

Ethnic inequality and the ethnification of political parties: Evidence from India

John D. Huber*
Pavithra Suryanarayan^{†‡}

June 22, 2015

Abstract

Why does ethnicity become a salient element of electoral politics in some places but not others? We argue that in majoritarian systems, ethnic identity is most salient to electoral behavior when there are high levels of inequality between ethnic groups. We test this argument in the Indian states and find that state-level party system ethnification is strongly correlated with economic inequality between groups, a pattern we also find in cross-national data. We also show that in India, when income differences between groups increase, the groups tend to support different parties. The analysis therefore reveals a strong class component to ethnic politics in India, and it underlines the importance of disentangling the effect of group identity from that of economic well-being when studying identity politics.

*Professor, Department of Political Science, Columbia University, 7th Floor IAB, West 118th street, (212) 854-3646, jdh39@columbia.edu.

[†]Ph.D student, Department of Political Science, Columbia University, 7th Floor IAB, West 118th street, (212) 854-3646, ps2550@columbia.edu.

[‡]We thank Kanchan Chandra, Francesca Refsum Jensenius, Kimuli Kasara, Allison Patch, Joel Simmons, Neelanjan Sircar, Milan Vaishnav, seminar participants at Columbia University, Paris School of Economics, the University of Maryland and participants at “the Ethnic Politics and Electoral Democracy” conference (Zurich 2012) for their comments on earlier drafts of this paper. We thank the Lokniti team at the Center for the Study of Developing Societies, New Delhi for making the Indian National Election Studies data available to us.

1 Introduction

In ethnically divided democratic systems, ethnic identity can play an important role in vote choice. The degree to which this occurs, however, varies considerably across democracies, with some party systems characterized by political parties with clear ties to voters from particular ethnic groups and others by parties that lack any clear ethnic base. Why does ethnicity become salient to explaining voting behavior in some systems but not others?

Most existing research on ethnic politics, particularly in the developing world, pays little attention to the differences in economic endowments of groups, focusing instead on the intrinsic importance of ethnic categories.¹ Ethnicity provides a marker that elites can easily use to target voters and form electoral coalitions.² Electoral politics is therefore akin to an “ethnic head count” where the contest is to form a “minimum winning coalition.” Parties seek to represent winning coalitions of groups by strategically employing appeals to particular ethnic identities, and voters in turn strategically invoke the identities that are most advantageous to them in efforts to become part of a winning coalition. The stakes of such ethnic competition are high, as the parties that win power can distribute government resources to the groups that support them. From this perspective, the specific attributes of group members are secondary. Ethnic identity creates a largely exogenous marker that simplifies targeting, coalition building, and exclusion from government resources. It does not matter if group members have a particular set of policy preferences or ideologies; rather what is important is whether individuals can be identified for inclusion in government patronage (or exclusion from it) based on their group membership.

In contrast, this paper examines the incentives that voters of the same group have to vote together, irrespective of the strategies of elites. Focusing on electoral politics in India’s majoritarian system, we are specifically interested in the role played by the economic

¹An exception to this is Donald Horowitz’s 1985 categorization of ethnic societies into ranked and un-ranked systems with the former being systems where ethnicity and class location overlap and latter where groups are economically heterogeneous.

²See Bates 1983; Horowitz 1985; Chandra 2004; Posner 2004 and 2005.

well-being of group members, and how the relative well-being of groups affects voting incentives. If ethnic identity and economic well-being are related, with some groups being relatively rich and other groups relatively poor, then the salience of ethnic identity in electoral behavior should increase for two reasons. First, when economic well-being and group identity are related, political cleavages will be reinforcing, reducing cross-pressures on voters and making it more likely that members of the same group will find it in their interest to support the same party. Second, when some groups are rich and others poor, members of different groups should have different policy preferences, leading voters to sort themselves electorally by their group identity. Thus, the “ethnification of party systems” – that is, the degree to which parties in a particular system have unique ethnic bases of support – should increase as group identity and economic well-being become more strongly intertwined.

This paper develops this argument and tests it by comparing party system ethnification across the states in India’s majoritarian electoral system. Focusing on India allows us to test our argument while holding constant many of the factors that can make cross-national comparisons difficult. Across the Indian states, the electoral rules and the menu and meaning of ethnic identities are largely the same, and while the states differ in their economic development, individuals across the states find themselves in essentially the same political and economic framework. The case of India is also intrinsically important. Scholars of the world’s most populous democracy invariably agree that elements of identity are central to Indian politics, but there have been few efforts to assess empirically which dimensions of identity are most important to understanding electoral choice, or to understand how the economic attributes of groups might be related to the salience of group identity in elections. The analysis here, by demonstrating the relevance of these economic attributes, provides a fresh way of thinking about identity politics in India.

We use survey data from two National Election Studies (NES) in India (1999 and 2004) to measure “party system ethnification” across the Indian states. The specific mea-

sure, “Party Voting Polarization” (PVP), taps the degree to which the parties have a unique ethnic basis of support, and it therefore is increasing as it become easier to know a voter’s identity by knowing the voter’s preferred party³ By measuring PVP using the three central definitions of identity in India: religion, umbrella caste and subcaste (or *jati*), we are able to show that party system ethnification is highest using *jati* and lowest using religion. We therefore focus primarily on the *jati* definition of groups to test our argument empirically.

To measure the degree to which group identity and economic well-being are related in a state, we use the surveys to measure between-group inequality (“BGI”). BGI is a component of the Gini decomposition that measures differences in the average income of groups. When BGI is low, group average incomes are similar and thus there is low correlation between group identity and economic well-being. When BGI is high, the opposite is true. We find a very strong and robust positive relationship between BGI and the ethnification of party systems – the more inequality there is between ethnic groups, the higher the levels of ethnification, suggesting perhaps that ethnic politics in India has a stronger economic orientation than has been previously recognized. Using fixed-effects models that take advantage of the two time periods in our data, we also provide evidence of a causal effect of ethnic inequality: those states with the largest increases in ethnic inequality between 1999 and 2004 are also the states where there is the largest increase in party system ethnification in the 2004 election.

The relationship between BGI and party system ethnification does not, however, necessarily imply a strong economic dimension of ethnic politics in India: it may be that groups with similar levels of economic well-being vote together, but it is also possible that electoral coalitions form between richer and poorer groups. We therefore probe the relationship between group income differences and group voting patterns in India using a group-level analysis, where we measure the voting differences between each pair of groups in a state. We regress this measure of voting differences on income differences

³Huber 2012.

between the groups and find that members of one *jati* group tend to vote for different parties than members of another *jati* group when income differences between the two groups is large. This suggests that voting differences across *jati* groups are associated with economic factors. It also provides reassurance that the importance of economic factors in ethnic voting is not due to decisions about how to aggregate parties with different levels of support into system-level measures.

Some might worry that the Indian case is unique and thus a difficult one from which to generalize. It is therefore useful to situate India comparatively using cross-national data from majoritarian political systems. Such analysis shows a strong association between between-group inequality and party system ethnification across countries, and it also indicates that the level of party system ethnification in India is about what one would expect given India's level of between-group inequality. At the same time, the cross-national analysis also presents evidence that the relationship between ethnicity and voting outcomes in majoritarian systems, the focus here, may not generalize to more proportional electoral systems.

The paper is organized as follows. The next section elaborates our argument about group-based economic inequality and the ethnification of party systems. Section 3 then presents the measures of party system ethnification and between group inequality that will be used in the empirical analysis, and section 4 describes relevant features of ethnic politics in India. Four different empirical analyses follow: section 5 explores which definition of group identity in India is associated with the highest level of party system ethnification; section 6 presents the state-level analysis in India; section 7 presents the group-level analysis in India, and section 8 presents the cross-national analysis. We conclude by discussing the implications of our results.

2 Party ethnification and inequality between groups in majoritarian systems

Focusing on “party system ethnification” – that is on the degree to which political parties have a strong ethnic basis of support – has not been central to research on ethnic politics. Instead, scholars often direct their attention to ethnic appeals (such as whether party leaders make appeals for votes based on ethnicity, or whether the ethnic identity of party leaders is emphasized),⁴ or on the “ethnification of policies” i.e., on the degree to which governments target benefits based on ethnic identity.⁵ Studying electoral behavior, rather than ethnic appeals or policy outcomes, has several advantages.

First, voting behavior provides a crucial gauge of the actual relevance of ethnic identity to voters themselves. Parties may make strong appeals for ethnic votes, but if voters do not respond by voting their ethnicity, it is difficult to interpret the significance of such strategies. Similarly, a focus on voters can reveal whether ethnicity plays a significant role in electoral politics even if there are no overt ethnic appeals by parties. Voters from a particular group, for example, may understand that a certain party will act in their interest, even if there are no explicit ethnic party markers or campaign strategies based on ethnicity. If voters are sorting themselves into parties based on their ethnic identity, we should have reason to believe that ethnicity is important even if we have not detected strategies surrounding ethnicity. Second, if one cares about ethnic politics and policy outcomes, it is important to understand which parties or candidates actually succeed in cultivating an ethnic basis of support. To the extent that such support is strong, we might expect more ethnification of policies, and if governing parties are favoring particular groups even when they do not rely on them for support, there is a puzzle to be explained. Finally, if specific attributes of groups – like economic well-being – are related to the salience of group

⁴For a very helpful discussion of the different approaches to studying ethnic electoral politics, see Chandra 2011.

⁵Kasara 2007; Bates 1983; van de Walle 1989.

identity in electoral behavior, this should guide our expectations about the precise way in which ethnic politics affects policy. Hence, there may be much to be gained by increasing the attention paid to the behavior of voters in studies of ethnic politics.

There are two reasons that inequality between groups should be associated with a strong ethnic basis of support for parties. First, economic inequality between groups should lead to systematic differences in groups' public policy preferences. Kate Baldwin and John Huber emphasize that economic differences across groups "can lead to different group needs with respect to public goods, feelings of alienation or discrimination by some groups, different attitudes toward redistribution across groups, and different 'class' identities by different groups".⁶ If voters from different ethnic groups have similar preferences because they share similar levels of economic well-being, we might expect they will be more likely to vote in the same way. But if voters from different ethnic groups have different policy preference because they have different levels of economic well-being, we might expect the members of the different groups to vote differently. This may be true regardless of the types of appeals party leaders make regarding ethnicity, so long as voters believe that parties differ in the way they will address the interests of the rich as opposed to those of the poor. In addition, if group identity and income are related, parties can more easily make commitments to specific groups – such as minority groups that are crucial to the success of the party – without alienating members of the broader coalition. If a party, for example, commits to building new schools or water treatment plants, or to hiring more public sector workers in a region dominated by a specific group, this is less likely to cause tension within the broader electoral coalition if the party is generally committed to policies related to schools, clean water and public sector employment.

The second reason why inequality between groups should be associated with party system ethnification concerns cross-cutting cleavages, which create cross-pressures on voters. As Thad Dunning and Lauren Harrison demonstrate in their study of Mali, cross-

⁶Baldwin and Huber 2010, 644-45. They link between group inequality to lower public goods provision, and Alesina et al 2013 link it to lower economic development.

cutting cleavages can reduce incentives for ethnic voting because they force voters to make trade-offs on different dimensions that are important to voters. Income and ethnicity are obvious potential sources of cross-cutting cleavages.⁷ If members of ethnic groups, for example, represent the broader income distribution in society, then ethnic and income-based cleavages will cross-cut, with poor members within groups favoring different parties than rich members in the group. This can divide group members at election time. But if ethnic groups tend to be composed of individuals from particular parts of the income distribution – such as when there exist relatively rich and poor ethnic groups – ethnicity and income will be reinforcing. Fewer voters from the same group will be likely to face cross pressures related to ethnicity and economic well-being, and thus will be more likely to vote for the same party.

Some might be skeptical about the relevance of these arguments to India, or to other places where ethnic politics are seen as revolving around clientelistic or patronage-based networks. While we would hardly deny the importance of patronage politics in India, it is important to explore whether policy-based accounts of vote choice can add to our understanding of ethnic politics. There is evidence that even in patronage-based systems where ethnic politics are central, voters respond to policy. In India, for example, Tariq Thachil shows how the right-wing BJP earns support from some poor voters (by targeting them with privately provided local public goods) and some rich voters (by advocating tax and redistributive policies that the rich embrace).⁸ And Dunning and Harrison find evidence that in Mali the salience of ethnicity can be undermined in mass political behavior by cross-cutting cleavages.⁹ There is also a theoretical limitation of purely patronage-based accounts. In an ethnically diverse society, a given majority electoral coalition of groups that a party builds based on patronage payoffs can be defeated by another coalition of groups that makes at least one group (in the first coalition) better off. This can make

⁷Dunning and Harrison 2010.

⁸Thachil 2014.

⁹Dunning and Harrison 2010.

it difficult for parties to credibly commit to specific electoral coalitions of groups, inviting the use of policy to help cement patronage-oriented electoral coalitions. The role of income-related policy preferences has perhaps been under-appreciated in this regard, and the inequality-based perspective can help flesh out how patronage networks are reinforced in different contexts. Finally, it is worth noting a pure patronage-based view would not predict systematic differences in ethnic electoral behavior based on the economic attributes of groups. Thus, if inequality between groups turns out to be systematically related to voting behavior, this presents a puzzle for ethnic politics theories of patronage and clientelism.

3 Measuring the ethnification of party systems

In this section we develop measures at two levels in a political system to approximate the extent to which ethnicity matters to electoral behavior – at the aggregate party system level and then at the ethnic group level. We first develop an aggregate measure by quantifying the group basis of political support for parties across political systems. We then examine voting behavior at the ethnic group level by studying the extent to which members from any two groups within a political system exhibit similar partisan preferences.

One challenge facing any effort to study the group basis of party support is that different political systems have different types of group identity at play. We should be able to say, for example, whether party ethnification in India is largest using an individual's religion, umbrella caste category or *jati*, because we want to explain cross-state differences using the measure of identity that seems most important in producing such effects. Recent research on India has examined ethnification at the system-level. Oliver Heath, for example, uses cluster analysis to create a polarization measure that gauges the connection of caste and party, and Pradeep Chhibber, Francesca Jensenius and Pavithra Suryanarayan create a measure that captures both the dependence of a party on social cleavages and

the dependence of the social base on parties.¹⁰ But these measures do not allow valid comparisons across states using different definitions of groups, or when the number of parties varies. To address this issue, we use the Party Voting Polarization measure (“PVP”) developed by John Huber.¹¹

A measure of party system ethnification should take into consideration (a) the degree to which parties have a unique basis of ethnic support, (b) the number of parties, and (c) the size of parties. Measuring the degree to which parties have a unique basis of ethnic support requires making comparisons across parties. Suppose, for example, that Party A receives 90 percent of its support from the Blue group and 10 percent from the Green group. Is this party “ethnified”? It depends on the basis of support for other parties. If Party B also receives 90 percent from the Blues and 10 percent from the Greens, then Party A does not seem so ethnified. But if Party B receives 90 percent from the Greens and 10 percent from the Blues, then Party A would be considered to have a more unique ethnic basis of support than in the first case (as would Party B).

Thus, one element of PVP is to measure the distance in the ethnic basis of support for each party from every other party. The distance is zero for a pair of parties when the group-basis of support for each party is the same. In the above example, where Party A and Party B both receive 90 percent of its support from the Blue group and 10 percent from the Green group, there is zero distance in the ethnic basis of support for these two parties. By contrast, suppose that all of Party A’s support came from the Green group and all of Party B’s support came from the Blue group. This would yield the maximal distance between the ethnic basis of support for each party, which is 1.

Formally, this distance in the ethnic basis of support between two parties, i and j is defined as

¹⁰Heath 2005; Chhibber, Jensenius and Suryanarayan 2012.

¹¹Huber 2012.

$$\tilde{r}_{ij} = \sqrt{\frac{1}{2} \sum_{g=1}^G (P_g^i - P_g^j)^2}, \quad (1)$$

where P_g^i and P_g^j are the proportion of supporters of parties i and j who come from group g , and there are G groups.

For two hypothetical parties, A and B, Table 1 provides two examples of the calculation of \tilde{r}_{AB} .¹² In both examples, there are three groups, and we calculate the distance between the two parties using the composition of group support for each party. In the top example, Party A receives 40 percent of its support from Group 1, 35 percent of its support from Group 2, and 25 percent of its support from Group 3. Party B has a fairly similar profile, but a smaller proportion of its support comes from Group 1 and a larger proportion of its support comes from Group 3. Thus, $\tilde{r}_{AB} = .15$. In the second example at the bottom of the table, the support base for each party is skewed toward a particular group, with Party 1 receiving 80 percent of its support from Group 1 and no support from Group 3, and Party 2 receiving 80 percent of its support from Group 3 and none from Group 1. Thus, $\tilde{r}_{AB} = .8$, which is considerably larger than in the top example.

Table 1 here

The maximum \tilde{r}_{ij} is 1, which occurs when all of party A 's support comes from one group, and all of party B 's support comes from another group. The minimum distance is zero, which occurs when the proportion of support that comes from each group for party A is the same as the proportion of support that comes from each group for party B . In general, as the distribution of groups supporting any two parties becomes more similar, \tilde{r}_{AB} will decline.

The second step is to aggregate these measures of ethnic differences between parties into a system level measure, and in so doing, it is important to take into account both the size and number of parties. Suppose, for example, that there were three parties, A, B,

¹²This example is taken from the supplemental materials in Huber 2012.

and C, and that the distance in the ethnic basis of support between A and B is roughly the same, but that C gets its support from a completely different group than A and B. Then if Party C is very small, the ethnification of the party system should be considered much less than would be the case if Party C was relatively large. Thus, the amount that any given \tilde{r}_{ij} contributes to the party system score should depend on the size of the parties, i and j .

The size of parties will of course be linked to the number of parties, but how should a measure of party system ethnification change with the number of parties? As Huber describes¹³, there are two theoretical frameworks for thinking about how to use information on the number and size of “units” (e.g., the number and size of ethnic groups, or industries, or in our case, political parties) to create meaningful measures that can be compared at the system-level. “Fractionalization” is an approach that aggregates the number and size of units in a way that causes the measure to increase as the number of units proliferates and as the units grow more equal in size. Applied to our problem, 10 equal-sized parties, each with an ethnic distance from other parties of .5, would yield a higher fractionalization score than 2 equal-size parties, each with the same ethnic distance from every other party. “Polarization” is the major alternative to fractionalization, and it takes the highest value when the number of units goes toward two and the units become more equal in size.¹⁴

Which approach to aggregation is more appropriate depends on theory and context. The polarization approach emerged from the study of civil conflict, in large part due to Donald Horowitz’s argument¹⁵ that many ethnic groups is less problematic for stable governance than two equal-sized groups.¹⁶ Our study is obviously not about political stability, and we are not aware of studies of ethnic voting that have argued that particular measures are more appropriate to particular electoral laws. In our view, however, the polarization perspective is particularly appropriate to the majoritarian electoral systems found across

¹³Huber 2012.

¹⁴See Reynal-Querol 2002 for a development of the measure applied to ethnic conflict.

¹⁵Horowitz 1985.

¹⁶See Montalvo and Reynal-Querol 2005, and Esteban, Mayoral and Ray 2012 for a recent empirical study using both methods.

the Indian states. The first-past-the-post electoral systems disproportionately reward the top two parties, making the role or impact of ethnically-based support for other parties less clear in situations where this vote support is fragmented across parties that receive little or no representation. Perhaps more importantly given that electoral coordination can fail, in majoritarian systems, voters should view the electoral stakes to be largest – that is, the impact of this ethnic basis of support for subsequent outcomes – when two competing parties are close to the threshold of victory. Thus, the relevance of ethnicity to outcomes should be greatest when polarization scores are highest.

Huber adapts the polarization perspective to party ethnification¹⁷, showing that we can combine the polarization perspective with the ethnic voting distances to define Party Voting Polarization as:

$$PVP = 4 \sum_{i=1}^N \sum_{j=1}^N p_i p_j^2 \tilde{r}_{ij}, \quad (2)$$

where p_k is the proportion of the vote received by party k .

The *PVP* measure used here, then, has two central properties. First, holding the number and size of parties constant, the measure increases with increasing distance in the ethnic basis of support for parties (i.e., increases with \tilde{r}_{ij}). Second, holding constant the distances in ethnic bases of support, *PVP* increases as the party system moves toward two parties, each receiving 50 percent of the vote, and each receiving their support from a single (different) ethnic group.

We believe that the *PVP* measure is most appropriate to the majoritarian electoral law of India and it will be the central focus of our analysis. But we also offer two other types of tests. First, we estimate models using *PVF*, the measure of ethnic voting that takes the fractionalization perspective. The measure is defined as:

¹⁷Huber 2012.

$$PVF = \sum_{i=1}^N \sum_{j=1}^N p_i p_j \tilde{r}_{ij}, \quad (3)$$

Second, we estimate group-level models, examining whether two groups tend to vote more differently when the income differences between them is large. This allows us to explore the role of income and group voting behavior without making any assumptions about how to aggregate into a system-level measure, providing evidence that results about group-based inequality are not due to decisions regarding how to aggregate voting patterns into system level scores. Importantly, the group-level analysis also allows us to explore whether poorer and richer groups tend to vote for different parties.

To explore whether the measure of party system ethnification varies with the level of inequality between groups, we use India's NES (see details below) to calculate between-group inequality (BGI). BGI is a component of the Gini index that is based on the average income differences between groups, weighted by group size. When BGI is large, the average incomes of group will vary and there will be a relatively strong correlation of group identity and income. When BGI is small, there is very little correlation of income and group because the groups' average incomes are roughly the same. The formula for BGI is given by

$$BGI = \frac{1}{2\bar{y}} \left(\sum_{m=1}^k \sum_{n=1}^k p_m p_n | \bar{y}_m - \bar{y}_n | \right), \quad (4)$$

where m and n index groups, p_m is the proportion of the population in group m , \bar{y}_m is the average income of group m , \bar{y} is the average income in the society, and there are k groups in society. BGI is one of three components of the Gini coefficient. The other two are within-group inequality (WGI), which measures inequality that is strictly within groups by aggregating the Gini coefficient for each group, and overlap (O), which has been interpreted as a measure of income stratification.¹⁸

¹⁸See Yitzhaki and Lerman 1991 for a formal definition of the three components of the Gini decomposition and a useful discussion of their substantive meaning.

To calculate BGI, we need a measure of individual “income.” Given that a large proportion of individuals do not have meaningful cash incomes in a developing country like India, it is not feasible to accurately measure inequality by using standard income variables. We therefore follow the strategy used in a number of previous studies in emerging economies that employ various asset indicators to gauge economic well-being.¹⁹ Specifically, the Indian election surveys of 1999 and 2004 ask individuals if they own particular items. Both surveys contain the following 7 variables that are associated with economic well-being in India:

- Car/Jeep/Van
- Tractor
- Television/Color Television/Cable Television
- Scooter/Motorcycle/Moped
- Telephone/Mobile telephone
- Bicycle
- Pumping set

Respondents were given a score of 1 for each asset listed above. To measure a respondent’s “income” we conduct a factor analysis on these assets in each state. The resulting factor scores describe the degree to which the various assets distinguish the well-being of citizens, and thus are used to weight the assets which are aggregated (using the factor weights) to determine an individual’s “income.” Respondents’ “income,” based on their asset ownership and factor scores, are then rescaled to their percentile rank (thus ranging from 0 and 100), which gives all individuals a non-zero “income,” allowing us to perform the Gini decomposition on the “income” values. Although this approach is standard for measuring inequality in countries where cash incomes are insignificant for large

¹⁹see, for example, Filmer and Pritchett 2001 and McKenzie 2005

proportions of the population, it is important to recognize that these measures underestimate total inequality because they do not capture the differences in income that exist among the relatively well-off (who tend to have all of the relevant asset items). While it is not feasible to meaningfully combine asset information with income information, an alternative way to test our arguments is to measure inequality using educational attainment rather than assets. This is an additional strategy we follow below to explore the robustness of our results.

4 Ethnic politics across states in India

Individuals in India typically have multiple “ethnic” identities, three of which have been most prominent in the existing literature: religion, umbrella caste categories and subcaste, or *jati*.²⁰ Scholars typically focus their research on one of these identities, but there have been no efforts to our knowledge that assess empirically which of these identities is most important to understanding how voters make choices at election time. One goal here is therefore to provide such an analysis.

These three ethnic categories are related to each other, and are in fact nested. The broadest categorization is religion and the Hindu-Muslim divide is the most salient religious cleavage in the country.²¹ Hindu-Muslim politics has taken on a heightened salience with the rising fortunes of the right-wing Hindu nationalist party, the Bharatiya Janata Party (BJP). Paul Brass, for example, argues that the vote for the BJP is directly linked to the proportion of muslims in an area.²² Susanne Rudolph and Lloyd Rudolph argue that economic competition between hindus and muslims (as determined by their occupational

²⁰There are also many different languages in India, but these have not typically been viewed as as politically salient in electoral politics.

²¹The Hindu-Muslim cleavage emerged early on in electoral politics in colonial India and eventually led to a violent partition and the creation of Pakistan and present-day Bangladesh. Sporadic violence in the form of religious riots continue to occur in the Indian states, particularly during election years.

²²Brass 2003.

patterns in the area) leads to greater salience of religion in politics.²³ Steven Wilkinson notes that hindu-muslim riots tend to occur in closely contested elections.²⁴ Drawing on the categories in the NES survey, we categorize respondents as Hindu, Muslim, Christian, Sikh, Buddhist, Jain or Parsi.

“Caste” is nested within religion. The role of caste in Indian politics is considered to be so central that Kanchan Chandra writes: “In India, people do not cast their votes, they vote their caste.”²⁵ Caste is also in works by M.N. Srinivas, Lloyd Rudolph, Anirudh Krishna and Christophe Jaffrelot.²⁶ While scholars use the term differently, with some using “caste” to refer to what we call “*jati*” and others to refer to the “*varna*” system, we use caste to refer to seven broad and politically salient umbrella categories that represent social-status ranking.²⁷ Thus individuals in our surveys were sorted into the following umbrella caste categories: upper castes, peasant castes, upper backward castes, lower backward castes, schedules caste, scheduled tribes and muslims.

Finally, sub-castes, or *jati*, are nested within the broad caste categories listed above. We use this term to refer to a “hereditary, endogamous, usually localized group” which reflects historical occupational categories and which to this day, guide religious and marriage customs.²⁸ While this identity category has received less attention than other categories, scholars have clearly recognized its importance as an identity category in electoral politics.²⁹ To categorize respondents into their sub-castes we use a survey question asking: “What is your Caste/Jati-biradari/Tribe name?” To give an example of how these categories are nested within each other, a respondent from the state of Andhra Pradesh who

²³Rudolph and Rudolph 1993.

²⁴Wilkinson 2004. Others who have focused on religion include Jaffrelot 2005b; Varshney 2003; and Thachil 2014.

²⁵Chandra 2004, 212.

²⁶M.N. Srinivas 1962; Rudolph 1965, Krishna 2003 and Jaffrelot 2005a.

²⁷This is also the approach in Heath 2005; Chhibber, Jensenius and Suryanarayan 2013 and Dunning and Nilekani 2013. In the the *varna* system, caste groups are categorized into five broad categories of Brahmins (priests), Kshatriya (warrior), Vaishya (merchant), Shudras (backward castes) and the caste groups that lie outside the varna system (the former untouchables).

²⁸Srinivas 1962, 3

²⁹Chhibber 1999; Chandra 2004 and Dunning and Nilekani 2013; Chauchard 2014.

has a "kapu" sub-caste is categorized as "Peasant" caste and "Hindu" religion.

We examine variation in party system ethnification using these three categories of ethnicity across the Indian states. We do this because state-level factors are central in national-level voting. The Indian states have constitutionally mandated autonomy over key policy areas such as education, health care, law and order and agriculture, amongst others, and their role in economic policymaking has increased after major economic changes in 1991.³⁰ Even when the central government legislates on key developmental projects such as the Mahatma Gandhi National Rural Employment Guarantee Act that was enacted in 2006, there is a high level of discretion given to states in implementation. The introduction of village-level government institutions through the 73rd constitutional amendment in 1992 further served to strengthen state-level political parties and intensified efforts by national parties to embark on state-centric organization building.

The Congress Party, which had dominated politics for many years, evolved into a collection of regionally diverse party organizations under one banner, with little control by central elites over local party messages. Another major party, the Bharatiya Janata Party (BJP), is also an organization that is vertically divided. Although the party was ideologically driven, cohesive and boasted a centralized machinery in the past, by the 1990s, the ideological wing of the party was sidelined and state-level opportunists and moneyed candidates were given a central role in the party with a view to winning elections. In addition, recent changes in regional party systems have seen the rise of parties that compete in only one or two states and that garner significant national parliamentary seats in those states such as the DMK and AIADMK in Tamil Nadu, the TDP in Andhra Pradesh, the Akali Dal in Punjab, the BSP in Uttar Pradesh and the TMC in West Bengal, amongst others.

Consequently, parties and voters tend to focus on state-level political and economic factors during national elections. We can see this by examining a question in the 2004

³⁰Chhibber and Nooruddin 2004.

NES survey which asks respondents to state the importance of state government versus national government performance when casting their national vote.³¹ Across India, the weight respondents put on state government performance was equal to the weight put on national government performance.

5 Party ethnification by group identity in the Indian states

We use the Party Voting Polarization (PVP) measure to explore patterns of party system ethnification across the Indian states. The core data for our analysis come from the National Election Studies of 1999 and 2004, each conducted in the aftermath of national parliamentary elections.³² The NES surveys are distinctive for their large samples of voters across the Indian states and are conducted face-to-face in the local language using a structured questionnaire.³³ NES 2004, for instance, was conducted in 22 Indian languages and had 27,189 respondents.³⁴

Two states, Jammu and Kashmir and Manipur, are excluded from the analysis. These states have complex separatist movements dominating their politics. The decision to exclude the two states, however, does not affect the substantive results.³⁵

The measures of PVP in the states are based on the three most salient definitions of ethnic group – religion, caste and *jati*. Which type of group is associated with the highest

³¹The question in the 2004 survey– “While voting some people give more importance to the work done by the state government while others give more importance to the work done by the central government. While voting in this (national) election, what mattered to you the most?”.

³²Elections to the 543 seats in the lower house of the national parliament in India are held every five years. The elections are held under the guidance of the Election Commission of India and according to single member, simple plurality rules. In the two elections under investigation in this paper, the 1999 and 2004 elections, the boundaries of the 543 constituencies remain unchanged in accordance to a freeze in constituency boundaries that had been in effect since 1976.

³³For more information on the NES and other surveys by CSDS, please go to <http://lokniti.org>.

³⁴In comparison, the World Values Survey (WVS) of India conducted in 2006 had 2000 respondents and was administered in ten major Indian languages.

³⁵Between 1999 to 2004, three new states were created – Chhattisgarh, Uttarakhand and Jharkhand. These three states were carved out of pre-existing states, and are part of the 2004 dataset. We retained the districts that comprised these new states in the 1999 original states to state-level voting patterns before the new states were created.

level of party system ethnification? In the 41 state-specific surveys that we have across the two elections, *jati* produces the highest PVP score 24 times (or 59 percent of the time), caste produces the highest score 14 times (34 percent) and religion produces the highest score only 3 times (7 percent).

It is important to bear in mind that the PVP measures should be affected by the underlying distribution of groups in a state. If each group, for example, voted for a different party, then differences in PVP across states would not be a function of voting behavior but rather of differences in the number and size of groups. Thus, in assessing the levels of PVP it is important to control for the underlying level of ethnic polarization. Ethnic polarization (“EP”) is a measure of ethnic diversity that considers only the number and size of groups, and it takes its maximal value when there are two equal size groups. The measure grows smaller as the number of groups proliferate or as one group becomes predominant in size.³⁶

When we regress PVP on EP, an indicator for election year, and indicator variables for group type (with caste as the omitted category), the coefficient on the religion indicator is -.03 (p-value .05) and the coefficient on the *jati* indicator is .05 (p-value .006). This implies that controlling for EP and the year, using religion to tap group identity yields PVP scores that are on average .03 lower than those resulting from using caste, and that are .08 lower than those obtained using *jati*. And using *jati* results in PVP scores that are on average .05 greater than those resulting from using caste. These are fairly large differences given that the mean of PVP across all groups is .16 with a standard deviation of .09.³⁷

In sum, the evidence suggests that *jati* is the definition of group identity that is

³⁶The formal definition of EP is from Reynol Querol 2002, who draws on Esteban and Ray 1994:

$$EP = 1 - \sum_{i=1}^G \left(\frac{1/2 - s_i}{1/2} \right)^2 s_i, \quad (5)$$

where s_i is the size of group i and there are G groups.

³⁷We have calculated PVP using language. Consistent with what is typically asserted in the literature about the low salience of language in Indian elections, PVP based on language is low, about .08 on average. Interestingly, however, this is roughly the same average we find for religion.

associated with the highest level of party system ethnification across the Indian states, followed by caste. In contrast, except for a small handful of states, religion is the definition of group that is associated with by far the lowest levels of average party system ethnification. In what follows, we will focus primarily on the *jati* definition of groups, although we will also present some analysis using the larger umbrella caste definition.

6 Party system ethnification across the Indian states

What is the relationship between party system ethnification and between-group inequality? Figure 1 shows a scatter plot of PVP and BGI for the three definitions of group. As noted above, in examining the relationship between PVP and any right-hand side variable, it is important to control for the underlying level of Ethnic Polarization. The values of PVP plotted in the figure are therefore the residuals from a simple regression of PVP on EP. The figure shows a strong positive relationship between PVP and BGI for the *jati* and umbrella caste definitions of group. The slopes are very similar, with a slightly stronger relationship when *jati* is used (the slope is .78 for *jati* and .71 for caste). By contrast, using religion, there is absolutely no relationship between BGI and PVP. We also see in the figure that BGI using religion is quite small compared with BGI using the other definitions of groups: the mean of BGI is .16 using *jati*, .13 using umbrella caste, and only .03 using religion. The figure therefore underscores that we should not expect a relationship between PVP and BGI for any definition of groups. Instead, these data suggest that when a group definition is not correlated with economic differences across groups, then voting polarization is typically not strong for this definition of groups, although obviously there can be isolated situations where such a definition nonetheless leads to strong ethnification.

Figure 1 here

OLS models. Does the relationship depicted in Figure 1 survive when controlling in an OLS regression framework for other variables that could affect PVP? Table ?? presents a

number of models where PVP is the dependent variable, BGI is the right-hand side variable of central interest, and a number of other controls are included as well. All of the variables are standardized to have a mean of zero and standard deviation of 1 in order to facilitate comparisons of the coefficients.³⁸

Each of the models includes four core control variables. As noted above, it is important to control for EP (so that we know variation in PVP is due to variation in voting patterns rather than variation in the number and size of groups). Second, we include a year fixed effect, an indicator variable for the 2004 election, to control for any systematic differences in ethnic voting that may have existed across the two elections. Third, since BGI is one of three components of the Gini, to ensure any results we attribute to BGI are not in fact capturing other elements of inequality, we include in most models a variable, “Gini-BGI,” which is the Gini minus its BGI component. Thus, we can interpret the coefficient for BGI as the effect of a change in BGI when all other aspects of inequality are held constant. In models that don’t include the Gini-BGI variable, we control for the individual components of inequality - within group inequality (“WGI”) and the residual component of the Gini related to stratification (Overlap). Finally, we control for the ratio of parties to groups (i.e., the number of parties divided by the number of ethnic groups). As discussed in detail by Huber³⁹, this ratio of parties to groups can be related to the type of ethnic voting measure we employ: PVP, which is based on the polarization logic, is likely to be negatively correlated with this ratio whereas a measure based on the fractionalization approach, PVF (which we discuss below) is likely to be positively related to this ratio.

Table 2 provides our first set of empirical results. Model 1 includes BGI, EP, Gini-BGI, Party-Group Ratio and the 2004 indicator variable. The coefficient for BGI is the largest in magnitude and the most precisely estimated – a one standard deviation increase in BGI is associated with an increase in PVP of 0.642 standard deviations. This effect

³⁸A coefficient of 1 therefore indicates that an increase of one standard deviation in a right-hand side variable is associated with a 1 standard deviation increase in PVP.

³⁹Huber 2012, 993

is even substantially larger than that of EP itself, the only other coefficient that is also precisely estimated. The coefficient on the Party-Group Ratio indicator variable is positive, opposite to the direction we would expect, but it is not statistically significant at conventional thresholds. The dummy for the 2004 election is negative but estimated with considerable error, suggesting there is no significant difference in party ethnification across these two elections (when we control for EP and BGI). And there is a negligible effect of inequality that is unrelated to BGI.

Table 2 here

A central reason for including the Party-Group Ratio is that so doing accounts for the structural context that voters face when casting their votes. If PVP increases with BGI controlling for the parties-groups ratio, it must be because members of the same group are more likely to vote for the same party (and not because, for example, PVP is spuriously correlated with a larger number of parties per group for reasons having nothing to do with voters coordinating their voting by ethnic identity). But we could also consider alternative controls for the party system. Model 3 includes the well-known Effective Number of Parties (ENP).⁴⁰ The variable is much less precisely estimated than Party-Group Ratio, and its inclusion does not affect the results of substantive interest: the coefficient for BGI remains positive and precisely estimated. One might worry about including a measure on the right-hand side that measures an outcome from voting behavior when the dependent variable itself an outcome from voting behavior. As an additional robustness check, Model 3 re-estimates model 1, but excludes Party-Group Ratio (and the other measures of the party system). The results for the BGI variable are again robust.

Model 4 re-estimates model 1, but includes each component of the Gini: BGI, Within-group inequality and Overlap. We might be particularly interested in the estimated coefficient for within-group economic inequality. As groups become more economically heterogeneous, their members might vote less cohesively, driving down party system eth-

⁴⁰The formal definition is $ENP = \frac{1}{\sum_{j=1} p_j^2}$. The correlation of this variable with PVP is quite weak ($r = .02$).

nification. Within-group inequality, or WGI, a weighted sum of the Gini coefficient for each group, can be used to test this possibility. As WGI increases, the economic heterogeneity of groups increases. The coefficient on WGI should therefore be negative if such heterogeneity is associated with decreased party system ethnification. Model 5 shows that the coefficients for all three inequality variables are positive, but only BGI has a coefficient that is precisely estimated. Thus, our data suggest that any relationship between party system ethnification and inequality in India is working through inequality between groups and not any other component of group inequality.

Measuring inequality by using information about individual assets helps distinguish the well-being of the many individuals who have little cash income. A drawback is that it can underestimate inequality by ignoring differences at higher levels of economic well-being. An alternative measure of economic well-being that captures some of this inequality among the more well-off is educational attainment. The NES surveys categorize respondents as non-literate, primary school, middle school, junior high school, high school, college (no degree), college (graduated), post-graduate degree and professional degree. We can use this 9 point scale as a measure of “income” to calculate educational inequality.⁴¹ This measure provides an avenue for exploring the robustness of the findings in Table 2.

Models 5-8 in Table 2 re-estimate models 1-4, but using education as the measure of economic well-being. The results are even stronger for the BGI variable when educational attainment is used to measure inequality. In each of the models, the coefficient for BGI is positive and very precisely estimated. The two party system variables have positive coefficients, the Party-Group Ratio variable has a more precisely estimated coefficient, but neither party system variable is precisely measured. The results are also robust when we exclude the party system variables.

Table 3 examines models when we add additional controls to model 1. Particularly poor countries are often associated with patronage-based politics, thereby making

⁴¹ Respondents' educational scores are rescaled to their percentile rank (thus ranging from 0 to 100), which we use to measure educational inequality along with the three components of the Gini.

the game of ethnic distributive politics especially salient. Model 9 therefore includes a measure of economic development, a 5-year average of state GDP per capita (logged).⁴² BGI has a large and precisely estimated coefficient, but the GDP variables and residual inequality do not.

Table 3 here

Model 10 includes three regional indicator variables. The first is an indicator for states in the North East of the country.⁴³ These states are unique because of their distinct historical status under the British in the colonial period, the predominantly tribal composition of some of the states and because of secessionist conflicts in some others. While we see no compelling *ex ante* reason to expect that BGI by sub-caste group should work differently in these states, we should nonetheless control for this region to see if patterns of party ethnification are systematically different in these states, and if controlling for these differences affects the coefficient estimate for BGI. The second is an indicator for the Hindi speaking belt.⁴⁴ It is possible that the hindi-belt was more susceptible to the mobilization efforts by the hindu nationalist party, the BJP, and because of differing historical landholding patterns and the greater numerical numbers of upper castes, experienced caste mobilization much later and more intensely than the states in the South.⁴⁵ Third, we include an indicator variable, “Regional Party Strength,” for states which have a strong regional party. We expect systems with regional parties to be associated with less ethnic parties because regional parties are believed to have mobilized voters across religious, caste and class groups by creating a sub-national unity amongst the states’ residents.⁴⁶ The results in model 10 show no systematic differences in PVP by region. The coefficients for Hindi Belt

⁴²The state GDP values are available through the “Handbook of Statistics on Indian Economy” on the the Reserve Bank of India website www.rbi.org

⁴³The northeast includes the following: Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Tripura and Sikkim.

⁴⁴Hindi-belt comprises of Bihar, Haryana, Himachal Pradesh, Madhya Pradesh, Rajasthan and Uttar Pradesh.

⁴⁵Jaffrelot 2005a.

⁴⁶Singh 2010. We include the states of Andhra Pradesh, Assam, Kerala, Punjab, Tamil Nadu and West Bengal, states with long-standing regional parties, in this category.

and Regional Party Strength are positive, but they are estimated with considerable error. The coefficient for Northeast states is negative (albeit very small) and also estimated with considerable error. In addition, there are no statistically significant differences in the coefficient for any pair of these variables. The result for BGI is not affected by the inclusion of these variables.⁴⁷

It is possible that state governments with relatively high bureaucratic professionalism and capacity to provide services may make voters less susceptible to ethnic appeals by parties. To measure bureaucratic capacity, we measured the states' expenditure on tax institutions as a proportion of overall expenditure. This variable is a proxy for the quality of tax and transfer institutions in the state – the higher the level of such expenditures, the more bureaucratic professionalism we should expect.⁴⁸ In model 11 we find no effect of Tax Expenditure on PVP, and its inclusion has little effect on the main result for BGI.

If parties are trying to build the smallest winning coalitions of ethnic groups, they may be most successful when there are many small groups with which to bargain. This suggests that ethnification may be strongest when group fractionalization is highest. To test for this possibility, model 12 includes a measure of ethnic fractionalization, a standard fractionalization index computed using the jati identity. The coefficient for this variable is positive but not at all precisely estimated. The coefficients for BGI and Ethnic Polarization continue to be large, positive and precisely estimated.

We have argued that a party-based aggregate measure of ethnification in a majoritarian system is better examined from a polarization perspective than a fractionalization perspective, and it has been our central focus. PVP takes its highest value when there are two equal sized parties in the system, and each group votes for one of the two parties. Thus, in majoritarian systems, when PVP is high the stakes of voting outcomes are high. In

⁴⁷We also included these regional variables one by one into the models and the results were similar to the ones presented here.

⁴⁸The data used to create these measures are available through the “Database on Indian Economy” on the Reserve Bank of India website. The state financial documents collect information on state expenditures and revenues available here: www.rbi.org.

India, despite the first-past-the-post electoral system, some states, particularly in the Hindi-belt, have multi-party systems with different groups fielding a party (though they are not based on *jati*). Such party systems could be the result of failed coordination by elites and voters, but it also could simply be the case that many majoritarian systems are operating at the district level and do not aggregate to the state level (at which we are able to test). It is therefore useful to consider the results using a measure of ethnic voting based on the fractionalization perspective. The PVF measure, defined above, takes a higher value when there are many equal sized parties and when group members vote together. Thus, PVP will take a higher value when *jati* group members sort themselves into two major parties and PVF will take a higher value when *jati* groups sort themselves into multiple parties. As a practical matter, the two measures are closely related, with a correlation of 0.76 in the data. Model 13 re-estimates model 12, but using PVF as the dependent variable. The coefficient for BGI remains positive and reasonably precisely estimated (though less precisely estimated than when PVP is used), providing evidence that inequality between groups is also associated with larger ethnic voting scores using the fractionalization perspective.

Finally, we re-estimate model 1 using umbrella caste to define group identity. In Model 14, BGI has the expected positive sign, and the coefficient is reasonably precisely estimated ($p=.105$), though less so than for *jati*. The size of the BGI coefficient is somewhat smaller than we find using *jati* (recall the coefficients are comparable across specifications because all variables are standardized). Model 15 re-estimates model 14 using education to measure “income”. The coefficient for BGI is now measured quite precisely ($p=.011$), though it is again somewhat smaller than we find using asset income (see model 5). Thus, the association between BGI and PVP is strongest when we use *jati* to define groups; the relationship is also present but weaker using umbrella caste.

We have therefore found a robust positive relationship between party system ethnification and between-group inequality. The relationship is robust to different controls for the party system, different ways of measuring “income” (assets and education), the

inclusion of different controls, and even to the use of caste rather than *jati* (though the estimated coefficients are smaller when caste is used). We have also found that the empirical relationship between BGI and ethnic voting is present when we use PVF as our measure of ethnic voting.

Fixed effects. Although the regressions to this point demonstrate a robust association between the ethnification of party systems and between-group inequality, we might still have the standard concern that BGI is correlated with some other right-hand side variable that we have not measured. And there is the possibility of reverse causation: if individuals vote by group, and if the winning parties favor their groups, then ethnic voting might cause inequality between groups rather than the contrary. We can address such issues empirically by taking advantage of the fact that we have 15 states for which we have measures in both 1999 and 2004. This panel structure makes it possible to estimate fixed effects models (which also corresponds to estimating a difference-in-difference model given there are only two time periods). A fixed effects model obviously addresses concerns about possible biases from omitted state-level regressors on the right-hand side. And it also addresses concern about reverse causation because any changes in the measure of BGI that occurs between the 1999 survey and the 2004 survey must precede the 2004 election itself, making it impossible that changes in 2004 voting caused the changes in inequality that we measure.

Figure 2 shows bivariate scatter plots where the y-axis plots the change in PVP from 1999 to 2004 and the x-axis plots the change in BGI from 1999 to 2004. For the plot on the left, BGI is measured using asset indicators and for the plot on the right, BGI is measured using education. In both plots, there is a strong positive relationship: those states with the highest increase in inequality between groups are the states with the highest increase in party system ethnification. The relationship is stronger using educational attainment, but this is due largely to the leverage of the outlier state, Assam (“AS”), which depresses the slope of the relationship in the plot using asset indicators.

Figure 2 here

The results from fixed effects regressions are presented in Table 4. The first two columns use asset indicators to measure inequality. Column 1 includes the standard controls (Gini-BGI and EP), as well as the wealth of the state. The coefficient for BGI is positive and relatively precisely estimated ($p=.08$), even with the outlying state (AS) included. Model 2 drops the GDP variable, which has a coefficient estimated with considerable error in model 1. The coefficient for BGI is now estimated much more precisely ($p=.03$). Models 3 and 4 estimate the same models using educational inequality. In both models, the coefficient for BGI is positive and estimated very precisely ($p<.005$). Models 5 and 6 re-estimate models 3 and 4, but using PVF as the dependent variable (and controlling for ELF given the fractionalization-basis for PVF). Again, there is a precisely estimated positive relationship between BGI and party system ethnification.

It is important to bear in mind that these fixed effects regressions are based on only 15 states and one change in time period. Nonetheless, the impressive bivariate correlations in Figure 2 and the results from the empirical models in Table 4 provide evidence of a causal effect of inequality between *jati* groups on the degree to which parties have a clear ethnic basis of support.

Table 4 here

7 Group level analysis

We have presented evidence that the ethnification of parties is strongest in states where ethnicity and average income are strongly correlated, but this does not imply that party ethnification carries with it a strong relationship to the economic status of groups. High ethnification, for example, could be associated with members of poor *jatis* supporting different parties than members of rich *jatis*, resulting in a relatively strong economic basis for party politics when ethnic voting is high. It could also be the case, however, that high

BGI leads to high ethnification, but with no clear patterns of party support by *jati* that are based on income, with some parties drawing on support from certain rich and poor *jatis* and other parties drawing on support from other rich and poor *jatis*. This would lead to high ethnification, but to a weak economic foundation for party politics. This section therefore presents a group-level analysis of voting by *jati* groups to explore how the average income of groups is related to voting patterns. So doing allows us not only to explore whether groups with similar income tend to vote together, but also to test the importance of income differences between groups without having to make any assumptions about the relevance of party size in aggregating to state-level variables (as we do when measuring PVP, PVF or any other state-level measure).

We draw on Huber (2012) to measure the “voting distance” between members of any two groups. The basic idea is to compare the distribution of support for the different parties by one *jati* group with the distribution of support by another *jati* group in the state. If the members of the first *jati* support parties in the same proportions as the members of the second *jati* (e.g., each *jati* gives 20 percent of its support to party 1 and 80 percent of its support to party 2), then the electoral distance is 0. The distance measure increases as the proportions that each *jati* gives to each party diverge, and it reaches its maximum when each *jati* has its own party (e.g. *jati* 1 gives 100 percent of its support to party 1 and *jati* 2 gives 100 percent of its support to party 2). Formally, let \bar{r}_{ij} be the measure of electoral distance between groups i and j in a state. Then

$$\bar{r}_{ij} = \sqrt{\frac{1}{2} \sum_{k=1}^N (V_i^k - V_j^k)^2}.$$

where V_i^k and V_j^k are the proportion of members of group i and j respectively who support party k and there are N total parties in a state. The measure of \bar{r}_{ij} is of course closely related to \tilde{r}_{ij} , but it is based on group voting patterns rather than to the composition of support for parties.

Our goal is to understand if \bar{r}_{ij} increases with the income differences between groups. We therefore regress \bar{r}_{ij} on “Income Difference,” which is the absolute difference in the mean income of groups i and j . Table 5 presents our results. In each model the dependent variable is the measure of \bar{r}_{ij} , and there are 2,233 pairs of groups across the states in the two elections.⁴⁹ The models also include state and year fixed effects (not reported). All continuous variables are standardized to have a mean of 0 and a standard deviation of 1.

Table 5 here

Model 1 includes only Income Difference (and the state and year fixed effects). The coefficient is positive and very precisely estimated. We find that as income differences between groups increase, members of poor *jati* groups tend to vote for different parties than members of rich *jati* groups, suggesting that income differences between *jati* groups does lead to income-based electoral politics.

Does umbrella caste mitigate the effect of income distance? It may be the case that members of *jatis* belonging to the same umbrella caste group will vote in similar ways, regardless of their economic well-being. Model 2 examines this idea by including “Same Caste,” an indicator variable taking the value 1 if the two *jatis* in a pair are from the same caste, as well as the interaction of Same Caste and Income Difference.

The results provide very uneven support for the idea that caste membership mitigates the effect of income difference on voting. The coefficient for Same Caste is negative and reasonably large in magnitude, but it is not at all precisely estimated. And the coefficient on the interaction term has the correct sign, but it too is very small in size and estimated with very large error. We find, however, that the coefficient for Income Difference remains large, positive and precisely estimated. The main conclusion to draw from the model is that the effect of income differences on voting differences is essentially the

⁴⁹We kept all pairs for the *jatis* belonging to Upper Castes, Peasant Castes, Upper backward Caste, Lower Backward Castes, Dalits and Tribals while removing *jatis* belonging to Christian, Muslims, Buddhists, Sikhs and Jain religions where the respondents did not also identify as a member of a larger caste group.

same regardless of the caste affiliations of the *jatis* being compared.

Models 1 and 2 estimate the effect of the absolute difference in the average income of two groups on the voting behavior of the two groups. An alternative approach, which provides more information about which part of the income scale is producing the income differences, is to replace Income Difference with two variables. “Poor group income” is the average income of the group in the dyad which has the lowest average income. It should have a negative coefficient if income differences lead to voting differences. “Rich group income” is the average income of the group with the higher average income in the dyad, and this variable should have a positive coefficient. These variables allow us to understand if the results for income differences are driven disproportionately by the income of the richer groups or the income of the poorer groups. Model 3 presents the results when only Rich Group Income and Poor Group Income are included (along with the fixed effects). We find that the coefficients for both variables are in the expected direction, that they are very precisely estimated, and that they are reasonably similar in absolute magnitude. Thus, there is no evidence from this model that the results we have found for income differences are driven disproportionately by the voting patterns of rich or poor *jati* groups.

Model 4 adds Same Caste and the interactions of Same Caste with the income variables. If shared caste diminishes the effect of income differences between *jati* on voting differences, then the interaction with Poor Group Income should be positive and the interaction with the Rich Group Income should be negative. When the caste variables are included in the model, we find that the coefficients for Poor Group Income and Rich Group Income remain precisely estimated with the expected sign. The coefficients for the interactions, however, are not precisely estimated, and the coefficient for the Rich Income*Same Caste has the wrong sign (suggesting increases in rich group income is associated with greater voting differences when *jatis* are of the same caste rather than different castes). When we calculate the standard errors for the interaction terms, however, we find that there is no statistically significant difference in the estimated marginal effect of Poor Group

Income within caste and Poor Group Income across castes. The same is true for rich income.

Model 5 adds a number of group level controls to model 4. “Large Group Size” is the size of the largest group and “Small Group Size” is the size of the smallest group. If group size affects group heterogeneity or the appeal of groups in coalition building, these variables may affect voting patterns. Similarly, “Rich group Gini” is the group Gini for the richest group and “Poor group Gini” is the group Gini for the poorest group. Since a large Gini reflects greater income heterogeneity within a group, we might worry that the level of within-group inequality could mediate the effect of group income differences on voting outcomes.

There is little support for the hypothesis that group-level heterogeneity systematically affects voting patterns. Only one of the four group-level control variables – Rich group Gini – is measured precisely, and its positive coefficient suggests that all else equal, a rich heterogeneous group will have more distinctive voting patterns than a rich homogeneous group. This effect, however, is not substantively large, and the inclusion of these group-level variables in the model, does not affect the results for income distance found in models 3 and 4. The coefficients for Poor Group Income and Rich Group Income remain large in absolute magnitude and are very precisely estimated (significant at the .01 level). And they are virtually identical in absolute size. Same Caste is more precisely estimated in model 5, negative and significant at the .05 level. But the coefficient of -.113 implies that a change in Poor Group Income from one standard deviation above the mean to one standard deviation below the mean would be associated with an increase in voting distance that is over three times the effect of a change from a within-caste *jati* comparison to a between-caste *jati* comparison.

As with the state-level regressions, for the group-level analysis we re-estimated the models in Table 5 using educational attainment rather than “asset income” distance between groups. The results, presented in Table ?? of the appendix, are remarkably similar

to those in Table 5. In each model, we find a large effect of educational differences on voting differences.

In sum, we find robust evidence that as two *jati* groups in a state diverge in their average income or education, they tend to support different parties. This implies a strong economic element in Indian ethnic electoral politics. In addition, we find that umbrella caste groups do little to mitigate the effect of sub-caste income differences on sub-caste voting patterns. This is a particularly important finding for Indian politics as it is often taken as conventional wisdom that these politicized higher caste categories are most critical to explaining variations in ethnic voting patterns in the country.

8 Cross-national analysis

Some might worry that the historic tie of *jati* groups to occupation makes *jati*-based politics in India rather unique. In particular, we might expect that the link between *jati*-based group identity and economic well-being to be particularly strong, with members of any given *jati* group unusually homogeneous with respect to economic well-being, and with inequality between *jati* groups unusually large. If this is true, India might be a difficult case from which to draw more general inferences about inter-group inequality and the salience of ethnicity to electoral behavior.

We doubt this concern is valid given the socio-political dynamic in India's post-independence period. In particular, affirmative action policies, economic reforms, growing urbanization and transformations in the agricultural economy have dramatically altered the relationship between *jati* and occupations to the extent that it is generally difficult to tell the *jati* of a person by their occupation.⁵⁰ In addition, the average economic heterogeneity of *jatis* is quite high. When we calculate the Gini of each *jati* and take their average in each state, then the mean of these averages is .403. The mean of state-level

⁵⁰Karnath 1996.

Ginis is .440, only .037 higher. Thus, although there is variation across *jatis*, the average inequality within groups is very close to the average inequality within the states themselves.

We can also explore the issue of Indian exceptionalism directly by examining the relationship between BGI and PVP in majoritarian systems across countries using measures of PVP from 24 surveys in 13 majoritarian systems.⁵¹ We combine this with measures of the Gini decomposition for each of these countries.⁵² The cross-national data rely on the list of groups from James Fearon's cross-national ethnic diversity dataset, which is based on a set of clear and reasonable criteria for identifying the socially relevant groups across a wide range of countries that is widely used in the literature.⁵³ For India, Fearon uses language groups, which we have noted yields roughly the same value of PVP that we find for religion, which is less than that of caste or *jati*. Given that *jati* groups vary considerably across states, it is impossible to use *jati* at the national level. We therefore use the NES surveys with caste to calculate PVP and BGI for the cross-national analysis.

Figure 3 shows the same plot using the cross-national data that we show for India in Figure 1. That is, we regress PVP on EP and plot the residuals against BGI. Two things are noteworthy. First, the relationship, if anything, is stronger in the cross-national data than in the cross-state data from India. The greater the level of inequality between groups, the greater the level of PVP. Second, India is not an outlier. Although there is less ethnification of the parties than one would expect given the relatively high level of BGI, the India observations are not far from the bi-variate regression line.

Figure 3 here

Table 6 provides results from OLS models. Model 1 includes BGI, residual inequality

⁵¹Huber 2012. The surveys includes the Comparative Study of Electoral Systems, the World Values Survey and Afrobarometers. The majoritarian countries are Australia, Bangladesh, Botswana, Canada, France, India, Kenya, Madagascar, Malawi, Mali, Nigeria, United States and Zambia.

⁵²Huber and Mayoral 2014, drawing on a wide range of individual level surveys, compute these measures.

⁵³Fearon 2003. Depending on the country, Fearon's identification of groups may be based on race (e.g., the US), language (e.g., Belgium), religion (e.g. France), tribe (e.g., many African countries), or even some combination of these factors. Further details can be found in Fearon 2003.

(Gini-BGI), EP and other controls for economic development (the log of GDP per capita), federalism and the level of democracy (Polity2). All of the variables are standardized to have a mean of 0 and a standard deviation of 1 to facilitate comparisons of coefficients. We will focus our discussion on the inequality variables. In model 1, BGI has a positive coefficient that is very precisely estimated, and residual inequality (Gini-BGI) has a negative coefficient that is not at all precisely estimated. Model 2 introduces each of the components of the Gini, and only the coefficient for BGI is positive and precisely estimated. Model 3 drops the GDP and Federalism variables (whose coefficients are estimated with considerable error), and the coefficient for BGI is large, positive and precisely estimated. Thus, as in the analysis across the Indian states, in majoritarian countries, there is a strong, positive and robust association between inequality between groups and the ethnification of party systems.

For comparison, model 4 estimates model 3, but with PR rather than majoritarian systems. The results are quite different: BGI has no relationship with PVP but the coefficient for within-group inequality is negative and precisely estimated. Thus, the relationship between various components of inequality and ethnic voting appear to be different under different electoral laws. While it is beyond the scope of this paper to carefully probe these differences, the findings here are consistent with those of others regarding why PR systems actually have less ethnic voting behavior than majoritarian ones.⁵⁴ When party entry is relatively easy (as under PR), multiple parties can compete for support from the same group, dividing the group against itself. If underlying group attributes affect the success of such elite strategies, individuals from the same group should be most likely to support different parties when group members have heterogeneous preferences. Inequality within groups should increase such preference heterogeneity.

⁵⁴Huber 2012.

9 Conclusion

The results here provide a fresh perspective on identity politics in Indian elections. As noted above, previous studies are more likely to emphasize umbrella caste categories or religion than *jati* in identity politics, and existing studies have not engaged in head-to-head comparisons that can show which identity category is associated with the greatest ethnification of party systems. We find that among the various definitions of identity examined here, ethnification of parties is actually strongest using “*jati*” identity. Those interested in Indian electoral politics, then, could benefit from paying more attention to dynamics at the sub-caste level.

Previous research on India also emphasized the role of ethnic appeals in fostering ethnic-based patronage politics. While we do not discount the importance of these appeals, our results about the relationship between ethnic inequality and ethnic voting behavior suggest that whatever the nature of party strategies, economic conditions can play an important role in determining the circumstances under which these appeals will win votes. Finally, scholars of Indian politics have not focused on whether the economic attributes of groups influence the extent to which ethnic identity is salient in electoral behavior. We find not only that ethnic inequality and the ethnification of party systems are related, but also that the voting patterns of members from two different groups diverge when the mean incomes of these groups diverge. Thus, what is often viewed as patronage-based ethnic politics in India may be masking a previously neglected but important element of “class politics,” where identity-based voting behavior is strongest when voters’ economic well-being are related to their group identity. We would emphasize, however, that the findings do not imply that when ethnicity becomes salient to electoral behavior, it is little more than class politics in disguise. Since the economic heterogeneity of groups does not affect group voting patterns in India or other majoritarian systems, this suggests that if inequality between groups contributes to the salience of ethnic identity for voters, members of the same group tend to vote together independent of the degree to which they have com-

mon economic interests. Thus, inequality between groups might well contribute to group solidarity that transcends income differences within groups.

The analysis also informs the more general study of ethnic politics, suggesting pathways for further research. The patterns we find across the states in India, which we also find in cross-national analysis of majoritarian systems, reminds us that elites cannot turn the salience of particular group identities on or off like water at the tap. Voters have to have a reason for viewing particular identities as salient to their electoral behavior, and economic characteristics of groups seem to play a role in determining whether identity politics are useful electorally. There is something to be gained, then, by further study of the conditions that lead ethnic identity to become salient to voters in the first place.

Figures and Tables

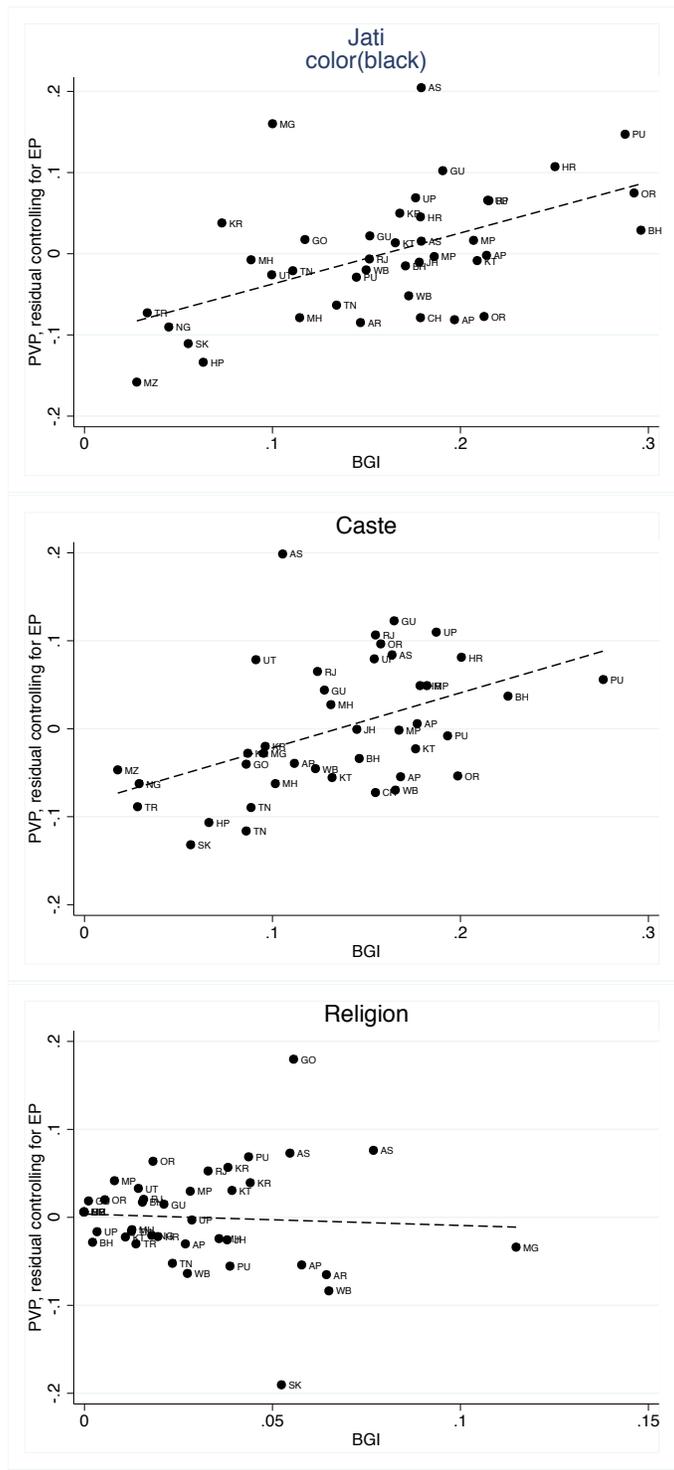


Figure 1: BGI and Party Ethnification using three definitions of group

Figure 2: Changes in PVP vs. changes in BGI in 15 states, 1999 to 2004

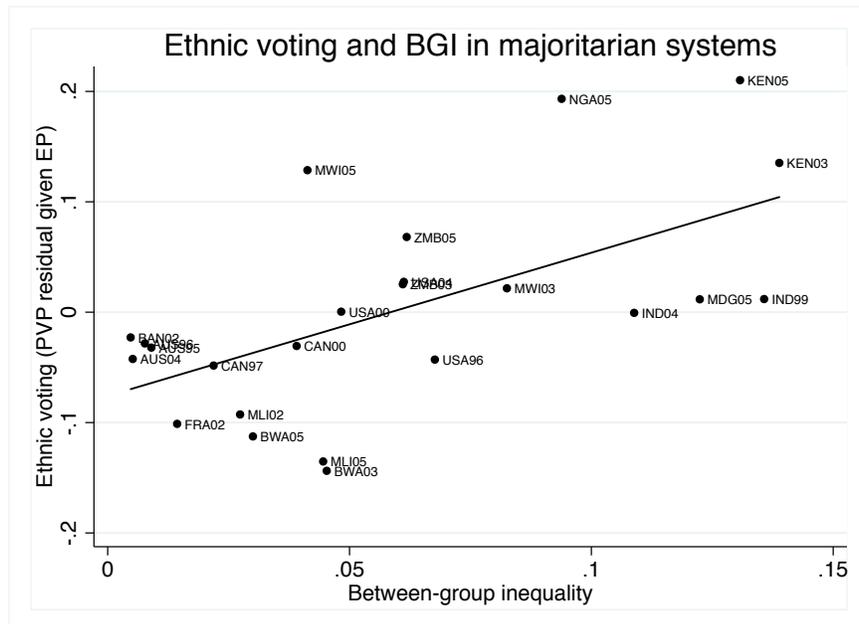
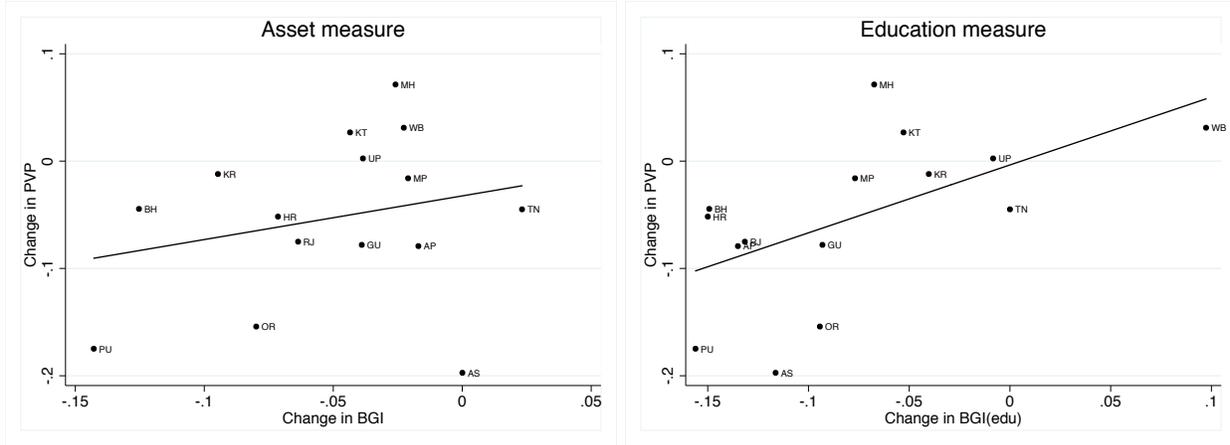


Figure 3: PVP and BGI in 13 majoritarian countries

Table 1: Example of the calculation of electoral distance (\tilde{r}_{AB}) between Party A and Party B

Example 1			
	P_k^A	P_k^B	$(P_k^A - P_k^B)^2$
Group 1	0.4	0.25	0.0225
Group 2	0.35	0.35	0
Group 3	0.25	0.4	0.0225

$$\sum_{k=1}^3 (P_k^A - P_k^B)^2 = .0445$$

$$\tilde{r}_{AB} = \sqrt{\frac{.0445}{2}} = .15$$

Example 2			
	P_k^A	P_k^B	$(P_k^A - P_k^B)^2$
Group 1	0.8	0	0.64
Group 2	0.2	0.2	0
Group 3	0	0.8	0.64

$$\sum_{k=1}^3 (P_k^A - P_k^B)^2 = 1.28$$

$$\tilde{r}_{AB} = \sqrt{\frac{1.28}{2}} = .8$$

Table 2: OLS regressions of PVP on BGI using asset and educational 'income' data

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
BGI (assets)	0.642** (0.256)	0.631** (0.260)	0.630** (0.253)	0.681** (0.257)				
BGI (edu.)					0.677** (0.179)	0.613** (0.170)	0.590** (0.166)	0.639** (0.184)
EP	0.420** (0.162)	0.433** (0.162)	0.433** (0.160)	0.396** (0.163)	0.513** (0.164)	0.529** (0.170)	0.507** (0.165)	0.540** (0.167)
Gini-BGI (assets)	0.076 (0.205)	0.099 (0.210)	0.097 (0.200)					
WGI (assets)				0.018 (0.332)				
Overlap(assets)				0.248 (0.239)				
Gini-BGI(edu.)					-0.141 (0.176)	-0.169 (0.176)	-0.190 (0.172)	-0.548 (0.450)
Within(edu.)								-0.042 (0.173)
Overlap(edu)								-0.111 (0.309)
2004	-0.345 (0.295)	-0.373 (0.294)	-0.373 (0.289)	-0.328 (0.294)	-0.105 (0.308)	-0.158 (0.308)	-0.190 (0.302)	1.047 (0.690)
Party-Group Ratio	0.363 (0.590)			0.822 (0.707)	0.741 (0.607)			
Effective No of Parties		0.003 (0.088)				0.058 (0.085)		
Constant	0.531 (0.421)	0.332 (0.427)	0.341 (0.285)	0.608 (0.424)	0.549 (0.448)	-0.064 (0.455)	0.157 (0.314)	0.471 (0.456)
Adj. R-squared	0.310	0.302	0.322	0.317	0.373	0.354	0.364	0.371
N	41	41	41	41	41	41	41	41

Note: Continuous variables are standardized to have a mean of 0 and a standard deviation of 1. Standard errors in parentheses. * p<.10, ** p<.05, *** p<.01.

Table 3: Additional cross-state OLS regressions

	(9)	(10)	(11)	(12)	(13)	(14)	(15)
BGI (assets)	0.771** (0.315)	0.638** (0.267)	0.601** (0.265)	0.637** (0.252)	0.377* (0.206)	0.477 (0.287)	
BGI(educ.)							0.532** (0.197)
EP	0.382** (0.172)	0.419** (0.175)	0.423** (0.171)	0.423** (0.160)	0.135 (0.131)	0.297 (0.226)	0.359* (0.198)
Gini-BGI (assets)	0.166 (0.242)	0.123 (0.225)	0.064 (0.217)	0.239 (0.229)	0.273 (0.187)	-0.021 (0.263)	
Gini-BGI(educ.)							-0.028 (0.174)
2004	-0.341 (0.297)	-0.335 (0.303)	-0.435 (0.308)	-0.326 (0.290)	-0.386 (0.238)	-0.556* (0.274)	-0.340 (0.302)
GDP/cap(ln)	0.117 (0.164)						
Party-Group Ratio	0.374 (0.594)	0.708 (0.674)	0.415 (0.629)	0.934 (0.695)	3.843*** (0.568)	-0.229 (0.392)	-0.116 (0.384)
Regional parties		-0.241 (0.298)					
Hindu Belt		0.019 (0.294)					
Northeast		-0.500 (0.482)					
Tax expenditures			-1.097 (3.721)				
ELF				0.564 (0.379)	1.568*** (0.310)		
Constant	0.491 (0.428)	0.949 (0.566)	0.761 (0.659)	0.561 (0.415)	1.781*** (0.339)	0.134 (0.310)	0.003 (0.320)
Adj. R-squared	0.300	0.279	0.306	0.333	0.639	0.357	0.370
N	41	41	40	41	41	41	41
Dependent var.	PVP	PVP	PVP	PVP	PVF	PVP	PVP
Group-type	<i>jati</i>	<i>jati</i>	<i>jati</i>	<i>jati</i>	<i>jati</i>	Umbrella caste	Umbrella caste

Note: Continuous variables are standardized to have a mean of 0 and a standard deviation of 1. Standard errors in parentheses. * p<.10, ** p<.05, *** p<.01.

Table 4: Fixed effects regressions

	(1)	(2)	(3)	(4)	(5)	(6)
BGI (assets)	0.966* (0.509)	1.109** (0.455)			1.332** (0.503)	
BGI (edu.)			0.780*** (0.220)	0.699*** (0.174)		0.600** (0.244)
Gini-BGI (asset)	0.581 (0.752)	0.448 (0.711)			1.247 (0.761)	
Gini-BGI (edu.)			-0.124 (0.378)	-0.013 (0.326)		0.021 (0.431)
EP	0.516* (0.260)	0.512* (0.254)	0.436* (0.212)	0.466** (0.201)		
GDP/cap(ln)	-0.093 (0.135)		0.076 (0.120)			
ELF					-1.228* (0.660)	-1.209* (0.632)
Constant	-0.483 (0.373)	-0.316 (0.278)	0.052 (0.297)	-0.107 (0.157)	0.713 (0.604)	1.136* (0.523)
Adj. R-squared	-0.259	-0.204	0.238	0.276	-0.424	-0.298
N	30	30	30	30	30	30
Dependent variable	PVP	PVP	PVP	PVP	PVF	PVF

Note: Models 1-2 measure inequality using asset indicators. Models 3-4 measure inequality using educational attainment. Standard errors in parentheses: * p<.10, ** p<.05, *** p<.01.

Table 5: OLS regressions of Voting Distance on
Income Distance between groups

	(1)	(2)	(3)	(4)	(5)
Income Difference	0.159*** (0.019)	0.153*** (0.021)			
Same Caste		-0.090 (0.080)		-0.109* (0.057)	-0.113** (0.057)
Income Difference * Same Caste		-0.003 (0.030)			
Poor group income			-0.165*** (0.022)	-0.174*** (0.024)	-0.177*** (0.035)
Rich group income			0.143*** (0.022)	0.129*** (0.023)	0.202*** (0.040)
Rich inc.*Same Caste				0.045 (0.069)	0.043 (0.069)
Poor inc.*Same Caste				0.072 (0.064)	0.077 (0.064)
Small group size					-0.033 (0.022)
Large group size					0.019 (0.025)
Rich group Gini					0.090** (0.040)
Poor group Gini					-0.003 (0.035)
State and year fixed effects	Yes	Yes	Yes	Yes	Yes
Constant	-0.867 (0.884)	-0.861 (0.884)	-0.846 (0.884)	-0.826 (0.883)	-1.033 (0.923)
Adj. R-squared	0.221	0.221	0.222	0.223	0.224
N	2233	2233	2233	2233	2233

Note: Continuous variables are standardized to have a mean of 0 and a standard deviation of 1.
Standard errors are in parentheses: * p<.10, ** p<.05, *** p<.01

Table 6: Cross-national OLS regressions of PVP on inequality variables

	(1)	(2)	(3)	(4)
BGI	0.808** (0.348)	0.693* (0.357)	0.785** (0.365)	-0.033 (0.089)
Gini-BGI	-0.162 (0.117)			
WGI		-0.227 (0.160)	-0.172 (0.149)	-0.366** (0.176)
Ov		0.012 (0.361)	-0.332 (0.279)	0.232 (0.146)
EP	0.605*** (0.138)	0.472* (0.267)	0.731*** (0.193)	0.071 (0.085)
GDP/capita(ln)	0.219 (0.321)	0.414 (0.470)		
Polity	-0.666*** (0.219)	-0.725*** (0.244)	-0.361* (0.200)	-0.043 (0.144)
Federalism	0.477 (0.492)	0.404 (0.527)		
Constant	0.451 (0.358)	0.425 (0.364)	0.696*** (0.202)	-0.221* (0.116)
Adj. R-squared	0.566	0.549	0.526	0.288
N	24	24	24	45
Elec. Law	SMD	SMD	SMD	PR

Note: Continuous variables are standardized to have a mean of 0 and a standard deviation of 1. Robust standard errors are in parentheses: * p<.10, ** p<.05, *** p<.01

References

- Alesina, Alberto, Stelios Michalopoulos & Elias Papaioannou. N.d. "Ethnic Inequality." 2013.
- Baldwin, Kate & John D. Huber. 2010. "Economic versus Cultural Differences: Forms of Ethnic Diversity and Public Goods Provision." *American Political Science Review* 104 (4):644–662.
- Bates, Robert. 1983. State versus Ethnic Claims: African Policy Dilemmas. In *Modernization, Ethnic Competition and the Rationality of Politics*, ed. D Rothschild & V.A Olunorola. Westview Press chapter Modernization, Ethnic Competition and the Rationality of Politics.
- Brass, Paul R. 2003. *The Production of Hindu-Muslim Violence in Contemporary India*. New Delhi: Oxford University Press.
- Chandra, Kanchan. 2004. *Why Ethnic Parties Succeed : Patronage and Ethnic Headcounts in India*. Cambridge studies in comparative politics Cambridge, UK ; New York: Cambridge University Press.
- Chandra, Kanchan. 2011. "What is an Ethnic Party?" *Party Politics* 17 (2):151–169.
- Chauchard, Simon. 2014. "Can Descriptive Representation Change Beliefs about a Stigmatized Group? Evidence from Rural India." *American Political Science Review* Forthcoming.
- Chhibber, Pradeep. 1999. *Democracy without associations : transformation of the party system and social cleavages in India*. Ann Arbor: University of Michigan Press.
- Chhibber, Pradeep, Francesca Refsum-Jensenius & Pavithra Suryanarayan. Forthcoming 2013. "Party Organization and Party Proliferation in India." *Party Politics* .
- Chhibber, Pradeep & Irfan Nooruddin. 2004. "Do Party Systems Count: The Number of Parties and Government Performance." *Comparative Political Studies* 37 (2):152–187.
- Dunning, Thad & Janhavi Nilekani. 2013. "Ethnic Quotas and Political Mobilization: Caste, Parties and Distribution in Indian Village Councils." *American Political Science Review* 107 (1):35–56.
- Dunning, Thad & Lauren Harrison. 2010. "Cross-cutting Cleavages and Ethnic Voting: An Experimental Study of Cousinage in Mali." *American Political Science Review* 104 (1):21–39.
- Esteban, Joan & Debraj Ray. 1994. "On the Measurement of Polarization." *Econometrica* 62:819–52.
- Esteban, Joan, Laura Mayoral & Debraj Ray. 2012. "Ethnicity and Conflict: An empirical study." *American Economic Review* 102(4):1310–42.

- Fearon, James. 2003. "Ethnicity and Cultural Diversity by Country." *Journal of Economic Growth* 8:195–222.
- Filmer, Deon & Lant H. Pritchett. 2001. "Estimating Wealth Effects Without Expenditure Data-Or Tears: An Application to Educational Enrollments in States of India." *Demography* 38 (1):115–132.
- Heath, Oliver. 2005. "Party Systems, Political Cleavages and Electoral Volatility in India A State-Wise Analysis, 1998–1999." *Electoral Studies* 24(2):177–199.
- Horowitz, Donald. 1985. *Ethnic Groups in Conflict*. University of California Press.
- Huber, John D. 2012. "Measuring Ethnic Voting: Do Proportional Electoral Laws Politicize Ethnicity?" *American Journal of Political Science* 56 (4):986–1001.
- Huber, John D. & Laura Mayoral. N.d. "Inequality, Ethnicity and Civil Conflict." 2013.
- Jaffrelot, Christophe. 2005a. *India's Silent Revolution: The Rise of Lower Castes*. Hurst & Co, London.
- Jaffrelot, Christophe. 2005b. *The Sangh Parivar: A Reader*. Oxford University Press.
- Karnath, G.K. 1996. Caste in Contemporary Rural India. In *Caste: Its Twentieth Century Avatar*, ed. M.N. Srinivas. Viking, India.
- Kasara, Kimuli. 2007. "Tax Me If You Can: Ethnic Geography, Democracy, and the Taxation of Agriculture in Africa." *American Political Science Review* 101(1):159–172.
- Krishna, Anirudh. 2003. "What is Happening to Caste? A View from Some North Indian Villages." *The Journal of Asian Studies* 62 (4):1171–1193.
- McKenzie, David J. 2005. "Measuring Inequality with Asset Indicators." *Journal of Population Economics* 18 (2):229–260.
- Montalvo, Jose G. & Marta Reynal-Querol. 2005. "Ethnic Polarization, Potential Conflict and Civil War." *American Economic Review* 95 (3):796–816.
- Posner, Daniel N. 2004. "The Political Salience of Cultural Difference: Why Chewas and Tumbukas Are Allies in Zambia and Adversaries in Malawi." *American Political Science Review* 98 (4):529–545.
- Posner, Daniel N. 2005. *Institutions and Ethnic Politics in Africa*. Cambridge: Cambridge University Press.
- Reynal-Querol, Marta. 2002. "Ethnic Polarization, Potential Conflict and Civil War." *Journal of Conflict Resolution* 46(1):29–54.
- Rudolph, Lloyd. 1965. "The Modernity of Tradition: The Democratic Incarnation of Caste in India." *The American Political Science Review* 59 (4):975–989.

- Rudolph, Susanne H. & Lloyd Rudolph. March 22, 1993. "Modern Hate." *The New Republic* pp. 24–29.
- Singh, Prerna. 2010. "We-ness and Welfare: A Longitudinal Analysis of Social Development in Kerala, India." *World Development* 38(2):282–293.
- Srinivas, M N. 1962. *Caste in Modern India and other Essays*. Asia Publishing House, Bombay.
- Thachil, Tariq. N.d. "Can Social Services Win Votes? A Study of Hindu Nationalism and the Poor in India." APSA 2010 Annual Meeting Paper.
- Wilkinson, Steven. 2004. *Votes and Violence*. Cambridge University Press.
- Yitzhaki, Shlomo & Robert I. Lerman. 1991. "Income Stratification and Income Inequality." *Journal of Population Economics* 37(3):313–28.