

Why Indian men rebel? Explaining armed rebellion in the northeastern states of India, 1970–2007

Journal of Peace Research
48(5) 605–619
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sagepub.co.uk/journalsPermissions.nav
DOI: 10.1177/0022343311412409
jpr.sagepub.com



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Abstract

Armed conflicts have been a permanent feature of the northeastern region since Indian independence. Surprisingly, relentless conflicts in this remote region of India have received little attention in the literature. Although some studies on conflicts in India have made important contributions to understanding and analyzing the causes of conflicts in general, none of them has paid specific attention to the ongoing conflicts in the northeastern region of India. Relative deprivation and persistent economic and political discrimination are often identified as the major causes for armed rebellion in this region. I provide a first quantitative test of this argument, exploring whether deprivation and continual economic and political discrimination explain the probability of armed conflict incidence across nine northeastern states of India during the period 1970–2007. The main findings from probit estimations show that poverty (relative to the rest of the country) and economic and political discrimination explain conflict outbreaks, after controlling for income, population pressures, state capacity, ethnic affiliations, forest area, peace years, neighboring conflict incidence, and distance to New Delhi. The study also reports considerable support for the baseline results when controlling for potential reverse feedback effects using the generalized method of moments. These results are robust to alternative estimation techniques and sample size.

Keywords

armed conflicts, discrimination, northeast India, relative deprivation

Introduction

Why do people rebel in northeast India? This article tries to provide some answers to this question in the first empirical study on conflicts in the northeastern states of India. The region, comprising of eight states (excluding West Bengal), has been the theatre of some of the oldest unresolved armed civil conflicts around the world. This region consists of more than 70 ethnic groups and 272 tribes, speaking close to 400 languages and dialects – the largest concentration of languages in South Asia – but only makes up 7.6% of land area and 3.6% of total population in India (Mentschel, 2007). The region is land-locked and remotely connected to the rest of India

by a mere 21 kilometre-wide corridor.¹ Historically, the states in this region never identified themselves with India, as it was unlikely a diverse region (with completely different culture, customs, language and traditions) would psychologically associate itself or integrate with the ‘mainland’ (Bhawmik, 1998). Local historians claim

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¹ This effectively means only 1% of the entire northeast region’s boundary is shared with India, while 99% of its boundaries are international. The territory connecting the northeast with the rest of India is popularly known as the ‘chicken neck’.

that the entire region was forcefully annexed to India by the British Empire² (Bhawmik, 1998). Thus, after Indian independence in 1947, various ethnic groups, both moderate and extremists, vociferously demanded secession (Inoue, 2005). Anti-Indian sentiment emerged among the region's people as the Indian government ignored local grievances and wishes, leading to a spill-over effect of secessionists' demands to other states in the region. Given the region's complex historical background, antagonism became easy to instigate as warlords became active in organizing the rebellion. By the 1970s, the region experienced a variety of conflict movements, ranging from insurgency for secession (such as Nagas in Nagaland) to insurgency for autonomy (Bodos for Bodoland in Assam state). Acts of terrorism (by terrorists groups such as the United Liberation Front of Asom – ULFA) and frequent ethnic clashes (mostly seen in Manipur and Nagaland) also occurred. At the beginning of the 1990s, except for Sikkim, almost all other states in the region were affected by some form of insurgent violence, forcing the government of India to recognize these rebellions as low-intensity armed conflicts.

Much of this trouble has often been attributed to the numerous actions (or lack thereof) and reactions of the Indian government in the 1950s (Inoue, 2005). First, it is argued that the ethnic and cultural specificities of this region were grossly ignored during the formation of states in the region. Second, the delineation of states in themselves was delayed substantially³ (with the exception of Assam). Both led to massive discontentment with the Indian state and the assertion of a northeastern group identity (Das, 2007). Thirdly, instead of addressing the grievances and issues related to maldevelopment, the government responded with the Armed Forces Special Power Act (AFSPA) in 1958. This act provided the launch pad for military offensives to counter armed separatist movements in the region, which many claim to have done more harm than good.⁴

Fourthly, although development and prosperity in this region was hindered by insurgent groups, the Indian government made little effort to address the basic needs of people in the region, leading to an increase in inequality and poverty, and thus further disenchantment. Although the Indian government created the Northeastern Council in 1971 to oversee the problems associated with development in the region, many of its achievements did not come until the late 1990s. Fifth, the so-called governance decentralization process, initiated throughout the country in the early 1990s, was never implemented in the northeastern states. Finally, it is also argued that poor governance infrastructure in this region had unintended consequences in terms of perceived economic and political discrimination among the key social groups of the region.

Despite the complexities involved, the current literature on conflict has ignored some of the world's oldest and still unresolved armed civil conflicts in India. To the best of my knowledge, this is the first empirical study looking into the causes of armed rebellion in the country's northeastern states. Throughout this examination, I rely on two prominent and popular propositions, namely greed and grievances. I base my discussion on a general body of literature on civil conflicts, for which the greed explanation provides a small but influential component. That being said, it is grievance-based issues (current and historical contexts) that are at the core of the process that unleashed a series of civil wars in the region. In an intra-state conflict such as in India's northeast, the identity component becomes crucial. Identity-based grievances help overcome the collective action problem confronted by the rebel leadership. In addition, a breakdown of institutional factors, an under-theorized domain in the conflict literature (which often creates synergy between private and public spheres to overcome collective problems of maintaining peace) created the perfect environment for insurgency to blossom.

Utilizing panel data on nine northeastern states during the 1970–2007 period, this article makes use of both economic and political discrimination indices for various ethnic groups in each northeastern state of India. These indices come from the Minority at Risk (MAR hereafter) report, coupled with the official poverty rate and the relative poverty of each state compared with the rest of the country. Although one must recognize that the discrimination indices from MAR do not fully mirror group inequality, it seems the best available proxy in the absence of any other comprehensive measure on group inequality. My findings confirm that conflicts in this region tend to be driven by relative deprivation which is enhanced by group grievances, with institutional

² In 1838, the British East India Company took over Ahom kingdom in the Brahmaputra valley. As a part of colonial policy, Assam provision was created and all the hill areas with large diverse ethnic groups were merged into Assam province. This policy continued even after the British left India in 1947, leading to strong feelings of being deprived of culture and identity. The resentment also continued against the Indian state.

³ Nagaland state was carved up in 1963, while Manipur, Meghalaya and Tripura were formed in 1972. The kingdom of Sikkim became part of India in 1975, and in 1987, Arunachal Pradesh and Mizoram were recognized as separate states in India.

⁴ Human Rights Watch alleges that AFSPA has led to widespread human rights violations ever since it was enacted in 1958. Refer to <http://www.hrw.org/en/news/2008/08/17/india-repeal-armed-forces-special-powers-act>.

breakdown required for the mobilization of conflicts. The rest of the article is organized as follows. The next section presents testable hypotheses based on arguments explaining the causes of conflict in northeastern states. Section three introduces the variables of interest and considers the estimation strategy to be adopted. Section four then presents the main findings, along with a range of robustness checks, while section five concludes the study.

Why do people rebel in northeast India? – Theory and hypotheses

Why do people rebel in northeast India? Some popular explanations see societal grievances (based on ethnic and cultural divides) as the key causal mechanism. Sociologists believe that cultural differences and primordial loyalties, coupled with the state's response with repression, have created a sense of insecurity driving people in the region to fight for survival and demand secession. Others, however, argue that rebellion in this region is caused by greed rather than grievances, and that the 'lust for power' and predation (such as extorting money) provide the required motivation to organize a rebellion. This section will systematically assess the relative contributions of these general propositions, with a specific focus on conflict in the northeastern region of India. It is also noteworthy that the aim of this study is not to test these theories per se, but rather to use them as a guide for a better understanding of the causes of long-term armed conflicts in northeast India.

Many argue that the grievance factor is the major cause of the armed rebellion in northeast India (García & Ariño, 2010). Central to the grievance thesis is identity and group formation (Murshed & Tadjoeeddin, 2009), based on a sense of injustice felt by a particular social group, often with a strong historical dimension. In order to better understand the grievance-based arguments in the context of northeastern states, I follow Murshed & Tadjoeeddin (2009) and divide the grievance-based arguments into relative deprivation and horizontal inequality. The concept of relative deprivation dates back to the work of Ted Gurr, who examines the psychological frustration-aggression mechanism and maintains that, while frustration does not necessarily lead to violence, it often does when felt strongly and over a long period of time (Gurr, 1970). More specifically, when there is a gap between expectation and achievement – that is, increased expectations of better economic or social conditions which are continuously unfulfilled – this will lead to sustained discontent among individuals or groups. Building on this theory in his work on people versus states, Gurr (2000) argues that the potential for collective violence varies

strongly depending on the intensity and scope of relative deprivation. In diverse regions/countries (such as north-east India), differences in access to scarce productive resources often result in economic deprivation. Unequal access can also have social and political implications, such as dominant ethnic groups using discriminatory policies to oppress minority groups, giving rise to serious discontent and assertion of group identity. When felt over a longer period, this spurs frustration among the deprived. While frustration does not necessarily lead to the outbreak of conflict, it certainly increases the risk of rebellion because of the resentment generated by relative deprivation and the policies related to it.

Indeed, some studies find support for the arguments of Gurr. Tadjoeeddin (2003), for instance, finds that the relative economic deprivation of the Christian community in the eastern province of Indonesia led to civil conflict between Christian minorities and Muslims. Likewise, Gates & Miklian (2010) find that the poor economic conditions of the Madhesi ethnic group forced them to join the armed insurgency movement led by the Nepal Maoists. In the northeastern states of India, the relative deprivation is noted by many as being very strong (Mentschel, 2007). In fact, sentiments for secession in this region existed even before Indian independence. This sentiment stems from the historical connections among the traditional tribes in this region to East Asia rather than India (Mentschel, 2007). Some historians also argue that people from this region have failed to psychologically integrate because they see the region as being annexed to India by the British (Bhawmik, 1998). Others maintain that this is one of the reasons why northeastern states remained inactive during the independence movement (Rustomji, 1983; Bhawmik, 1998). Some even go a step further, highlighting the attitude of India's government after independence, which continued policies of isolation and alienation of northeastern states from the rest of the country (Savyasaachi, 1998). The economic situation and development also worsened after independence; while the rest of the country surged through rapid economic progress, the northeastern states lagged behind and are designated 'special category states'. This is reflected by high unemployment (despite a fairly high literacy rate), lack of industrialization and infrastructure, and a low ranking on the Indian Human Development Index⁵ (*India*

⁵ For example, according to a report in *India Today* magazine, almost all states from the northeast are ranked among the least performing states in India (with the exception of Mizoram).

Today, 2004). The perception is very strong among the population that people in the region do not receive any benefits from the Indian state and that they are politically and economically discriminated against in their own country (Northeast Support Centre & Helpline, 2009 survey).

An extension of Gurr's (1970) relative deprivation argument is that of 'routine violence', which is analogous to 'mass violence' but not a civil war. The concept of 'routine violence' is straightforward as, according to Murshed & Tadjoeeddin (2009), it is not tied to an ideology, nor does it have any explicit political aim of replacing the government. It is a crime committed by a group and often exhibits predatory patterns, something akin to Olson's (1965) 'roving bandits', whose intent is simply to loot. Some argue that having failed to convert the popular uprising into a fully fledged rebellion, the rebel groups such as All-Tripura Tiger Forces (ATTF) and others (in Tripura) and the United Liberation Front of Asom (ULFA) (in Assam) were successful in converting the ethnic insurgency into criminality, which eventually became a lucrative business (see Rajagopalan, 2008; Dasgupta, 2001). Often, tribes become the targets of crimes committed by the rebels, who claim to be the defenders of tribal rights. In Manipur, a small state where the conflict began with three rebel groups, there were about 26 militant groups in 2004, most of which were active in extortion and drug trafficking (Kamboj, 2004). These predatory patterns question the very cause the militants are fighting for, as their insurgency is largely criminal in nature. Under such conditions, where the rebel insurgency descends to criminality and looting, perpetual peace in northeast India becomes much harder to achieve (Rajagopalan, 2008).

The relative deprivation argument outlined above pertains to the risk of conflict outbreak. For large-scale and long-lasting conflicts, as in northeast India, other factors must also be present. Not all regions or countries with conditions right for insurgency experience civil conflict. According to de Soysa (2002) and Murshed (2002), institutional factors 'fashion the opportunity costs of people and help solve the correlative action problem at the level of group or society at large' (de Soysa, 2002: 399). Taking the argument further, Murshed & Tadjoeeddin (2009) and Murshed & Gates (2005) note that the very presence of armed conflict implies the absence of contractual interaction between economic agents, groups, or nations. According to Murshed (2002), the degradation of 'social contract' occurs when there is an absolute failure of institutions related to

conflict management and systems of redistribution. The institutional degradation can be attributed to extractive and predatory patterns of production, which prevent the establishment of conflict management institutions such as those protecting the rule of law, property rights, accountable governance, contractual interactions (e.g. trade and commerce between economic agents/groups) and redistributive systems (e.g. decentralization of governance – strong incentives faced by local elite that may not allow them to promote development and modernization).⁶

According to Rajagopalan (2008) and Arambam (2007), the process of institutional breakdown is the foremost reason for persistent maldevelopment in this region. The absence of productive activities and asset creation, as well as the local tribal elite control, are a result of economic mismanagement and large-scale corruption (Grossman, 2002). The majority of people in the region lack faith in the Indian political leadership, as they see corruption in the political sphere as a hindrance to development (Arambam, 2007). Closer to home, many also lack faith in their own ministers and local politicians (Mentschel, 2007). Indeed the World Bank findings show that underdevelopment and a low-level equilibrium poverty trap are major problems in this region, despite the Ministry of Development of North Eastern Region claiming to have spent around 426 billion Indian Rupees (approx. US\$9.3 billion) between 1998 and 2006, and earmarking 10% of the total annual budget for the region (cited in Bhatia, 2009). It is in fact the lack of economic development, evidenced by relatively high poverty levels, which has led to sparse economic interaction between groups (Murshed & Tadjoeeddin, 2009). Because of persistent poverty levels, the rebels also have very little to lose from the collateral damage and destruction of war. Thus, civil war is more likely when there is institutional breakdown as a result of maldevelopment. These propositions lead to the following hypotheses:

Hypothesis 1: Ceteris paribus, the relative deprivation of a state compared to rest of the country is associated with the higher risk of armed conflict in northeast India.

Hypothesis 2: Ceteris paribus, persistent poverty levels (a proxy for degradation of institutions and social contract) increase the risk of armed rebellion in northeast India.

⁶ Prominent studies show the benefits associated with governance decentralization, which range from significant improvement in access to basic services to overall well-being and happiness (see Dreher & Fischer, 2010, 2011; Bjørnskov, Dreher & Fischer, 2008).

There are two important issues which the relative deprivation thesis does not answer. First, if conventional wisdom holds that relative deprivation and institutional breakdown are the main drivers of armed rebellion in northeast India, then what is puzzling is that it is only taking place in specific states, despite such factors also being prevalent in other parts of the country. Second, although relative deprivation might provide the incentive to rebel, the authority of rebel leadership would then face a collective action problem in mobilizing individuals to join a rebellion (Robert & Norton, 2005). Because non-rebels tend to benefit from the outcome of rebellion, rational individuals would prefer not to participate and opt for a 'free-ride' (Olson, 1965). This is where ethnicity or group identity comes into play as a unifying force which can help facilitate mobilization of groups, thus resolving the collective action problem. Group specific identities or ethnicity is far superior to social class and is often considered as a powerful organizing force. Extending this argument further, shared identity coupled with group grievances (especially economic discrimination and political exclusion) not only mobilize people to join a rebellion, but also bind them together with a common grievance cause (Murshed & Gates, 2005; Østby, 2008; Østby, Nordås & Rød, 2009). Group-grievances usually originate from discrimination (economic, political, social and cultural or a combination of all) against well-defined groups based on ethnicity or religion. The resulting inequality is often referred to as 'horizontal inequality'.

The concept of horizontal inequality was advocated by Stewart (2000, 2002, 2008) and is different from vertical inequality, which measures inequality among individuals within an otherwise homogenous population. Group inequality can facilitate rebel leaders in mobilizing support by bringing this group exploitation to light, often with a strong historical dimension (Stewart, Brown & Mancini, 2005). Disproportionate exploitation arises in the first place because of societal discrimination being formal or institutionalized in economic or political opportunities, for example. Previous studies of horizontal inequalities have found strong support for this argument. Langer (2005), focusing on Ivory Coast, finds that political and socio-economic horizontal inequalities generated incentives to mobilize people for armed conflict drawn on ethnic lines. Brown (2008) provides similar such arguments which gave birth to violent separatist movements in four Southeast Asian countries. Using disaggregated economic and group-level data, Cederman, Wimmer & Min (2010) find that affluent ethnic groups who are relatively poor and excluded from state power or

underrepresented in government are more likely to challenge the regime through violent conflict. Interestingly, in a study comparing conflicts in northeast India with Southeast Asian countries, namely, Indonesia (Aceh), the Philippines (Mindanao), Thailand (south) and Burma (east), García & Ariño (2010) find evidence on the ground in favour of horizontal inequalities. Their findings, based on comparative investigations of the role of horizontal inequalities in fomenting rebellion in northeast India, provide strong support for this case.

Another reason for group inequality providing powerful grievances is psychological (Brown et al., 2000). Akerlof & Kranton (2000) argue that an ethnic group's relative welfare position is bound to be a function of individual welfare. According to them, the group reflects the individual's identity, and the relative progress of the group significantly helps in improving the individual's own perceptions of well-being. Thus, relative economic, social and political discrimination provides the opportunity for ethnic entrepreneurs to gain access to economic and political resources by ousting a grievance-based government in the name of justice-seeking (Stewart, 2000; de Soysa, 2002; Gurr & Harff, 1994).

On the other hand, the cost of recruiting labour would be lower as state repression increases, because the mobilization of rebel labour then becomes easy as the individuals may want to avoid being punished by the state (Mason, 1996). This is precisely what has been happening in the northeast states of India. Initial suppression in the post-independence period led to resistance, and this resistance was subsequently countered with more repressive measures from the Indian government through the introduction of the Armed Forces Special Power Act (AFSPA) in 1958. This act, considered by many to be draconian in nature, created antipathy among the people, leading to an armed confrontation and further evoking aspirations for an independent state (Rustomji, 1983). Thus, sociopolitical and economic inequalities coinciding with ethnic cleavages significantly enhanced group grievances in this region. In addition, repressive state behaviour and frustration resulting from a sense of isolation and deprivation due to economic mismanagement increased the preference of deprived and potential labour for armed struggle, in the hope that they would gain more than they would from peaceful activities. This leads to the following hypothesis:

Hypothesis 3: Ceteris paribus, persistent economic and political discrimination against ethnic groups increases the risk of armed conflicts by facilitating group cohesion and collective mobilization.

What is more striking, however, is that the region has endured the armed insurgency for almost 50 years without any significant success or long-lasting peace. Therefore, it appears more likely that the motivations for conflict reflect benefits during the conflict itself, rather than the benefits which follow a highly uncertain victory in the distant future. As emphasized earlier, there are certain issues which cast doubts on the legitimacy of the rationale for rebellion in this region. For example, factions within the rebels (and disputes among them) have pushed issues related to social justice and maldevelopment on to the back burner. Clashes erupted within the Naga rebel group as predominantly grievance-based motivations changed over time, leading to the split of the National Socialist Council of Nagaland (NSCN) into two factions: Isak Muivah (NSCN-IM) and the National Socialist Council of Nagaland–Khaplang (NSCN-K). Since then, Nagaland has witnessed frequent clashes between these two groups (horizontal conflict), both of whom have their own ceasefire agreements with the government of India. In this battle over one-upmanship and securing control, the residents of villages are caught in the crossfire between the rebel groups, questioning the very legitimacy of the ‘Nagalim revolution’. Likewise, the violent behaviour of rebels towards the tribal poor, and their strategy of fighting against the Indian state at the expense of lost development projects, drug trafficking, extortion and kidnapping, makes it reasonable to suggest that there may be other explanations behind insurgency in the region.

Focusing on the greedy behaviour of the rebels, Collier & Hoeffler (2004) highlight financing, recruitment and geography as the usual challenges faced by rebel groups in organizing an insurgency. In the literature, the discussion on the opportunities faced by rebels has focused predominantly on capturable natural resource endowments, which are absent in northeast India. However, Collier & Hoeffler (1998) argue that greed need not necessarily only be associated with natural resources. It can also be associated with the behaviour of self-interested material gain (such as lust for power), where rebels, according to Collier & Hoeffler’s (1998) power-seeking variant of the predation theory, ‘are motivated by power, but rebellion only occurs when these rebels feel that they gain financially from the war’. However, greed in itself, which is found to some extent in any country, is not sufficient to explain the outbreak of a civil rebel conflict in this case, particularly when confronted with the problem of mobilizing the groups to act collectively. Furthermore, the evidence supporting the greed thesis was not

overwhelming or robust (Tadjoeddin & Murshed, 2007). Be that as it may, I believe, at least in the case of northeast India, legitimate grievance-based issues are at the core of the process that provided the fertile ground for the rebels to not only expand, but also maintain their support through a motivation akin to ‘roving banditry’. This highlights that greed and grievances in practice are entwined and difficult to unravel.

Data and estimation strategy

I select nine states which are categorized as northeastern states in India for the period 1970–2007 (Appendix 1). My dependent variable is the incidence of civil war in state i in year t (conflict_{it}). I use the armed conflict database developed and recently updated by Nils Petter Gleditsch et al. (2002) at the International Peace Research Institute Oslo (PRIO) and Uppsala University (UCDP/PRIO, hereafter). Accordingly, an armed conflict is defined in the UCDP/PRIO database as ‘a contested incompatibility that concerns government and/or territory where the use of armed force between two parties, of which at least one is the government of a state, results in at least 25 battle-related deaths’. The first and the foremost advantage of this dataset is that it is more transparent in its construction than the Correlates of War project (COW). It provides not only detailed information on conflicts within countries, but also the exact location of conflicts and parties involved in those conflicts. The other major advantage of the UCDP/PRIO dataset is that it clearly distinguishes between conflicts – more specifically, between interstate conflicts, intrastate conflicts, colonial wars and international wars. Furthermore, it also classifies various levels of conflicts by battle deaths (< 25, > 25, and > 1,000 battle deaths per year). Since I cover low-intensity conflicts at a sub-national level, I find this dataset to be more useful than COW and others.

In this study, the armed conflict incidence variable for state i in year t is coded as 1 if the state-year has a civil conflict in progress with at least 25 battle deaths per year, and 0 otherwise. As the data on conflict incidents are binary, I estimate the panel regressions employing the probit estimator with time fixed effects with heteroscedastic consistent robust standard errors (Beck & Katz, 1995). I estimate the following relationship:

$$\text{incidence}_{it} = \phi_1 + \psi_2 V_{it-1} + \psi_4 Z_{it-1} + v_t + \omega_{it} \quad (1)$$

where incidence_{it} represents the armed conflict dummy with 25 or more battle deaths in a northeastern state i

in year t , V_{it-1} denotes factors associated with deprivation and discriminations, Z_{it-1} are variables related to other factors that determine the outbreak of conflicts in north-eastern states, ν_i are time fixed effects and ω_{it} is an error term for state i at time t . I do not include state fixed effects because some of the variables (fractionalization index, forest area covered and minority discrimination indices) remain largely 'time invariant'. Usage of two-way fixed effects will not only be collinear with time-invariant regressors, but also generate biased estimates (Beck, 2001). In addition, including fixed effects in non-linear estimations may be problematic because of the well-known incidental parameter problem (Lancaster, 2000; Wooldbridge, 2002). I estimate the models with a probit method and compute marginal effects holding other covariates at their mean.

Hypotheses variables

The main hypotheses variables in V_{it-1} include absolute and relative deprivation and discrimination against ethnic groups in northeastern states. With respect to variables related to deprivation, I include the absolute poverty rate and relative poverty rate of each state in comparison to the rest of the country. The poverty level in a state is also a proxy for maldevelopment which, according to Murshed (2002), often results in institutional breakdown. The data on poverty rate (percentage of population living below poverty line) is based on the five-yearly estimates of the planning commission of India (Planning Commission, 2011). The data are based on the expert group methodology which estimates the levels of poverty in all the states in India on five-year basis since 1972. The poverty rate is computed based on scores derived from the degree of deprivation in 13 aspects, including landholding, type of house, clothing, food security, sanitation, consumer durables, literacy status, labour force, means of livelihood, status of children and type of indebtedness.⁷ As the data are available in five-year periods, the missing years are interpolated. Since the poverty levels change slowly between the five-year periods measured, the interpolated values should not be problematic. Second, I measure the relative deprivation of a state by dividing the poverty rate of each state in my sample by the aggregated poverty rate of India. The missing values are interpolated thereafter. This provides a continuous variable ranging from 0 (lowest level or almost no relative deprivation vis-à-vis

the rest of the country) to 1 and above (highest level of relative deprivation).

With respect to the horizontal inequality (relative discrimination), which is relatively a new concept, it is noteworthy that there exists no theoretical consensus on its measurement, partly because of lack of relevant data or even information on specific target ethnic groups. Since I focus on relative discrimination of ethnic groups in northeast Indian states, I consider political and economic dimensions of horizontal inequalities, adopting Stewart's (2008) definition.⁸ Following Stewart's conceptualization of horizontal inequality, I treat the economic and political discrimination (kind of proxy distribution of wealth and power) as separate components. Most of the literature has focused on the role of political exclusion, ignoring economic issues (Cederman, Wimmer & Min, 2010; Buhaug, Cederman & Rød, 2008). Moreover, the literature is also silent on measuring these issues in the sub-national context. To measure them separately, I use Economic and Political Discrimination indices of minority ethnic groups in northeastern states of India, available at the Minority at Risk (MAR) database. Accordingly, discrimination takes on two distinct forms, namely, economic and political discrimination, which measure how public policy and social practice are used to promote group inequalities. The intergroup differentials are jointly coded on a five-point scale (0–4: highest value indicates substantial economic and political discrimination) based on the political and economic status or traits of the group with respect to the dominant group(s). It is noteworthy that these indices are group-specific within each country. I retain the same coding provided by MAR for minority ethnic groups of northeastern states and average their scores along with Muslims and Scheduled Tribes who are spread across India. The final scores derived are the measures of economic and political discrimination indices.

Controls

With respect to the vector of control variables (Z_{it-1}), I follow prominent studies in the conflict literature: Fearon & Laitin (2003), Fearon (2004), de Soysa (2002) and other comprehensive evaluations of early studies on determinants of civil conflicts (Collier, Hoeffler & Rohner, 2009). Accordingly, I control for

⁷ For data and other detailed information, refer to <http://planningcommission.nic.in/data/central/index.php?data=centab>

⁸ It is important to note that horizontal inequalities also include social and cultural issues as per the definition provided by Stewart (2008) and these also have strong influence on outbreak of conflict. I do not consider them because of lack of measurable information.

economic development by including per capita income (logged) in Indian Rupees 1993–94 constant prices drawn from the Reserve Bank of India (RBI). The income levels could influence not just democratic stability (Vreeland, 2008) but also the outbreak of conflicts. Following Urdal (2006), I include the log of population density in each state to control for population pressures. I also control for ethnic differences as the northeast is culturally very diverse with over 400 languages, various religions, castes, food and living habits. I utilize the linguistic and religious fractionalization index constructed by Beer & Mitchell (2006). To measure the remoteness of this region vis-à-vis the Indian mainland, I compute the distance from each northeastern state's capital city to New Delhi (capital of India) measured in kilometres. Following others, I also include the conflict incidence of an immediate neighbouring state to capture the spill-over effects (Hegre, Østby & Raleigh, 2009). In addition, I measure state capacity with police force per head (logged). I also capture the conditions that favour insurgency by including the share of forest area (in square kilometres). Lastly, I also include a dummy counting the civil peace years in each state. The data description and sources are presented in Appendix 2.

Endogeneity concerns

One might argue that changes in poverty rate in a state may be a result rather than a cause of armed conflicts. Although I lag the variables by one year, it does not fully eliminate the endogeneity concerns. In addition, conflicts also significantly hamper the prospects of growth and development (Barro, 1996). Not taking this endogeneity into account would induce bias in the estimates. To control for the potential endogeneity, I replicate the probit analysis using the system-GMM (generalized method of moments) estimator as suggested by Arellano & Bond (1991), Arellano & Bover (1995) and Blundell & Bond (1998). However, I am not aware of an IV estimator for a binary dependent variable when the error term is serially correlated and heteroscedastic. Following Eichengreen & Leblang (2008), I estimate the linear probability models, which provide consistent estimates.

The dynamic panel GMM estimator exploits an assumption about the initial conditions to obtain moment conditions that remain informative even for persistent data. It is considered most appropriate in the presence of endogenous regressors. I generate results based on Roodman's (2006) one-step estimator implemented in Stata 11. The Sargan-Hansen test is

applied to check the validity of the instruments used and the Arellano-Bond test is used to check the absence of second-order autocorrelation from the data in order for the GMM estimator to be consistent. I treat the lagged dependent variable and measures of deprivation and discrimination as endogenous and all other variables as strictly exogenous. As before, I include time dummies in the GMM regressions. In order to minimize the number of instruments in the regressions I follow Dreher & Boockmann (2011) and collapse the matrix of instruments as suggested in Roodman (2006).

Empirical results

The results determining armed conflicts in northeastern states of India are presented in Table I. The summary of data statistics are presented in Appendix 3. While Table I presents probit estimates, I address the issue of reverse causality and potential omitted variable bias in Table II by utilizing GMM. Note that Table I reports marginal effects at the mean of explanatory variables. I begin with the results in column 2 of Table I, where I test my first hypothesis regarding the relationship between deprivation in terms of poverty and outbreak of conflicts in this region. I find a strong positive impact of poverty rate on the probability of conflict outbreak in northeastern states of India, which is significantly different from zero at 10% level. Holding other variables constant at their mean, I find that a 1% increase in poverty rate is associated with a 2% increase in the probability of conflict outbreak in the following year. As suggested by Østby (2008) and Collier & Hoeffler (2004), an increase in poverty level also tends to decrease the cost of recruitment because the prospects of providing a secure and stable livelihood are low. One could also envisage that persistent poverty levels tend to aggravate the level of frustration by sowing the seeds of discontent against the state.

The most interesting findings are provided in column 3 of Table I, where I find that an increase in poverty rate compared to rest of the country is strongly associated with the outbreak of conflicts in this region (see column 3, Table I). For every one unit increase in relative poverty ratio there is a 52% corresponding increase in the probability of armed conflict outbreak in the following year in this region, holding all controls at the mean. A one standard deviation increase in the relative poverty ratio is associated with an increase in the probability of conflict outbreak of about 11%. In comparison to the absolute poverty rate, the probability of conflict outbreak associated with relative poverty is higher by about 50%. This

Table I. Determinants of armed conflicts in northeastern states of India

<i>Variables</i>	(1) <i>Conflict incidence Probit</i>	(2) <i>Conflict incidence Probit</i>	(3) <i>Conflict incidence Probit</i>	(4) <i>Conflict incidence Probit</i>	(5) <i>Conflict incidence Probit</i>	(6) <i>Conflict incidence Probit</i>
Per capita GDP (log) $t-1$	−0.350*** (2.73)	−0.340*** (2.71)	−0.335*** (2.65)	−0.450*** (3.34)	−0.467*** (3.10)	−0.477*** (3.25)
Population Density (log) $t-1$	0.251*** (5.30)	0.222*** (4.61)	0.230*** (4.80)	0.209*** (4.71)	0.237*** (4.86)	0.225*** (4.69)
Forest Area Share $t-1$	−3.546*** (4.28)	−3.594*** (4.41)	−3.563*** (4.36)	−3.245*** (3.79)	−3.594*** (4.23)	−3.454*** (4.02)
Fractionalization Index $t-1$	0.107*** (3.79)	0.108*** (3.92)	0.107*** (3.87)	0.087*** (3.02)	0.104*** (3.56)	0.098*** (3.31)
Police Force per head (log) $t-1$	−0.178** (2.36)	−0.200*** (2.71)	−0.195*** (2.66)	−0.111 (1.43)	−0.192** (2.53)	−0.166** (2.18)
Distance to New Delhi (log) $t-1$	−0.566 (0.72)	−0.547 (0.71)	−0.515 (0.67)	−0.751 (0.92)	−1.001 (1.24)	−0.946 (1.17)
Peace Years $t-1$	−0.784*** (7.12)	−0.781*** (7.06)	−0.791*** (7.06)	−0.797*** (7.09)	−0.823*** (7.02)	−0.818*** (7.02)
Conflict in Neighboring States $t-1$	0.169 (1.31)	0.185 (1.43)	0.184 (1.42)	0.163 (1.30)	0.154 (1.20)	0.150 (1.18)
Panchayat Raj Act $t-1$	0.280* (1.79)	0.287* (1.85)	0.276* (1.77)	0.161 (0.95)	0.232 (1.40)	0.202 (1.19)
Poverty Rate $t-1$		0.015* (1.85)				
Relative Poverty Rate $t-1$			0.515* (1.86)			
Economic Discrimination Index $t-1$				0.246*** (3.70)		
Political Discrimination Index $t-1$					0.087* (1.92)	
Total Discrimination Index $t-1$						0.070** (2.47)
Pseudo R2	0.6909	0.6931	0.693	0.6991	0.6947	0.6957
Wald chi2	192.0***	203.7***	199.6***	186.4***	188.2***	187.7***
Log pseudo likelihood	−67.95	−67.47	−67.49	−66.15	−67.12	−66.89
Number of states	9	9	9	9	9	9
Total observations	333	333	333	333	333	333

The table reports average marginal effects of all explanatory variables. Robust standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

also means that well-developed northeastern states are less likely to experience armed conflicts. These results suggest that an increase in poverty and inequality leads to social unrest, especially among vulnerable sections, paving the way for dissent against the state. Moreover, the likelihood of joining rebel movements is high where relative poverty exists because of low utility costs.

Finally, I test my last hypothesis regarding the relationship between persistent discrimination and conflict outbreak in columns 4–6 in Table I. In column 4,

I include an economic discrimination index, followed by a political discrimination index in column 5, as discussed in the previous section. I find a strong positive impact of the economic discrimination index on conflict incidence in this region, which is significantly different from zero at the 1% level (see column 4). Holding control variables at their mean, I find that in northeastern states of India, a point increase in the economic discrimination index increases the probability of an outbreak of armed conflict in the following year by nearly 25%. A

one standard deviation increase in the economic discrimination index is associated with an increase of 16% in the probability of outbreak of conflict. Likewise, I also find positive effects of political discrimination on outbreak of conflicts in this region. For every one point increase in the political discrimination index, holding controls at their mean, there is a 9% corresponding increase in the probability of armed conflict in this region (column 5, Table I). What is more interesting with these results is that the effects are rather large compared to the deprivation (poverty) hypothesis alone. In the last column, I club both economic and political discrimination indices together into a total discrimination index coded on the scale of 0–8. The results on the total discrimination index confirm my previous findings on both economic and political discrimination. I find that the total discrimination index is positive and significantly different from zero at the 10% level.

The results addressing reverse causality using system GMM are displayed in Table II, and clearly show that the baseline results (in Table I) are not affected by the choice of estimator. As can be seen, while the results for the covariates are generally weaker than in the estimations based on the probit model in Table I, the main results in GMM are in line with those reported in the baseline models in Table I. While poverty, relative poverty and the economic discrimination index are positive and significantly different from zero at conventional levels of significance, the political discrimination index remains insignificant after controlling for the potential feedback effects. It is also noteworthy that the effects have substantially come down after controlling for endogeneity.⁹ However, the findings of economic versus political discrimination are interesting. The insignificant effects of political discrimination can partly be attributed to the policy of reservations akin to 'affirmative action', to uplift the historically marginalized ethnic groups and disadvantaged castes. Although the impact of this policy remains mixed in other areas due to corruption, lack of governance decentralization and local elite capture, it saw considerable success in providing political representation (Banerjee & Somanathan, 2007; Bardhan & Mookherjee, 2000). These results remain robust to the inclusion of a lagged dependent variable (see Table II). The results also remain relatively stable with respect to

other control variables. The Sargan-Hansen test and the Arellano-Bond test clearly do not reject the GMM specification at the 5% significance level.¹⁰

With respect to controls, I find strong positive income effects. The coefficient estimate on per capita GDP (logged) is negative, -0.350 , and is statistically different from zero at the 1% level across the board. In line with Collier & Hoeffler (1998, 2004) and de Soysa (2002), I find that income has a beneficial effect in reducing the conflicts. On the other hand, I find that more population density has a higher probability of at least one year armed conflict, thus supporting the 'population pressures' thesis. These results remain consistent across the board (see Tables I and II). Regarding state capacity, I find strong negative association of police force (per head) on conflicts. These results remain robust to the inclusion of several other variables of interests in further models (see Tables I and II). However, I do not see robust findings for the distance from state capitals to New Delhi variable. Interestingly, I find a negative effect of the area covered with forest on outbreak of conflicts. I find some strong support for the argument of ethnic fractionalization. Indeed, northeastern states are highly diverse in terms of religion, language and ethnicity. This is evident from the results on ethno-linguistic fractionalization. In fact these results remain robust even after controlling the reverse feedback effects using GMM in Table II. Although I could not find support for outbreak of conflicts in states sharing borders with other conflict affected states, I do find positive effects of this spillover effect once accounting for endogeneity using GMM in Table II. I also find strong positive effects of the civil peace years dummy on outbreak of civil conflict in these regions (see Table I). Lastly, I find some weak evidence with respect to governance decentralization.

Checks on robustness

I examine the robustness of my main findings in the following ways. First, I drop West Bengal state from my sample as some consider it under the Eastern state of India. Despite this change in the sample, I do not find any significant change in the results with respect to my hypotheses variables. Indeed in both cases, the results also remained consistent even under GMM estimations. Second, I also perform the estimations by replacing conflict incidence with a dummy coded for the years

⁹ The coefficients of covariates in GMM are not strictly comparable with that of marginal effects presented in Table I, estimated using probit method, because the marginal effect of the i th variable is computed holding all other covariates at their mean value.

¹⁰ The exception is the last two columns in Table 2 (column 3), where the Sargan test rejects the instruments at the 5% level of significance.

Table II. Determinants of armed conflicts in northeastern states of India – GMM

<i>Variables</i>	(1) <i>Conflict incidence GMM</i>	(2) <i>Conflict incidence GMM</i>	(3) <i>Conflict incidence GMM</i>	(4) <i>Conflict incidence GMM</i>	(5) <i>Conflict incidence GMM</i>
Constant	6.245** (2.523)	6.167* (3.215)	5.995* (3.186)	6.601** (3.203)	7.208* (3.702)
Lag Dependent Variables	1.853 (1.998)	2.064 (2.164)	2.058 (2.145)	1.664 (1.843)	1.601 (1.746)
Per capita GDP (log) $t-1$	-0.104 (0.179)	-0.117 (0.172)	-0.116 (0.173)	-0.198 (0.228)	-0.166 (0.206)
Population Density (log) $t-1$	0.128*** (0.0240)	0.114*** (0.0232)	0.118*** (0.0234)	0.111*** (0.0228)	0.117*** (0.0211)
Forest Area Share $t-1$	-2.078*** (0.609)	-2.099*** (0.620)	-2.076*** (0.630)	-1.855*** (0.607)	-1.942*** (0.533)
Fractionalization Index $t-1$	0.0672*** (0.0194)	0.0676*** (0.0200)	0.0670*** (0.0202)	0.0562*** (0.0205)	0.0616*** (0.0167)
Police Force per head (log) $t-1$	-0.154*** (0.0447)	-0.163*** (0.0412)	-0.158*** (0.0435)	-0.120** (0.0501)	-0.154*** (0.0456)
Distance to New Delhi (log) $t-1$	-0.905* (0.475)	-0.919* (0.505)	-0.898* (0.504)	-0.851* (0.485)	-0.938* (0.492)
Peace Years $t-1$	1.368 (2.004)	1.569 (2.167)	1.566 (2.148)	1.227 (1.845)	1.121 (1.744)
Conflict in Neighboring States $t-1$	0.234** (0.107)	0.253** (0.111)	0.245** (0.111)	0.222** (0.112)	0.213* (0.117)
Panchayat Raj Act $t-1$	0.180* (0.0981)	0.172* (0.0888)	0.161* (0.0932)	0.0903 (0.110)	0.152 (0.103)
Poverty Rate $t-1$		0.00920* (0.00488)			
Relative Poverty Rate $t-1$			0.281* (0.163)		
Economic Discrimination Index $t-1$				0.105* (0.0615)	
Political Discrimination Index $t-1$					0.0334 (0.0388)
Arellano-Bond test for AR(2) { p -value}	0.338	0.281	0.279	0.344	0.423
Sargan J-statistic { p -value}	0.087	0.181	0.181	0.081	0.032
Wald chi2	43.41***	117.9***	96.20***	134.4***	86.54***
Number of instruments	80	83	83	83	83
Number of states	9	9	9	9	9
Total observations	315	315	315	315	315

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Robust standard errors in parentheses.

in which there was a conflict, irrespective of the death toll from Gleditsch et al.'s (2002) dataset. Despite a new

dependent variable measure, I do not find major changes with respect to my independent variables of interests in probit estimates.¹¹ Finally, as an alternative estimation technique, I replace the GMM method. It has been argued that the properties of an instrument variable (IV) and GMM approach do not hold for small-N and are hence likely to be severely biased and imprecise in

¹¹ Another alternative measure could be the use of an onset dummy as our dependent variable. However, I am unable to utilize onset because of small-N and too few onsets in our dataset which would lead to estimation problems.

small-N panel data (Bruno, 2005; Bun & Kiviet, 2003; Judson & Owen, 1999; Kiviet, 1995). To counter this, Bruno (2005) introduced the least squares dummy variable corrected (LSDVC henceforth) method which estimates a bootstrap variance–covariance matrix for the corrected estimator. The results generated by the LSDVC method did not produce any drastic change in the main findings, albeit the political discrimination index remains statistically insignificant. Due to brevity, not all these robustness check results are shown here, but they are available on request.

Conclusion

To date, subnational studies on India have focused on various aspects related to causes and consequences of civil conflicts (Hoelscher, Miklian & Vadlamannati, 2011; Urdal, 2006, 2008). Although these studies made important contributions to my understanding in analyzing the causes of conflicts, none of them paid specific attention to the ongoing conflicts in the northeastern region of India. This is rather puzzling because northeastern states have been the setting for some of the oldest unresolved armed conflicts in the world. Yet, literature has paid little attention to exploring the reasons behind such long-lasting conflicts. Trying to fill this gap, I present a first cut at exploring the causes of armed conflicts in nine northeastern states of India during the period 1970–2007.

Over the years, scholars and historians have argued that relative deprivation, social exclusion and economic and political discrimination are the major causes for armed rebellion in this region. I therefore examine whether deprivation and persistent discrimination against social groups in this region has affected the probability of armed conflict incidence using panel data on nine northeastern states during the period 1970–2007. My findings show that the two dimensions of deprivation (an absolute dimension covered by absolute poverty rate within a state and a relative dimension captured by the relative poverty rate of the state) along with discrimination comprising of two facets (economic and political discrimination of marginal groups in these regions) are positively related to conflict outbreak. These results hold after controlling for income, population pressures, ethnic affiliations, forest area, state capacity, peace years, neighbouring conflict events, and distance to New Delhi. The study also reports considerable support for our baseline results when controlling for potential reverse feedback effects using the GMM method. These results remain robust to alternative sample size,

data and estimation techniques. As it is clear that risk of conflict outbreak is pronounced in this region when absolute and relative deprivation and economic and political discrimination are high, future research can further explore issues related to developmental programs and their impact on overall socio-economic conditions with further disaggregated data at district level.

Replication data

The dataset, codebook and do-files for the empirical analysis in this article can be found at <http://www.prio.no/jpr/datasets>.

Acknowledgements

I thank Jason Miklian, James Vreeland, and my colleagues Tobias Lechtenfeld, Andreas Fuchs and Seo-Young Cho, for providing some useful comments on the initial draft. Thanks also to Scott Jobson, for excellent proof-reading. I also thank the editor Henrik Urdal and three anonymous referees whose comments were constructive.

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