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THE EFFECT OF THE POLITICS OF CASTE AND CLASS ON CHILD POVERTY IN INDIA

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Keywords: Political regimes, corruption, child poverty, caste, class, India, multilevel models.

Author contributions. Conceived and designed the research topic: AD, SN. Collected the state-level data: AD. Collected the micro data: SN. Performed the statistical analysis: AD. Interpreted the results: AD, SN. Wrote the manuscript: AD, SN. Revised the manuscript: AD, SN.

Abstract: The politics of caste, corruption, and wealth, are essential for combating poverty in India. However, relatively few studies have systematically analysed how these factors explain patterns of poverty combining state-level indicators with household and child-level outcomes. Focusing on child poverty as an outcome measure, our paper tests the explanatory potency of John Harriss' typology of state government political regimes, Transparency International India's (TII) measures of state corruption, and state-level wealth. Using data on 120,988 children, from the third National Family Health Survey (2005-2006) and multilevel models, we find that Harriss' typology of state regimes is better in explaining child poverty differences between states than TII's corruption index. Our findings show that states whose political regimes are historically dominated by upper caste groups tend to have an adverse effect on poor children from lower castes, compared to those states dominated by lower caste groups. This adverse effect is amplified in wealthier states.

Keywords: Political regimes, corruption, child poverty, caste, class, India, multilevel models.

Introduction

Between 1993 and 2013, India's average annual GDP growth was an impressive 8%[i]. However, during this period the country saw only a relatively small reduction in non-monetary measures of development, such as child malnutrition (Gragnolati et al., 2005), and access to basic services (IIPS and Macro International 2007).

The dual nature of India's economic and social development has generated much debate, with political, administrative and bureaucratic incompetence, corruption, and inefficiency highlighted. In 2012 a report on administrative governance examined the political and administrative processes which result in the misallocation and misappropriation of public funds. The report noted:

> "Weak governance, manifesting itself in poor service delivery, excessive regulation and uncoordinated and wasteful public expenditure, is one of the key factors impinging on development and social indicators" (Saxena 2012: 2-3).

The report goes quoted the Second Administrative Reforms Commission (2008):

> "The state apparatus is generally perceived to be largely inefficient with most functionaries serving no useful purpose. The bureaucracy is generally seen to be tardy, inefficient and unresponsive. Corruption is all-pervasive, eating into the vitals of our system, undermining economic growth, distorting competition and disproportionately hurting the poor and marginalized citizens. Criminalization of politics continues unchecked, with money and muscle power playing a large role in elections. In general there is a high degree of volatility in society on account of unfulfilled expectations and poor delivery. Abuse of authority at all levels in all organs of state has become the bane of our democracy".

The deficiencies of governance in India, therefore, are clear. While poverty declined, with the national headcount falling from 37% to 30% between 2004/05 and 2009/10 (Government of India Planning Commission, 2012), and all-India urban and rural poverty rates also falling, considerable inter-state differences remained (Alkire and Seth 2015; Cain et al. 2010; Cavatorta, Shankar, and Flores-Martinez 2015; Cavatorta et al. 2015; Dhongde 2017). Poverty fell by 10% or more in the states of Himachal Pradesh, Madhya Pradesh, Maharashtra, Orissa, Sikkim, Tamil Nadu, Karnataka and Uttarakhand but rose in the north-eastern states of Assam, Meghalaya, Manipur, Mizoram and Nagaland. Sizeable disparities persist between social groups, with higher than expected rates of rural poverty among Scheduled Tribe (47%) and Scheduled Caste (42%) communities. Poverty rates for urban-based Schedule Caste and Scheduled Tribes communities were at 34% and 30% respectively in 2009/10.

Poverty statistics are always contentious and political (Saith, 2005, Deaton and Dreze, 2002). Explanations of the causes of poverty, and people's (in)ability to extricate themselves from it lie at all levels, from international/state level factors to those attributed(able) to individuals and communities (Kim, Mohanty, and Subramanian 2016).

Explaining the different socio-political processes in a country as diverse as India is challenging. Interactions between ethnic groups, religions and social stratifications associated with caste and tribe, gender, geography and occupation result in an almost impenetrable black box, within which decisions are made and resources allocated (Fontaine and Yamada 2014; Harriss 2002; Kaletski and Prakash 2016), and this especially so in cases of resource scarcity

and weak governance (Daoud, 2010; 2011; 2015). The impressive human development outcomes for states like Kerala, contrast sharply with those of the states of Bihar and Uttar Pradesh. Much is made of these state-level differences (Kohli, 1989, Nayyar, 1991, Datt and Ravallion, 1998) not least with regards to the issue of corruption. Harriss' work on state political regimes and rural poverty reduction (Harriss, 1999, Harriss, 2005, Harriss, 2013) considers these issues in detail, and his typology of state political regimes in the mid-to-late 1990s provides an interesting framework to examine poverty in India. His theoretical framework captures India´s complexity in an analytically sharp yet non-reductionist way, and although questions remain as to whether his theory has any explanatory power when applied to empirical data.

In this paper, we test Harriss' theory by analysing the interaction between state political regimes, TII's index of state corruption and state levels of economic development (wealth), to see to what degree it explains observed differences in the distribution of child poverty across India. We focus on child poverty rather than general poverty for several reasons; children are most vulnerable to the impacts of poverty and deprivation, they are more reliant on their parents and basic public services.. There is also a moral imperative to analyse their situation, and to improve the conditions that affect their survival and development. A good way of assessing a society's level of development is seeing how it treats its most vulnerable citizens.

Political regimes and corruption

Corruption as a determinant of poverty

The links between political and administrative corruption and poverty in low and middle-income countries have been studied extensively. The World Bank's *2001 World Development Report* showed that the impacts of corruption fall most heavily on the poorest, by affecting access to and the quality of public services on which the poor depend, by diverting to unproductive uses and for personal enrichment, and by increasing the costs of capital investment through the use of kickbacks and bribes (World Bank, 2001).

Gupta et al. (2002) examined the different processes through which corruption affects national poverty and inequality. They showed that corruption impacted rates of economic growth, and raised inequality, both of which contribute to persistent poverty. Maladministration, in areas of tax collection/exemption benefited the wealthiest, in the ineffective targeting of benefit programmes away from the poor, and concentration of assets and resources among an elite all affected the ability of anti-poverty policies to achieve their aims. The diversion of public funds away from social programmes (e.g. public health or education), or towards groups which control the policy process is another way corruption contributes to poverty.

The literature on corruption suggests two broad mechanisms, related to economics and governance. Briefly, corruption by reducing economic growth, increasing inequality and reducing governance capacity, leads to higher poverty (Heidenheimer and Johnston, 2002). Studies on the impact on economic growth point to an inverse relationship between levels of corruption and rates of economic growth, highlighting the issues raised by Gupta et al. (2002). They also point to lower levels of public investment (Mauro, 2002). Studies focusing on the impact of corruption on quality of governance show how biased decision making and resource allocation in favour of some groups over others, can degrade the quality of public services on which the poor, and children in particular, are disproportionately dependent (Kaufmann,Kraay

and Zoido-Lobaton, 2000).

In more recent work, Daoud (2015) assessed the explanatory power of good governance for combating child poverty in India, using governance measures developed by Mundle *et al.* (2012). He found that governance explained about 60 percent of the inter-state variation of child poverty.

One of the strongest characterising features of stable societies is that they often have a low degree of institutional corruption (Rothstein 2014). The main mechanism is social trust (Rothstein and Uslaner 2005): the less corruption, the greater the level of social trust. Social trust facilitates many positive societal effects, from higher rates of economic development to better political representation of weaker social groups in governing bodies. When the poor are well represented via a democratic system, they will work to strengthen their entitlements. They will promote the use of pro-poor policies to a higher degree, compared to forms of organization where they are not well represented (Daoud, 2007, Sen, 2000, Ross, 2006, Kwon and Kim, 2014, Koumakhov and Daoud 2016). The same logic applies for how social and economic policies are influenced by greater participation by caste and class groupings; people will work to improve the situation and to protect the interests of those of similar background. These ideas have also been expressed by the theory of median voter (Meltzer and Richard, 1981). If the majority of the electorate are poor, whose median income is lower than mean income, the elected leaders promote the policies which benefit the majority of voters; this can include redistributive policies such as social spending programmes on health, education (Myroniuk, Vanneman, and Desai 2017), and the provision of public goods (Boix, 2003, Bueno de Mesquita et al., 2003, Ghobarah et al., 2004). However, these theoretical explanations have found mixed empirical results, and the literature shows that the link between democracy, political accountability, and poverty reduction is not straightforward (Keefer and Khemani, 2005). It has also been argued that the median voter theory cannot be easily applied to societies fragmented by language, ethnicity, and religion (Meltzer and Richard, 1981: Deaton and Dreze 2002).

Even if a political system functions as the median voter theory suggests, and that governance of a state can be said to be 'good' (i.e. effective, unbiased), the question remains of how and to what extent corruption hinders development. Corruption limits the full and effective functioning of the state through the misallocation or misappropriation of public resources. Corruption grows in government organizations that lack transparency and accountability (Rothstein and Uslaner, 2005, Rothstein, 2014). Khan (2006) has argued that corruption in developing countries is deeply rooted in the local political, social, and economic structures (e.g. patronage). While corruption is almost certainly prevalent across all countries, what matters is its nature and degree. Accordingly, since corruption has been found to explain many of the ills of poor development, a central question of this paper is to analyse the relative importance of political regimes, corruption, and economic development on child poverty in India.

Political regimes determining the quality of governance

Expanding on earlier work (Kohli, 1989), Harriss (2000) examined the effect of class power in state governance and their impact on performance in rural poverty reduction. He realised the importance of taking into account caste/class distinctions and the impact of 'accommodationism' (between caste/class groups) which remains a strong element in Indian

politics. Harriss' typology attempted to explain differences in the democratic functioning of Indian states and the political, economic and social forces behind them. Differences in states levels of industrial development, for example, would determine the relationships between an industrial bourgeoisie and the working class, which in turn would alter the nature and extent of political mobilisation and organisation of civil society (Harriss, 2000). These processes are also influenced by caste, class and other ethnic identities and, when taken together, result in quite different political environments, and eventually, economic and social outcomes. Thus, it is expected that in regimes where the strategic interests of the poor (for example, around issues like land reform) are more effectively organised, and where the caste/class balances tilt political power in their favour, that one would see better outcomes for them. Harriss concluded, perhaps unsurprisingly, that:

> "the regime differences … distinguished do seem to make sense of some of the variations in the adoption, resourcing and implementation of what can be described as 'pro-poor policies'. The structure and functioning of local agrarian power, and the relations of local with state-level power-holders, do vary significantly between states and exercise influence both on political patterns and on some policy outcomes". (Harriss, 2000)

Harriss' typology grouped the largest and most populous states of India as follows:

> ***A(i) States*** *in which upper caste/class dominance has persisted and Congress has remained strong in the context of a stable two-party system ['traditional dominance' rather than politics of accommodation vis-a-vis lower classes]*. This group included the states of Madhya Pradesh, Orissa, and Rajasthan.
>
> ***A(ii) States*** *in which upper caste/class dominance has been effectively challenged by middle castes/classes, and Congress support has collapsed in the context of fractured and unstable party competition [both 'dominance' and the politics of accommodation have broken down]*. This group included the states of Bihar and Uttar Pradesh.
>
> ***B States*** *with middle caste/class dominated regimes, where the Congress has been effectively challenged but has not collapsed, and there is fairly stable and mainly two-party competition [the politics of accommodation vis-a-vis lower class interests have continued to work effectively, most effectively in Maharashtra and Karnataka, least effectively in Gujarat]*. This group included the states of Andhra Pradesh, Gujarat, Karnataka, Maharashtra and Punjab.
>
> ***C States*** *in which lower castes/classes are more strongly represented in political regimes where the Congress lost its dominance at an early stage.* This group included the states of Kerala, Tamil Nadu and West Bengal.

The states in groups A(i) and A(ii) were also 'low-income states'; those in group B were 'high-income states', and those in group C were 'middle-income states'. In later work, Harriss (2000) examined levels of public spending on development and rural poverty alleviation, identifying clear patterns and relationships between state regimes and outcomes for the poor. He noted,

> "*those states which have most clearly pursued what might be described as a direct approach to poverty reduction, through investments in the key social sectors of*

education and health, and by means of food subsidies, are those in which there is evidence that lower castes/classes are most strongly represented in the political regime'.

This was not entirely unexpected, as earlier work reached similar conclusions (Kohli, 1989). Causation is an essential factor, and Harriss' conclusions could equally (or at least as validly) have been one which showed that more direct or effective approaches to poverty reduction were implemented by some state regimes precisely *because* the poor were most strongly represented. Harriss' work was done at a time when questions were increasingly being asked about the importance and impact of state governance in national development processes, not at least in a situation of natural disasters (Daoud *et al.* 2015), or economics crises (Daoud et al. 2017). Defined by the World Bank as '*the exercise of political authority and the use of institutional resources to manage society's problems and affairs'* (World Bank, 1991) governance is now considered an essential element of the development process, both for state and non-state actors (Daoud, 2015a, 2015b). Major donors increasingly emphasise the importance of good governance, and it is set to be a key issue in the era of the Sustainable Development Goals (UNGA, 2010, von der Hoven, 2012).

Articulating four Hypotheses

From the theoretical discussion of how political regimes and corruption affect poverty, we derive four hypotheses. ***First hypothesis***: *Indian states politically dominated by higher and middle castes/classes (political regime type) will have more child poverty*. The motivation behind this hypothesis is that in a political climate dominated by better-off groups in society, the worse off will have less say in public discourse and decision making (Dreze and Sen, 2014).

Second hypothesis: *Political regime types have a greater influence than corruption, but both will lead to higher levels of child poverty*. This hypothesis directly tests the relative impact of Harriss' idea that political regimes matter, versus the established view that it is corruption which matters most for explaining child poverty across states (Harriss, 2013).

The final two hypotheses test the moderating effect of state wealth on political regime types and the perceived influence of corruption. ***Third hypothesis***: *political regime types dominated by higher and middle castes/classes, with more wealth (higher GDP), will result in less poverty compared to those states with less wealth*. This hypothesis assumes that higher GDP should have an alleviating effect on child poverty rates if Trickle Down theory is to be believed – i.e. better endowed state governments will invest public money in such a way so as to reduce poverty (e.g. via public education, health care, food security, etc). ***Fourth hypothesis***: *greater corruption will lead to greater child poverty in states with higher levels of wealth (GDP) compared to those with less wealth*. The key assumption of this hypothesis is that the impact of corruption is likely to be greatest in wealthier states since there is a greater incentive for capturing economic power (Corbridge et al., 2013). The underlying mechanisms if that of resource scarcity leading to conflict between ethnic and religious groups. When there is some perceived local abundance (wealth) in a context of macro scarcity (general poverty), then the incentive increases to capture that wealth, by political means or by corruption (Daoud 2018).

Methods and Data

Child poverty

We use data from the third round of India's National Family Health Survey (2005/06), NFHS-3. The NFHS is a nationally and sub-nationally representative household survey, which collects a wealth of individual and household-level data about people's living conditions, access to services, health status and well-being (IIPS & Macro International 2007). The data are similar to the Demographic and Health Surveys (DHS) used in other low and middle income countries, to track progress towards international development goals like the SDGs and MDGs (Corsi et al., 2012).

Our sample included data on 120,988 children, aged 0-18 years. The main dependent variable is an indicator of absolute child poverty, based on a definition agreed at the 1995 World Summit on Social Development. The governments of 117 countries defined absolute poverty for policy purposes, as:

> …*a condition characterised by severe deprivation of basic human needs, including food, safe drinking water, sanitation facilities, health, shelter, education and information. It depends not only on income but also on access to social services.* (UN, 1995, p. 57)

The World Social Summit definition of 'absolute' poverty remains to this day as one of the few internationally agreed definitions of poverty. It requires the operationalisation of indicators of *severe* deprivation for the basic human needs identified, and the so-called Bristol Approach has done this for over 15 years (Gordon et al., 2003; UNICEF, 2007; Minujin and Nandy, 2012). Children experiencing multiple severe deprivations are classed as living in absolute poverty. These definitions are outlined in table 1.

A recent paper (Gordon and Nandy, 2016) using the approach on NFHS3 data detailed the extent of deprivation of basic needs among India's children. It found:

- Over two-thirds (68%, around 300 million) of Indian children were shelter deprived, living in dwellings with more than five people per room or which had a mud floor;
- Over a quarter of a billion Indian children (62%, 272 million) were severely sanitation deprived, lacking any form of toilet facility;
- Over 30 million Indian children (7%) were severely water deprived, either using unsafe (open) water sources or having a long walk (>30 minutes) to collect water;
- About one in seven children (61 million) were information deprived, lacking access to radio, television, telephone or newspapers at home;
- 27% of Indian children under five were severely food deprived (severe anthropometric failure);
- 13% of Indian children under five were health deprived, either not being immunised against any diseases or having had an illness causing diarrhoea and not receiving any medical advice or treatment; and
- 13% of school-aged children (around 34 million) were severely educationally deprived - they reported never having been to school
- In 2005/06, over half (58%) of India's children (256 million) were living in absolute poverty, that is severely deprived of two or more basic human needs; over 350 million children were severely deprived of one or more basic needs.

The indicators were age-appropriate, such that, for example, young, non-school aged children were not considered education deprived. Similarly, anthropometric data are not collected on children aged six and up, and so measures of food deprivation only applied to children under five. Children of all ages were covered by four household-level indicators, on shelter, water, sanitation and information deprivation. Children under five were also covered by indicators of health and food deprivation, but not education, and older children covered by an indicator of education deprivation but not food or health deprivation. A more detailed examination of the thresholds and weighting of such indices is covered in Abdu and Delamonica (2018).

<<<Table 1 about here >>>

Political Regimes

We derive the political regimes measure from Harriss (1999, 2005), as described in the theory section. His typology is one of the few measures describing the interaction of caste and politics in India. The limitation of Harriss' measure however, is that it does not cover all the states of India. As it was developed for the thirteen largest states of India, any statistical effects is limited to the sample average treatment effect rather than a population (India) average treatment effect (Morgan and Winship 2014). It is also worth noting the time lag between when Harriss released his typology (in 1999) and the micro-data (2005/06) we are using. This lag is useful since the impact of a political regime, and the policies it implements, takes time to propagate and affect the outcomes (child poverty). Accordingly, our design assumes a five-year lagged effect in where possible anti-poverty policy decisions emerging from the politics of class and caste takes around five years before affecting outcomes for children. Table 2 shows how the sample in the NFHS 3 is populated across Harriss' typology of states.

<<<Table 2 about here>>>

Corruption

We derive the two measures of corruption from Transparency International's India (TII). TII makes sub-national assessments of the perceived extent or degree of corruption in each state and territory of India. We recognise the difficulties of reliably measuring something as latent and contentious as corruption. We therefore use two distinct measures to capture different aspects of corruption. The first is derived from TII's 2005 report (TII_2005) which is based primarily on the opinions of national and international experts, and their assessments, of corruption in India. The second is derived from TII's 2008 report (TII_2008) and focus instead on the opinions and experiences of people living below the poverty line. Scholars have shown that expert- versus people-based measures can lead to different results. For example, the OECD Metagora project (OECD, 2008) demonstrated that estimates of corruption based solely on expert opinion often overstated the level of corruption experienced by citizens.

The TII_2008 measure covers nearly all states and territories of India (n=29); the TII_2005 measure covers only twenty states. High scores in the TII_2005 imply greater corruption. Table 3 provides basic descriptive statistics for these key measures.

<<<Table 3 about here>>>

Statistical models

We deployed multilevel models to test the four hypotheses. Our data have a hierarchical structure such that *children* are nested in *households*, in turn nested in DHS geographical *clusters*, and finally clusters are nested in *states*. We used sample weights provided by the NFHS. We fitted both logistic and linear probability models that yielded similar results. We opted to present the results of the linear probability models as the interpretation is simplified. We used MLwiN's iterative generalized least-square estimator (Rasbash et al., 2013) and controlled the workflow with R2MLwiN (Zhang et al., 2013) in the R environment (R Development Core Team, 2013).

Procedure and covariates

We tested the first hypothesis, about the direct effect of political regimes on child poverty, in two steps. First, we estimate a bivariate association to identify any potential evidence of regimes on poverty. We then included a set of individual-level covariates to evaluate the sensitivity of this association. These covariates, outlined in table 4, are standard demographic measures such as child's gender and age, caste of the household (defined as the caste of the head of the household), the religion of the household (reported by the head of the household), the location (urban or rural) of the household, and the adults to children ratio (controlling for the size of the household). Our models also include a measure of economic inequality to control for possible confounding between economic and political factors. We produced a Gini coefficient for each state using the household wealth index. If, after this, the Harriss typology still had an effect on child poverty, we concluded that there is statistical evidence relevant for explaining variations in child poverty across the thirteen states of India. We tested the remaining hypotheses in a similar manner. For the interaction hypotheses, we also calculated their marginal effects to disentangle the direction of effect (Kam and Franzese, 2007).

<<<Table 4 about here >>>

Results

Our intention here is to examine the relationship between different state regimes (using Harriss' typology) and outcomes for children. Table 5 presents descriptive estimates of the proportion of children living in absolute poverty in 2005/06 in each state of India; these are children who experienced severe deprivation of two or more of the basic needs.

<<<Table 5 about here >>>

Figure 1 displays the ordering of states, using the mean number of severe deprivations experience among children in each state. The ranking of states is not an unfamiliar one for those who know the Indian context; outcomes are best for children in the southern state of Kerala and worst for children in the more central states of Jharkhand, Madhya Pradesh, and Bihar. States group roughly together into those with low deprivation scores (Kerala, Delhi, Goa, and interestingly, Mizoram), average deprivation scores (Punjab to West Bengal) and high deprivation scores (Jharkhand, Bihar, Madhya Pradesh, Rajasthan, Orissa, and Chhattisgarh).

<<<Figure 1 about here>>>

Direct effects of corruption and political regimens

Table 6 describes the main results of the multilevel model analysis for the Harriss variable. The null model (M1) reveals that the total variance of absolute child poverty partitions 11.4 % at the state level, 35.5% at the cluster level, 42.0% at the household level, and only 11.2% at the child level.[1] It is not surprising that such a significant portion of the variance in child poverty is at the household level since much of the NFHS information is collected at this level. This variance partitioning defines how much variance we can expect each set of variables to explain (Steele, 2008). Accordingly, the maximum amount of variance we can explain with state-level variables, such as the TII measures or political regimes measure, is 11.7%.

<<< Table 6 about here >>>

Political regimes account for almost 70 percent[ii] of the state-level variance in a bivariate model (M2). This amount of explained variance is high and confirms that political regimes are a key explanatory variable of absolute child poverty. All the coefficients are significantly different from zero. This is noteworthy, given the small sample of states (n=13). This model indicates that children residing in states with regime types Ai or Aii—states dominated by higher caste and class groups—are 37 and 41 percent, respectively, more likely to be poor compared to regime type C, which is the reference category. Children living in regime type B states were about 13 percent more likely to be poor than children in regime type C. This finding suggests an explanatory order, with states dominated by higher caste and class associated with most child poverty, followed by states dominated by middle caste and class.

These stark regime effects diminish when we control for confounders such as child's age and sex, religion, place of residence, state GDP/capita, and economic inequality (Gini). While the effects of the controls are not the primary focus of this paper, we comment them briefly. The models (M3 to M5) do not detect any significant child poverty differences between the religious groups. Children from scheduled tribes and scheduled castes are, not surprisingly, the most likely to be poor. Children from scheduled tribes have a 5 percent higher probability of being poor compared to the referent group, of scheduled caste children (M3). The other higher caste categories are less likely to be poor compared to the referent. The effect of children's sex differences is significant but negligible; boys have on average a 0.4 percent lower probability of being poor compared to girls. Older children are less likely to be poor than younger children. Increasing within-state economic inequality correlated with an adverse prevalence of child poverty throughout all models. State wealth, or state GDP per capita, which is usually considered to be a strong determinant of poverty, is insignificant in most models. To validate this finding, we conducted a Farrar-Glauber multicollinearity test between GDP, Gini, and the TII_2005 measure (the only continues measures) as a check against multicollinearity. The test reveals no excessive correlations.

Both regime type B and Aii states remain significant after controlling the model for

[1] These variances are calculated by dividing the variance of interest (e.g. $\sigma^2_{state} = 0.276$) by the sum of all portioned variances ($\sigma^2_{all} = 0.243$)

confounders (M3 to M5). Middle caste/class dominated states (type B) correlate with the least detrimental effect compared to states with low caste/class dominated states (type C, which is the reference states in the models). B type states have about 0.12 more children in poverty compared to type C, and type Aii states (upper-middle caste/class dominated states) have about 0.22 percent than type C. These models cannot detect robust results for upper caste/class dominated states—Ai type states. M2 finds that as many as 0.37 poor children live in these states, whereas M3 can only detect a 0.08 percent but non-significant effect. Nonetheless, in summary, we propose that this evidence supply support for our first hypothesis, but with a reservation for the effect of AI type states.

With regards to the second hypothesis—whether it is political regime or corruption which is more important for explaining state differences in child poverty—our results (M4 and M5) show that the effect of political regimes remains stable and dominate over corruption. The TII_2008 measure shows that corruption has some effect, although the direction points in a counter-intuitive direction. We do not regard these effects as stable as they disappear when the model does not control for economic inequality (Gini). The regime variable remains stable, however. The TII_2005 measure (M5) effect is indistinguishable from zero, and neither does this corruption measure change the political regime effect.

Interactive effects of corruption and political regimes

In the last modeling step, we test the interaction hypotheses. This step reveals if regime types and level of corruption, respectively, interact with economic wealth in explaining variations in child poverty.

Table 7 shows the key interaction effects of three models: the political regimes measure, TII_2008, and TII_2005 corruption measures. We assessed the marginal effects of all models to analyze how levels of GDP moderate the effect of regime type and corruption on child poverty (Kam and Franzese, 2007).

We find that GDP does not moderate the effect of corruption on child poverty. The TII_2005 model shows no significant interaction effect of GDP. The TII_2008 model suggests a statistically significant effect. However, when investigating the marginal effect plot (not shown here), the effect extrapolates beyond our sample of wealth distribution. Therefore, we conclude that this effect is not substantively interesting.

Depicting the marginal effects of political regimes reveals two key facts. Figure 2 shows that political regimes have positive marginal effect for all regime types, although with mixed statistical effect. First, we note that the direction of the effect is unexpected, given assumptions of the Trickle-Down theory, which underlies the formulation of the interaction hypotheses. A positive marginal effect means the effect of political regimes is increasingly adverse as GDP per capita increases. When the effect is negative (y-axis), it implies a political regime has a beneficial effect. However, as states GDP per capita rises, that beneficial effect is eroded. When the effect is positive, it implies an adverse effect – i.e., as GDP per capita increases, the adverse effect is amplified. Accordingly, an amplified positive effect would mean that higher caste/class dominated Regimes (Ai, Aii, or B) compared to the reference Regime C, produce more poverty as the state´s wealth increases. Thus, in richer states, the effect of higher caste/class-dominated regimes is effectively harmful to combating poverty, given they control access to public services and resources and thus limit what resources can trickle down to the already deprived and marginalized groups within that state.

<<<Table 7 about here>>>
<<< Figure 2 about here>>>

Second, the marginal effect plots show that the interactive effects are mainly relevant for regime type Aii and B, in comparison with regime type C. For Regime type Aii states, the lower GDP/capita interval is barely different from zero, but for higher incomes (from Rs 22,000 to just below Rs 40,000) there is both a moderate statistical and substantive effect. This result implies that children living in richer Aii states are more likely to be disadvantaged compared to children living in lower caste and class states (regime C) but with the same state-wealth levels.

For states dominated by regime type B, the result is stronger pronounced but mixed. On the one hand, lower wealth levels produce a marginal effect that is beneficial for combating child poverty (negative y-axis values). On the other hand, by wealth levels of above Rs 27,000, this same effect switches into adverse impact. As the wealth of a state increases, it will be less and less beneficial for the poor, eventually even exacerbating their living conditions.

The results are weak for regime type Ai. The lower range of the wealth distribution (GDP per capita Rs 12,000 to Rs 30,000) is statistically insignificant, and the upper range of the distribution is significant but extrapolates beyond our sample. The political-regimes-and-wealth interaction model explains the majority of the state-level variance of child poverty: almost 90 % compared to the null model. It would be hard to improve the model performance further, with this data. Nevertheless, due to the limited state-level sample size, we advise that these effects apply mainly to the sample average treatment effect.

Discussion

This paper examined the statistical relationship between Harriss' typology of state political regimes, corruption, and the prevalence of child poverty in India. Using NFHS data, we tested four hypotheses:

i. that Indian states politically dominated by higher or middle caste/classes have more child poverty;
ii. that *political regime type* has greater importance than *corruption*;
iii. that political regimes dominated by higher or middle caste groups in wealthier states (i.e., higher levels of state GDP/capita) have less poverty; and
iv. that higher levels of corruption result in more child poverty in wealthier states.

With regards hypothesis (i) our bivariate model supports this hypothesis across all three regime types, having adverse effects relative C regime type states (i.e., *in which lower castes/classes are more strongly represented in political regimes where the Congress lost its dominance at an early stage*). In controlled models, this results are robust for two regime type states: regime B type states (i.e. *middle caste/class dominated regimes, where the Congress has been effectively challenged but has not collapsed, and there is fairly stable and mainly two-party competition*), and; Aii regime state (*in which upper caste/class dominance has been effectively challenged by middle castes/classes.*). Accordingly, this hypothesis enjoys empirical support in states where "*the politics of accommodation vis-a-vis lower class interests have continued to work effectively.*"

Concerning hypothesis (ii), our results suggest that the political regimes measure is the strongest predictor of child poverty. It remains stable and statistically significant across the two corruption measures. The TII_2005 exhibits not effect at all. However, asking the poor about corruption (TII_2008) yielded a different result than asking experts (the TII_2005). An explanation for this discrepancy could be due to the types of corruption these two groups encounter, and thus the types of corruption reflected by the. The poor report the types of corruption they experience in their everyday life: for example, in dealings with patrolling police, handling with administrative officials (e.g., hospitals), and other authorities. We could call this petit corruption (cf. Rothstein 2014). Experts, on the other hand, might be reporting higher-level, institutional types of corruption, which affect the broader functioning of political and economic systems, effects that are less tangible visible to poor and vulnerable families.

Our findings for the first two hypotheses resonate with Dreze and Sen (2014) account. In considering the issue of political and bureaucratic accountability in India, they note that '*corruption flourishes in informational darkness*' (p 96). Legislative changes in India, such as the 2005 Right to Information Act, in combination with wider social and technological changes, have resulted in more light being shed on previously occluded organizational and bureaucratic processes. The public is increasingly aware of their rights, about instances of corruption, and about where bureaucratic bottlenecks from to block the provision of basic services. Such changes have had a positive impact: the 2011 *India Corruption Study* showed a decline in the proportion of Indians who felt corruption had increased, from 70% in 2005 to 45% in 2010; there was near five-fold increase (from 6% to 29%) in the proportion who felt that corruption had *decreased*. Importantly, the proportion of rural households who reported paying paid bribes in the previous year fell, from 56% in 2005 to 28% in 2010. While corruption is still a problem, its apparent retreat in recent years is welcome. However, the politics of caste and class remain with no significant improvements (Harriss, 2005, 2013).

Our collected evidence in evaluating hypotheses (iii) and (iv) demonstrate the depth of the class and caste issues. Cooperation between these social strata should lead to higher joint prosperity. Thus, as the theory of trickle-down economics argues, more wealth should benefit all members of society (Corbridge et al., 2013). Yet the conflicts and dynamics between these social strata demonstrate a different trend in India. Our results imply that "*political regime types dominated by higher castes with more wealth has led to more child poverty*". This empirical fact has several possible explanations. One might be that as the wealth of a state increases the poor are increasingly marginalized and less able to make their voices heard on the political agenda. For example, the resurgence of Maoist movements in states like Bihar, Jharkhand and Andhra Pradesh testifies to such processes. The benefits of economic growth seem to turn into a liability, and the benefits from the years of "India Shining" clearly had not reached large sections of the population by 2005, the year in which the survey data were collected.

Even if they could put forth their interest in politics, another argument puts forth that the large gaps of economic inequality effectively block lasting social mobility of the poor (Vanneman and Dubey 2014). This explanation resounds with our statistical findings. Increased economic inequality associate strongly with an increase in child poverty. It also a possible confounder of political regime. For it seems unlikely that more economic wealth would cause more poverty—a possible interpretation of our interaction models—but rather that greater collective economic wealth implies greater economic inequality between households, and that this inequality blocks poorer households to pull themselves from poverty (Sonalde and Vanneman 2005). The intimate relationship between political regimes, economic inequality, and poverty,

pave the way for future research.

For now, based on our findings about the thirteen Indian states, we suggest that the politics of caste amid inequality trump those of corruption, in explaining absolute child poverty (Harriss, 2013). Social prejudices continue to divide the Indian society into distinct groups, of deserving and undeserving. Researchers have shown that children from lower caste groups are already excluded from the benefits of India's impressive economic growth (Dréze and Sen, 2014). What this paper show is that greater wealth and inequality can exacerbate this exclusion further. What is needed are politics based on social justice and equal rights for children, to enable them to flourish regardless of where they are born (Dréze and Khera 2017).

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Tables

Table 1: Absolute child poverty: an aggregate of seven types of individual level child deprivation

Child Deprivation
Water: Children who only had access to surface water (for example, rivers) for drinking or who lived in households where the nearest source of water was more than 15 minutes away. Children < 18 years old.
Food: Children whose heights and weights for their age were more than -3 standard deviations below the median of the international reference, that is, severe anthropometric failure. Children < 5 years old.
Education: Children who had never been to school and were not currently attending school, i.e., no professional education of any kind. Children 7 to 12 years old.
Shelter: Children in dwellings with more than five people per room and/or with no flooring material. Children < 18 years old.
Sanitation: Children who had no access to a toilet of any kind in the vicinity of their dwelling, that is, no private or communal toilets or latrines. Children < 18 years old.
Health: Children who had not been immunized against diseases or young children who had a recent illness involving diarrhoea and had not received any medical advice or treatment. Children < 5 years old
Information: Children who had no access to radio, television, telephone or newspapers at home. Children 3 to 12 years old.
Absolute child poverty: Experiencing two or more of the seven deprivations defined above.

Table 2: NFHS3 Sample distribution across Harriss state regime typologies

(un-weighted)

	N children (age <18 yrs)	**N of states**
Ai - Upper caste/class dominated states	24,791	3
Aii - Upper-Middle caste/class dominated states	33,880	2
B - Middle caste/class dominated states	42,476	5
C - Lower caste/class dominated states	19,841	3
Total:	120,988	

Source: National Family Health Survey (NFHS-3),

Table 3: Descriptive statistics for the state variables

	TII_2005	**TII_2008**	**Harriss**	**Gini**	**Gdp/cap**
State cases	20	29	13	29	29
Missing cases	9	0	16	0	0
Min	240	1	1	0.10	7914
Max	695	4	4	0.34	76968
range	455	3	3	0.24	69054
median	493.5	2	2	0.20	24086
mean	488.95	2.34	2.38	0.22	25025
std.dev	104.77	1.17	1.12	0.07	24100

Notes: Levels of Overall Corruption in States (involving BPL households) for
TII_2008: 4 = Alarming, 3 = Very high, 2 = High, and 1 = Moderate;
Harriss variable category description: 4 = Ai, 3 = Aii, 2 = B, and 1 = C.

Table 4: Demographics of the child sample

	Overall
n	198294
abspov (mean (sd))	0.45 (0.50)
sex = Female (%)	95981 (48.4)
caste (%)	
Scheduled_caste	34861 (17.6)
Scheduled tribe	30689 (15.5)
Other backward class	65158 (32.9)
None of above	58998 (29.8)
DK	729 (0.4)
NA	7859 (4.0)
religion (%)	
Nonreligious	102 (0.1)
Buddhism	2489 (1.3)
Christianity	18771 (9.5)
Hinduism	136624 (68.9)
Islam	32930 (16.6)
Jainism	600 (0.3)
Judaism	8 (0.0)
Sikhism	3902 (2.0)
Zoroastrianism	5 (0.0)
DK or Other	2816 (1.4)
NA	47 (0.0)
citytown (%)	
Countryside	118329 (59.7)
Large city	36147 (18.2)
Small city	12843 (6.5)
Town	30975 (15.6)
Adults_child (mean (sd))	1.21 (0.97)
age (mean (sd))	8.52 (5.03)

Table 5: Absolute Poverty among Children in India, by State, 2005/06 (%)

State	Absolute Poverty (2+ deprivations)	Included in Harriss' study
Bihar	77.9	✓
Jharkhand	77.7	
Chhattisgarh	77.6	
Madhya Pradesh	76.0	✓
Orissa	71.7	✓
Uttar Pradesh	69.6	✓
Rajasthan	66.3	✓
ALL INDIA	**58.1**	
West Bengal	53.2	✓
Karnataka	48.6	✓
Manipur	48.3	
Uttaranchal	48.1	
Gujarat	47.4	✓
Haryana	46.2	
Assam	45.1	
Andhra Pradesh	44.6	✓
Maharashtra	43.5	✓
Meghalaya	42.5	
Nagaland	41.3	
Himachal Pradesh	39.3	
Jammu and Kashmir	38.6	
Tamil Nadu	37.9	✓
Arunachal Pradesh	33.6	
Punjab	29.3	✓
Tripura	28.4	
Sikkim	27.9	
Goa	22.0	
Mizoram	17.8	
Delhi	15.5	
Kerala	4.0	✓

Source: Calculated from NFHS3 data.

Table 6 Harriss' models – absolute child poverty as outcome variable

[table 6 has been uploaded a separate pdf to accommodate reviewer requests]

Table 7: Results from interaction models – Political regimes, TII_2005 and TII_2008

Political regimes	Coef.	Std. Err.	z	Pr(>|z|)		[95% conf. Interval]	
Ai	-0.48	0.25	-1.84	0.07	.	-0.94	0.03
Aii	-0.61	0.27	-2.37	0.02	*	-1.18	-0.11
B	-1.03	0.29	-3.66	0.00	***	-1.65	-0.50
GDP20042005	0.00	0.00	-3.48	0.00	***	0.00	0.00
GDP20042005:Ai	0.00	0.00	1.82	0.07	.	0.00	0.00
GDP20042005:Aii	0.00	0.00	2.41	0.02	*	0.00	0.00
GDP20042005:B	0.00	0.00	3.54	0.00	***	0.00	0.00

TII_2008	Coef.	Std. Err.	z	Pr(>|z|)		[95% conf. Interval]	
alarming	0.35	0.21	1.69	0.09	.	-0.05	0.75
high	0.29	0.22	1.33	0.18		-0.14	0.72
Very high	0.62	0.28	2.23	0.03	*	0.07	1.16
GDP20042005	0.00	0.00	0.77	0.44		0.00	0.00
GDP20042005:alarming	0.00	0.00	-1.51	0.13		0.00	0.00
GDP20042005:very_high	0.00	0.00	-2.27	0.02	*	0.00	0.00
GDP20042005:high	0.00	0.00	-1.04	0.30		0.00	0.00

TII_2005	Coef.	Std. Err.	z	Pr(>|z|)	[95% conf. Interval]	
TII_2005	0.00	0.00	-0.23	0.82	0.00	0.00
GDP20042005	0.00	0.00	-1.28	0.20	0.00	0.00
TII_2005:GDP20042005	0.00	0.00	1.13	0.26	0.00	0.00

Notes: All figures are taken from an interactive fully specified model, and absolute child poverty as dependent variable. Only relevant numbers shown here.

Notes

[i] www.tradingeconomics.com/india/gdp-growth-annual accessed 12June 2015.
[ii] 0.006/0.031 = 0.194