral competition intensifies so that the effective number of parties on average increases by one, the effect is to decrease the likelihood of pre-electoral coalitions by a factor of 0.8. Likewise, though effect of a one-unit increase in two parties' constituency overlap is only to increase the likelihood of them forming a pre-electoral coalition by a factor of 1.008, this miniscule effect should be seen in the context of the

one-unit increase corresponding to a 1 percentage point increase in the percent of constituencies where two parties both finished in the top 4 out of the total number of shared constituencies.

In contrast, the effects of the second group are more palpable. Due to the geometrically weighted nature of the network terms, leadership and shared partners, we cannot directly conclude that the addition of one extra pre-electoral coalition partner to a party/one extra shared partner to the dyad makes the likelihood of another pre-electoral coalition by respectively 8.9 or 8.3 times as likely (since further additions get counted less each time). However, the implication that these endogenous predictors have a considerable impact on the formation of pre-electoral coalition is clear. Parties do keep track and respond to the pre-electoral agreements that take place around them. The impact of previously entered pre-electoral coalitions is more easily understood: if a pair of parties were allies in the last Lok Sabha, then they are 7 times more likely to form a pre-electoral coalition in the present Lok Sabha election.

5.5. Model performance

Before we can make the assumptions that the inferences from the model are valid, we need to ensure that the model is correctly specified. I do so by examining the MCMC diagnostic plots based on the final, refined model[12]. The diagnostics plots shown over the following pages consist of two types. The left-hand side plots indicate how well the chain is 'mixing', i.e. whether or not the distribution is stable. For a well-performing analysis, we want to see that the sample statistics vary randomly around the observed values at each step. Graphically, this should show up as dense 'caterpillars' centred on 0 (y-axis), which represents the value of the statistic in the observed networks. There should not be an upwards or downwards trend, which would indicate that the estimation process has yet to reach a stable distribution. The right-hand side plots show the same information but viewed 'from the side' with the curve indicating the differences between the observed

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[12] As in the previous iterations, this model was run with a sample size of 10,000 simulated networks with an MCMC interval of 2,000. In its final form, I increased the burn-in from 32,000 to 1,000,000 to give the algorithm more time to settle.

value and the simulated values of the sample statistics. The curve should centred on 0 (now on the x-axis, indicating no difference between observed and simulated values), and have an approximately bell-shaped distribution. The curve does not have to be smooth; given that some networks have only a small range of observed discrete values, a roughly bell-shaped curve can be uneven without indicating a problem with the fit (Butts & Hunter 2015).

To illustrate, we would *not* want the MCMC diagnostic plots to look like ones in Figure 5.12. which are borrowed from the statnet tutorial material (2016). The left-hand side plots are unevenly distributed with a trend curve that is clearly still travelling; they are matched by a set of right-hand plots where the distributions are skewed and non-normally distributed.
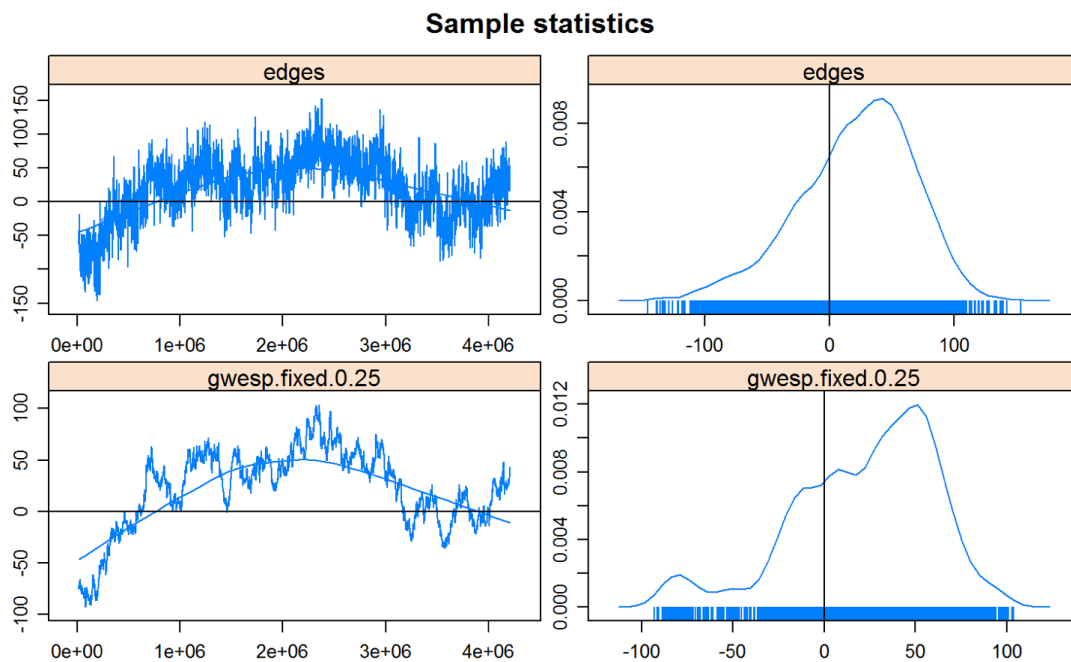

FIGURE 5.12. Example of poorly performing MCMC diagnostics plots. Figure from the Statnet Tutorial 2016.

The actual MCMC plots for the final, refined model can be seen in Figure 5.13. As opposed to the tutorial example, these MCMC diagnostics suggest that the estimation algorithm is mixing well. The left-hand side plots are centred on the midline with no major departures. The trendline is stable and close to 0 (which makes it difficult to see on

the plots). The right-hand side plots are approximately bell-shaped and centred 0, indicating a good fit between the characteristics of the simulated networks that the estimation produced based on our model, and the empirically observed pre-electoral coalition networks.
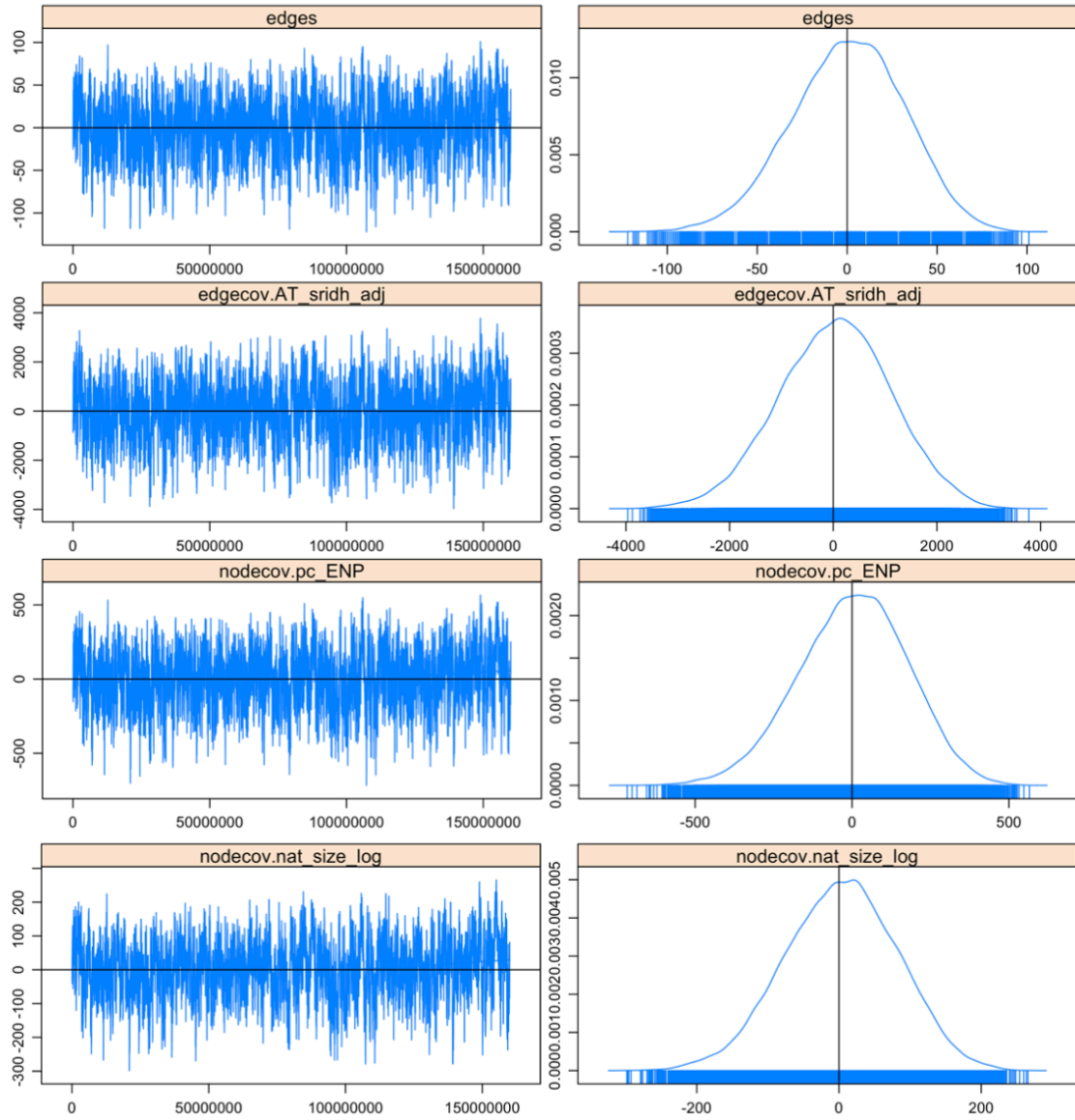

FIGURE 5.13. MCMC diagnostic plots of the key structural terms of the refined network model. On top, baseline propensity (edges); second from the top, constituency overlap (edgecov.AT_sridh_adj); second from the bottom, constituency crowdedness (nodecov.pc_ENP); and at the bottom, national size (nodecov.nat_size_log). The figure continues on the following page.
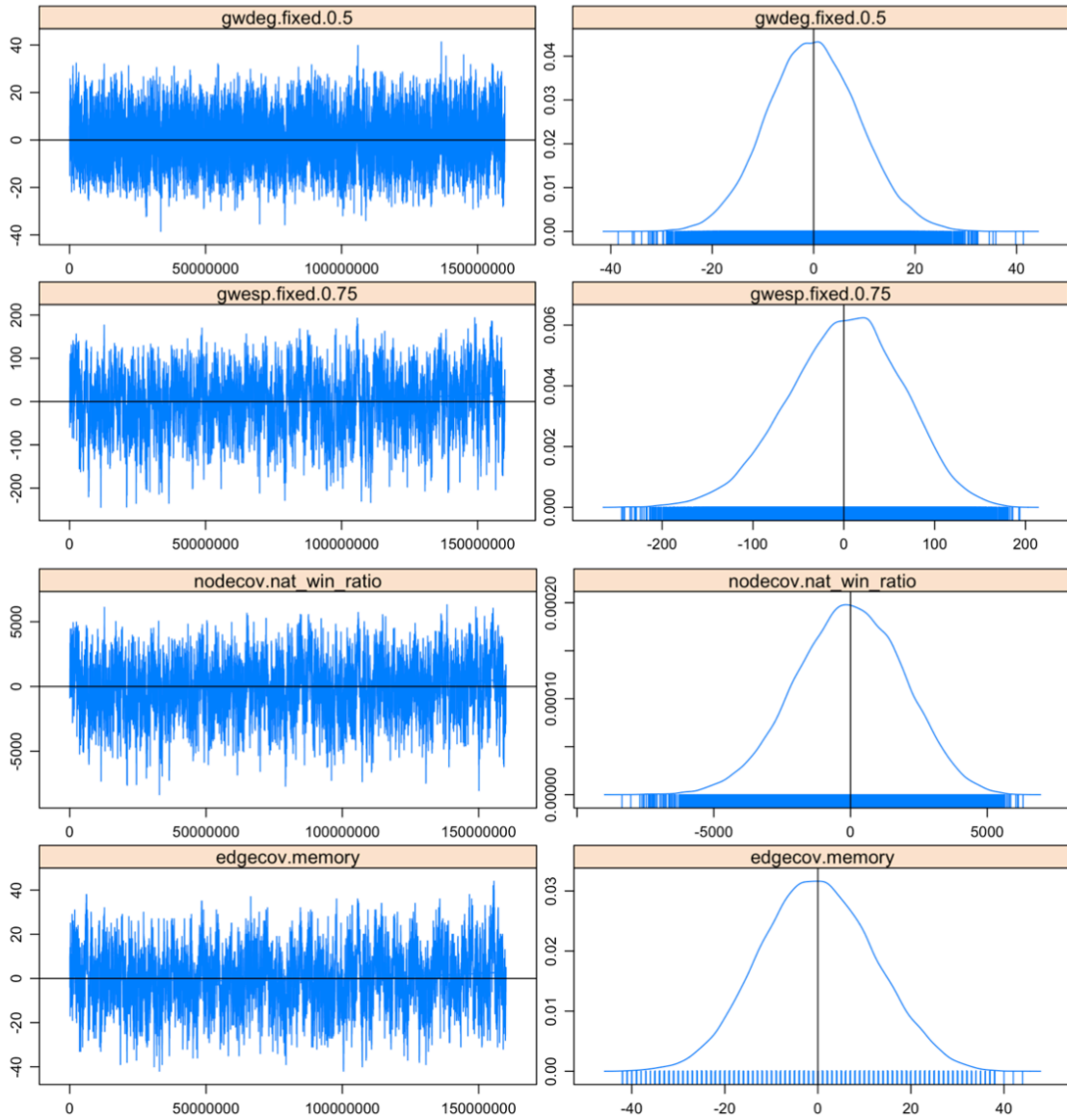
FIGURE 5.13., continued from the previous page. MCMC diagnostic plots of the key structural terms of the refined network model. On top, Popularity (gwdeg.fixed.0.5); second from the top, Shared Partners (gwesp.fixed.075); second from the bottom, Past party performance (nodecov.nat_win_ratio); and at the bottom, Previous allies (edgecov.memory).

The MCMC diagnostic plots indicate that the algorithm performs well, but the plots do not reflect how well the model ultimately fitted the data. For this we must examine the goodness-of-fit. The plots in Figure 5.14. indicate how well the simulations from this model can predict the original data.
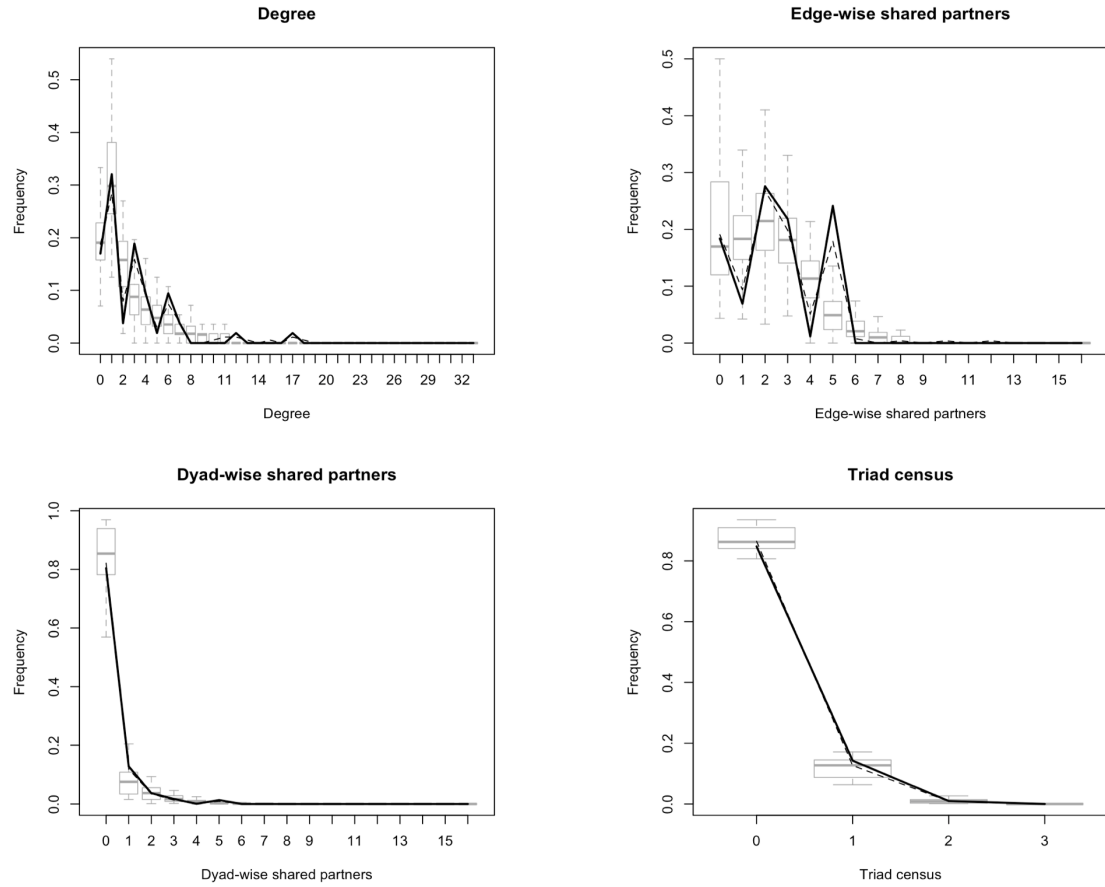
FIGURE 5.14. *Goodness-of-fit for the gwesp, gwdsp, dwdegree, and triad census of the final, reduced model.*

The four goodness-of-fit plots compares the observed distributions, i.e. the counts of the statistics in the empirical networks (black lines), with the corresponding values of the simulated networks (grey boxplots). The y-axis represents the proportion of nodes that are characterised by the feature in question, i.e. from the plot in the upper-left corner we can see that 20% of the nodes (0.2) had zero degrees (they were isolates, i.e. parties with no pre-electoral coalitions). The solid black lines represent the median and dashed black line represent the mean of each statistic (e.g. dyad-wise shared partners). Given that the pre-electoral coalition networks are moderately sized and captured only three times in the temporal analysis (2004, 2009, and 2014), the shape of these black lines are relatively 'spiky'. With a much larger dataset or with larger networks, these lines would be more harmonious. The unevenness of these lines is in other words a feature of the empirical

data. We would not expect a simulation to be able to capture this exact random element, but we would expect the simulations to reflect the implied pattern of this lines.

The comparison between the observed values and the simulated distributions in figure 5.14. suggest that the simulations in general capture the shape of empirical networks well, although they seem to underestimate the distribution spread of each statistic. In all four plots, the simulations correctly identify the most frequent observation (the highest peak of each line). While the simulations and the empirical network counts differ at specific points, there is no systematic over- or underestimation in either of plots (e.g. the smoother simulation estimates expected more nodes with a degree of exactly 2, less nodes with a degree of exactly 3, etc.). In the most 'problematic plot, that of the edge-wise shared partner term in the upper-right corner, the difference between the patterns indicated by the lines and the boxplots suggests that the tendency towards friend-of-my-friend patterns is marginally more pronounced in the empirical networks than in the simulations (as we recall, many of these tight, triangular clusters were the result of the mirror behaviour of the two communist parties)[13]. Jointly, Figure 5.13. and Figure 5.14. shows that the model parameters fit the data well.

The final way I assess the model performance is by examining how well the model is able to distinguish between the pre-electoral coalitions took place and which remained unrealised possibilities. First, I examine two set of graphs that each reflect this aspect, the Receiver Operating Characteristics (ROC) curve and the Precision Recall (PR) curve (Figure 5.15). The ROC curve shows the relationship between the false positive rate (i.e. the number of incorrectly predicted pre-electoral coalitions out of the total number of non-occurring pre-electoral coalitions) and the rate of true positives (i.e. the number of correctly predicted pre-electoral coalitions out of the total number of actually occurring pre-electoral coalitions), across all thresholds of probability (from 0 to 1). A perfectly predictive model would identify all actually occurring pre-electoral coalitions (true

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[13] This suggests that the decay parameter α of the GWESP term in the final model should be set slightly higher than 0.75. At a higher level of α, the models had trouble converging. More importantly, substantively, this difference would not make a difference for the interpretation of this effect.

positives) but never any that did not (false positives), regardless of the probability level. This would create a curve that followed the left-hand side of the plot and continued along its top. In contrast, an indifferent model would create a curve that went diagonally from the lower-left corner to the top-right. In Figure 5.15, these are the three light-grey curves closest to the diagonal (one for each election network, based on the null model). The actual ROC curves are the dark grey curves that run above them, approaching the y-axis and the top of the box. These indicate that while the model is not classifying the pre-electoral coalitions perfectly, they still constitute a clear improvement upon the null model.
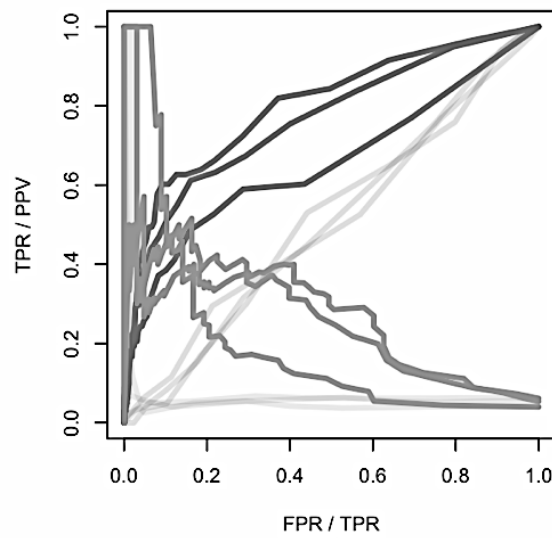

FIGURE 5.15. Receiver operating characteristics (ROC, dark grey diagonal lines ending in upper right corner) and precision recall (PR, medium-grey lines ending in the lower right corner) curves for the final refined model, for each of the three networks. The lighter lines indicate the baseline (null) model for each network (ROC along the diagonal and PR along the left and bottom of the box).

The PR curve shows the trade-off between precision (a low false positive rate) and recall (a low false negative rate) at different thresholds. Compared to the ROC curve, the PR curve can be more accurate in the case of rare event data, that is, datasets where there are relatively few events (<5%) compared to the number of non-events, because it does not take the non-events into account. As with the ROC curve, the larger the area under the curve is, the better the model is performing. The PR curve for an indifferent model (i.e. a model that does not distinguish well) will run in an L-shape along the left y-axis and parallel along the x-axis. In Figure 5.15., this is the shape that the PR curve for the

baseline model (in pale grey) takes. By contrast, the PR curves for the final network models (in mid-grey, closer to the diagonal running from the upper left corner to the lower right corner) show a clear improvement upon the baseline model. Strongly performing predictive models show PR curves that are close to the upper-left-to-lower-right diagonal, ideally approaching the upper right corner. Given this, the network model's PR curves also reveal that the model does not identify the actually occurring pre-electoral coalitions perfectly.

Finally, I explore this predictive aspect of the model's performance by directly examining the model's ability to generate true positives and negatives vs. false positives and negative. The mtergm technique makes it possible to carry out a micro-level interpretation of the calculated probability of each pre-electoral opportunity. Table 5.7 shows how the dyadic pre-electoral opportunities, both those that took place and those that remained hypotheticals, are distributed according to whether the model *predicted* that they would take place. This type of table for describing the performance of a classification model is known as a confusion matric. It should be emphasised again that the purpose of a network model is to account for the formation of the network itself as a single unit, and not to classify the individual connections that make up the network. ERGMs are not a method for predicting outcomes for individual actors in the network (Lusher & Robins 2012:16). With this caveat, the confusion matrix is informative in several ways.

		Predicted state	
		Positive (was predicted)	Negative (was not predicted)
Actual state	Positive (took place)	*True Positive*	*False Negative (type 2 error)*
	Negative (did not take place)	*False Positive (type 1 error)*	*True Negative*

TABLE 5.7. *Confusion matrix of classification outcomes.*

The edge probabilities reflect the 5089 pre-electoral coalition opportunities (because of the different number of parties within each election network, there are 1596 opportunities in 2004, 1540 in 2009, and 1953 in 2014). Out of these pre-electoral coalition opportunities, 259 took place and 4830 did not. Given the dichotomous nature of pre-electoral coalitions in this chapter (i.e., they either happened or they did not), I defined 0.5 as the probability threshold at which model predict that a pre-electoral coalition is likely to take place. At this threshold, the model predicted that 234 pre-electoral coalitions would take place against 4855. When we compare the actual and predicted outcomes, we can fill in the confusion matrix in Table 5.8. and calculate the percentage of accurate estimates.

		Predicted state	
		Positive (was predicted)	Negative (was not predicted)
Actual state	Positive (took place)	*True Positive* 135	*False Negative* 124
	Negative (did not take place)	*False Positive* 99	*True Negative* 4731
		Sensitivity 57.69%	Specificity 97.45%
		Overall accuracy 95.62%	

Table 5.8. True and false positives and negatives from the final model from 5089 dyadic pre-electoral coalition opportunities. In total, out of 5089 opportunities, 259 dyadic alliances were observed (5.362%).

This classification of outcomes yields three indicators of the model's performance; sensitivity, specificity, and overall accuracy. The most demanding indicator is *sensitivity*, which reflect the true positive rate, defined as the percentage of true positives (correctly identified pre-electoral coalitions) out of all pre-electoral coalitions in the dataset. The model's sensitivity, i.e. ability to identify pre-electoral coalitions is 57.69%, which comparable to classification models for party coalitions. The corresponding indicator for negative cases is *specificity*, or the true negative rate, which is defined as the percentage of true negatives out of all non-occurring opportunities. The model specificity is a satisfactory 97.45%. Together, this brings the model's *overall accuracy* rate to 95.62%.

5.6. Network analysis conclusion

This chapter analyses the formation of pre-electoral coalition networks taking into account exogenous as well as endogenous factors. The analysis performed well, as suggested by the diagnostics plots and by the fact that 96% of all cases in the empirical sample were correctly predicted. The analysis in the chapter suggest the following conclusions:

First, parties are incentivised to form pre-electoral coalitions by the prospect of pooling votes to win seats more cost-efficiently. The more a pair of parties found themselves in competition for the same seats in the previous election, the more likely they are to form a pre-electoral coalition. However, if the constituencies are crowded, i.e. if the votes are split between a high number of competitors, parties are less likely to coordinate, presumably because of the difficulty in identifying effective pre-electoral agreements.

Second, in contrast to most traditional studies of coalitions, the size of the parties, measured as their share of the votes nationally in the previous election, has only a small effect on the likelihood of pre-electoral coalitions. In contrast, two alternative measures that capture the network synergies of pre-electoral coalitions turn out to be strongly predictive of coalition formation. First, parties seek out highly connected partners that enables them to leverage the strength of a large number of indirect allies. Second, parties

tend to cluster together in more densely connected groups that allow smaller parties to become jointly relevant as partners in larger pre-electoral coalition structures.

Third, the state-specific context of the parties mattered less than originally theorised, once we took into account the influence of the past. The main effect was manifested through regional vote share, but surprisingly, the higher the vote share a party was able to command in the elections in its home state the less likely it was to join pre-electoral coalitions. This is likely to reflect a 'small pond, big fish' dynamic parties' situation, whereby dominant local parties do not necessarily perceive a need to seek pre-electoral partners or achieve national influence. The similarity between the national and the regional party systems, or the number of days to the next regional elections, did not significantly affect pre-electoral coalition formation.

Fourth, parties were significantly influenced by their most recent electoral experiences. The more parties had seen their candidates defeated in the last election, the more likely they were to enter pre-electoral coalitions. Parties were also more likely to renew their partnerships from the last election, an insight that is often overlooked in accounts of Indian politics, which are coloured by more conspicuous examples of inconstancy.

On an observation-by-observation basis, the micro-level interpretation of the model's output revealed that it had a strong predictive ability. Rather than prediction, however the real purpose of an ERGM analysis is to shed light on the patterns that lead to formation to relationships, such as pre-electoral coalitions. The general findings have been outlined above. The next chapter pursues these findings qualitatively through three case studies, selected off the statistical network results from the final model: a true positive case, a false positive case, and a false negative case.

6. Case studies

This chapter dives into the causal trajectories of pre-electoral coalition formation through three case studies that take us from the heartlands of mainstream politics to the careful balancing of minority interests in far-flung regions. The first case is a presumed 'typical case' according to the findings of the previous chapter, *Chapter 5: Network Analysis*. The other two cases each represent a variation of a 'deviant case'; one in which an expected alliance failed to take place, and on in which an alliance materialised in spite of the model's prediction. This selection of cases is based on the micro-interpretation of edge probabilities from the quantitative inferential network analysis.

Chapter 5: Network Analysis concluded that pre-electoral coalitions in the Indian Lok Sabha elections 2004-2014 were driven by the parties' wish to increase their odds of winning in particular constituencies and by their wish to combine their parliamentary strength afterwards, especially as this related to the way that pre-electoral coalitions connected to allies beyond the pair of parties themselves. The analysis revealed that this embeddedness into the network structure of the party system had a significant impact on the parties' pre-electoral coalition choices in at least two ways: First, we observe that alliances are much more likely to take place around high-degree 'connectors', even once we take into account that these popular parties tend to be larger. The implication is that smaller parties seek out alliances that give them access to a number of indirect partners. Parties in star-shaped alliances such as can leverage their combined strength in the parliament, without having to directly accommodate a large number of allies. The second aspect of network embeddedness relates to triangular 'friend-of-my-friend' alliances, where two parties are more likely to be allied if they share pre-electoral coalition partner. These closely-networked coalition clusters tend to take place in the periphery of the larger star-shaped alliances, as a way for smaller, regional pockets to increase their coalitional relevance to bigger prospective allies.

Contrary to expectations, the analysis found that regional circumstances such as the parties' regional size, the similarity between the regional and the national party systems, and the number of days to the next regional election did not affect pre-electoral coalition formation. The network analysis also showed that parties are likely to be influenced by their recent electoral experiences in two ways: First, parties are more likely to enter pre-electoral coalitions if they underperformed in their last foray into the general election, and second, they are more likely to enter into a pre-electoral coalition with a party that they were also allied with in the previous election. Finally, even though pre-electoral coalitions in India appear to be highly changeable from election to election, the analysis revealed that, on average, parties are more likely to renew an existing pre-electoral coalition than to create one afresh.

This chapter presents three case studies in order to explore these average effects indicated by the network analysis. I suggest there are several advantages to combining insights from quantitative and qualitative research components in this way. First, as Seawright (2016) argues, "adding a case-study component to an integrative multi-method design using regression analysis [or equivalent techniques] for the final causal inference [can] increase our confidence in that causal inference relative to what we can know from a regression alone" (2016:33). This works in two ways, as case studies can both act as a post facto safeguard against misspecification or measurement errors, but also work as a test of whether the hypothesised causal mechanisms actually took place, or whether the correlations uncovered by the model are actually the results of entirely different processes. A strategy focused on this objective would look at cases that were well-predicted by the model.

Second, while we know from examining the model performance in the previous chapter that the model does a satisfactory job of identifying pre-electoral coalitions, there are still cases that the network analysis struggled to classify accurately. Studying cases from this group of 'deviant findings' can potentially enable us to discover explanations that we have either neglected or misinterpreted so far. Even with a range of explanatory factors taken into account, the effects captured by the network model do not exert themselves in the

same way on every alliance opportunity. Case studies help us gauge this heterogeneity[1] - are the cases generally behaving in very similar ways or do we need to disaggregate the sample universe in particular ways? Finally, while the quantitative network analysis uncovered correlation between pre-electoral coalition formation and exogenous variables by examining static snapshots, the case studies enables us to examine causal mechanisms in the context of sequence and the dynamic context of the party system during the election periods. We also know that the parties' behaviour within pre-electoral coalitions are more varied than what the binary definition can capture. The model rests on the assumption that parties are either in or not in a pre-electoral coalition, but in reality, parties' relations do to some extent play out on a scale between competition and coordination, cf. 'friendly fights', instances of the localised competition between pre-electoral coalition partners. Finally, we can attempt to get a better sense of the interdependence between different (seat-seeking or government-seeking) behaviours with pre-electoral coalitions that was flagged in *Chapter 2: Theory*.

The chapter is organised as follows. Section 6.1. introduces the case selection strategy that is developed specifically for this study, building on a micro-interpretation of the network analysis output, and outlines the within-case analytical approach. The following three sections consist of a case study each; a *True Positive* case in section 6.2., a *False Positive* case in section 6.3., and a *False Negative* case in section 6.4. Each of the cases focuses on aspects of the three propositions that formed the basis of the final model, namely the pre-electoral coalition opportunity's scope for vote-to-seat optimisation; the opportunity's scope for seats-to-government optimisation, including the role of extra-dyadic network dynamics; and presence of the previous agreement between the two parties. I discuss the cross-case conclusions in section 6.5. before drawing together the findings of the empirical chapters in section 6.6., the chapter conclusion.

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[1] In a similar context, Sambanis (2004) point out that the "accepted practice in the literature to pool events […] without exploring whether, in fact, they all result from the same causal process" (2004:460). By exploring quantitative findings (into the causes of civil war) through case studies, Sambanis found "substantial unit heterogeneity in the data, as the mechanisms that lead to civil war seem to differ substantially across different sets of countries and types of civil war". We can substitute Sambanis' phenomenon of interest, civil war, for 'pre-electoral coalition' seamlessly and reach the same conclusion.

6.1. Case study design

In order to explore the findings of the last chapter, I employ a purposive, stratified case selection strategy. Fearon & Laitin (2011) argue that, ideally, the case selection based off quantitative studies should be *random* in order to eliminate investigator bias. In order to avoid cherry picking cases in support of the researcher's preferred argument, the researcher should instead submit to writing "narratives for cases that were chosen for him or her by a random number generator" (2011:1174). While effective in eliminating this type of bias, there are a number of reasons why a clear-cut version of Fearon & Laitin's "random narrative" approach would not serve us well within this study. Primarily, random selection runs the risk of selecting cases that are highly atypical of the case universe. This is would likely to lead us to misleading conclusions about the model performance (rendering the multi-method exercise futile). Moreover, a non-representative random selection can encourage us to draw case-specific inferences with deceptively low external validity beyond the case itself. Selecting multiple cases at random does not necessarily address this downside. We could still, by random, select cases are alike in their non-representativeness, or in some other way over-represent particular features of the case universe (for example, we might risk selecting cases from a single region, or, as Sambanis (2004:462) points out, only negative (non-event) cases).

As Rohlfing & Starke point out, hardly any studies actually follow a random case selection procedure (2013:496). However, Fearon & Laitin's (2011) starting point that steps should be taken to minimise selection bias is best heeded. An intermediary technique, suggested by both Fearon & Laitin (2011) and Rohlfing & Starke (2013), that retains some of the rigour of random selection combined with the pragmatic, causal concerns of purposive sampling, is to stratify cases prior to the case selection. In the following sections, I first outline my classification rules for stratifying the case universe based on the quantitative network analysis. I then select three cases from these categories.

6.1.1. Case classifcation

I stratify the case universe of pre-electoral coalition opportunities according to two classification principles, namely condition status and prediction status. The former refers to whether the opportunity actually did turn into a pre-electoral coalition between two parties. Comparing such positive and negative cases circumvents the risk of selecting on the dependent variable. If we observe only successfully negotiated agreements, we are likely to form an incomplete sense of the underlying causal mechanisms. Examining to what extent the same (or indeed, different) conditions exert themselves in the negative cases allows us to distinguish necessary and sufficient conditions with greater clarity[2]. The latter principle, prediction status, refers to whether the preceding quantitative analysis indicated that the pre-electoral coalition was likely to take place. The quantitative model incorporates our theoretical assumptions, so distinguishing between predicted and unpredicted outcomes enables us to explore which parts of our deductive reasoning fell short.

The implied comparisons that these two principles suggest (between events and non-events, and between 'on/off the regression line' cases) are well-known as case study designs. The logic of cross-cutting of these principles is more specific to this study. In combination, the two classification principles can be organised as a 2 by 2 matrix that yields four distinct categories (Table 6.1). These categories correspond to a *True Positive* condition, a *False Positive* condition, a *True Negative* condition, and a *False Negative* condition.

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[2] Looking at both events and non-events is relatively common in qualitative comparative case studies, usually as a result of a most-similar-systems research design (e.g. Woods 2009), where the purpose is to track why different outcomes occur in otherwise similar circumstances. Despite this similarity, the case selection strategy of this study is not equivalent to the most-similar-systems design/Mill's Method of Difference, since the purpose is not to control for background variables by selecting similar cases, but to explore model performance.

		Condition	
		Event	Non-event
Prediction	Predicted	TRUE POSITIVE *Happened* *as expected*	FALSE POSITIVE *Did not happen* *despite being expected* *(type I error)*
	Unpredicted	FALSE NEGATIVE *Happened* *despite not being expected* *(type II error)*	TRUE NEGATIVE *Did not happened* *and was not expected*

Table 6.1. Classification matrix of cases as True Positives, False Positives, True Negatives, and False Negatives.

The first category, the *True Positive* cases, refers to events where the network model correctly identified a pre-electoral coalition. The purpose of examining this type of case is to confirm whether the causal relationships identified by the statistical analysis played out as the theory predicted. Causal models can be "right for the wrong reasons" (Sambanis 2004:460). The association between well-specified causes and effects can potentially turn out to contingent on very different mechanisms and processes than expected. Seemingly 'well-behaved' case studies of predicted, positive events can therefore be useful in to checking the model's premises and to ascertain the existence of the hypothesised causal mechanisms.

The second category, the *False Positive,* consists of the puzzling absences. These are pre-electoral coalitions that our quantitative analysis suggested would happen (i.e. they had a probability above 0.5), but which failed to materialise. The third category, the *False Negative* cases, consists of the 'surprises', that is the pre-electoral coalition opportunities that the theory-informed model did not judge sufficiently likely to produce actual

alliances, but that none the less happened. Both cases are 'off the regression line' or deviant cases, when viewed from the perspective of the theoretically informed model. Examining either of these cases gives us an opportunity to gauge what the first analysis component missed.

The fourth category, the *True Negative*, consists of pre-electoral coalition opportunities that the model accurately assumed where unlikely to take place. Like the False Positive case, the True Negative case is a non-event, but the two types differ considerably in their potential to add to our understanding of pre-electoral coalitions. From a causal inference perspective, the True Negatives are 'nothing to see here' cases with very modest informational value. An illustrative equivalent from the realm of international relations might be a hypothetical dyadic military alliance between Chile and Laos. Exploring a non-existing mechanism in a case where we already know that little interaction between the main actors took place, "tells us nothing about how the mechanism works in cases where it is present" (Beach & Pedersen 2016:840). Mahoney & Goertz suggests that we should only select non-events for case studies "where the outcome of interest is possible" (2004:653). Accordingly, I do not carry out a True Negative case study.

Table 6.2. updates the previous matrix to show how the statistical network models divides the pre-electoral coalition opportunities into four groups of outcomes. The full case universe consists of 5089 dyadic opportunities across the three elections.

		Condition	
		Event (259)	Non-event (4830)
Prediction	Predicted (234)	*135* true positives	*99* false positives
	Unpredicted (4855)	*124* false negatives	*4731* true negatives

Table 6.2. True and false positives and negatives from the final network model. Out of 5089 possible pre-electoral coalition opportunities, 234 dyadic alliances were observed in total (5.5%). The network model was able to predict 96% of all cases and 58% of all positive cases (actually occurring pre-electoral coalitions).

6.1.2. Case selection

Following the four-part classification, my next step is to define a set of criteria to help identify useful cases from the resulting categories. Defining explicit case selection criteria prior to selection has the further advantage of guarding against inadvertent cherry-picking of narratives.

The first criterion is that that each case should be a clear exponent of the stratification logic. This means that the *True Positive* case should be relatively strongly predicted by the model and also not be subject to any ambiguity whether a pre-electoral coalition indeed took place. Likewise, in order for the *False Positive* case to be able to challenge the model inferences, it should be strongly predicted but also undeniably not have taken place. In reverse, *the False Negative* should be deemed very unlikely to have taken place by the model, but yet unambiguously have taken place. For any of the cases, a borderline classification

on either the condition or the prediction scale would limit its the inferential value as a follow-up exploration.

The 'clear exponent' criterion reduced the number of relevant cases in each category. At the point, I followed Fearon & Laitin's (2011) original suggestion to choose 'random narratives', using a random sample generator to suggest a case from each category. However, at this point I considered one further criterion concerning the substantive representativeness of the cases within their category to guide whether a case should be discarded.

My second criterion states that the cases should represent the general character of their respective categories. There is no guarantee that cases within a particular category resemble each other, but to the extent there are similarities, the chosen case should be broadly typical this subset of cases in a meaningful way. None of the three randomly selected cases were discarded, but the way in which the representation criterion was applied is discussed in the presentation if the cases below. (I also discuss what we can learn from the general population within each category in greater detail in each of the case study sections later in this chapter.) Table 6.3. summarises the case classification and the selection outcomes.

TYPE	PREDICTED	EVENT	CASE
True Positive	yes	yes	INC-NCP 2004
False Positive	yes	no	AITC-INPT 2009
False Negative	no	yes	BJP-LJP 2014
True Negative	no	no	*(not analysed)*

Table 6.3. The case selection strategy according to classification into prediction and event status with the final choices.

The *True Positive* case selected is the pre-electoral coalition opportunity between Indian National Congress (INC) and the Nationalist Congress Party (NCP) in the 2004 Lok Sabha election. This case study is described in part 6.2 of this chapter. The pre-electoral

coalition that took place here is well-described and can be considered a central and uncontroversial example of a pre-electoral partnership. The statistical network analysis estimated this case as having a 71% likelihood of taking place.

For both of the deviant cases, the *False Positive* and the *False Negative* cases, I select pre-electoral opportunities whose condition is unequivocally puzzling from the perspective of statistical analysis, i.e. a highly predicted non-event and a very lowly predicted event. As with the *True Positive* case I took steps to ensure that the cases were substantially similar to the majority of cases in their respective categories.

The *False Positive* case selected is the pre-electoral coalition opportunity between the All-Indian Trinamool Congress (AITC) and the Indigenous National Party of Twipra (INPT) in the 2009 Lok Sabha election. This case study constitutes part 6.3. of this chapter. The statistical model predicted the likelihood of this pre-electoral coalition happening to be 95%, however no such partnership took place.

The chosen *False Negative* case is the pre-electoral coalition opportunity between Bharatiya Janata Party (BJP) and the Lok Janshakti Party (LJP) in 2014. This case study makes up part 6.4. of this chapter. According to the statistical network analysis, this case only had a likelihood of less than 0.001% (0.00878933) of taking place. Yet this partnership was formed and explicitly acknowledged by both parties.

With regards to the fourth and final category, the *True Negatives* constitute by far the largest group of cases. This is in line with what we can expect of a well-performing analysis of a rare events phenomenon. The true negatives are cases where no pre-electoral coalition took place and where the model correctly predicted that this was the case. I suggested above that this category should be least informative, consisting of non-events that are both theoretically and substantively improbable. Examining this category, I confirmed that dyads in this group had little incentive or opportunity to interact, and indeed were not obvious candidates for a mutual pre-electoral coalition.

Finally, I considered two subsidiary points to confirm the joint selection of the three cases: The first consideration concerned the availability and richness of data for each case. Given the extensive data collection that was required to verify the coding of each potential PEC opportunity in the quantitative dataset (see *Chapter 4: Empirical Strategy*), I had sufficient information to assess the basic features of each case, but there was a possibility that individual cases might not be sufficiently documented to construct a more detailed sequence of events. While one of the original three chosen cases, the False Positive case AITC-INPT 2009, turned out to be less well-documented than the other two, I found that I did not need to discard any cases due to insufficient data.

A second consideration relates to the overall variation between the three cases. While purpose of this thesis is not to present an account of all pre-electoral coalitions that formed between 2004 and 2014, I have aimed to present cases that reflect the spread of practises and actors that the dataset contains. To this end, I avoided to include the same party more than once (the random generator did not include the same party in the dyads more than once, however). The three chosen dyads comprise of a mix of national, regional, and sub-regional parties. Finally, I have selected cases that span the full investigation period, one for each election. In the analyses that follows, I have allowed the chronological order of three elections to determine the order the cases appear.

6.2. The predicted pre-electoral coalition (true positive case)

The True Positive case refers to a case where the network model correctly identified a pre-electoral coalition that took place. The purpose of studying this case is to confirm whether the causal relationships that the network model identified as typical indeed took place as hypothesised.

The chosen case is the pre-electoral coalition opportunity between the Congress Party (Indian National Congress, INC) and the Nationalist Congress Party (NCP) in the run-up to the 2004 Lok Sabha. Following some negotiation, this opportunity was solidified into a pre-electoral coalition that turned out to be a lasting partnership in the subsequent decade. The 2004 INC-NCP pre-electoral coalition embodies the causal relationships suggested by the model in in multiple ways. In the following I discuss the pair's constituency-oriented and legislative incentives, including their respective network embeddedness, and their recent shared history, prior to the 2004 Lok Sabha election.
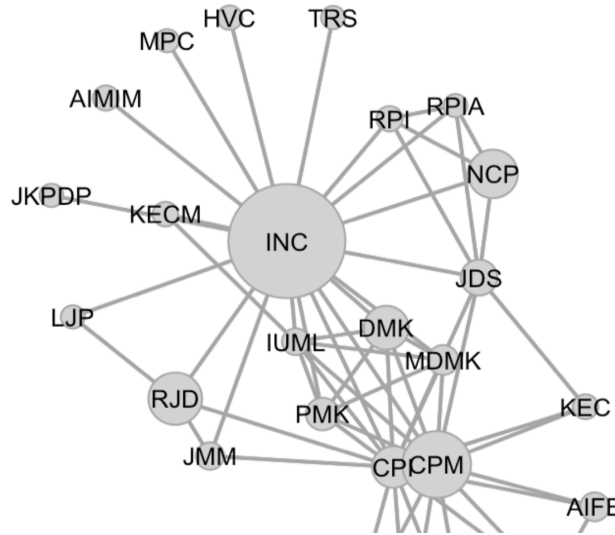

FIGURE 6.1. *The well-explained pre-electoral coalition between INC and NCP (on the left-hand side of the graph) in 2004, and the two parties' respective pre-electoral coalitions with other parties (excerpt of Figure 5.4.).*

CONSTITUENCY COMPETION ASPECTS OF THE TRUE POSITIVE CASE

A comparison of the patterns of competitive overlaps between INC and NCP before and after entering the pre-electoral agreement, clearly shows that the two parties stood to gain a clear advantage from agreeing to a seat-sharing deal. The ECI data shows that, in 1999, candidates from INC and NCP competed against each other in 111 constituencies, where they both finished in among the first four parties. In the 2004 Lok Sabha election, due to the two parties' decision to coordinate seat-sharing, this number was reduced to a mere 10 constituencies[3].

If we examine the contemporary sources, it is readily apparent that both parties were keenly aware of negative impact of splitting votes between them, and the potential to address this through votes-to-seats coordination. NCP had been founded as a splinter-party from INC prior to the 1999 election. The mutual fallout of the two parties' competition in 1999 was evident to contemporary observers. A competitor, the Communist Party of India (Marxist) (CPM) assessed that the exit of Sharad Pawar and to other IND leaders to form NCP "changed the entire electoral picture at one stroke", as at precisely that time, the "stage was set for an even more decisive sweep by the Congress, both in parliament and [in the Maharashtra] assembly. The INC and the NCP fought bitterly against each other in all seats. INC-NCP fell sharply from the 40-plus Lok Sabha seats that they might have won had they been united, to a paltry 16 [INC winning 10, NCP 6]. This disastrous performance was in spite of the INC-NCP together garnering over 51 per cent of the vote!" (Communist Party of India (Marxist) 1999).

LEGISLATIVE COMPETITION ASPECTS OF THE TRUE POSITIVE CASE

In terms of legislative outlook, INC, as the former dominant party of India and by 2004 one of two large national parties, was a credible future formateur in a government formation situation. By 2004, NCP had established itself amongst the class of medium-sized parties, having secured a respectable 2.27% of the votes in its first Lok Sabha

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[3] In these 10 constituencies, NCP and INC candidates continued to fight against each other for election, a practise known as 'friendly fights'. In one of these constituencies, a seat-sharing deal between the two parties could conceivably have secured a victory for a coalition candidate. In Salumber in Rajasthan, the INC candidate was defeated by a margin of 24,774 votes. The NCP candidate received 25,351 votes.

election in 1999. While slightly less than a tenth of the INC vote share in 1999, this still had given NCP eight seats in a parliamentary context where the outgoing BJP government had fallen by a single vote.

In terms of indirect partnerships, both INC and NCP were deeply embedded in coalitions within the party system, as shown in Figure 6.1. Both parties exhibited coalition leadership in forging ties to several coalition partners each, and the parties also came share many allies. In the 1999 election, NCP had been active in several pre-electoral coalition formations, especially in terms of its attempts to cobble together Maharashtra-based parties as the Progressive Democratic Front (PDF), but also via its involvement in the loose national grouping referred to as the Third Front. In the 2004 election, NCP continued to take a leadership position in the formation of pre-electoral coalitions. The leadership dynamic was amplified by the coalition-willingness at the top of the parties. Sharad Pawar stand out as high connector even before emerging as the leader of a separate party[4]. In 1998, Pawar had engineered several of INC's electoral alliances, andeven as he and two other leaders were preparing to split from INC in 1999, Pawar was put in charge of reaching out to potential allies (Kidway 2011)[5].

Pawar's personal willingness to pursue cooperation was matched by his INC counterpart, Sonia Gandhi. Sonia Gandhi's role in facilitating the implementation of this reorientation is evident from contemporary accounts. From 2003 onwards, the contours of Gandhi's 'dinner diplomacy', reaching out to leaders and potential allies and gathering in social contexts, emerges as strong factor in INC's relations to other parties. The leadership

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[4] In this respect, fellow NCP co-founders PA Sangma emerges from the accounts as a similar high connector. Sangma switched party allegiance several time, but whichever party Sangma is a member of sees a high rate of new pre-electoral alliances. In contrast, BSP leader Mayawati is notoriously wary of pre-electoral coalitions. Despite BSP being one of the parties with the most to reap from pre-electoral coordination, based on an analysis of the electoral data, BSP turned down most opportunities to coordinate in the decade between 2004 and 2014. Though difficult to integrate into a statistical analysis, the leader-centric aspect does seem to influence the parties' propensity to enter pre-electoral coalitions.

[5] "A few days before taking on Sonia on the foreigner issue [on 15 May 1999], Pawar was given the key responsibility of acquiring signatures from probable allies soon after the fall of the Vajpayee government. […] Pawar was also entrusted with the crucial job of stitching up alliances in other states." (Kidwai 2011:105)

period of Sonia Gandhi, which began in 1997, corresponds with a period of significant reorientation in the party's attitude to electoral cooperation. In 1998, INC had adopted the so-called Panchmarhi resolution where by it staunchly rejected the notion of overarching coalitions and as late as the run-up to the 1999 election, the official position of party was there should be no coalition government after the election (Ramakrishnan 1999). This position however did leave space for what the INC referred to as "local understandings", i.e. ad hoc, regionally circumscribed seat-sharing agreements that did not commit INC post-electorally. However, as INC's national rival BJP pursued a successful strategy of alliances that also had post-electoral implications by 2004, was INC leadership coming around to the idea of coalition politics as the new mode of party politics. The pre-electoral coalitions that INC formed in 2004, and of which NCP took part, was post-electorally confirmed as the United Progressive Alliance, as a direct countermeasure to the BJP-led National Democratic Alliance, NDA.

PAST PATTERNS OF THE TRUE POSITIVE CASE

While the network analysis indicated that the existence of a previous pre-electoral coalition makes a repletion more likely, there was no pre-electoral coalition between INC and NCP in the previous Lok Sabha election in 1999. Rather, the two parties were explicitly at odds in 1999, given NCP status a recent of-shoot of INC. However, the impact of the 2004 alliance contributes to raising the probability of pre-electoral coalition that took place between INC and NCP in 2009 (and again in 2014) from the 2004 level of 0.7 to close 1 (i.e. highly probable of taking place).

While the INC-NCP pre-electoral coalition was new in the sense that the parties did not have an alliance in the previous Lok Sabha election, the two parties had built towards a gradual understanding in the years since 1999. Notably, the negotiations to form a state-level coalition government in Maharashtra, began immediately after the confrontational 1999 election (the Maharashtra Vidhan Sabha elections were held concurrently with the Lok Sabha election in 1999). In 2002, another state-level coalition government was formed in Manipur, with INC as the leader and NCP as a junior member. The two parties had attempted to form a pre-electoral coalition in the 2002 Goa Vidhan Sabha elections,

but the parties fell out over the division of seats. INC, winning 16 out of 40 seats, saw both candidates and voters defect to NCP, who despite this boost won only a single seat. According to contemporary accounts, it was assumed that an INC-NCP pre-electoral coalition could prevented the victory by a rival coalition between BJP and two local parties, by cutting into BJP's tally by at least four seats (Sharma 2002). The combined experiences of these state-level experiments, some of which succeeded and some of which failed, demonstrated that INC and NCP had much to gain from cooperating, on the condition that they both were able to make compromises.

DISCUSSION OF THE TRUE POSITIVE CASE

The strength of the incentives motivating the INC-NCP pre-electoral coalition in 2004 are emphasised by the existence of a personal unease between the two protagonists, which is likely to have created an opposite impetus. Pawar left INC in 1999 specifically due to his dissatisfaction with Sonia Gandhi's leadership position. In a memoir published in 2017, former Indian president Pranab Mukherjee describes how Pawar, as the leader of opposition in the Lok Sabha, expected INC to pick him rather Sonia Gandhi as party president. Mukherjee suggest that resulting disenchantment triggered Pawar's decision to attack over Sonia Gandhi's foreign roots in May 1999 and eventual party exit (Mukherjee 2017)[6]. During the 1999 election, Sonia Gandhi's foreign birth was a key point of contention, and from the contemporary sources we can see how NCP used the issue as a point of differentiation between itself and the party from which it had recently separated.

Several accounts remark on the lack of personal chemistry between the two leaders in their meetings. While still in the same party, "Pawar and Sonia Gandhi never seemed to get along with each other. She preferred to keep a distance, keeping in mind [her late husband's] opinion that Pawar was a good leader but not one to be trusted" (Kidwai 2011:105). For his part, Pawar "admitted that he was never comfortable with her. Their conversations never lasted long and even that short duration was punctuated by long

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[6] Mukherjee cannot be assumed to be an entirely impartial observer, as he was himself a high-ranking INC leader who chose to stay in INC under Sonia Gandhi, and who was personally involved the 2004 pre-electoral negotiations between NCP and INC. However, Mukherjee's account is supported by the evidence of contemporary reporting.

pauses." (Kidwai 2011:65). The anti-Sonia rhetoric was such an ingrained part of Pawar's public communication, that he is frequently described as "staunchly anti-Sonia" as late as 26 January 2004, a time where the two party leaders met several times in person to finalise their pre-electoral agreement (India Today 2004). The expediency of the upcoming election, required the parties to put their contentious past behind them Following a mid -January meeting, Pawar was reported addressed this issues thus: ""We are not raising this particular subject [of Sonia Gandhi's foreign birth] at this juncture," the NCP chief said adding, "For any political party there are a number of issues. But when you have to sit together, you have to keep certain issues aside."" (Sahay 2004)[7].

On notable feature is that the formation of the pre-electoral coalition between INC and NCP happened gradually in distinct steps. Following the first top-level meetings, negotiations intensify in February and March. One part of the difficulty was that NCP wished a "total package" i.e. seat-sharing deals in multiple states including West Bengal, Gujarat, Madhya Pradesh, Manipur, Goa, and Rajasthan (Tribune News Service 2004). In order to manage the complex negotiations, the specifics of the seat-sharing coordination wee delegated to meetings between state-level branch leaders. The first concrete announcement took place on 13 February, where local leaders announced that a deal between INC and NCP for Goa's two constituencies (PTI 2004). Only months later, close before the election, were the parties able to finalise the details of the seat-sharing agreement, eventually leaving seven constituencies open to 'friendly fights' between the candidates from both parties.

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[7] The departure of one of NCP's three co-founders PA Sangma during this period removed a further barrier to the partnership. Sangma shared Pawar's objections to Sonia Gandhi's leadership but in contrast to Pawar Sangma maintained his resistance to potential INC alliance. The timing of Sangma's exit was concurrent with the gradual formations of the INC-NPC pre-electoral coalition. Sangma has a 'final consultation' with NCP leadership on 19 January and has split by the end of the month, as evidence by the fact that the Pawar-led NCP and Sangma's new faction are both briefly lodging claims to NCP's election symbol, the clock, in February 2004. During this period, NCP was initially negotiating with both INC and BJP, but by early February 2004 the INC-NCP deal has solidified. By 13 March 2004, Sangma's exit was definite enough that he officially joins another party, the AITC.

In terms of the government formation, the parties long hedged their bets, with Pawar openly declaring himself to be in the running to be prime minister late in April 2004. Later, NCP confirmed its commitment to the parties' joint post-electoral bid for powerl but with the caveat that NCP might prefer to support INC as part of the external legislative coalition. In contrast, INC long hoped for an outright majority (Tribune News Service 2004). Eventually, following the election, INC did successfully take on the role as formateur with the support of its pre-electoral allies including NCP, who were reported with ministerial portfolios to Pawar and his closest associate.

In sum, the analysis of *True Positive* case revealed a case where the party dyad in question had clear constituency- and legislature-based incentives to coordinate. Both parties took on leadership roles in forging pre-electoral coalitions in the 2004 election and were embedded in coordination networks that made their alliance highly likely, from a network theory perspective. The combined strength of these incentives was sufficient to entice the parties to form a pre-electoral coalition that had not previously taken place, even overcoming difficult personal relationships to do so. However, this 'well-behaved' pre-electoral coalition contain graduations. The case study revealed how the agreement was built gradually by rolling out more regionally-specific agreements to coordinate, rather than emerging fully-formed. Despite the incentive to coordinate the vote-to-seats transfer, INC and NCP struggled to agree on the specifics of their very comprehensive seat-sharing agreement and both parties long remained ambiguous about their commitment to coordinate the seats-to-government leverage transfer. The *True Positive* case therefore also offers some degree of resistance to the general narrative.

6.3. The absent pre-electoral coalition (false positive case)

The *False Positive* case refers to a case where the model expected a pre-electoral coalition to occur that did not in fact take place. We also know *False Positive* findings as Type I errors[8]. The puzzle of the *False Positive* case is why this pre-electoral coalition did not come to be despite the theoretically promising circumstances of the opportunity. The purpose of carrying out this case study is therefore to explore what the statistical network analysis incentives overstated or which constraints it missed.

Before looking at the specific case, I examine the *False Positive* category to see if we can draw any conclusion from this group of 'missing' events collectively. Overall, the *False Positive* category is populated by pre-electoral coalition between pairs of relatively small, regional parties that are often indirectly linked by a shared pre-electoral partner. Typically, these dyads were part of a larger network component organised around a central, high-connected party, acting as a hub. Looking at this group of outcomes in isolation suggests that the model perhaps overestimate the likelihood of the shared partner dynamic in encouraging further pre-electoral partnerships. The fact that these cases are categorised as False Positives also highlights the earlier discussion in *Chapter 3: Empirical Strategy*, regarding model choices and coding criteria decisions. With a multilateral coding criterion that emphasised group membership rather than dyadic network alliances, some of False *Positive observations* would have been coded as occurring alliances. However, it is worth remembering the empirical justification for this model choice; despite what either conceptual model might suggest, these pairs of parties were not observed to have any interaction that would have qualified as pre-electoral coordination.

The specific *False Positive* case chosen for a closer examination is the pre-electoral coalition opportunity between the All-India Trinamool Congress Party (AITC) and the Indigenous Nationalist Party of Twipra (INPT) in the 2009 Lok Sabha election[9]. The statistical

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[8] A useful mnemonic to remember Type I and Type II errors by is that, when Peter cried 'Wolf!' the first time, the villagers believed him erroneously (Type I). When Peter cried 'Wolf!' the second time, the villagers did not believe him, also mistakenly (Type II).

[9] 'Twipra' is the spelling preferred by some tribal Tripuri groups for the state officially known as Tripura.

network analysis suggested that this particular alliance would have a very high chance of taking place, 95%. Similar to the majority of cases in the *False Positive* category, these two parties AITC and INPT were indirectly allied by the same high-connecter party, INC, in the 2009 election, as can be seen in Figure 6.2. A pre-electoral coalition between AITC and INPT would also have been a continuation of the two parties' pre-electoral coalition in the previous Lok Sabha election in 2004. According to the statistical network analysis, both the presence of shared ally and a previous alliance are strongly associated with forming a pre-electoral coalition.
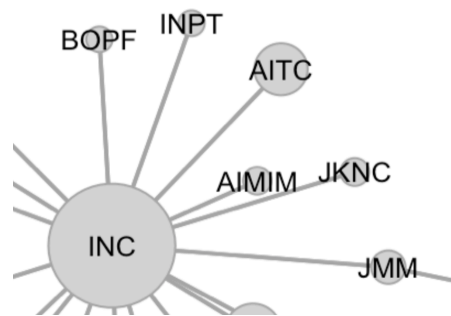

FIGURE 6.2. The AITC-INPT 'missing pre-electoral coalition' in 2009 and the two parties' single shared partner, INC (excerpt from Figure 5.5).

Before looking closer into this partnership, it should be noted that compared to the other parties featured in the three case studies, INPT is a very small party, as one of only three parties in the sample who did not field candidates in the Lok Sabha elections. I included these parties in overall sample of parties for the following reasons: First, the contemporary sources implicated these parties as relevant actors in the pre-electoral coalition negotiations. Second, the reason that these parties do not in the end field candidates for the Lok Sabha often appears to be because of pre-electoral coordination (i.e. they withdraw their candidates as part of seat-sharing agreements). Third, given the very extreme differences in party sizes in the Indian party system, it is important to examine how the pre-electoral coalition incentives plays out in both the presence of the very large parties (such as BJP and INC), the small-to-medium-sized parties (such as AITC, NCP, and LJP), and the very small parties (such as the INPT), even if the latter operates at the

margins of the Lok Sabha elections. Thus, we would be mistaken to dismiss the insights of a case study of the AITC-INPT pre-electoral coalition opportunity as irrelevant.

CONSTITUENCY, LEGISLATIVE AND PAST ASPECTS OF THE FALSE POSITIVE CASE

In contrast to the equivalent sections in the *True Positive* and the *False Negative* case studies, the following section first provides the background information required to understand the role of parties such as the INPT in pre-electoral coalitions. In course of this section, I will still address the three of the main points of enquiry, though they I have not organised the discussion into separate sections.

The main cleavage in Tripura is the division between Bengali and tribal political identities[10]. The population of Tripura is approximately two thirds Bengali, a growing majority due to immigration. The remaining third of the population is tribal, which in turn is divides into 19 major groups, the largest of which is the Tripuris, who constitute 57% of tribal population. The tribal groups "show more cultural similarity than differences" (Ghosh 2013:226), and the distinctions between tribes are only unevenly politicised. The two largest parties in the Tripura, the Communist Party of India (Marxist) (CPM) and INC are mostly Bengali-dominated, but both parties have been able to co-opt tribal movements. Especially the CPM have been successful in accommodating tribal issues within their own discourse and practices of government (Bhattacharyya 2018). In contrast, INC, and other parties that are active in Tripura but not specifically anchored there, tend to cooperate with the tribal movements through inter-party means, including pre-electoral coordination.

The tribal movements have periodically turned towards extremism and violence, but over time different radical leaders have been drafted into more moderate expressions of the tribal cause (Ghosh 2013), including as political organisations that competing in democratic elections. The forerunner of INPT, Tripura Upajati Juba Samiti (TUJS, the

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[10] This account of Tripura and its political landscape relies on Ghosh (2013), Bhattacharyya (2018), and Mitra & Bhattacharyya (2018).

'Tribal Youth Association'), was formed a political party in 1967, and ruled Tripura in coalition with INC between 1988–1993, the only occasion when the communist parties were not in power. TUJS merged with another tribal party, the Indigenous People's Front of Tripura (IFDP) in 2002, leading to the foundation of INPT[11]. INPT operates as a political party in its own right, but from an electoral perspective, it is especially pertinent to recognise how INPT and the other tribal parties operate as channels of tribal vote banks.

The contemporary sources indicate that in the run-up to the 2009 Lok Sabha elections, there were three main tribal parties in the fray, who were being sought after as pre-electoral coalition partners (Sharma 2009). Beyond INPT, this included the Indigenous People's Front of Tripura (IPFT) and the Nationalist Council of Tripura (NCT). IPFT, which represented a more hard-line tribal line calling for a tribal homeland to protect the livelihoods of tribal population from the increasing Bengali majority, eventually chose not to ally with any other parties. NCT, a relatively marginal group that did not have a discernible presence outside of the 2009 election, chose to ally with BJP (who at this point had a very slight presence in Tripura but who in subsequent elections would grow to challenge the dominance of the CPM in the state).

In the spring of 2009, the INPT appears to have offered a relatively promising prospect for non-parties looking to secure tribal votes through a pre-electoral partnership. Because the tribal parties only very intermittently fields candidates in the Lok Sabha constituencies, we can instead look to recent state elections for an indicator of the tribal parties' strength. Though smaller than CPM and INC, the 2008 Tripura Vidhan Sabha elections, INPT emerged as the third largest party by vote share. Many constituencies had been held continuously by TUJS/INPT candidates since the 1980s, including the Vidhan Sabha constituency held by the sitting INPT leader Bijoy Hrangkhawl.

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[11] In the dataset, INPT and TUJS are coded as one continuous entity under the INPT name (see note on acronyms in the beginning of the thesis). Though a splinter-group of IFDP later revived the IFDP name, the interpretation of INPT as the continuation of TUJS is supported by the party's official constitution lodged with the ECI, which states "The INPT is transformation of the TUJS by way of changing nomenclature the reserved symbol the 'TWO LEAVES' allotted to the TUJS by the Election Commission of India, shall continue" [sic] (INPT 2002:21).

Moreover, INPT proved its sustained electoral abilities at the further sub-national levels of electoral competition, such as the tribal councils.

The other party in the pre-electoral coalition opportunity is AITC, a dominant party in much larger, neighbouring state of West Bengal. Nationally, AITC is belongs among the larger of medium-sized parties in the rung below INC and BJP, who have the latent potential to play a pivotal role in the national legislative power balance, given the conditions of fragmentation. In Tripura, however, AITC is a relatively small party. In the 2004 Lok Sabha elections, INPT and AITC had been pre-electoral allies in a triangular coalition with a shared partner, the pan-national party INC. However, in 2009, the existence of this shared partner was the reason that the AITC-INPT pre-electoral coalition did not take place. Even though INC and AITC was committed to a pre-electoral coalition that was announced on 12 March 2009, the two parties resorted to 'friendly fights' in Tripura in 2009. As INPT decided to support the INC candidates in Tripura against AITC, this precluded the AITC-INPT alliance.

In order to explain the non-appearance of the AITC-INPT pre-electoral coalition, we therefore first need to address a related puzzle, namely what led AITC and INC to compete against in each other in the pocket of Tripura while otherwise being pre-electorally allied. Despite the fact that INC had a stronger presence in Tripura than AITC, AITC seems to have expected that the larger party would allocate at least one of Tripura's Lok Sabha constituencies to AITC as part of their agreement. AITC's state president in Tripura, Dulal Das, told the media that "[INC] in Tripura ignored our party [AITC] and that's why with the approval of our party chief Mamata Banerjee we have fielded candidates in the two parliamentary constituencies" (News18, 25 March 2009). The AITC leader is clearly aware of (and concerned about) this competition between the two parties will benefit the rival Left Front, complaining that "Due to [INC's] non-political [i.e., un-cooperative] attitude, the non-Left votes would divide and the ruling Left Front candidates will get the benefit in the polls" (News18, 25 March 2009). When announcing the decision to field candidates against its former ally IND, AITC seems to have supposed that it would be able to secure the support of a tribal party, possibly INPT, stating "We will fight the Congress and the ruling Left Front in Tripura and we are likely

to form an alliance with tribal based parties" (Sharma 2009). However, the AITC was not able to find secure the support of INPT or any of the other tribal organisations; nor was the party able to make a dent in the electoral results in the Tripura constituencies.

The rejection of the AITC-INPT pre-electoral coalition was an unavoidably corollary to INPT's choice of to remain with INC in 2009. The footprint of AITC in Tripura was smaller than INC, who crucially was able to offer INPT support in the upcoming elections to the Tripura Tribal Areas Autonomous District Council (TTAADC) in 2010. The INPT general Secretary Rabindra Debbarma confirmed this aspect of the deal on 17 March 2009, saying "We have discussed with the Congress central leaders our support for their candidates in both the Lok Sabha seats as they will in turn support us in next year's election to the Tripura Tribal Areas Autonomous District Council" (Sharma 2009). Finally, the effect of familiarity from previous partnerships seems to have worked in INC's favour rather than AITC, as continuous cooperation throughout the previous decades had given INPT leader Bijoy Hrangkhawl the opportunity to build a relationship with INC's Tripura branch (Vinayak 2003).

In conclusion, the pre-electoral coalition opportunity between INPT and AITC in 2009 was substantively likely to take place, based on the parties' shared interest in pooling support in the Tripura constituencies, against the formidable force of the CPM. This is further supported by the fact that in 2004 election, under very similar circumstances, AITC and INPT did form a pre-electoral coalition. However, the recurrence of the pre-electoral coalition was prevented by a breakdown in the relationship between AITC and the two parties' joint ally, INC, specifically in the state of Tripura. This localised outbreak of competition forced INPT to pick sides. Here, INC was a more attractive option than AITC, being the stronger party and able to more convincingly offer pay-offs at the sub-national tribal council elections. The case highlights the role of very small parties, who operate just above the point where the boundaries between political parties and various types of grassroots movements become fluid. These parties are attractive for the electoral support that they provide in the votes-to-seats competition in the constituencies. The analysis of the *False Positive* case brought to the fore two important aspects that the theoretical framework had not taken into account: first, how parties trade pay-offs across

national and sub-national levels of elections, and second, how alliances can also serve to rule out other potential pre-electoral coalitions.

6.4. The surprising pre-electoral coalition (false negative case)

The *False Negative* case refers to a situation where a pre-electoral coalition took place but which the statistical network model failed to predict. A false negative finding is in other words a Type II error. The purpose of looking at the *False Negative* case is to examine the causes that motivated the parties to coordinate. What were the incentives that the theoretical framework developed in the early chapters and the statistical analysis in previous chapter either underestimated or missed entirely? Before looking into the specific *False Negative* case of the pre-electoral coalition between the Bharatiya Janata Party (BJP) and the Lok Janshakti Party (LJP) in 2014, I consider what we can learn from the *False Negative* group overall.

The *False Negative* category consists of 124 dyadic pre-electoral coalition opportunities, all of which took place despite the model prediction. This category consists of a relatively varied group of alliances. One characteristic that many of *False Negative* opportunities do have in common, is the pairs of parties tend to have a relatively high degree of competitive electoral overlap in the previous election, i.e. the parties found themselves competing against each other in the top 4 in several constituencies. The high overlaps indicate that the pairs of parties had an incentive to gain significantly from entering seat-sharing agreements, and by extension that that they might have responded to this when forming their pre-electoral coalitions. As we recall, the network analysis indicated that while past constituency overlaps were positively correlated with pre-electoral coalition formation, the effect was relatively small. When examining the patterns of the pre-electoral opportunities with the highest constituency overlaps, including the *False Negative* category, a possible explanation presents itself. It appears that the model struggled with predicting that certain pre-electoral coalition opportunities responded to the constituency incentives, because many similar opportunities (in the *True Negative* category) did not. Many parties who fight each other regularly in elections across several constituencies and as such have

very large competitive overlaps, do so because of ingrained rivalries that are defining of the electoral competition in their shared territories in fundamental ways. The largest constituency overlaps occur between INC and BJP, who to the extent that the Indian political landscape can be said organised around a bipolar axis clearly constitute the two opposing poles. A regional equivalent would be the two major parties of Tamil Nadu, DMK and ADMK, who also have relatively large competitive overlaps. The existence of an incentive to coordinate the vote-to-seats transfers is not persuasive in the case of ingrained rivalries. The examination of the *False Negative* cases suggests that while incentives related to constituency overlaps are not a necessary cause for pre-electoral coordination, they can be a sufficient cause as long as the parties are not defined by their mutual rivalry.

The *False Negative* observation chosen for a closer case study is the 2014 pre-electoral coalition between the Bharatiya Janata Party (BJP) and the Lok Janshakti Party (LJP). The model assessed that this pre-electoral coalition had an exceedingly small chance of occurring, less than 0.01%. Yet, the BJP-LJP deal was not surprising from a substantive perspective, making it a suitable case to explore in order to discover what the quantitative analysis so clearly failed to detect. Figure 6.3. shows the pre-electoral coalition between BJP and LJP (lower right corner) in its network context.
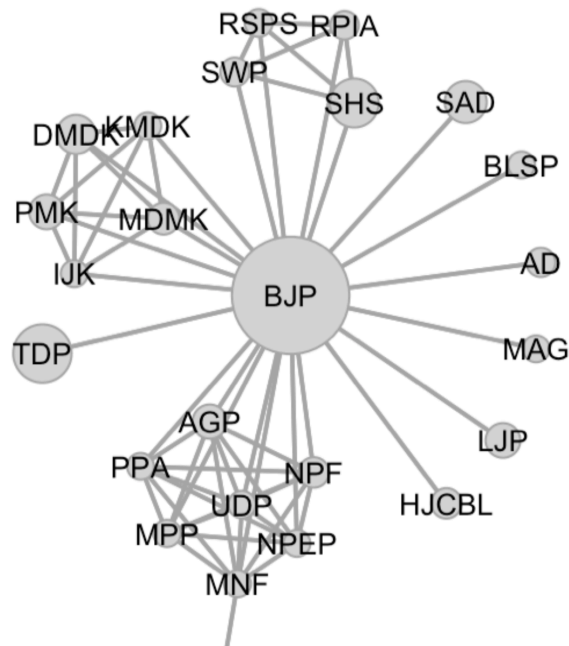
FIGURE 6.3. The 'surprising' pre-electoral coalition between BJP and LJP (lower right corner) in 2014 in the context of BJP's other pre-electoral coalitions (excerpt from Figure 5.6.).

What are the characteristics of this pre-electoral coalition opportunity as measured by the information provided to the statistical model?

CONSTITUENCY COMPETION ASPECTS OF THE FALSE NEGATIVE CASE

While LJP is a relatively small party even in its home state of Bihar, at the time of the 2014 election, the party had demonstrated a solid hold over approximately 7-8% of the Bihar's electorate. This segment consisted primarily of the Dalit community of paswans, of who the party leader Ram Vilas Paswan was a prominent leader. A senior BJP leader in Bihar, speaking on the occasion of the first day of voting in Bihar, pointed out that "these alliances [with very small parties, including LJP] are important. All of these parties have dedicated vote banks in their areas of dominance, and these are votes that these parties can transfer to the BJP" (Mohan 2014). With specific reference to LJP's traditional community of supporters, the BJP leader estimated that the paswan community comprised 50-60,000 voters in a majority of Bihar's 40 Lok Sabha seats, whose votes, the leader argued would "help BJP candidates" (Mohan 2014). The BJP-LJP partnership has

a clear vote-to-seats coordination objective: in 2009, the parties competed in 77 constituencies; in the 2014 election, this was reduced to 0 constituencies. The exact details of the deal were published (and easy to verify in the ECI data): Of the 40 Lok Sabha constituencies in Bihar, BJP allocated eight constituencies to be fought by the LJP candidates. This arrangement appears to be well judged. LJP won seven of the eight seats, only finishing second in one constituency.

LEGISLATIVE COMPETITION ASPECTS OF THE FALSE NEGATIVE CASE

The pre-electoral coalition between BJP and LJP in 2014 also had a seats-to-government leverage objective. Contemporary polls suggested that BJP was favourite to lead the government formation negotiations after the elections, but only a minority the polls suggested that BJP would be able to do form a government in the absence of further allies (TNN 2014). As can be seen from Figure 6.3., BJP took of a very active leadership role in forging pre-electoral partnerships in 2014, both in terms of reaching out to individual parties and also in terms of building relationship with smaller regional clusters of parties in Maharashtra (with SHS, RPIA and others), in Tamil Nadu (with PMK, DMDK and others) and in the north-eastern states (with AGP, NPF and others).

For LJP, a pre-electoral coalition offered not only a better chance at success in the constituencies but, potentially, given that the partner was a large national party, the chance of accessing ministerial portfolios. LJP had in the past allied with both of the two large national parties, INC and BJP, and Paswan had previously been a government minister. That LJP was interested in entering a pre-electoral coalition in 2014 that would grant it access to ministerial offices once again, is also suggested by the circumstance that LJP was negotiating with INC throughout January 2014. However, the following month LJP pivoted to BJP and a deal was announced on 27 February. It appears different factions within LJP were responsible for negotiating with INC and with BJP. LJP Secretary General Abdul Khalik had negotiated with INC, whereas the BJP deal was promoted by Ram Vilas Paswan's son Chirag, who was a strong advocate of this prospect's post-electoral possibilities (according to journalist Rajdeep Sardesai, Chirag

told his father: "Modi is winning the elections. Let's just join the right side this time." Sardesai 2015)[12].

The government formation window after the 2014 was short and decisive given that BJP had won a majority of the Lok Sabha seats single-handedly. However, LJP was rewarded for its early commitment with a ministerial post to Ram Vilas Paswan, indicating the priority of honouring pre-electoral coalitions.

PAST PATTERNS OF THE FALSE NEGATIVE CASE

The pre-electoral coalition between BJP and LJP was a new occurrence in the 2014 Lok Sabha election. In the previous election in 2009, LJP had found itself in the INC-led United Progressive Alliance camp, in partnership with another Bihar-based party, RJD.

However, LJP had previously been an ally of BJP as part of National Democratic Alliance. Paswan held the post of Minister for Coal and Mines in 2002 when LJP quit the BJP-led government, following the outbreak of inter-communal violence in Gujarat. Paswan blamed then-Gujarat chief minister Narendra Modi for the horrific human, cost demanding Modi's resignation. Twelve years, at the time of 2014 elections, with Modi established as the leader and face of BJP, Paswan had no insurmountable qualms in entering a close partnership. As in the INC-NCP case, the BJP-LJP case suggests that personal issues can eventually be set aside when confronted by the prerogatives of solving electoral coordination problems.

DISCUSSION OF THE FALSE NEGATIVE CASE

The pre-electoral coalition between BJP and LJP in 2014 was tightly coordinated, fully committed by the respective party leaderships, and very clear communicated. Compared to the *True Positive* alliance between INC and NCP in 2004, BJP and LJP finalised their

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[12] Only after the agreement was announced, was a meeting organised between Paswan and the BJP prime ministerial candidate Narendra Modi and BJP party patriarch LK Advani. Paswan and Modi then shares the dais at a Bihar rally on March 3, in what was described as a "Kodak moment" (Bhatt, 5 May 2014).

(admittedly smaller and less complex) deal in as single go that took only weeks to finalise, compared to INC and NCP's protracted negotiations. BJP and LJP were also able to negotiate a full seat-sharing agreement without resorting to 'friendly fights'. The government-seeking commitment, as part of the NDA-front, was clearly acknowledged by both parties. As such, the closer examination did not uncover any ambiguities that could have suggested that the *False Negative* case should be interpreted as a negative (non-occurring) case from a substantive, empirical perspective. Rather, the case very much appears to fit the propositions that were developed deductively.

Another aspect of this uncovered during the closer examination of the case is the suggestion of potential triangular pre-electoral coalition relationship between BJP, LJP and another Bihar-based party, the Rashtriya Lok Samata Party (though informally often referred to with acronym RLSP, in this thesis I rely on the ECI acronym BLSP). In Figure 6.3., the BJP-BLSP pre-electoral coalition can be seen slightly above the BJP-LJP pre-electoral coalition. BLSP and LJP are both supported by (different) backward caste communities in Bihar, and the two parties played similar roles in the BJP electoral strategy in 2014. However, a close examination of the secondary sources shows that LJP and BLSP's pre-electoral coalitions with BJP were parallel but not directly connected at the time of the Lok Sabha election in 2014. The contemporary sources describe BLSP consistently as a BJP ally rather than an ally of both LJP and BJP. Neither BLSP nor LJP acknowledged the other in public statements and the party leaders did not appear together in public events. In contrast, by the time of the 2015 Bihar Vidhan Sabha election, the LJP-BLSP bond had solidified into an explicitly acknowledged mutual coalition. Though this does not change the interpretation of the analysis here, the emergence of a closer network in the vicinity of the BJP-LJP collation underlines another way that the *False Negative* case bears similarity to the 2004 *True Positive* alliance between INC and NCP.

In conclusion, the *False Negative* case exhibits many of the same characteristics as the *True Positive* case, the other empirically observed pre-electoral coalition. Both pre-electoral coalitions were clearly aimed at optimising the outcomes of both the votes-to-seats transfer and the seats-to-government leverage transfer, and both alliances were supported by extra-dyadic network structures.

6.5. Cross-case findings

In this section I will briefly summarise the findings of three case studies and draw attention to some particular points that become apparent when considering the cases together. The analysis of *True Positive* case supported the main arguments of the theoretical framework; more surprisingly, so did the evidence of the *False Negative* case, suggesting that while the overall deductive direction of the thesis is valid, the statistical analysis was not fully able to capture this operationally. The other 'deviant' case, the *False Positive*, highlighted aspects that the theoretical model had not fully anticipated or accentuated, namely the existence of sub-national pay-offs and the potential constraining effects of extra-dyadic alliances.

The first case study looked into a *True Positive*, a pre-electoral coalition that took place and was predicted by the model. This case, the 2004 pre-electoral coalition between the Indian National Congress (INC) and the Nationalist Congress Party (NCP), exemplifies a lot of aspects emphasised by the theoretical framework and the hypotheses. The parties had a clear incentive to pool their votes in order to optimise the number of seats each was able to win, following elections where the absence of coordination had clearly affected both parties negatively. Having made a pre-electoral commitment to seek executive power together, they were also able to make a successful bid to form the government. The analysis also revealed how the INC-NCP partnership between parties was notably entrenched in the party system network structures. Both parties were strongly active in forging pre-electoral coalitions, thereby providing each other with a cast of indirect allies that strengthen their common cause. The parties also came to share several pre-electoral partners. In sum, the *True Positive* case support the findings of the statistical network analysis. The strength of this explanation is further underlined by the fact that the party leaders overcame considerable personal unease in order to form what would become a lasting partnership.

The second case study considered a *False Positive* finding, i.e. a pre-electoral coalition that the model predicted would take place, but which failed to materialise for reasons that it

was possible to detect deductively. This case study examined the 'non-occurrence' of a pre-electoral coalition between the AITC and INPT in the 2009 Lok Sabha election. These two parties had been allied in the 2004 Lok Sabha election, but in 2009 the pre-electoral coalition did not take place, despite very similar initial conditions. The case study analysis revealed that reason for this 'missing pre-electoral coalition' was an unpredicted effect of the complex ways in which parties decide to coordinate during elections. In 2009, AITC and INC had a local 'rift' in their pre-electoral partnership: while they had agreed to divide constituencies between them in most other localities, AITC decided not to withdraw in favour of INC in Tripura (and vice versa). Instead the INC and AITC settled on fighting each other in the Tripura constituencies. This type of pre-electoral inter-coalition competition is common enough in the Indian elections to be widely known as 'friendly fights'. INPT, forced to decide which of its two erstwhile two allies to support, chose to remain with INC ahead of AITC, which was the smaller of the two in Tripura, as well as nationally. Thus, even though the analysis of the previous chapter suggested that having shared partners made a pre-electoral coalition more like likely between two parties, the reason for the non-occurring agreement between AITC and INPT is actually to be found in the fact that both parties were allied with the same party, INC. The *False Positive* case reveals that while the surrounding network structures of a pre-electoral coalition opportunity can incentivise and solidify it into existence, they can also have to opposite effect. Future studies should find look for ways to take both the constraining effects of network structures and the local impact of 'friendly fights' into account.

The final case was the 'surprise appearance' of a *False Negative* pre-electoral coalition. This pair of parties were not predicted by the model to enter an agreement in the election, yet the parties still found sufficient common ground to work together. My examination of the pre-electoral coalition between the BJP and LJP in the 2014 Lok Sabha election showed a pair of parties that had discernible electoral incentives in terms of both votes-to-seats and seats-to-government leverage optimisation. in to their ability to improve their prospects of winning more seats by pooling support in the constituencies through seat-sharing agreements; and to their prospects of securing government power by making early, pre-electoral commitments. These incentives were very similar to the True Positive case, which also united a major national and a smaller and an in this case more clearly

regional party. Overall, the incentives were less pronounced in 2014 BJP-LJP case, which was after all predicted not to take place. This pairing was also less entrenched in the network structures, though the BJP's leadership efforts in forging a high number of pre-electoral coalitions in 2014 clearly added to the party's attractiveness as a pre-electoral coalition opportunity. The *False Negative* findings suggest that while the explanations offered by the general theory are valid, it is difficult to predict at what thresholds parties are persuaded to respond to a pre-electoral coalition opportunity.

Looking across cases, I conclude that the propositions of the model were generally supported. The *Tre Positive* case supported the findings in the previous chapter. The INC-NCP pre-electoral coalition in 2004 was motivated the parties' realisation that they could reap considerable gains by coordinating their pursuit of seats and government power. This ambition was sharpened by the fact that both parties had experienced less than successful performances in the previous election in 1999, in the absence of a pre-electoral agreement. The fact that INC and NCP split the votes to their detriment was apparent to both parties as well as to the competitors. While there was no preceding agreement in 1999, the pre-electoral coalition of 2004 was succeeded renewed agreements in 2009 and 2014. More surprisingly, the pre-electoral coalition in the *False Negative* case was shown to rely on very similar incentives as the *True Positive* case, though this went undetected by the statistical analysis. The evidence of this case supports the overall argument of the first two theoretical propositions, but it also draws into question the precision of the statistical model. Finally, partially diverging from the direction of the overall findings, the *False Positive* case illustrated how political parties can coordinate support in the constituencies to optimise the pursuit of seats at the margins of organised political competition. However, this case also suggested that this study, despite its efforts to include the role of very small parties in Indian electoral politics, was not fully able to capture the incentives and constraints faced by these parties.

Together, the case studies yielded several incidental insights that deserve consideration in future research. First, for both LJP and INPT, the smallest and most regionally limited parties in the case studies, alliance decisions in the Lok Sabha were shaped by the prospects of securing pay-offs in a future regional election, in the case of LJP, from BJP in

the 2015 Bihar; and in the case of INPT, from INC in the 2010 tribal elections in Tripura). This circumstance has been discussed to some extent in previous research (e.g. Kailash 2014; and from a comparativist, government coalition perspective Ştefuriuc 2009), we still need ways of studying these inter-level exchanges within pre-electoral coalitions more systematically. Second, the cases demonstrated how the extra-dyadic network effects in some cases encourage pre-electoral coalition formation (INC-NCP and BJP-LJP) but also some cases discourage pre-electoral coalition formation (AITC-INPT). This point poses a challenge for future inferential network analysis studies of party behaviours. On a related note, within the still emerging study of pre-electoral coordination, the practise of 'agreed competition' within the boundaries of an agreed pre-electoral coalition has gone entirely unexplored, especially from a comparativist perspective. Yet, given how common 'friendly fights' are within the pre-electoral coalitions in the Indian elections, instances of similar intra-coalitional competition are likely to be taking place elsewhere.

6.6. Case studies conclusion

This chapter examined the trajectories of one predicted and two unpredicted pre-electoral coalition outcomes, in order to assess the quantitative network analysis findings in the light of more qualitatively rich case studies. The case studies largely confirmed the direction of the thesis' arguments but also revealed aspects of pre-electoral coalition formation that have gone mostly unexplored so far.

The logic of sequential multi-method research design, such as the one pursued over the past two chapters, inherently suggests that its findings can be explored further in future iterative steps of analysis. The purpose of case studies in a mixed-method research design should not be solely to serve as an assessment of the statistical component. If the case study component reveals new causal mechanisms or in other ways leads us to reassess or add to the deductive logic of the original model, this should encourage us to revise the statistical analysis (Bennett 2002, Lieberman 2005). In this case, it would be worth exploring the alternative network dynamics discovered in the *False Positive* case study. The presence of extra-dyadic relationships (coalition partners beyond the immediate pair of parties) do not

always encourage closer alliances; instead they can also rule out some pre-electoral partnerships. Network analysis tend to focus on how positive connections (in essence, cooperation) encourage further connections, but the analysis here suggest that we should also focus on how negative connections (in essence, competition, even in the limited form of 'friendly fights') can encourage further negative connections.

7. CONCLUSION

In this final chapter, I review the progress of the research, which began with an initial effort to conceptualise and define the often puzzling and sometimes anarchic-looking phenomenon of pre-electoral coalitions in the Indian Lok Sabha elections in recent decades, to its final conclusions and recommendations.

7.1. Summary of research

The research question that motivated this research project was founded in a genuine sense of puzzlement: What shaped the formation of pre-electoral coalitions that we have observed in recent Indian Lok Sabha elections? The explanations I found in the existing literature on party coalitions emphasised precisely calculated size criteria and close ideological compatibility, which were clearly unable to cast sufficient light on the empirical puzzle. Moreover, many of underlying assumptions of these theories, such as the supposition that parties enter strategic partnerships without a consideration of the existence of other alliances, seem to fit poorly with our empirical understanding of these behaviours.

Over the course of the past six chapters, I first set up a theoretical framework in order to understand what pre-electoral coalitions are in a very fundamental sense. Why do they take place and how do they achieve their objectives? Where and when do we observe them? And who are the political actors that bring them into being? In pursuing these answers, I focused on the parties' interlinked pursuits of 1) obtaining legislative seats (from pooling electoral votes) and 2) obtaining influence on government formation (from pooling legislative votes). Each of these pursuits yielded a set of hypotheses that could be tested against the extensive empirical data that I collected from the national and regional

elections in India leading up to 2014. I furthermore developed two more lines of enquiry concerning the role of the parties' regional priorities and their experiences in previous elections. These four propositions and their associated hypotheses are listed in detail at the end of *Chapter 3: Hypotheses*.

To test these hypotheses empirically, I devised a mixed-methods research design. I first provided a general statistical account of the processes leading to the formation of pre-electoral coalitions in Lok Sabha elections 2004, 2009, and 2014. In the quantitative inferential network approach, I was able to find a conceptual model that allowed me to analyse pre-electoral coalitions as relational data, combining the strengths of statistical, simulation-based estimation with social network analysis. The model was able to correctly identify 96% of all pre-electoral coalition opportunities and revealed several substantive insights that I describe below. I then explored the findings qualitatively through case studies, as a further test of the quantitative inferences. The case studies examined a 'well-behaved' *True Positive* case as well two different variations of deviant cases, a *False Positive* case of a 'missing' pre-electoral coalition and a *False Negative* case of a 'surprise' pre-electoral coalition. With this qualitative detail, I was able to better understand both what the statistical model got right and what it did not capture.

Together, the analyses supported the hypothesis that parties are motivated by the prospect of pooling votes to win seats more cost-efficiently. The more intense the competition between a pair of potential allies previously, the more likely they are to agree to coordinate in the present election. However, when the competition in the constituencies become too fragmented, parties struggle to identify optimal coordination opportunities; as a result, they become less likely to enter pre-electoral coalitions.

Parties are also motivated by the prospect of securing a say in the formation of a government in the potentially brief and hectic window in the immediate aftermath of the electoral results. In contrast to traditional approaches to party coalitions, I found that the expected legislative size of the parties has a relatively small effect on their pre-electoral commitments. Rather, parties seem to rely on the ability to count on the presence of other allies, who are connected to either themselves, their prospective partner, or both. These network effects turned out to be strongly predictive of coalition formation. Parties seek

out highly connected partners that enable them to leverage the strength of indirect allies. In addition, pre-electoral allies tend to cluster together in more densely connected groups that allow smaller parties to become jointly relevant as partners in larger pre-electoral coalition structures.

The findings suggest that the state-specific context of the parties matters less than I initially assumed. Neither a party's regional size nor the differences between the states' party systems or electoral cycles appear to have a strong influence on pre-electoral coalition formation. However, the analysis supports the hypothesis that parties are significantly influenced by their recent electoral experiences. Parties who experienced electoral defeats in the previous election are more inclined to form pre-electoral coalitions. They are also more likely to form pre-electoral coalitions with their allies from the previous election. This finding modifies a perception of the Indian parties as relatively opportunistic in their coalition behaviour; rather, the analysis suggests that the parties are more constant than commonly supposed.

7.2. Contributions of the study

Beyond the analytical findings, during the course of the research the thesis has made methodological and substantive contributions in six main areas. First, the thesis has provided the introduction of inferential network analysis, in the shape of ERGM models, to the study of party coordination. The empirical analysis demonstrated that network models not only allow us to make more realistic assumptions about the social processes that generate relational data (such as coalition), but also enables us to produce useful substantive insights.

Second, the thesis proposed a new method for case selection based on quantitative probability estimates. Rather than looking at sets of *either* events/non-events *or* predicted/unpredicted cases, the true/false positive/negative framework showed a way of combining these logics in a stringent manner.

Third, the thesis research sets up a new, coherent dataset of pre-electoral coalitions for the four Lok Sabha elections from 1999-2014, which extends previous efforts substantially. The dataset builds on an extensive database of contemporary sources on pre-electoral negotiations during the period, which has been indexed by search terms. Both the dataset and the secondary source database can facilitate a variety of future research projects.

Fourth, the thesis suggested a unifying framework for understanding the many diverging expressions of inter-party coordination in different electoral contexts. As the study of pre-electoral coalitions develops and matures, this framework offers an explanation for when and why we sometimes reach contradictory conclusions regarding what encourage pre-electoral coordination.

Fifth, the thesis took on the task of explaining a critical but theoretically underexplained case, which has constituted a stubborn puzzle from the perspective of most existing theories of party behaviour. India is an exceptionally strong exponent of pre-electoral coordination; thus, the inclusion of this case in the study of pre-electoral coalitions has been long overdue.

Sixth, and finally, the thesis makes a contribution by explicitly engaging with a range of complex, strategic party behaviours that only come to the fore when party systems are fragmented. As traditional fault lines of political competition shift within European and Anglo-Saxon democracies, thereby challenging our assumptions of 'politics as usual', looking for answers outside of the traditional academic hunting grounds becomes ever more pertinent.

7.3. Implications for future research

Looking beyond the work carried out within this thesis, there are four areas in particular where future research can make vital contributions to our understanding of how and why parties coordinate their electoral strategies:

CONCLUSION

The first point concerns how the voters contribute to pre-electoral coordination. This thesis took a supply-centric, party-oriented approach to the formation of strategic alliances, one that only considered the role that voters play incidentally. Questions such as what happens when voters go along with transferring their support to an ally or whether pre-electoral coalitions can be vote-additive are still ripe for further research, especially in the context of the Indian elections.

The second point concerns the effect of regional politics, which did not emerge as a strong explanatory factor within this research design. However, it is difficult to fully reconcile this finding with the heavily regionalised nature of the Indian party politics. Future research should seek to explore this aspect of pre-electoral coalitions through the development of new causal theories and other means of operationalisation.

The third point is motivated by the finding in this thesis that the parties' pre-electoral coalition networks sometimes appear to have a suppressing effect on the formation of new alliances. Future studies should explore the possibility of incorporating networks of competition as well as network of coordination into the analysis of party coalition behaviour.

As the final point of the thesis, I suggest the methods and substantive take-aways developed as part of this research can be fruitfully applied to pre-electoral coalitions elsewhere. Such an extension can augment our understanding of the role of pre-electoral coalitions in shaping political competition across a variety of contexts.

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