

Local Government Proliferation, Diversity, and Conflict*

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Abstract

The creation of new local governments is a key feature of decentralization in developing countries. This process often causes substantial changes in contestable public resources and the local diversity of the electorate. We exploit the plausibly exogenous timing of new district creation in Indonesia to identify the implications of these changes for violent conflict. Using new geospatial data on violence, we show that allowing for redistricting along group lines can reduce conflict. However, these reductions are undone and even reversed if the newly defined electorates are ethnically polarized, particularly in areas that receive an entirely new seat of government. We identify several mechanisms highlighting the violent contestation of political control.

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1 Introduction

The age-old question of how to draw political borders has resurfaced with secessionist referenda in Scotland and Catalonia. This question is especially pertinent in developing countries today as decentralization has led to a proliferation of new governments at the subnational level—a process we refer to as redistricting.¹ These boundary changes often change the composition of the electorate and access to public resources. The associated tradeoffs between diversity and the efficiency of public goods provision have well-established implications for the optimal size of political units (see [Alesina and Spolaore, 2003](#)). The implications for conflict are much less well understood.

This paper uses the creation of new local governments to study how changes in diversity and contestable public resources shape conflict. A more homogenous population located closer to the government should be easier to govern, improving welfare and reducing conflict. However, the creation of new local governments also creates new rents associated with, among others, public sector jobs and control over the policymaking process. These public prizes may be contested violently, particularly when the newly created administrative units give rise to a new power struggle between different groups and the costs of conflict are low. Disentangling these offsetting effects on conflict empirically has been difficult due to a host of identification and measurement challenges.

We resolve these challenges using a unique natural experiment in the ethnically diverse setting of contemporary Indonesia. Decentralization reforms begun in the late 1990s greatly eased the process of redistricting and led to a dramatic increase in the number of local governments from 302 in 1999 to 514 in 2014 (see [Figure 1](#)). The central government created a very favorable environment for splitting that allows us to examine the effects of locally-driven subnational splits. Crucially, the timing of redistricting was staggered across locations in a plausibly exogenous way.

Using novel, high frequency geospatial data on violence, we contribute to a new empirical literature showing how diversity matters for conflict ([Arbatli et al., 2015](#); [Desmet et al., 2015](#); [Esteban et al., 2012, 2015](#); [Spolaore and Wacziarg, forthcoming](#)). Although overall violence remains relatively unchanged after redistricting, we find differential reductions in violence in areas that experience large reductions in ethnolinguistic and religious diversity. At the same time, local violence is higher on average in areas that receive a new seat of government, and ethnic polarization amplifies these differences. We isolate political violence mechanisms and link these findings to a new theory of ethnic conflict due to [Esteban and Ray \(2011a\)](#), who show that incentives to compete over a public prize are highest in polarized areas.

We first identify the net effect of redistricting on conflict and then isolate distinct mechanisms associated with diversity and political institutions. We estimate this net effect at the original district boundaries in 2000, comparing districts that split earlier to districts that split later in a generalized difference-in-difference framework. The many steps in the process of redistricting create idiosyncratic variation in the timing of approval, but most importantly, the national government placed a moratorium on district splitting between 2004 and 2006.² After a split, the *original district* is divided into a *parent* district, which

¹[Grossman and Lewis \(2014\)](#) document the global pervasiveness of this phenomenon across all levels of administration. For example, Nigerian states increased from 22 in 1990 to 37 in 2010, Ugandan Districts from 34 to 112, and Kenyan districts from 47 to 70 over the same period. Czechoslovakia and Hungary increased their municipalities by 50 percent between 1989 and 1993. Brazilian municipalities increased from 3,974 in 1980 to 5,560 in 2000. Vietnam increased its provinces from 40 to 64 between 1996 and 2003.

²We define the timing based on the date that the formal law approving the creation of the new district was passed. This is

retains the original capital, and a *child* district, which acquires a new capital and seat of government (see Figure 2 for an example). Our rich data allow us to estimate effects at all administrative levels.

Redistricting constitutes a major increase in the value of public resources, and we exploit the differential incidence of these resources between parent and child districts to identify the implications for conflict. The new seat of government in the child comes with a host of contestable resources, including an increase in per capita revenue transfers from the center as well as positions in the local executive, parliament, and regional government institutions. Meanwhile, in the parent district, relatively less changes in terms of available fiscal resources and government positions.

To understand the role of increased homogeneity, we examine how changes in diversity mediate the effects of redistricting. Ethnic fractionalization declines substantially on average at the original district level. However, some of the newly drawn borders encompass fewer, large groups, thereby increasing ethnic polarization. We account for this using Population Census microdata from 2000 to construct measures of how homogenized the new districts are relative to the original district in terms of these two main diversity metrics. We are able to identify the mediating effects of changes in diversity because the timing of redistricting is unrelated to diversity and other district-specific correlates of conflict.

Our study is well suited to identify *how* diversity matters for conflict. Indonesia is home to over 400 ethnolinguistic groups, allowing us to distinguish between fractionalization and polarization.³ Fractionalization measures the likelihood of meeting someone outside your group, while polarization captures differences in preferences across groups and the strength of association within one's own group. These measures proxy for the potential identity-based coalitions around which mobilization and political action take place. When a contested good is private and divisible among members, intergroup distances—proxied by language—play less of a role while increases in group size reduce payoffs, bringing fractionalization to the forefront. On the other hand, polarization amplifies conflict incentives when the prize is more public and cannot be fully excluded from losing groups. When the public prize affects everyone but can be tailored to the winning groups' preferences—as with control over local government institutions—intergroup distances matter. Furthermore, payoffs to seizing such institutions are not as diminished by group size, and larger cohesive groups are more able to mobilize to their cause, bringing polarization to the forefront.

Contemporary Indonesia is an excellent context for testing theories of sociopolitical conflict. Mass communal conflict largely subsided by 2003/4 and was replaced by more sporadic, routine violence. Our study is geared at picking up the latter, which include flare ups of identity-based conflict, resource-related violence such as land disputes, and violence around elections (Barron et al., 2014). These types of local violence remain a major policy concern in new democracies like Indonesia given not only their large economic costs but also their potential to escalate into more systematic large-scale conflict.⁴ We draw upon new geospatial conflict data developed by the Indonesian National Violence Monitoring System (known by its Indonesian acronym of SNPK). This is the largest single-country conflict database

similar to the identifying variation used in Burgess et al. (2012).

³Although majority Muslim, Indonesia has sizable Christian, Hindu and Buddhist groups. However, unlike ethnicity, it is difficult to separate fractionalization and polarization for religion given there are relatively few groups in any one location.

⁴In our data, even if we examine the least violent years and restrict to non-crime violence, we observe around 500 annual deaths, 7,000 annual injuries, and 1,500 annual buildings damaged. Including crime and domestic violence more than doubles these numbers. Using a methodology due to Fearon and Hoeffler (2014), we estimate that the direct costs of non-crime conflict in the post-2005 period range from 0.2% - 0.5% of GDP.

in the world with over 230,000 recorded incidents between 2000 and 2014. Based on reporting in over 120 media sources across the country, these detailed data allow us to explore mechanisms in a way that is not possible in most cross-country conflict datasets. We examine the incidence of any crime-related violence and non-crime-related conflict with further subclassifications into types of political violence.

We find that the small average effect of redistricting on conflict masks considerable heterogeneity. Amalgamations that split up into more homogeneous units experience reductions in conflict, with changes in ethnolinguistic polarization being the most significant. At the more disaggregated level, child districts with high polarization experience a differential increase in political conflict after redistricting, and this translates into an overall increase at sufficiently high levels of diversity. These differential changes in child districts are consistent with conflict over new, contestable public resources.

Taken together, these results suggest not only that increasing public prizes in polarized areas increases conflict but also that increased homogeneity may help to reduce it. Overall results are muted in part because these forces offset each other and potentially because violence may be relocating from parent to child within the original district borders. The results can also be interpreted through the lens of state capacity (Besley and Persson, 2009, 2010). Child districts may have limited institutional capacity for dealing with, for example, violent contestation of elections or resource disputes.

Using the granularity of the new conflict data, we provide evidence on the mechanisms underlying the link between redistricting and violence. First, we show that the increase in violence in child districts is most pronounced around the time of the first election after splitting, but no such differential is found for parent districts. Moreover, within child districts, ethnic polarization further amplifies violence around the first election. This is consistent with ethnicity capturing differences in preferences as well as facilitating mobilization. The post-redistricting violence in child districts appears to be driven by contestation of resources, identity, and governance based on subclassifications within the conflict data. Meanwhile, pre-2000 differences in voting preferences between parent and child districts are associated with greater violence in the parent district before redistricting and less violence after, which provides further evidence on the conflict-reducing effects of preference homogenization.

Our paper is related to three strands of the literature. First, we add to a growing body of work on optimal borders by identifying the effects of an increasingly common policy of administrative unit proliferation on conflict (see Pierskalla, 2016a, for a survey). A large theoretical and growing empirical literature offers a framework for identifying suboptimal borders at the (sub)national level (e.g., Alesina and Spolaore, 1997; Alesina et al., 2004; Bolton and Roland, 1997; Coate and Knight, 2007; Spolaore and Wacziarg, 2005; Weese, 2015). The messy politics of border formation often explain departures from optimality (Alesina and Spolaore, 2005; Spolaore, 2008). The unique policy context in Indonesia allows us to take these complex determinants of border formation as given and focus on investigating its consequences. Our results build upon Alesina et al. (2011) and Michalopoulos and Papaioannou (forthcoming), who highlight the adverse consequences of arbitrary, post-colonial partitioning of ethnic groups across national borders. We identify similar consequences for conflict in the policy-relevant context of decentralization. Our findings point to an important unintended consequence of redistricting, namely that, under certain conditions, violence may simply shift from the old to the new seat of government.⁵

⁵Other work shows how redistricting can amplify the negative externalities associated with pollution and deforestation that were better internalized by larger administrative units (Burgess et al., 2012; Lipscomb and Mobarak, forthcoming).

Second, we provide new evidence on the nature of conflict over public resources and rents, which is a salient albeit controversial mechanism in the conflict literature. Several studies use shocks to the price of taxable commodities, such as oil and minerals, as sources of variation in the value of the state, but there is mixed evidence on how conflict responds to these shocks (see [Bazzi and Blattman, 2014](#); [Dube and Vargas, 2013](#)). Moreover, recent work highlights several potential channels through which ethnoreligious diversity affects (resource) conflict ([Amodio and Chiovelli, 2015](#); [Arbatli et al., 2015](#); [Caselli and Coleman, 2013](#); [Esteban and Ray, 2011a,b](#); [Esteban et al., 2012, 2015](#); [Morelli and Rohner, 2014](#); [Spolaore and Wacziarg, forthcoming](#)). We offer two innovations that provide novel insights into how and why diversity affects conflict. We identify causal impacts of policy-induced *changes* in diversity within local government boundaries. This is important because diversity levels are often confounded with agroclimatic conditions ([Ahlerup and Olsson, 2012](#); [Michalopoulos, 2012](#)) or recent immigration ([Fearon and Laitin, 2011](#)), both of which may shape conflict independent of diversity. Additionally, we exploit exogenous variation in the value of public prizes bound up with local governments. This stands in contrast to previous work largely focused on rival private goods like natural resources. By isolating sharp changes in public prizes, we provide strong support for a hypothesized distinction between fractionalization and polarization that has been difficult to causally identify in cross-country work.⁶

Finally, our work highlights an important consequence of decentralization in diverse societies with limited state capacity. Our focus on conflict goes beyond the standard questions of capture and corruption that pervade the literature on decentralization (see [Mookherjee, 2015](#)). Our work is related to [Martinez-Bravo et al. \(2014\)](#), who study a different decentralization reform: the introduction of local elections for village officials. In the Chinese context, local elections increase public goods expenditures. However, these benefits are more limited if not entirely undone in villages with high religious fractionalization ([Padró i Miguel et al., 2012](#)) or low social capital ([Padró i Miguel et al., 2015](#)). We find complementary results for violent conflict in new child districts experiencing their first election. Moreover, the redistricting process, which involves changes in the value of local political control *and* the composition of the electorate, affords us the opportunity to test additional hypotheses beyond those associated with changes in electoral accountability. A large body of work examines how ethnic divisions shape public goods provision (e.g., [Alesina and La Ferrara, 2005](#); [Burgess et al., 2015](#); [De Luca et al., 2015](#); [Habyarimana et al., 2007](#); [Miguel and Gugerty, 2005](#)). We complement this research by taking a step back to investigate conflict over control of the government institutions that allocate these goods.

The paper proceeds as follows: In Section 2, we detail the context of district proliferation in Indonesia. In Section 3, we discuss how redistricting affects local rents and diversity. In Section 4, we present the new geospatial conflict data. In Section 5, we develop an empirical strategy that allows us to identify the different implications of redrawing borders. In Section 6, we present the main results and highlight key mechanisms. In Section 7, we conclude.

⁶[Spolaore and Wacziarg \(forthcoming\)](#) show that countries with more similar genetic roots are more likely to engage in cross-border conflict because those groups have similar preferences over the private goods often being contested in international wars. However, they note (as do [Arbatli et al., 2015](#)) that intergroup distance and polarization will exacerbate within-country conflict, which is more likely to involve contestation of public prizes (in addition to private ones). Together, these studies are consistent with the theoretical predictions in [Esteban and Ray \(2011a\)](#) on which we provide causal evidence.

2 District Proliferation in Indonesia

This section provides background on Indonesia's extensive district proliferation. We first describe the important role districts play in Indonesia's government. We then document the wave of redistricting that led to a more than 60 percent increase in the number of districts in 15 years, elaborating on the delays and moratoria in the splitting process that we exploit for identification. For reference, the timeline in Figure 3 provides a summary of the key events over our study period.

2.1 Decentralization and the Political Context

Indonesia has four main tiers of government. The largest tier is the province, of which there were 34 by 2014. Provinces are divided into districts known as *kabupaten* and *kota*, the main administrative unit of analysis in this paper. In 2014, there were 514 districts.⁷ Districts are in turn divided up into 7,094 sub-districts (*kecamatan*), which are further subdivided into more than 80,000 villages, the smallest unit of government.

Our study focuses on districts from 2000 to 2014. This period was characterized by far-reaching decentralization reforms aimed at devolving authority to the district level. The resignation of President Suharto in May 1998 ushered in a wave of laws that rapidly shifted the balance of power away from the central government and towards the districts.⁸ Effective January 2001, districts took over responsibility for nearly all public policy and service provision with the exception of the few areas naturally reserved for the central government (i.e., defense and security, foreign affairs, fiscal and monetary policy).

Major electoral reforms also accompanied decentralization. With the 1999 reform, district heads (known as *bupatis* and *walikotas*) were locally elected for the first time since independence. At first, they were elected via majority vote by members of the local parliament, who were in turn popularly elected according to a closed-list proportional representation system. Beginning in 2005, district heads and their running mates were directly elected by majority vote. District heads and members of parliament serve for 5 years. Parliamentary elections occur at the same time as national elections (1999, 2004, 2009, 2014), whereas district head elections vary in their timing across districts due to predetermined path dependence (Skoufias et al., 2014). The timing of these elections will play an important role in our investigation of mechanisms in Section 6.2.

Decentralization also led to a large increase in local government revenue per capita. Over our study period, 90 percent of district revenue comes from the central government with few strings attached (Hill, 2014). Real revenue per capita for the median district nearly doubled in real terms from USD 110 in 2000 to USD 205 in 2010.⁹ Spending decisions are primarily made locally: budgets are proposed by a board

⁷*Kabupaten* are more rural than *kota*. We treat them similarly in the empirical analysis and refer to both as districts.

⁸Provincial power was greatly limited by the original decentralization laws due to fears that consolidated power at such a large regional level would lead to secession, a very real concern given the 1999 secession of East Timor by referendum (Fitriani et al., 2005). While this largely continues today, the province's spending power is not trivial. In 2012, districts captured three quarters of total subnational spending with provinces making up the rest (Lewis, 2014).

⁹Part of this increase is due to redistricting as discussed in Section 3.1. The revenue figures are calculated from the World Bank's Indonesia Database for Policy and Economic Research (DAPOER). Approximately 60 percent of these funds come from a general allocation grant (*Dana Alokasi Umum*, DAU). Shared taxes, shared natural resource rents, and the special allocation grant (*Dana Alokasi Khusus*, DAK) each accounted for around 8 percent of total revenues, while own revenue capacity is quite limited, comprising most of the remainder (Lewis, 2014). On average, districts spend 55 percent of their budget on infrastructure, health care, and education and 33 percent on administrative costs.

overseen by the district head after a bottom up process that begins with requests at the village level. Budgets are then approved by the local parliament.

2.2 Creating New Districts

Concurrent with the wave of decentralization, the Indonesian government created many new districts through a process known colloquially as *pemekaran* or blossoming. After remaining steady from 1980 to 1998, the number of districts ballooned from 302 in 1999 to 514 in 2014 (see Figure 1). Most of the redistricting took place in 2001–3 and 2007–8.¹⁰ This proliferation of districts occurred across the archipelago as shown in Figure 4. We provide here institutional details on the redistricting process and highlight the sources of our empirical identification.

New districts are formed when existing subdistricts break off from their original district and create their own local government. After a split, the original district is divided in two: The *parent district* contains the original capital replete with pre-existing local government institutions. The *child district* receives a new capital, district head, parliament, and government apparatus a new area with a new capital and government. Figure 2 provides an example of this distinction based on the splitting of Buru district into Buru (the parent) and South Buru (the child). Crucially, we are able to use subdistrict data to construct key variables at the child and parent district level over the entire study period 2000–2014 *even though these areas did not exist as separate administrative entities before redistricting*.

We construct a new panel dataset that links the districts observed in 2014 back to their original district in 1980, identifying each new district created in between. We identify children as areas that split and had a change in administrative code.¹¹ In order to pick up any conflict generated in the interim period, we base the timing of redistricting on the month in which the new district is approved by the National Parliament, as indicated in legal documents. This granular district–month panel serves as our main data structure throughout the paper.

Redistricting Process. Local interest groups initiate the action to split in accordance with the redistricting mandate passed into law in 2000. First, the new district must have a minimum of three subdistricts. Second, there must be support for the split among parliamentarians and the district head in the original district. Third, the proposing parties must present technical research demonstrating the socioeconomic capacity of the new district in terms of, for example, potential GDP, financial institutions, education and health facilities, and transport and communication. Most proposals were submitted to and approved directly by the national parliament with no evidence of proposed splits being rejected (Pierskalla, 2016b).

The central government has twice halted the redistricting process by issuing national moratoria on the creation of new regions, the first of which occurred from 2004–6 and the second from 2009–2012.¹²

¹⁰Only one area in our study splits again after 2008 (in January 2013), and for simplicity we drop observations in 2013 and 2014 for this district. Results are unchanged under other treatments. Four other areas split for the first time in late 2012–13. However, we exclude these from the analysis in order to focus on areas that are credibly affected by a moratoria on redistricting that we describe below. The redistricting in 1999 occurred before the new government regulation on *pemekaran* was established and likely differ in nature from later redistricting. For example, a number were longstanding requests, and others were initiated by the central government (Fitriani et al., 2005). These areas only enter our data if they later split again.

¹¹Following Pierskalla (2016b), we also cross-check with fiscal data to ensure these are indeed child districts that get a new funding stream. We omit Papua due to problems with the underlying geographic and administrative data.

¹²The primary stated reason for the moratoria was the drain on fiscal resources. At the end of the first moratorium, the gov-

Both periods are clearly seen in Figure 1. We exploit the first moratorium for identification purposes, building upon the strategy used by Burgess et al. (2012). Areas that were close to having the process completed in 2003 but not quite prepared had to wait until at least 2007 to be created. Although we do not have data on the number of proposals in progress or already submitted in 2004, a report by the National Development Planning Agency notes that 114 proposals for new districts were awaiting consideration in 2005–6 (BAPPENAS, 2007). The process of splitting has extensive scope for administrative delays, which likely adds further idiosyncratic variation to the date of approval beyond that provided by the moratorium.¹³ We revisit these idiosyncrasies in the timing of redistricting in developing our identification strategy in Section 5.

After the law approving the new district has passed, there is an interim period before a new district head can be elected. During this time, an interim district head is appointed by the central government from a list of candidates generated locally. The interim district head establishes the most essential ministries/offices and partially staffs them. With the exception of the few early splits (2001 and 2002) after which the district executive was elected by parliament, redistricting was followed by a direct popular election for district and vice-district head within two years.

While our identification relies only on variation in the timing of redistricting, it is helpful to understand why we see redistricting in some locations and not others. The potential incentives include, among others, efficiency gains (smaller districts can better provide public goods), homogeneity (less heterogeneity in taste allows public goods to be better targeted), electoral gerrymandering, and rent seeking (new districts come with new jobs and ‘pork’). The incentives are weaker, albeit still salient, for parent districts for which little is lost in terms of revenue transfers per capita, and there may be small gains in terms of the number of civil servant and parliamentary positions per capita. Moreover, the local government no longer has to govern over such a vast and potentially heterogeneous area and may experience more favorable electoral chances. Prior studies in Indonesia find support for arguments based on rent-seeking, ethnic homogenization, and size-based efficiency (see Fitriani et al., 2005; Pierskalla, 2016b).

3 Redistricting and Changes in Rents and Diversity

Redistricting led to dramatic changes in the ethnoreligious composition of districts and the incidence of public resources. Here, we first show that splitting increases government jobs and fiscal rents. Next, we discuss our measures of diversity and show that, on average, new districts were drawn in a way that increased ethnoreligious homogeneity. We end by discussing testable implications for conflict.

3.1 Public Resources

We begin by showing that redistricting leads to a large change in public resources associated with (i) a new local parliament and district head who jointly make decisions regarding, among others, public expenditures and staffing; (ii) up to 30 new regional ministries/departments and corresponding new

ernment tightened the law on redistricting. First, the minimum number of subdistricts increased to five. Second, these subdistricts must be within a parent district that had existed for at least seven years.

¹³For example, in field interviews conducted in June 2015, we learned that the process to redistrict Manggarai began in 2000 but was not finalized until 2003 in the case of the first child district of Manggarai Barat and 2007 in the case of the second child district of Manggarai Timur.

civil servant jobs; and (iii) a new flow of fiscal transfers from the center.

Size of Government. The creation of a new local government in the child district is the most direct consequence of redistricting. After the interim period, a new district head is elected and tasked with staffing each of the district's up to 30 new government agencies. In the typical district, between 1200 and 2000 new jobs are created.¹⁴ We have not found evidence to suggest that the total number of offices and jobs decrease in the parent district. Thus, the overall number of civil servants per capita increases substantially, and these newly created jobs are important for setting and executing public policy.¹⁵

The district executive branch is complemented by a local parliament. The number of seats is determined by population size according to a step function and increases with district splitting.¹⁶ For example, a district with 400,000 people initially would have 40 seats. If it split into two equally sized districts, each would have 30 seats for a total of 60 compared with 40 originally.

Fiscal Rents. Redistricting also leads to an increase in overall transfers from the central government. Figure 5 compares per capita transfers from 2000 to 2012 in original districts with no splits to ones that had splits in 2002–3 and 2007–8, respectively.¹⁷ All districts had similar average transfers until 2006, when areas that split in 2002–3 experienced a differential increase in average transfers of around USD 100 per capita. While average real transfers decline in 2009 and 2010 for districts that never split or districts that split in 2002–3, they increase for districts that split in 2007–8. This difference is smaller but still sizable at around USD 50 per capita. These flows constitute a sizable increase in rents given that average district revenue per capita is less than USD 300. That these differences appear 2–4 years after the splits is consistent with the fact that transfers to the child districts take at least 1–2 years to start flowing and tend to begin small.

Nearly all of the increase in average per capita transfers accrues to the child districts with relatively little change observed for parents. Like other districts, approximately 40 percent of these transfers will be spent on government wages and the rest will be spent on public goods in the new district. The decision on how to do so is entirely at the discretion of the new local executive and parliament.

To summarize, redistricting creates new contestable public prizes associated with the infusion of revenue from the central government and opening of government positions responsible for public expenditure. These gains are concentrated in the child districts, with the parent likely having more government positions per capita but no increase in transfers per capita. We now turn to documenting how splitting changes the ethnoreligious diversity of the governed populace.

¹⁴The numbers for jobs are estimated based on field interviews conducted by the authors as well as province-level totals for 2008–12 reported by the National Development Planning Agency.

¹⁵For example, small government projects can be directly assigned to contractors by the heads of the relevant local government office, once the budget has been approved by parliament. Hence, in addition to holding a high-paying position, the top civil servants are directly involved in public service provision.

¹⁶In particular, < 100,000 people get 20 seats, between (100,000, 200,000) get 25, (200,000, 300,000) get 30, (300,000, 400,000) get 35, (400,000, 500,000) get 40, (500,000, 1,000,000) get 45, and > 1,000,000 get 50 seats.

¹⁷The data come from Ministry of Finance reports collected by the World Bank's DAPOER project. We exclude districts in Java given that they follow a very different trajectory. After doing so, there are 137 districts with no splits, 59 districts that split between 2002–3 and 23 districts that split between 2007–8. We also estimate the effect of splitting on per capita transfers within our final estimation sample of districts that split, using our identification strategy detailed in Section 5. Redistricting increases per capita transfers by USD 53–90, or 20–35 percent of the mean, comparable to the estimates reported in Figure 5.

3.2 Changes in Ethnolinguistic and Religious Diversity

Indonesia is the fourth most populous country in the world and home to remarkable diversity with over 400 ethnolinguistic groups. It is predominantly Muslim, with minority Christian, Hindu, and Buddhist groups. The contemporary ethnic, linguistic and religious diversity is the result of long-run settlement processes dating back many centuries. As of the late 20th century, the distribution of different groups across administrative boundaries could be largely traced back to (i) subdistrict borders drawn by the Dutch colonial authorities before independence, and (ii) large waves of population resettlement from Java/Bali to the Outer Islands in the 1970s and early 1980s (see [Bazzi et al., 2015](#)). Here we describe the measures of ethnic and religious diversity at the core of our empirical analysis.

Measuring Diversity. We capture this ethnic and religious diversity using microdata from the universal 2000 Population Census. This data allows us to map the initial subdistricts in 2000 to their final 2010 district boundaries, providing us with measures of diversity in the child and parent districts as well as within the original district boundaries. We focus on three measures of diversity: ethnic fractionalization, ethnic polarization, and religious polarization.

Ethnic fractionalization measures the probability that two randomly chosen individuals belong to different groups, and as such increases with the number of equally sized groups. Formally, fractionalization in district d is given by $F = \sum_{g=1}^{M_e} \pi_g(1 - \pi_g)$, where M_e is the number of ethnic groups in the district, and π_g is the population share of group g as reported in the 2000 Census. In the average original district in our sample, there are 549 distinct ethnic groups with 21 (3) having greater than 0.1 (5) percent of the population. Consolidating ethnic subgroups based on language slightly reduces these numbers to 271 distinct ethnolinguistic groups, 18 (3) with greater than 0.1 (5) percent. In robustness checks, we consider the Greenberg-Gini index (G), which is an alternative measure of fractionalization that incorporates distances between groups and effectively collapses to a measure of F with these latter supergroups.

Meanwhile, ethnic polarization is defined as $P = \sum_{g=1}^{M_e} \sum_{h=1}^{M_e} \pi_g^2 \pi_h \kappa_{gh}$, where κ_{gh} is the distance between groups g and h . Following [Fearon \(2003\)](#), we use linguistic differences to proxy for differences in preferences between groups. We map each of the over 1000 ethnic groups in the 2000 Census to a language in *Ethnologue*, which provides a full classification of the linguistic origins of each language (see [Appendix A](#)). We set $\kappa_{gh} = 1 - s_{gh}^\delta$, where s_{gh} is the degree of similarity between the languages spoken by g and h as given by the ratio of common branches on the language classification tree to the maximum possible (14), and δ is a parameter that selects the level of linguistic dissimilarity to be emphasized. Low δ s emphasize differences between languages with the fewest branches in common; as δ increases, smaller differences become relatively more important until in the limit all differences are equal to 1 unless groups share a common language. We set $\delta = 0.05$ following [Esteban et al. \(2012\)](#), but our results are robust to other values as discussed in [Section 6.3](#).

Ethnic polarization differs from fractionalization in two key respects. First, the squaring of the own group term emphasizes the role of own group identification in increasing tensions between groups. As such, it attains its maximum when there are two distinct, equally sized groups. Second, it formally incorporates distances between groups while conventional fractionalization (F) treats the difference between any two groups identically (albeit G does not). Running a horse race between these distinct measures

will be important in testing recent theories of diversity and conflict. P and F are correlated at around 0.3, suggesting considerable scope for identifying differential effects.

Religious polarization, $R = \sum_{g=1}^{M_r} \sum_{h=1}^{M_r} \pi_g^2 \pi_h$, where M_r is the number of religious groups, and π_g (π_h) is the population share of group g (h). Note that this measure does not admit any notion of distance between religions. There are seven religions recorded in the Census, but in most districts, there is a single cleavage between a Muslim and a non-Muslim, typically Christian, group. As a result religious polarization is effectively identical to religious fractionalization in our data (with a correlation of 0.96).

Panel A in Figure 6 shows the distribution of each diversity measure for the parent and child districts in our study. There is considerable heterogeneity within and between the group of parent and child districts. Table 1 provides additional summary statistics demonstrating this variation.

Changes in Diversity. To examine changes in diversity at the original district level, we compute the population-weighted average polarization/fractionalization in the new units (children and parent district) and subtract the polarization/fractionalization in the original district, expressing the final measure in percentage terms. For example, if an original district A becomes parent district B and child C , we calculate $\Delta P = \frac{\left(\frac{N_B}{N_A} P_B + \frac{N_C}{N_A} P_C\right) - P_A}{P_A}$. Note that Δ fractionalization, computed in this manner, is mechanically less than or equal to zero. Panel B in Figure 6 plots these changes in diversity, and Table B.1 shows significant average declines in F and R but an increase in P .¹⁸

These average changes in diversity mask interesting heterogeneity. Consider two examples. The district of Ngada split into Ngada and Nagekeo, and was roughly divided along ethnic lines with ethnic Ngada living in Ngada district and ethnic Nagekeo in Nagekeo district. Ethnic polarization declined from 0.43 to about 0.01 in both districts, and ethnic fractionalization declined from 0.7 to an average of 0.4. On the other end of the spectrum, Maluku Utara split into five new areas, three of which had increased ethnic polarization relative to the original area (about 0.6 relative to 0.4 originally). One of these was Pulau Morotai, which is composed of 43 percent Galela and 30 percent Morotai ethnics. Meanwhile, fractionalization in Maluku Utara was very high initially (0.92) and declined significantly in all areas.

In sum, the new boundaries arose in a way that reduced ethnic fractionalization and religious polarization, but not ethnic polarization. We view these measures of diversity as proxies for the potential identity-based coalitions around which political action and mobilization takes place. [Aspinall \(2011\)](#), for example, documents the important role of ethnicity as an organizing technology around local politics, and especially *bupati* elections, in the era of decentralization. As a result, the variation in realized diversity across the new districts has important implications for conflict that we describe next.

3.3 Implications for Conflict

The process of redistricting provides a natural laboratory for exploring the drivers of conflict through the lens of theory. The first question we bring to the data is whether overall violence decreases after splitting up the area into smaller, more homogeneous units. If homogeneity attenuates tensions as predicted in [Esteban and Ray \(2011a\)](#) and [Alesina et al. \(2004\)](#), we expect violence to decline after redistricting,

¹⁸Appendix Table B.1 compares Δ diversity for districts that split and those that did not between 2000 and 2010. We find statistically significant declines in F (as in [Alesina et al., 2014](#)) and R for those that split with no significant change in P .

particularly in districts that experienced the largest reduction in ethnoreligious diversity. The Δ diversity measures noted above are well suited to test this hypothesis at the original district level.

However, the large increase in contestable rents associated with the new district governments may increase the incentives for violence. We expect some form of contest over who gets to allocate the increased public goods and how they do so. Ideally, this occurs peacefully through the democratic process, but violence may be used to influence elections or the existing allocation of rents. Drawing upon [Esteban and Ray \(2011a\)](#), we hypothesize that these incentives will be strongest in areas with the most polarized preferences. The relative publicness of the prizes associated with the new government imply important roles for inter-group differences and the strength of own-group identification. Hence, polarization should be more important than fractionalization. Moreover, the effects of redistricting should differ across child and parent districts based on the incidence of changes in public rents.

Our overarching goal is to understand whether a policy of locally-driven government creation can reduce violent conflict by creating more homogeneous governmental units or whether increases in rents and newly salient group cleavages can offset and perhaps undo the potential gains from homogenization. We test these hypotheses by using multiple empirical strategies and drawing upon newly available data on conflict described next.

4 Conflict: Context and New Data

The recent history of Indonesian conflict can roughly be classified into two periods: (i) collective violence during the democratic transition and initial decentralization reforms (1998–2003), and (ii) routine local violence from 2004–present. Violence in the first period included anti-Chinese riots, large-scale interethnic and interreligious violence (e.g., in Maluku), separatist conflict between the central government in Aceh, and terrorist acts by fundamentalist Islamic groups ([Barron et al., 2009, 2014](#)). Since 2004, large-scale conflict has transitioned into more episodic sociopolitical conflict characterized by fewer fatalities. Understanding these sporadic, albeit increasingly routine, episodes of violence is of direct policy relevance to Indonesia today. These low intensity incidents—increasingly associated with elections, governance, and resource disputes—often reflect the ways in which power is violently contested in new democracies with low state capacity and as such pertain to a host of other developing countries.¹⁹

We draw upon new monthly data on conflict from the Indonesian National Violence Monitoring System. Hereafter, we refer to the data by its Indonesian acronym (SNPK). Like other geospatial conflict databases such as the Armed Conflict Location & Event Data (see, e.g., [Michalopoulos and Papaioannou, forthcoming](#)), the SNPK data is based on reports of violence in over 120 media sources. Coverage begins in 1998 for nine conflict-prone provinces and increases to 15 provinces plus parts of 3 provinces in greater Jakarta beginning in 2005.²⁰ Thus, the data is not formally representative of Indonesia, but it

¹⁹In this sense, our context is particularly well suited to testing the [Esteban and Ray \(2011a\)](#) model. As they note, “. . . social conflict need not manifest itself in civil war alone, and there are various other measures (that incorporate, for instance, strikes, demonstrations, riots, assassinations, political prisoners, and the like). Our model should certainly not be seen as an attempt to explain the onset of civil war, and perhaps should not be used in such a context. It may be somewhat better for civil war incidence, but its most satisfactory application should be—data permitting—as a potential explanation for the broader range of [social] conflicts described here.”

²⁰These late entrants pose no challenge to our identification. We know when these areas split (even if it is before 2005), and hence we allow them enter the data as post-split if they have already split or as non-split if they are redistricted after 2005.

does span all major island groups and covers a majority of the Indonesian population. Multiple regional newspapers are collected for each province to ensure district coverage. However, data coverage is unreliable in the earliest years, and hence we exclude 1998 and 1999 from the analysis. Crucially, conflict locations are recorded at the 2011 district level because most incidents have a subdistrict specified in the newspaper (see Appendix A).

Coders read articles and then use a standardized template to code the incident based on the underlying trigger. The incidents are first coded as domestic violence, violent crime, violence during law enforcement, or conflict. Within conflict, the coders further sort into identity, elections/appointments, governance, resource violence, popular justice, separatist, and other (could not be classified). In our baseline specifications, we analyze three main groupings of incidents: (i) *All*, which includes any reported incidents; (ii) *Non-Crime*, which drops the crime and domestic violence meta-categories; and (iii) *Political*, which includes identity, elections/appointments, governance, resource violence, and other. Categories (i) and (ii) help alleviate concerns about systematic miscoding.

The Political category is intended to capture conflicts most plausibly associated with the changing rents and changing ethnoreligious diversity that results from redistricting. Conceptually, elections/appointments and governance should capture conflict over who gets to allocate the public good. Resource violence should pick up disputes over the existing allocation of both public and private goods.²¹ Identity violence is the most likely candidate to pick up differences in preferences.

Summary statistics for our main conflict outcomes can be seen in Table 1. Violent non-crime incidents occur in around 36 percent of the district-months based on the 2010 borders. Political types of violence comprise a majority of these events and occur with around a 20 percent probability. Appendix Table B.2 provides a further, detailed breakdown of subcategories of violence, offering a sense of the typical incident in each category. For example, electoral/appointment violence most commonly relates to district-level politics. Its consequences are typically non-lethal, resulting in injuries or buildings destroyed. Governance violence is also not especially deadly, with conflict over the quality of public services and government programs being most prevalent. In contrast, resource violence is more deadly, with the majority of disputes being about land. Identity violence is also deadly, particularly for interethnic and inter-religious clashes, the latter being more prevalent overall. Finally, popular retaliation for perceived injustice is the most common form of non-crime-based violence.

5 Empirical Strategy

This section develops our empirical strategy in two steps. First, we describe the baseline estimating equations for identifying the change in the average incidence and geography of conflict after redistricting. Second, we detail the framework for estimating heterogeneous effects based on population diversity. Third, we test and validate the underlying identifying assumptions.

Thus they simply pose a missing data problem. Our results are robust to dropping these entrants, but we retain them in our baseline so as to take advantage of all possible information.

²¹The resource category includes conflict over private and public property (and market access) but does not distinguish between the two. We therefore retain it in the *Political* category, but results are similar when omitting it. Nearly all separatist incidents occur in Aceh pre-2005 during its decades-long secessionist conflict with the national government. We omit it from political violence on account of it following a quite unique logic than other forms of political violence.

5.1 Identifying the Average Effect of Redistricting

We restrict our econometric analysis to districts that split between 2000 and 2014 and are also found in the SNP database. Nearly all of these splits occur in the two years before and after the moratorium on splitting from 2004–6. This gives us 52 original districts (d) in 2000 that broke apart into 133 districts by 2014. Among these, 29 original districts are observed from 2000–14 while 23 enter the data in 2005. These districts span 19 provinces across the archipelago.

Our main empirical strategy is a generalized difference-in-difference approach that exploits the plausibly exogenous timing of district splits. Our baseline specification is estimated on a monthly panel of original districts defined according to the boundaries in January 2000:

$$conflict_{dt} = \nu + \alpha conflict_{d,t-1} + \beta split_{d,t>s} + \theta_t + \theta_d + \theta_d \times t + \varepsilon_{dt}, \quad (1)$$

where β identifies the overall change in some measure of conflict after a redistricting of d is announced relative to the change over the same period for those districts that have not yet split due to the moratoria and other administrative delays. The parameters θ_t , θ_d , and $\theta_d \times t$ are month fixed effects (FE), district FE, and district-specific linear time trends. $split_{d,t>s}$ is an indicator equal to one for all months t after the district's first post-1999 redistricting was officially passed into law in month s .²² The month FE sweep out shocks to conflict incidence that are common across all districts (e.g., if there is a national policy innovation associated with conflict). The district FE take out time-invariant level differences in conflict incidence across districts, which is important given that certain regions of Indonesia are historically more prone to violence than others. Meanwhile, the district-specific time trends are important given (i) the secular decline in violence across Indonesia over this period (see Appendix Figure B.1), and (ii) the cessation of major hostilities in the longstanding violence in the provinces of Aceh and Maluku by the mid-2000s as noted in Section 4. The lagged dependent variable accounts for persistence in the unobservable shocks to conflict across months. Given our long monthly panel ($T > 100 \forall d$), there is little concern about dynamic panel bias, which is equivalent to $1/T$ (Alvarez and Arellano, 2003; Nickell, 1981).²³

In our baseline approach, $conflict_{dt}$ is an indicator for any reported incidents. We focus on the extensive margin of any incidents rather than the number of incidents because the monthly variation in conflict occurs primarily along the extensive margin.²⁴ We estimate all equations using linear probability models (LPM) and cluster standard errors at the original district d level. The LPM estimator is preferable

²²Districts that split into three or four all at once pose no particular difficulty. Districts that split at two different points in time are more of a nuisance. Consider, for example, Manggarai district, which first created one child, Manggarai Barat in 2003, and then later the parent district was further subdivided to create Manggarai Timur in 2007. Out of 52 original districts, 11 split at multiple points in time. In our baseline setup, we only use the information provided by the first instance of redistricting. Results are robust to dropping these multi-split areas or to assigning the date of the split to the month in which the most splits took place for the given original district. At the more disaggregated level, we code the child district as splitting when they get their new government ratified and leave parents as having their first split. For example, Manggarai Timur would split in 2007 despite the fact that it was part of an area that was subjected to a split in 2003. The parent district of Manggarai meanwhile retains its status as having split since 2003. Note that it is extremely rare for child districts to subsequently split (we only have one case late in our sample period) largely because of a law passed in 2007 that required districts to have been in existence for at least seven years before redistricting.

²³All results are robust to alternative formulations of the lag structure, including dropping the lag altogether.

²⁴In Section 6.3, we show robustness to looking instead at the intensive margin of the number of incidents. We can also restrict to incidents in which there are reported injuries, deaths, or damage to buildings. Doing so leaves our results unchanged, and we retain the unrestricted measure to allow for possible misreporting of these various outcomes.

to nonlinear approaches such as conditional FE logit given the large number of FE and time trends and our primary interest in recovering causal estimates rather than predicting conflict per se.

Next, we disaggregate the original districts d into parent d_o and new children d_c as observed at the end of 2010. In this case, our baseline specification is estimated on a monthly panel of parent d_o and child d_c districts while retaining the $f(media_{dt})$ controls:

$$conflict_{it} = \nu + \alpha conflict_{i,t-1} + \beta split_{i,t>s} + \eta (split_{i,t>s} \times \mathbf{1}(i = d_c)) + \theta_t + \theta_i + \theta_i \times t + \varepsilon_{it}, \quad (2)$$

where β identifies the post-split change in conflict on the territory within the parent district boundaries ($i = d_o$), and η identifies the differential effect on conflict within the child boundaries ($i = d_c$).

5.2 Ethnic Diversity and Heterogeneous Effects of Redistricting

We proceed to examine how the effects of splitting vary with ethnoreligious diversity. Given the relative publicness of the prize associated with the new district governments, we expect ethnic polarization to matter relatively more than ethnic fractionalization (see Section 3.1). Moreover, we also consider religious polarization given the salience of religious identity in many areas of Indonesia. Although the three diversity measures are mutually correlated, there is significant scope for disentangling the separate contribution of each given the ethnoreligious variation across the country.²⁵

We begin by examining how the effects of splitting at the original district level vary with ethnic diversity by augmenting equation (1):

$$conflict_{dt} = \nu + \alpha conflict_{d,t-1} + \beta split_{d,t>s} + \sum_{j \in \{F,P,R\}} \phi_j (split_{d,t>s} \times \Delta j_d^0) + \theta_t + \theta_d + \theta_d \times t + \varepsilon_{dt} \quad (3)$$

where Δj_d^0 are the percentage change in diversity between 2000 and 2010 borders (see Section 3.2) for ethnic fractionalization ($j = F$), ethnic polarization ($j = P$), and religious polarization ($j = R$) indices based on the inhabitants of the original district d in the year 2000. The goal of this regression is to identify whether areas that split into more homogeneous and less polarized units experience a differential reduction in violence as compared to districts that did not draw their boundaries in this manner.

While equation (3) examines how changes in violence resulting from redistricting are mediated by changes in diversity, it is important to keep in mind that with these changes in the diversity of the governed groups come changes in rents. To clarify this additional implication of redistricting, we proceed to the more disaggregated units of analysis, child and parent districts, where changes in rents are more easily distinguished.

We allow for differential heterogeneous effects between parent and child districts based on the following equation:

$$conflict_{it} = \nu + \alpha conflict_{i,t-1} + \beta split_{i,t>s} + \sum_{j \in \{F,P,R\}} \phi_j (split_{i,t>s} \times j_i^0) + \theta_t + \theta_i + \theta_i \times t + \varepsilon_{it}, \quad (4)$$

²⁵In the 52 original districts, ethnic polarization has a correlation of -0.01 (0.30) with religious polarization (ethnic fractionalization), and ethnic fractionalization has a correlation of 0.44 with religious polarization. The correlations are all below 0.4 for the diversity measures based on the eventual parent and child district boundaries.

which we estimate separately for parent $i = d_o$ or child $i = d_c$ districts and compare coefficients across equations. As noted in Section 3.3, we hypothesize that polarization will be relatively more important than fractionalization, and we expect this differential effect to be even more pronounced in child districts.

The key idea underlying the estimates in equation (4) is that the redistricting led to a sharp change in the salience of ethnic and religious affiliation of those individuals within the newly formed borders, whereas before the split, the ethnoreligious diversity of the entire original district was plausibly more salient. The ϕ coefficients identify whether placing a new government in more polarized/fractionalized areas has differential effects on conflict compared to less polarized/fractionalized areas.

5.3 Identifying Assumptions

This section establishes the identifying assumptions underlying our key estimating equations and provides initial evidence supporting a causal interpretation. First, we show that the timing of redistricting is unrelated to salient determinants of conflict including the initial levels and changes in diversity. In Table 2, we estimate cross-sectional regressions that relate some initial characteristic x to the timing of the initial split in original district d —measured either as the number of months since January 2000 or an indicator for whether the district split after the moratorium.²⁶ We normalize all variables to have mean zero and standard deviation one for comparison purposes relative to the mean timing outcomes. There are no statistically or economically significant effects of initial diversity within the original district borders in 2000. Moreover, the timing appears to be independent of the way in which the new borders are drawn, which is important for recovering causal estimates in specifications (3) and (4). In particular, we find no significant effects of initial diversity within the eventual child and parent borders or of the realized change in diversity at the original district level. We find similarly insignificant effects of initial political discord and natural resource intensity as seen in the bottom two panels.

Overall, the results in Table 2 rule out first order concerns about endogeneity in the timing of district splits. Consistent with Burgess et al. (2012), the evidence suggests that the moratorium and idiosyncrasies in the application and approval process created plausible exogeneity in the time of new district creation across the country.

Second, we provide evidence of parallel pre-trends in conflict. One might worry about spikes or dips in conflict prior to redistricting. This would be problematic if such trends were differential with respect to diversity. Reassuringly, we find little evidence of systematic pre-trends as seen in Appendix Figures B.2–B.5 showing the coefficients on a pre-split dummy in equations (1)–(4) augmented with (interactions of) $split_{d,j < s}$, which is an indicator for all months j before the split in month s for rolling $j \in [3, 18]$.²⁷ The results shown are for *political* conflict but are similar for the other measures of conflict. Overall, the lack of pre-trends are consistent with the favorable environment for redistricting in which the central government ensured very limited losses for parent districts after splitting.²⁸

²⁶This test is similar to that used in Padró i Miguel et al. (2012) to establish the exogeneity of the timing of village elections. Results look similar based the multivariate timing regression approach used by Burgess et al. (2012).

²⁷The slight negative pre-trends at $j > 12$ for ΔR in Figure B.4 are not especially worrying given our main focus on ethnic diversity, the heterogeneous effects of which are not dependent on controlling for religious diversity.

²⁸It is important to keep in mind that the timing of the split is based on the legal announcement date, which likely comes after many months and sometimes multiple years of political action. There are few cases of protest and other pressure on the local or national government in order to get a split approved. The data include an explicit subcategory called “Violence triggered by regional splitting or redistricting,” but these are largely about village redistricting and village-level border disputes, as

Third, in order to interpret the heterogeneous effects of diversity on conflict, we also aim to ensure that the diversity measures are not merely picking up the effects of other, correlated initial characteristics of districts that split. We address these concerns in Section 6.3 through the standard approach of interacting post-split with an array of initial district characteristics besides diversity. We include (proxies for) key confounders like initial public good levels, ethnic residential segregation, income, distance to the capital and security offices, initial vote share polarization, the extent of resource sharing with the central government, and the relative importance of cash crops. The heterogeneous effects results remain broadly unchanged.

Finally, we aim to rule out the concern that newspaper coverage and hence entries in SNP data are changing in systematic ways with redistricting. In all specifications, we flexibly account for differences in the intensity of reporting by controlling for the number of active media sources used by coders for a given province-month (see Appendix A). However, we cannot exclude the possibility that a given paper sends reporters differentially to child districts and by the level of diversity (e.g., because elections are more interesting). This concern may be attenuated by the fact that nearly all media sources are responsible for coverage of regions much larger than that of a single district. Moreover, the fact that we find strong heterogeneous effects in child districts both during and outside election periods (see Section 6.2) suggests that the coverage bias would have to persist beyond the early draw of the new political activity in the child.

6 Results: District Proliferation and Conflict

We first report no decline in the average incidence of conflict after redistricting. However, we find relatively larger reductions in violence after splitting in those original districts that experience the largest reductions in diversity. We then investigate the factors that may be moderating changes in conflict. We identify differential changes in conflict in child and parent districts. In particular, child districts exhibit slightly more violence than parents after splitting, and these differences are largest in child districts with high ethnic polarization and around the time of the first election. Meanwhile, parent districts that have dissimilar voting preferences with child districts pre-split experience relatively less violence after redistricting. Finally, we subject the main results to a battery of robustness checks. Overall, the findings suggest that the reductions in violence associated with increased homogeneity after redistricting may be offset by changes in contestable rents and the composition of the electorate.

6.1 Main Results

We distinguish two first order implications of redistricting: (i) the increase in government capacity and accountability associated with bringing government closer to the governed in terms of physical proximity and preference alignment, and (ii) the change in the existence and size of local rents associated with control of public resources and institutions. If redistricting leads to more ethnically and religiously homogeneous districts, then we may see a reduction in conflict if (i) matters. However, the large increase in contestable public rents may lead to an increase in conflict if (ii) matters, particularly if the redrawing

seen in detailed incident reports. There are 97 incidents in this category, which falls within Governance (1132 incidents in total), as compared to 21,022 total non-crime incidents.

of district boundaries increased group polarization.

Net Effects: Original District. The estimates of equation (1) in Table 3 provide an initial sense of which of these two forces dominates in the average district. Column 1 shows a null effect of splitting on the likelihood of any violent incidents at the original district level. The point estimate is very small relative to the mean of around 86 percent of district-months with any reported incidents. The same holds for non-crime violence in column 2. Column 3 focuses on violence most plausibly associated with conflict over public resources and identity politics (see Section 4). Although imprecise, the estimate is economically significant, implying a 10 percent reduction in the likelihood of these types of violence. Overall, though, the estimates in Table 3 point to small average effects of splitting on overall violence. In the remainder of the paper, we show that these weak average effects mask important changes in the geography of violence and, especially, the composition of the electorate.

In Table 4, we estimate equation (3) to show how the border-induced changes in predetermined diversity mediate the overall change in conflict after redistricting. First, we find that ethnic and religious polarization have positive differential effects on the change in conflict after splitting, particularly when focusing on non-crime violence. Meanwhile, ethnic fractionalization has much weaker differential effects close to zero. The positive differential for polarization is consistent with Esteban and Ray (2011a) who argue that polarization should matter more than fractionalization when the resources being contested are relatively more public than private as is arguably the case with the redistricting process. Importantly, the null results for fractionalization are not driven by measurement error in the definition of ethnic groups. In Appendix Table B.3, we look instead at the Greenberg-Gini index (see Section 3.2 and Appendix A), which incorporates linguistic distances between subgroups, and find similarly small and insignificant heterogeneous effects. Moreover, this differential between polarization and fractionalization holds up to the inclusion of a host of other predetermined district characteristics (plausibly correlated with changes in diversity) times the post-split indicator as discussed in Section 6.3.

Second, we find that districts with large reductions in diversity experience a statistically and economically significant decrease in the likelihood of political conflict after splitting. For example, for an original district at the 10th percentile of the change in ethnoreligious diversity— $\Delta F = -0.24$, $\Delta P = -0.09$, and $\Delta R = -0.16$ —the estimates imply around a 36 percent decline in the likelihood of violence. We find a large reduction of 12 percent even in the median district. This is consistent with the conflict-reducing effects of a more homogenized population dominating the conflict-inducing effects of increased public prizes in such homogenized areas. This can be seen in column 3 at the bottom of Table 4 where we compute the change in conflict for districts at the 10th, 50th, and 90th percentile of Δ diversity.²⁹

Meanwhile, we find moderate increases in conflict for original districts at the 90th percentile where we see an increase in ethnic polarization ($\Delta P = 0.19$). The increase is only statistically significant for the broader set of non-crime violence in column 2. This suggests that in the absence of sufficient homogenization from splitting, there may be limited or no reductions in violence to be gained from redistricting. However, as we show next, these results mask interesting heterogeneity across parent and child districts.

²⁹In practice, no district is simultaneously at the given percentile of all three diversity measures. However, there is no reason why this could not arise in practice. Indeed some districts lie close to these percentiles.

Geography of Violence: Parent vs. Child. Although informative about overall changes in violence, estimating the model at the original district level obscures the very different implications of redistricting for parent and child districts. Exploiting the granularity of our data, we turn now to disentangle these implications. In all subsequent analysis, we retain this disaggregated look across parent and child districts in order to highlight important changes in the geography of violence caused by redistricting.

Table 5 reveals a small differential increase in violence in child districts after splitting relative to parent districts where we see no change in violence on average. These estimates of equation (2) are somewhat imprecise but point in column 1 to an economically significant difference with child districts experiencing roughly a 7 percent increase in the likelihood of violence after the new borders are formally recognized. When focusing only on non-crime related violence in column 2, we find smaller insignificant results, suggesting that some of the average increase in violence in child districts may be due to crime. Yet, column 3 reveals a larger differential when restricting to those types of violence most plausibly associated with identity politics and resource contestation. These results provide initial suggestive evidence of conflict over the *allocation of new rents* associated with the creation of a new government.

Moreover, the estimates in column 3 imply negative effects of splitting on these political types of conflict in parent districts. Although statistically insignificant, the negative estimates both for the original district level in column 3 of Table 4 and for the parent district here are consistent with redistricting leading to a reduction in local grievances. In the parent district, the preexisting government is now responsible for a smaller and more proximate population. This bringing of the government closer to the governed may therefore be offsetting any potential increase in conflict over the *reallocation of old rents* after the split. We further bolster this explanation below by considering the role of predetermined diversity within and political differences between parent and child districts.

Table 6 allows for differential effects of redistricting across child and parent districts with varying degrees of initial diversity. In columns 1-3, we find that child districts with greater diversity experience differentially more conflict after redistricting. Interestingly, which diversity metric matters depends on the type of violence. In column 1, ethnic fractionalization has a large, statistically significant effect on the incidence of any violence whereas ethnic and religious polarization have much weaker effects. The opposite is true in column 2 when excluding all crime-related incidents. Non-criminal conflict plausibly involves fighting over resources that are relatively more public than those involved in most criminal incidents. As such, the larger differential positive effect of ethnic polarization (fractionalization) in columns 2-3 (column 1) can be interpreted as further evidence in support of Esteban and Ray (2011a).³⁰ While private prizes have changed relatively less after splitting, the fractionalization result in column 1 may be consistent with the institutional capacity to fight crime being relatively limited in the child in the early period after splitting.

These results provide evidence of both positive and negative effects of splitting on conflict in the newly created child districts. For child districts at the 90th percentile of ethnoreligious diversity, we see systematic increases in conflict on the order of 25 percent for all violent incidents in column 1 and the most politicized categories of violent non-crime related conflict in column 3. Meanwhile we see a

³⁰As with the earlier original district-level results, these different effects of ethnic polarization and fractionalization hold when accounting for linguistic distances in the fractionalization index, suggesting the intergroup differences do not explain all of the difference. These findings also hold when looking at the diversity indices separately, which is important given the high correlation (≈ 0.9) between ethnic polarization and the Greenberg-Gini index.

reduction in all incidents for those districts at the 10th percentile. Interestingly, though, we do not see that reduction for the political categories of conflict, suggesting that conflict over public resources and identity are pervasive in newly created districts. In general, these results point to the importance of drawing new district borders in a way that does not result in extreme polarization or fractionalization.

While we find large heterogeneous effects for child districts, the amplification effects of diversity are weaker for parent districts. Ethnic fractionalization has a small and statistically insignificant positive differential effect on all three measures of conflict after splitting whereas ethnic polarization has a negative and insignificant heterogeneous effect. However, religious polarization seems to amplify non-crime and especially political types of conflict after splitting. Using subcategories of political conflict, we can show that this result is driven by resource violence, which may point to a few districts on the island of Maluku with religious polarization between Muslims and Christians from the same ethnic groups.

Overall, the differences between parent and child districts are consistent with the change in the value of contestable public resources being larger in the latter. The other noteworthy difference is that parent districts with very low diversity (at the 10th percentile) experience a decline in all types of violence after redistricting with the largest and most significant decline happening for political conflict. Again, this is consistent with ethnoreligiously homogenous parent districts finding it easier to govern and placate various interest groups thereby reducing incentives to conflict. It is also consistent with violence moving from parent to child post-split, to the extent that these non-local violent expressions occur.

Discussion. Null average effects of redistricting on violence mask compelling heterogeneity. Firstly, at the original district level, large reductions in diversity as a result of redistricting lead to a sizable reduction in the incidence of violence most plausibly related to contests over the determination of public goods. Homogenization appears to dampen the incentives for conflict over how to distribute the new public prizes. Turning to the more disaggregated units, there is clear evidence consistent with newly generated public sector rents inducing conflict, particularly in polarized areas. Although child districts with low diversity see reductions in violent crime, even those with low diversity do not see a reduction in political conflict. In parent districts, where changes in contestable prizes are less extreme, we again see reductions in violence of all types—and especially within the political category—at low diversity levels.

It is important to note that when examining the more disaggregated units, we cannot rule out movements in violence from the parent to the child. That is, we cannot distinguish between a genuine reduction in violence in the parent offset by new violence in the child versus a movement of the same violent actors from parent to child committing similar acts.³¹ No matter which is occurring, we are more likely to observe an increase in violence, be it reallocated or entirely new, in ethnically polarized child districts. Moreover, the original district results point to genuine decreases in violence post-split in areas with more homogeneity within the new borders, which suggests that the redistricting process can generate economically meaningful reductions in violence as opposed to just reallocating it.

The results presented in Tables 3–6 paint a suggestive picture of the potential channels through which

³¹The SNP data suggest little cross parent/child border violence before or after redistricting (there are only 105 incidents out of 53,144 that have two subdistricts recorded as their location). The splitting process requires approval in the parent district which likely helps to ensure that accepted splits will not be further contested between parent and child districts. This further motivates the sample splitting approach in equation (4). Of course, it may nevertheless be the case that violence moves from the parent beforehand to the child afterwards, following the construction of the new capital.

redistricting can affect conflict in diverse settings. In general, these results hold up to a battery of robustness checks discussed in Section 6.3. We turn now to investigate a few key mechanisms aimed at further clarifying the two countervailing effects of redistricting on conflict.

6.2 Mechanisms Linking Redistricting and Conflict

Several mechanisms can help explain why we see relatively small average effects of redistricting on conflict but large heterogeneous effects both within and between parent and child districts. We focus here on three key results. First, we identify differential increases in violence in newly created districts around the time of the first election after redistricting. Second, we provide two pieces of evidence on how changes in the composition of the electorate affect violence: (i) The violent surges around election time only occur for child districts and are amplified in ethnically polarized areas. (ii) Predetermined differences in voting preferences between parent and child districts are associated with greater violence in the parent district before redistricting and less violence after, which is consistent with the conflict-reducing effects of preference homogenization. Finally, we examine further breakdowns in the conflict typology in order to clarify which types of non-crime violence are driving the key results above.

Election Period Violence. If the increase in violence after redistricting is due to contestation of public prizes, then we should observe a differential increase in violence around the time of the first direct election for the head of the newly created district governments. The district head plays a crucial role in allocating many of the public resources detailed in Section 3. Additionally, these effects should be more pronounced in child districts in which new government institutions, jobs, and resources are concentrated. We provide direct evidence of these patterns in Table 7 by augmenting our baseline specification in equation (2) with indicators for the district-specific election periods before and after redistricting. In all cases, we define the election period as a six month window centered on the month of the election.

In Table 7, we find systematic differences in the likelihood of violence around election time after redistricting. In column 2 for child districts, violence is 13 percent more likely during the election period than during other months after redistricting. Recall that these direct elections only took place for the first time beginning in 2005, and typically occur within 1.5–2.5 years of splitting. These results suggest that mobilization around election times is a particularly important feature of the conflict landscape after redistricting. Indeed, in column 3, we find a significantly larger differential effect when focusing on political types of violence. The absence of a differential effect in column 1, which includes crime-based violence, is reassuring inasmuch as it suggests that there is not simply a general increase in reporting of violence around election periods due to more intense media coverage (or lack of security).

Meanwhile, before redistricting, we find no differential upsurge in violence in child district areas around election times when residents were voting for the head of the original district based in the capital (of the parent district).³² This difference pre- and post-split is consistent with the large change in contestable rents experienced by residents of child districts. It may also be explained in part by the possibility that conflict-prone groups from the child district who used to travel to the original district capital to engage in violence around election times naturally reallocate efforts towards the newly created district capital after redistricting.

³²Note that this result is only identified off of districts that split after the moratorium ended in 2006.

At the same time, we find no differential violence around election times when looking at parent districts newly separated from the neighboring child(ren).³³ Despite the scope for formation of new electoral coalitions and reallocation of rents, there does not appear to be any more violence around election times in the new parent districts. This apparent difference with child districts can be explained in part by the fact that the scale of the change in contestable rents is relatively smaller in the newly created parent districts. Moreover, as we show below, these parent districts may have had different underlying political preferences than the child districts, and hence after splitting, the political process may have been less polarized and generally more amicable, a claim we support next.

Composition of the Electorate. Given the strong patterns of violence around elections in child districts, we now consider how diversity in the child districts shapes this violence. If contestation over control of the new public prizes is driving this violence, then we should observe relatively more violence around elections in those districts where the newly relevant electorate is more polarized. Table 8 provides evidence in support of these predictions by interacting the post-split \times first election period indicator with the initial diversity of the child district.

Child districts with greater initial ethnic polarization are more likely to experience violent conflict around election times. This effect is borne out for nearly all types of violence and is particularly significant for political categories of violence in column 3. However, this amplification effect extends outside the election period as well. In particular, ethnic polarization retains a positive coefficient on both the interaction with the post-split indicator as well as the triple interaction with post-split and first election period. The latter coefficient is twice as large, suggesting that the conflict-inducing effects of polarization may be relatively stronger around election periods. In contrast, ethnic fractionalization retains its significant relationship with overall violence after redistricting as seen in column 1, but we see no associated amplification around election times, which is again consistent with the relative importance of public versus private goods around elections.

We return now to the parent districts in order to further understand how changes in the electorate affect violence after redistricting. Although we find no differential violence around election times in parents, Table 7 shows that these null results documented earlier mask an important source of heterogeneity associated with the differences in voting preferences between parent and child districts. If part of the impetus for splitting lies in the homogenization of political preferences to ease social conflict, then we expect violence to be differentially lower around election time after redistricting in parent districts with relatively more dissimilar voting preferences compared to their neighboring child areas. Moreover, we expect the opposite around election time before redistricting given that parent districts hosted the political seat of the original district where some of the pre-split violence around elections took place.

We test these predictions in Table 9 using an index that captures the similarity in vote shares in the country's first parliamentary elections of the post-Suharto era in 1999. In particular, we define the dissimilarity in voting preferences between parents and children as $\Delta_{vote} = \sum_{c \in C} \pi_c \sum_{i=1}^I |share_{ip} - share_{ic}|$ where $share_{ip}$ is the share of votes for party i in subdistricts within the parent borders, $share_{ic}$ is the same share for party i within the child borders, and $I = 5$ includes the five parties with the most votes in the overall original district (see Appendix A for details on the voting data). We sum over

³³The elections in child and parent districts belonging to the same original district occur at different times after redistricting.

multiple children in cases where $C > 1$, and the weight π_c captures the share of the total child population in 2000 that each child makes up. From an identification perspective, it is important to note that original districts with high Δ_{vote} split no earlier than those with low Δ_{vote} (see Table 2).

Overall, parent districts with divergent voting preferences compared to neighboring child districts experience relatively more violence before splitting and less violence after splitting, with both differential effects concentrated around election times. We see this in column 1 for all violence with the interaction of Δ_{vote} and election period having roughly equal and opposite sign pre- and post-split. Reassuringly, these effects seem to be driven by the political subcategories of violence in column 3. Here, we also find that vote share dissimilarity is associated with lower violence even in non-election periods after redistricting. All of these results point to the potential reductions in violence afforded to parent districts after separating from children with different political preferences. This may explain some of the typical parent district's support for redistricting.

Conflict Typologies. Having identified systematic differential violence in child districts around election periods, we now use the disaggregated categories of violence to provide deeper insight into the types of conflict being amplified by diversity in the wake of redistricting.

In Table 10, column 1 shows that some of the heterogeneous effects of ethnic polarization on violence in Table 6 can be traced to conflict over resources. This category includes violence associated with disputes over a range of public and private resources. In columns 2 and 3, we find a statistically and economic significant increase in conflict over governance and electoral processes in child districts with high levels of diversity. A plurality of the incidents in these categories is associated with district-level elections and appointments. The likelihood of such conflict nearly doubles after redistricting in child districts at the 90th percentile of ethnoreligious diversity with a corresponding decline in electoral albeit not governance-based violence at the 10th percentile. Religious rather than ethnic polarization differentially increases governance-based conflict whereas ethnic fractionalization amplifies conflict over electoral activities. The former is consistent with the public prize interpretation of conflict over public office and policymaking, but the latter is not. However, given the discussion in Section 4, it is not necessarily the case that the electoral violence category captures all conflict related to contests over government institutions if, for example, law enforcement- or identity-based violence are also associated with those institutions (but not classified as such due to the single category assignment rule).

Turning to identity-based violence in column 4, we find that ethnic polarization exerts a positive differential effect whereas ethnic fractionalization exerts a negative differential effect. Both of these results are statistically significant and consistent with the theoretical difference between the two measures. Holding group sizes constant, in districts with many groups and hence high fractionalization, the salience of within group identity is relatively weaker than in districts with fewer groups of equal size where polarization is higher. These offsetting effects of ethnic polarization and fractionalization on identity-based violence in the average district imply null overall effects across districts at different levels of ethnoreligious diversity.

Additionally, ethnic polarization has similarly large differential effects on violence associated with popular justice and law enforcement, perhaps suggesting that state capacity in the newly created districts is declining in the degree of ethnic polarization. Looking at the remaining other types of violence, we find

no systematic relationship across all three diversity measures, which is reassuring given that columns 1-6 capture the most salient types of conflict associated with contestation of rents and state capacity.

Overall, the results in Table 10 highlight a few important ways in which ethnoreligious diversity shapes the effects of redistricting on conflict. However, as noted in Section 4, we recognize that the coding of these categories is often at best arbitrary and at worst systematically biased towards the particular mechanisms we have in mind. Given the lack of alternative conflict data for validation, we turn to a set of robustness checks with these findings and particular caveat in mind.

6.3 Robustness

Before concluding, we provide evidence on the robustness of key results in Tables 4 and 6. Most importantly, in Appendix Tables B.4–B.5 we interact the post-split indicator with a host of other initial district characteristics that may be correlated with ethnoreligious diversity or the (eventual) location of the child district. These include political polarization, the extent of resource sharing with and size of transfers from the central government, the relative importance of cash crops in overall agricultural revenue, the share of the labor force in agriculture and forestry, ethnic residential segregation (Alesina and Zhuravskaya, 2011), nighttime light intensity as a proxy for income (Henderson et al., 2012), the number of post-primary educational institutions per capita, the number of health clinics and hospitals per capita, and the average village-level distance to the district capital and security offices. The latter controls capture the extent of initial local state capacity. We prefer to retain these specifications as a robustness check since they reduce the sample size due to missing data for some districts.

Overall, the results are robust to this demanding specification. At the original district level in Table B.4, the key point estimates on the diversity measures \times post-split remain largely unchanged. At the disaggregated child and parent level in Table B.5, ethnic fractionalization matters relatively less for crime-based violence in child districts and relatively more in parent districts compared to the baseline. The effects of religious polarization after redistricting are also slightly muted in child districts. However, the main heterogeneous effect of ethnic polarization remains unchanged. This reinforces the central finding that in newly created districts that are highly polarized, the contestation of public rents and associated amplification of identity politics tend to outweigh the benefits of bringing local government closer to the constituents it serves.

The baseline results are also robust to generalizing the dependent variable to the count of the number of incidents occurring in the given district-month. In Table B.6 (B.7), we reestimate the specifications in Table 4 (6) using conditional fixed effects Poisson to account for the count nature of the dependent variable. The coefficients in these tables can be interpreted as average marginal effects (AMEs) by simply multiplying by the mean of the dependent variable reported at the bottom of the table. Although some are imprecisely estimated, the sign and magnitude of the AMEs are broadly in line with the estimated effects reported in our baseline tables. We retain the extensive margin as the baseline given that the lion share of the variation in conflict incidents at the monthly level lies in moving from none to any rather than along the intensive margin of number of incidents.

We also implement additional tests (not reported) aimed at further corroborating the validity of the identification strategy and measurement of key variables. First, we omit Aceh from the sample, allowing for the possibility that conflict dynamics differ there given the longstanding separatist violence, which

ended with the post-tsunami peace accord in 2005. Second, we drop original districts that experienced two splits over the sample period, which complicate the definition of the timing of redistricting. Finally, we consider an alternative measure of polarization by setting the linguistic distance parameter $\delta = 0.3$, which serves to amplify smaller differences relatively more than our baseline $\delta = 0.05$ as in [Esteban et al. \(2012\)](#). In all cases, we find no systematic changes in the significance of the main results.

7 Conclusion

This paper provides evidence on the conditions under which border-induced changes in diversity can reduce conflict. In an ethnically diverse country like Indonesia, redistricting may result in higher polarization within new borders. Combined with an increase in contestable public goods and potentially low state capacity, this is sufficient to offset, and in some cases reverse, any gains from bringing government institutions closer to the governed. In such cases, it is important to ensure proper expectations, free and fair elections, and sufficient state capacity to ensure the transition proceeds smoothly.

We see two important directions for future research on the link between local government proliferation and conflict. First, a small but growing literature highlights the importance of *within*-ethnolinguistic or -religious group heterogeneity in culture ([Desmet et al., 2015](#)), genes ([Arbatli et al., 2015](#)), or income ([Esteban and Ray, 2008](#); [Mitra and Ray, 2014](#)) in shaping conflict. This is an interesting question in the context of decentralization and one that we can explore using heterogeneity in responses to household survey questions on preferences, variation in vote shares for different parties of the same religion, and within-group educational differences reported in the Population Census.

A second question is whether redistricting can be a vehicle for a central government to constrain national secessionist tendencies. Coming on the heels of East Timor's independence and worried about breakaway regions in Aceh and Papua, Indonesian policymakers in the late 1990s strategically chose the district to be the primary administrative units allowed to proliferate. According to observers like [Booth \(2011\)](#), their goal was to placate grievances with the center and fracture the strength of broader regional identities. In future research, it would be interesting to explore whether this policy of "breaking up to stay together" stifled secessionist sentiments and ultimately reduced violence.

We conclude with two caveats regarding policy implications. Redistricting until reaching a homogeneous entity is certainly not an appropriate solution, particularly given that we have not accounted for economies of scale or other consequences of smaller administrative units. Moreover, this study does not address potential long term implications of reduced interactions with other groups; it may well be that the optimal long-term decision to create a new government involves having multiple groups. We simply caution that care must be taken when such a valuable public prize is placed in polarized areas. This is particularly important in the short- to medium-run period as new government institutions are formed.

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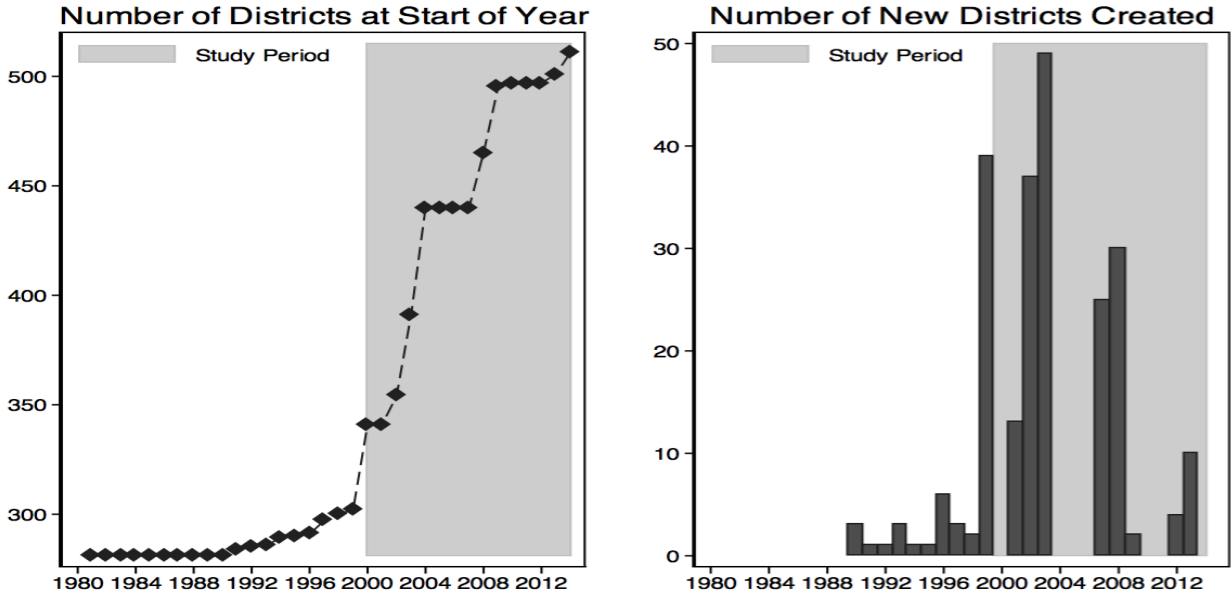
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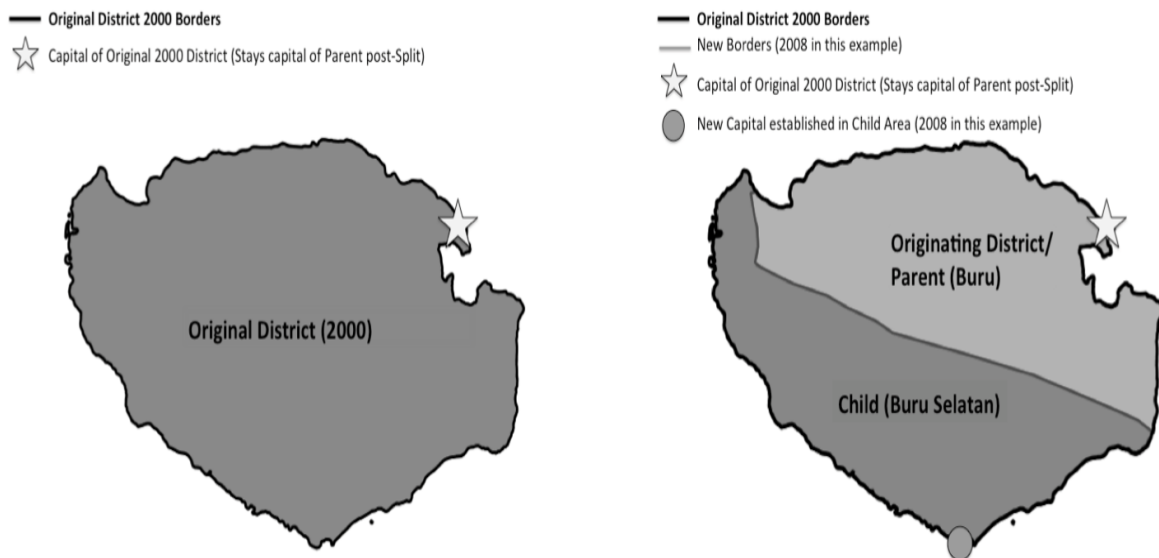
Figures

Figure 1: Indonesia’s Remarkable Wave(s) of Redistricting



Notes: These figures capture the evolution of new districts across Indonesia from 1980–2014 based on the month each district was passed into law.

Figure 2: Example of Redistricting into Parent and Child Districts



Notes: This figure provides an example from Buru district of the redistricting process as well as our nomenclature for the different administrative divisions.

Figure 3: Timeline of Events

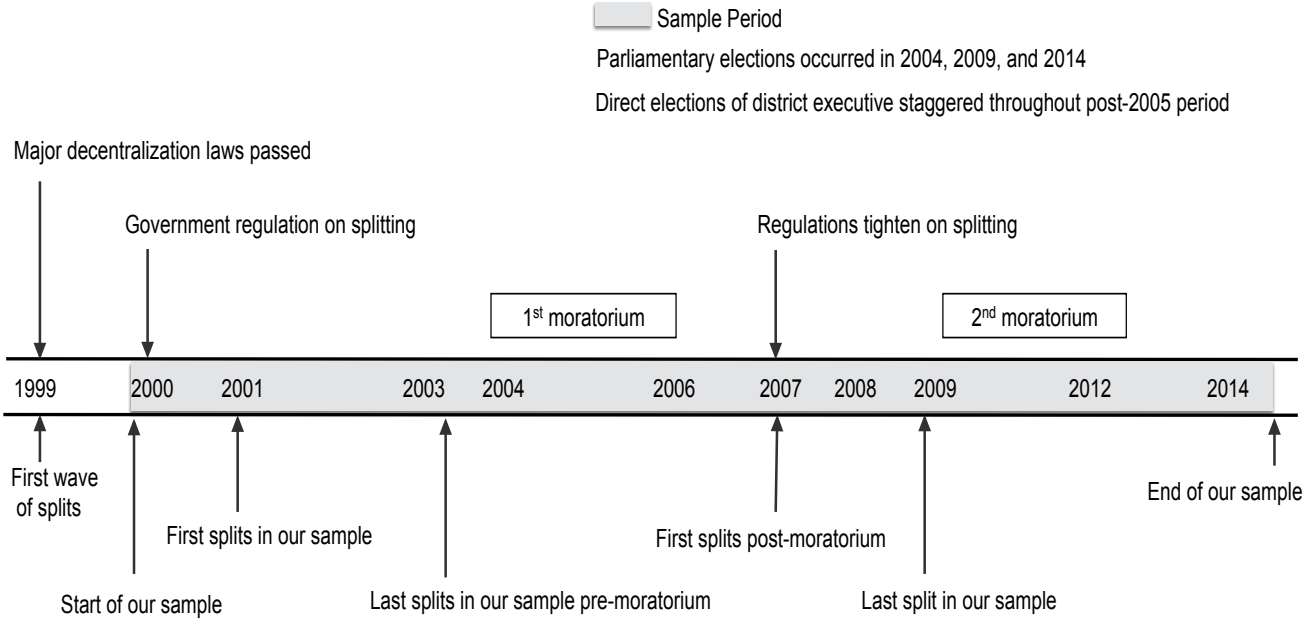
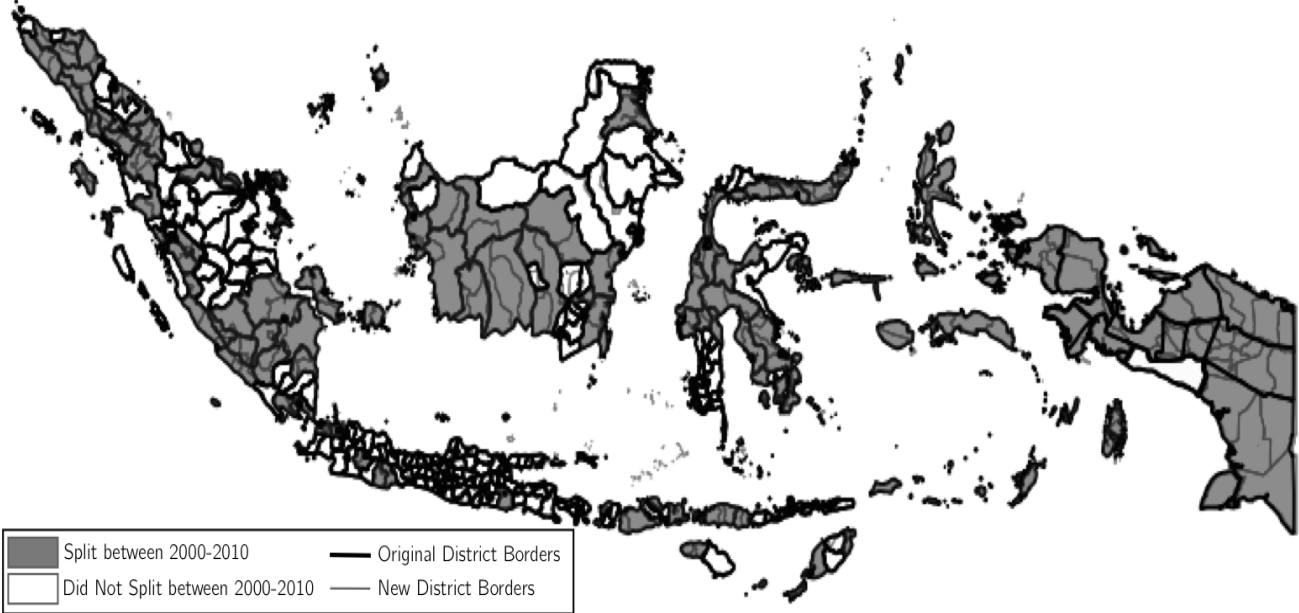
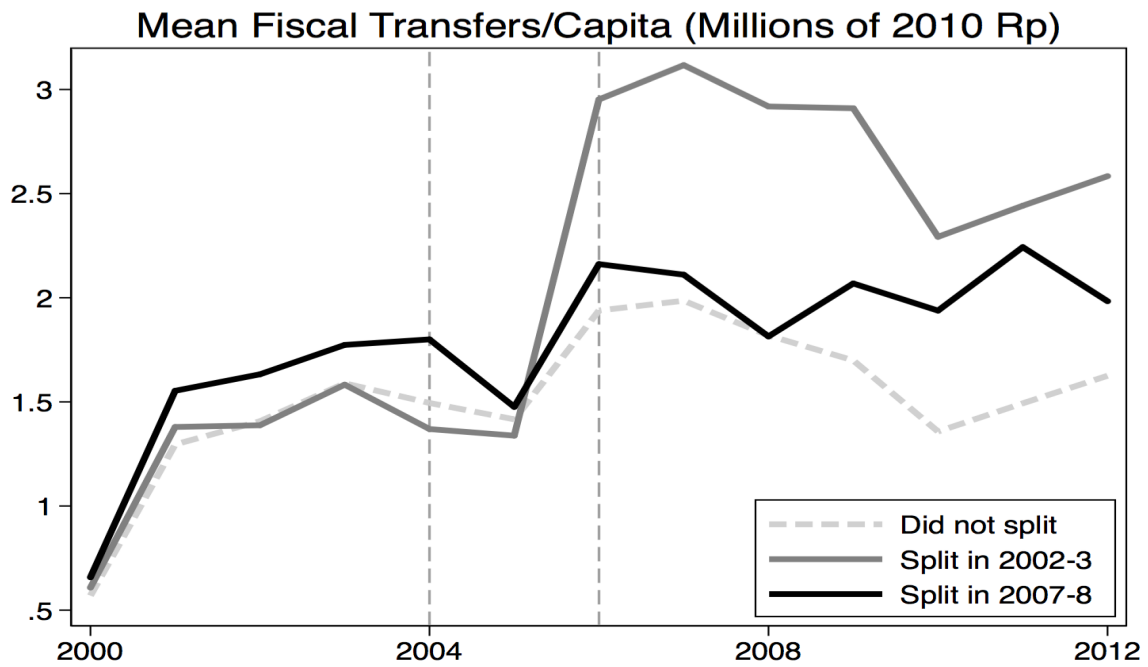


Figure 4: Redistricting across the Country



Notes: This map plots the original and new district borders based on district-level shapefiles for 2000 and 2010.

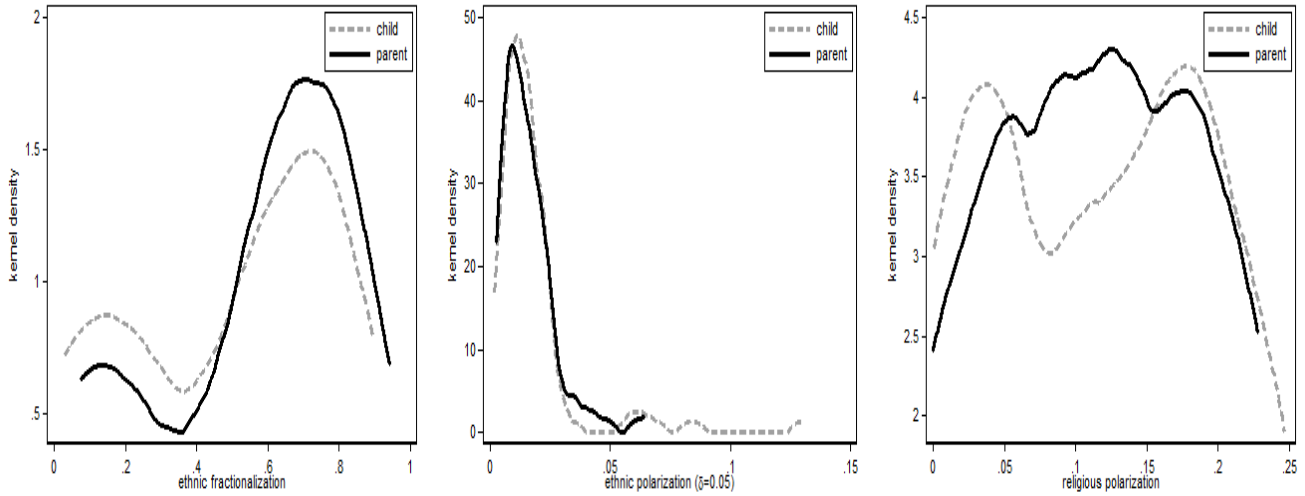
Figure 5: Redistricting Increases Transfers



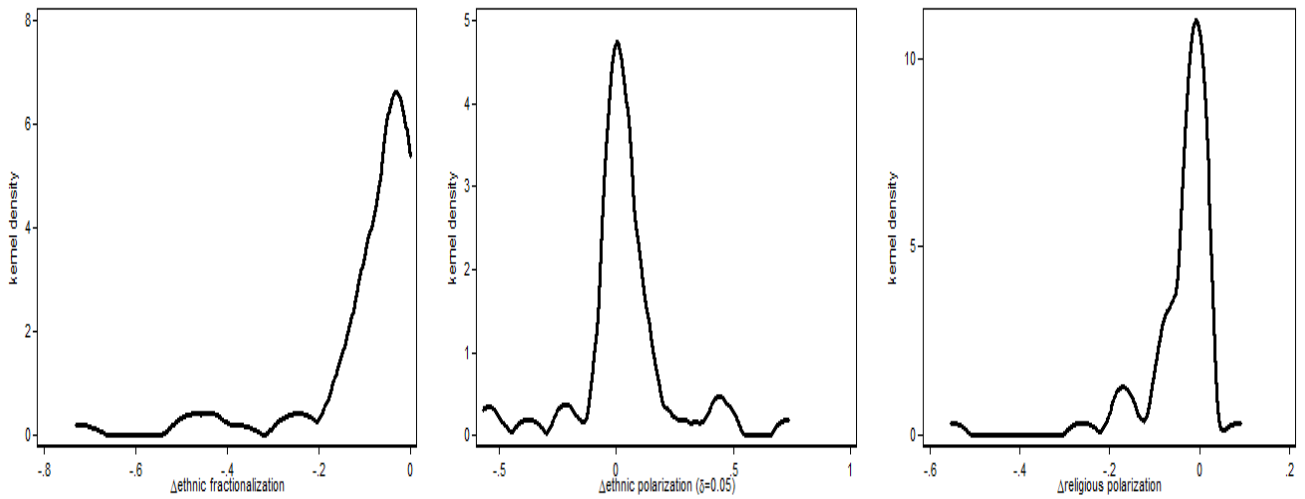
Notes: This figure plots the evolution of average central government transfers to three different groups of districts: (i) those that did not split between 2000 and 2010, (ii) those that split in 2002–3 right before the moratorium (in dashed lines), and (iii) those that split right after the moratorium in 2007–8. The data are from the DAPOER database from the World Bank.

Figure 6: Distribution of (Changes in) Ethnoreligious Diversity

Panel A: Initial Diversity in Parent and Child Districts



Panel B: Δ Diversity at the Original District Level



Notes: The figures in Panel A plot the distribution of initial levels of ethnoreligious diversity in parent and child districts realized by 2010 (i.e., based on the 2000 populations). The figures in Panel B plot the distribution of our measures of the percentage change in ethnoreligious diversity at the original district level, Δ diversity measures in the paper.

Tables

Table 1: Summary Statistics

2000 Borders: Original Districts						
	Conflict Incidents			Post-Split	Entered Data in 2005	
	Any	Any Non-Crime	Any Political			
Mean	0.861	0.631	0.413	0.787	0.347	
Standard Dev.	0.346	0.483	0.492	0.409	0.476	
	Ethnic Polarization	Ethnic Fractionalization	Religious Polarization	Δ Ethnic Polarization	Δ Ethnic Fractionalization	Δ Religious Polarization
Mean	0.017	0.612	0.119	0.032	-0.091	-0.045
Standard Dev.	0.016	0.256	0.070	0.206	0.141	0.094
Min	0.003	0.062	0.001	-0.565	-0.732	-0.552
Median	0.013	0.689	0.130	0.007	-0.047	-0.008
Max	0.095	0.957	0.233	0.736	-0.000	0.090
2010 Borders: Parent and Child Districts						
	Conflict Incidents			Post-Split	Child Indicator	Entered Data in 2005
	Any	Any Non-Crime	Any Political			
Mean	0.616	0.364	0.204	0.607	0.768	0.356
Standard Dev.	0.486	0.481	0.403	0.489	0.422	0.479
	Ethnic Polarization	Ethnic Fractionalization	Religious Polarization			
Mean	0.017	0.531	0.114			
Standard Dev	0.016	0.276	0.076			
Min	0.002	0.030	0.000			
Median	0.013	0.629	0.124			
Max	0.131	0.943	0.247			

Notes: At the 2000 level there are 52 Districts and 15 Years, for 7,956 monthly observations. At the 2010 level there are 133 Districts and 15 years, for 20,220 monthly observations. *any* includes all crime and non-crime violence; *non – crime* restricts to non-crime violent conflict; and *Political* restricts to those categories of violence most plausibly associated with the implications of redistricting including identity, elections/appointments, governance, resource violence, and other. See Appendix A for variable definitions.

Table 2: Plausibly Exogenous Timing of Redistricting (52 Original Districts)

	Dependent Variable	
	no. months until split mean: 53	1(post-moratorium split) mean: 0.31
<u>Ethnolinguistic & Religious Diversity</u>		
original district ethnic fractionalization	2.415 (4.578)	0.011 (0.071)
original district Δ ethnic fractionalization	4.020 (2.969)	0.051 (0.049)
child district ethnic fractionalization	2.683 (4.283)	0.009 (0.069)
parent district ethnic fractionalization	4.884 (4.273)	0.051 (0.066)
original district ethnic polarization	-1.226 (3.029)	-0.006 (0.048)
original district Δ ethnic polarization	3.857 (3.905)	0.000 (0.064)
child district ethnic polarization	-1.130 (3.418)	-0.002 (0.045)
parent district ethnic polarization	2.447 (4.180)	0.045 (0.071)
original district religious polarization	1.044 (3.683)	-0.024 (0.060)
original district Δ religious polarization	-1.244 (2.677)	0.024 (0.040)
child district religious polarization	-1.965 (4.014)	-0.063 (0.060)
parent district religious polarization	2.516 (4.043)	0.013 (0.063)
<u>Political Preferences</u>		
vote dissimilarity between parent and child	-5.414 (3.248)	-0.073 (0.049)
original district vote polarization	-1.923 (4.335)	-0.006 (0.072)
<u>Natural Resources</u>		
original district share of workers in agriculture	3.729 (4.403)	0.045 (0.070)
original district share of workers in forestry	-3.171 (3.704)	-0.079 (0.054)
original district cash crop share by value	2.810 (4.122)	0.033 (0.063)
original district resource revenues	1.183 (6.270)	0.009 (0.089)

Notes: Each cell is a different bivariate OLS regression of the timing of the first split on initial district characteristics. The dependent variable in column (1) is the month that each original district split minus the months since January 2000 and in column (2) is an indicator for whether the split happened after the moratorium in from 2004–6. In the bottom two panels for political preferences and natural resources, we are restricted to 49 original districts for which we have additional controls as used in the robustness checks discussion in Section 6.3. All regressions also control for the year of entry into our sample (2000 or 2005). Coefficients are based on standardized variables. Robust standard errors are in parentheses. Significance levels: * : 10% ** : 5% *** : 1%.

Table 3: Average Effects of Redistricting on Conflict
Original District Level

	Dep. Var.: any ... incidents		
	all (1)	non-crime (2)	political (3)
lagged conflict	0.082 (0.022)***	0.052 (0.014)***	0.038 (0.012)***
post-split	-0.000 (0.019)	-0.010 (0.024)	-0.044 (0.027)
Observations	7904	7904	7904
District Borders in	2000	2000	2000
No. of Districts	52	52	52
Mean Dep. Var.	0.862	0.631	0.413
Time FE	Yes	Yes	Yes
District FE	Yes	Yes	Yes
District Time Trends	Yes	Yes	Yes

Notes: The dependent variable in all columns is an indicator equal to one if there was any violent incidents of the given categorization in that district-month. *all* includes all crime and non-crime violence; *non - crime* restricts to non-crime violent conflict; and *Political* restricts to those categories of violence most plausibly associated with the implications of redistricting including identity, elections/appointments, governance, resource violence, and other. Lagged conflict is simply the one month lag of that indicator. *post - split* is an indicator equal to one for all months after which the original or parent district experiences its first redistricting and the child district is officially passed into law. All specifications include month FE, district FE, and district-specific monthly time trends. Standard errors are clustered by original district, of which there are 52. Significance levels: * : 10% ** : 5% *** : 1%.

Table 4: Ethnoreligious Diversity and the Effects of Redistricting on Conflict

Original District Level

	Dep. Var.: any ... incidents		
	all (1)	non-crime (2)	Political (3)
lagged conflict	0.081 (0.022)***	0.051 (0.014)***	0.037 (0.012)***
post-split	-0.025 (0.028)	-0.025 (0.028)	-0.054 (0.029)*
post-split \times Δ ethnic fractionalization	-0.255 (0.231)	-0.199 (0.160)	-0.138 (0.140)
post-split \times Δ ethnic polarization	0.259 (0.152)*	0.341 (0.102)***	0.287 (0.117)**
post-split \times Δ religious polarization	0.314 (0.236)	0.520 (0.209)**	0.437 (0.217)**
Observations	7904	7904	7904
District Borders in	2000	2000	2000
No. of Districts	52	52	52
Mean Dep. Var.	0.862	0.631	0.413
Δ conflict, diversity 10th pctile	-0.066 [0.256]	-0.130 [0.012]	-0.150 [0.008]
Δ conflict, diversity 50th pctile	-0.013 [0.538]	-0.017 [0.493]	-0.049 [0.071]
Δ conflict, diversity 90th pctile	0.049 [0.221]	0.073 [0.022]	0.028 [0.499]
Time FE	Yes	Yes	Yes
District FE	Yes	Yes	Yes
District Time Trends	Yes	Yes	Yes

Notes: The dependent variable in all columns is an indicator equal to one if there was any violent incidents of the given categorization in that original district-month (see the notes to Table 3). *post – split* is an indicator equal to one for all months after which the original district experiences its first post-2000 redistricting. Δ of the given diversity measure captures the percentage change in diversity between the original district in 2000 and the population-weighted average of initial diversity within the emergent parent and child districts in 2010. All specifications include month FE, district FE, and district-specific monthly time trends. Standard errors are clustered by original district, of which there are 52. Significance levels: * : 10% ** : 5% *** : 1%.

Table 5: Average Effects of Redistricting on Conflict
Child and Parent District Level

	Dep. Var.: any ... incidents		
	all (1)	non-crime (2)	political (3)
lagged conflict	0.075 (0.011)***	0.062 (0.013)***	0.048 (0.010)***
post-split	-0.004 (0.022)	-0.003 (0.025)	-0.024 (0.022)
post-split × child	0.042 (0.024)*	0.007 (0.026)	0.035 (0.022)
Observations	20087	20087	20087
District Borders in	2010	2010	2010
No. of Districts	133	133	133
Mean Dep. Var.	0.616	0.364	0.204
Time FE	Yes	Yes	Yes
District FE	Yes	Yes	Yes
District Time Trends	Yes	Yes	Yes

Notes: The dependent variable in all columns is an indicator equal to one if there was any violent incidents of the given categorization in that original district-month (see the notes to Table 3). *post – split* is an indicator equal to one for all months after which the original or parent district experiences its first redistricting and the child district is officially passed into law. The child indicator equals one for child districts. There are 52 parent and 81 child districts. All specifications include month FE, district FE, and initial district-specific monthly time trends. Standard errors are clustered by original district, of which there are 52. Significance levels: * : 10% ** : 5% *** : 1%.

Table 6: Ethnoreligious Diversity and the Effects of Redistricting on Conflict

Child versus Parent Districts

	Dep. Var.: any ... incidents					
	all (1)	non-crime (2)	political (3)	all (4)	non-crime (5)	political (6)
	Child Districts			Parent Districts		
lagged conflict	0.074 (0.013)***	0.071 (0.015)***	0.061 (0.012)***	0.071 (0.018)***	0.048 (0.014)***	0.030 (0.014)**
post-split	-0.115 (0.046)**	-0.053 (0.040)	-0.034 (0.029)	-0.080 (0.058)	-0.071 (0.055)	-0.114 (0.037)***
post-split × ethnic fractionalization	0.232 (0.075)***	-0.015 (0.059)	-0.007 (0.044)	0.146 (0.106)	0.071 (0.073)	0.049 (0.070)
post-split × ethnic polarization	-0.054 (0.861)	1.695 (1.006)*	1.230 (0.378)***	-2.249 (2.119)	-1.465 (1.807)	-1.180 (1.707)
post-split × religious polarization	0.290 (0.298)	0.259 (0.183)	0.197 (0.161)	0.151 (0.331)	0.435 (0.277)	0.625 (0.209)***
Observations	12183	12183	12183	7904	7904	7904
District Borders in	2010	2010	2010	2010	2010	2010
No. of Districts	81	81	81	52	52	52
Mean Dep. Var.	0.536	0.286	0.152	0.739	0.484	0.284
Δ conflict, diversity 10th pctile	-0.095 [0.030]	-0.044 [0.222]	-0.027 [0.317]	-0.072 [0.130]	-0.068 [0.159]	-0.111 [0.001]
Δ conflict, diversity 50th pctile	0.067 [0.004]	-0.007 [0.779]	0.004 [0.831]	0.009 [0.729]	0.010 [0.747]	-0.021 [0.461]
Δ conflict, diversity 90th pctile	0.143 [0.001]	0.036 [0.317]	0.037 [0.083]	0.011 [0.783]	0.041 [0.309]	0.031 [0.406]
Time FE	Yes	Yes	Yes	Yes	Yes	Yes
District FE	Yes	Yes	Yes	Yes	Yes	Yes
District Time Trends	Yes	Yes	Yes	Yes	Yes	Yes

Notes: The dependent variable in all columns is an indicator equal to one if there was any violent incidents of the given categorization in that original district-month (see the notes to Table 3). *post – split* is an indicator equal to one for all months after which the child district is passed into law or the parent district experiences its first redistricting (i.e., is split out from an original district and loses the child district). The ethnoreligious diversity measures are based on the population residing within the eventual parent and child district boundaries in 2000. There are 52 parent and 81 child districts. All specifications include month FE, district FE, and initial district-specific monthly time trends. Standard errors are clustered by original district, of which there are 52. Significance levels: * : 10% ** : 5% *** : 1%.

Table 7: Differential Effects During Election Time**Child versus Parent Districts**

	Dep. Var.: any ... incidents					
	all (1)	non-crime (2)	political (3)	all (4)	non-crime (5)	political (6)
	Child Districts			Parent Districts		
lagged conflict	0.077 (0.013)***	0.071 (0.015)***	0.061 (0.012)***	0.072 (0.018)***	0.048 (0.014)***	0.033 (0.014)**
post-split	0.040 (0.024)	-0.005 (0.024)	0.001 (0.017)	-0.008 (0.021)	0.001 (0.027)	-0.027 (0.026)
pre-split election period (original district)	-0.015 (0.021)	-0.008 (0.021)	-0.004 (0.019)	0.003 (0.034)	-0.059 (0.039)	-0.010 (0.039)
1st election period post-split	-0.014 (0.023)	0.038 (0.020)*	0.060 (0.021)***	0.026 (0.044)	-0.011 (0.049)	0.027 (0.048)
Observations	12064	12064	12064	7785	7785	7785
District Borders in	2010	2010	2010	2010	2010	2010
No. of Districts	80	80	80	51	51	51
Mean Dep. Var.	0.540	0.289	0.153	0.735	0.476	0.278
Time FE	Yes	Yes	Yes	Yes	Yes	Yes
District FE	Yes	Yes	Yes	Yes	Yes	Yes
District Time Trends	Yes	Yes	Yes	Yes	Yes	Yes

Notes: The dependent variable in all columns is an indicator equal to one if there was any violent incidents of the given categorization in that parent or child district-month (see the notes to Table 3. *post-split* is an indicator equal to one for all months after which the child district is passed into law or the parent district experiences its first redistricting (i.e., is split out from an original district and loses the child district). The pre-split election period equals a 6 month window around the the district-specific date of the election for the district head at the level of the original district. This is only possible for districts that split after 2006 because before 2005, these elections were not held as the district head was appointed by the central government. The pre-split election time is the same for both parent and child districts. The first post-split election period is defined similarly and varies across (parent and child) districts. There are 52 parent and 81 child districts. All specifications include month FE, district FE, and initial district-specific monthly time trends. Standard errors are clustered by original district, of which there are 52. Significance levels: * : 10% ** : 5% *** : 1%.

Table 8: Ethnoreligious Diversity, Elections and Conflict

Child Districts

	Dep. Var.: any . . . incidents		
	all (1)	non-crime (2)	political (3)
lagged conflict	0.074 (0.013) ^{***}	0.070 (0.015) ^{***}	0.059 (0.012) ^{***}
post-split	-0.104 (0.045) ^{**}	-0.046 (0.040)	-0.032 (0.029)
post-split × ethnic fractionalization	0.223 (0.073) ^{***}	-0.032 (0.060)	-0.020 (0.043)
post-split × ethnic polarization	-0.271 (0.884)	1.610 (1.038)	1.046 (0.405) ^{**}
post-split × religious polarization	0.301 (0.295)	0.241 (0.175)	0.205 (0.162)
1st election period post-split	-0.077 (0.040) [*]	-0.073 (0.047)	-0.021 (0.040)
ethnic fractionalization × 1st election period post-split	0.053 (0.072)	0.136 (0.066) ^{**}	0.099 (0.064)
ethnic polarization × 1st election period post-split	2.331 (1.271) [*]	1.101 (0.691)	2.169 (0.838) ^{**}
religious polarization × 1st election period post-split	-0.058 (0.217)	0.208 (0.261)	-0.066 (0.232)
Observations	12064	12064	12064
Mean Dep. Var.	0.540	0.289	0.153
Time FE	Yes	Yes	Yes
District FE	Yes	Yes	Yes
District Time Trends	Yes	Yes	Yes

Notes: The dependent variable in all columns is an indicator equal to one if there was any violent incidents of the given categorization in that parent or child district-month (see the notes to Table 3). See the notes to Table 7 for details on the election variable. *post – split* is an indicator equal to one for all months after which the child district is passed into law or the parent district experiences its first redistricting (i.e., is split out from an original district and loses the child district). The ethnoreligious diversity measures are based on the population residing within the eventual child district boundaries in 2000. There are 81 child districts. All specifications include month FE, district FE, and initial district-specific monthly time trends. Standard errors are clustered by original district, of which there are 52. Significance levels: * : 10% ** : 5% *** : 1%.

Table 9: Political Preference Differences, Elections and Conflict

Parent Districts

	Dep. Var.: any ... incidents		
	all (1)	non-crime (2)	political (3)
lagged conflict	0.072 (0.019)***	0.047 (0.015)***	0.035 (0.014)**
post-split	-0.012 (0.045)	0.042 (0.055)	0.022 (0.048)
pre-split election period (original district)	-0.131 (0.067)*	-0.029 (0.121)	-0.165 (0.079)**
vote share dissimilarity \times election period pre-split	0.703 (0.287)**	-0.141 (0.507)	0.781 (0.401)*
1st election period post-split	0.162 (0.094)*	-0.118 (0.137)	0.156 (0.100)
post-split \times vote share dissimilarity	-0.001 (0.201)	-0.183 (0.205)	-0.228 (0.156)
vote share dissimilarity \times 1st election period post-split	-0.732 (0.362)**	0.495 (0.571)	-0.634 (0.464)
Observations	7427	7427	7427
Mean Dep. Var.	0.750	0.486	0.282
Time FE	Yes	Yes	Yes
District FE	Yes	Yes	Yes
District Time Trends	Yes	Yes	Yes

Notes: The dependent variable in all columns is an indicator equal to one if there was any violent incidents of the given categorization in that parent or child district-month (see the notes to Table 3). See the notes to Table 7 for details on the election variable. *post – split* is an indicator equal to one for all months after which the child district is passed into law or the parent district experiences its first redistricting (i.e., is split out from an original district and loses the child district). The vote share dissimilarity measure captures the difference in vote shares between parent and child districts for the top five parties in the 1999 parliamentary elections at the original district level (see Appendix A for details). All specifications include month FE, district FE, and district-specific monthly time trends. Standard errors are clustered at the original district level in all columns. Significance levels: * : 10% ** : 5% *** : 1%.

Table 10: Dissecting Conflict

Child Districts

Dependent Variable Category	Any . . . Incidents						
	resource (1)	governance (2)	electoral (3)	identity (4)	pop. just. (5)	law enforce (6)	other (7)
lagged conflict	0.039 (0.012)***	0.026 (0.017)	0.109 (0.024)***	0.113 (0.026)***	0.030 (0.020)	0.006 (0.014)	0.007 (0.029)
post-split	-0.018 (0.019)	-0.012 (0.012)	-0.023 (0.008)***	0.012 (0.017)	-0.010 (0.031)	-0.027 (0.017)	0.004 (0.007)
post-split × ethnic fractionalization	0.007 (0.021)	0.000 (0.020)	0.045 (0.017)***	-0.067 (0.026)**	-0.049 (0.049)	-0.003 (0.033)	0.003 (0.015)
post-split × ethnic polarization	0.811 (0.258)***	-0.082 (0.365)	0.100 (0.180)	0.578 (0.261)**	1.303 (0.753)*	0.963 (0.340)***	0.201 (0.240)
post-split × religious polarization	0.015 (0.088)	0.176 (0.070)**	0.004 (0.058)	0.036 (0.071)	0.031 (0.130)	0.012 (0.100)	-0.001 (0.042)
Observations	12183	12183	12183	12183	12183	12183	12183
Mean Dep. Var.	0.057	0.036	0.032	0.024	0.104	0.065	0.021
Δ conflict, diversity 10th pctile	-0.013 [0.465]	-0.011 [0.288]	-0.019 [0.014]	0.010 [0.523]	-0.007 [0.806]	-0.022 [0.159]	0.005 [0.447]
Δ conflict, diversity 50th pctile	-0.002 [0.859]	0.010 [0.190]	0.007 [0.350]	-0.017 [0.087]	-0.020 [0.310]	-0.015 [0.275]	0.008 [0.266]
Δ conflict, diversity 90th pctile	0.012 [0.263]	0.025 [0.040]	0.018 [0.060]	-0.020 [0.122]	-0.010 [0.731]	-0.001 [0.961]	0.011 [0.260]
Time FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
District FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
District Time Trends	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: The dependent variable in all columns is an indicator equal to one if there was any violent conflict incidents of the given categorization in that district-month. *post – split* is an indicator equal to one for all months after which the parent district experiences its first redistricting (i.e., is split out from an original district and loses the child district). The ethnoreligious diversity measures are based on the population residing within the eventual child district boundaries in 2000. There are 81 child districts. All specifications include month FE, district FE, and initial district-specific monthly time trends. Standard errors are clustered by original district, of which there are 52. Significance levels: * : 10% ** : 5% *** : 1%.

Appendix

A Data and Variables

We describe here the key variables and data sources used in the paper.

A.1 Administrative Divisions

Original District: This administrative unit defines all areas based on the 2000 boundaries.

Child District: This represents the subdistricts that eventually become their own new district with an accompanying capital.

Parent District: This represents the subdistricts that stay with the original district capital after other subdistricts split off.

Post-Split: This is an indicator that turns on after the month that parliamentary legislation first established a new district within the original district boundaries. In most cases there is only one split event per original district. Multi-splits have a second split at a later date. We explore robustness to alternate ways of handling multi-splits.

A.2 Conflict

The conflict data comes from the Indonesian National Violence Monitoring System (known by its Indonesian acronym SNPKN). The data are reported at the 2011 district level, and hence we can calculate conflict within both the 2010 and 2000 borders over the years 2000–2014. Our main conflict measures are binary indicators for any conflict in a given district–month, but we also consider the number of incidents as a robustness check.

Any Incident: A dummy for whether SNPKN recorded any violent incident in the given month.

Any Non-Crime Incident: A dummy for whether SNPKN recorded any non-crime and non-domestic violence incidents in the given month.

Any Political Incident: A dummy for whether SNPKN recorded any resource, governance, election, identity or non-classified violent conflict incident in the given month. Resource conflict is triggered by resource disputes (most commonly land and restricted access to public locations). Governance conflict is triggered by disputes over government policies or programs (most commonly corruption and poor public service quality). Election incidents are triggered by electoral competition or bureaucratic appointments (most commonly pertaining to the district level). Identity-based incidents are incidents that are triggered by disputes between ethnicities, religions, or long-standing enmity between resident groups (most commonly religious or between residents of different areas).

Active Media: Using data obtained directly from SNPKN managers on newspaper availability and usage by province and month, we calculate the number of papers used in any given province-month. All conflict specifications control flexibly for media availability by including dummies for the number of active papers in any given province-month.

Entered 2005: SNPKN coverage begins in 1998 for nine conflict-prone provinces and increases to 15 provinces plus parts of 3 provinces in greater Jakarta beginning in 2005. The data are not reliable for

1998 and 1999, and hence we focus on 2000–2014 in the paper.

A.3 Diversity

All measures are computed using the universal 2000 Population Census. Since this contains data at the village level, metrics can be constructed at both the 2000 and 2010 borders.

Ethnic Fractionalization: Ethnic fractionalization in district d is given by $F = \sum_{g=1}^{M_e} \pi_g(1 - \pi_g)$, where M_e is the number of ethnic groups in the district, and π_g is the population share of group g as reported in the 2000 Census. We observe over 1000 ethnicities and sub-ethnicities speaking over 400 languages. We also consider the related Greenberg-Gini version, which allows for non-binary distances between groups: $G = \sum_{g=1}^{M_e} \sum_{h=1}^{M_e} \pi_g \pi_h \kappa_{gh}$ where κ_{gh} captures the linguistic distance between groups g and h as detailed below.

Religious Polarization: Religious polarization, $R = \sum_{g=1}^{M_r} \sum_{h=1}^{M_r} \pi_g^2 \pi_h$, where M_r is the number of religious groups, and π_g (π_h) is the population share of group g (h). There are seven religions recorded in the Census, but in most districts, there is a single cleavage between a Muslim and a non-Muslim group. As a result religious polarization is effectively identical to religious fractionalization in our data (with a correlation of 0.96).

Ethnic Polarization: $P = \sum_{g=1}^{M_e} \sum_{h=1}^{M_e} \pi_g^2 \pi_h \kappa_{gh}$, where M_e , π_g , and π_h are as defined before, and κ_{gh} is the distance between groups g and h . We map each ethnic group in the 2000 Census to a language in *Ethnologue*, which provides a full classification of the linguistic origins of each language (see [Bazzi et al. \(2015\)](#)). We set $\kappa_{gh} = 1 - s_{gh}^\delta$, where s_{gh} is the degree of similarity between the languages spoken by g and h as given by the ratio of common branches on the language classification tree to the maximum possible (14), and δ is a parameter that selects the level of linguistic dissimilarity to be emphasized. We set $\delta = 0.05$ in our baseline, but consider alternate values. Ethnicities with missing languages are given province-specific average pairwise distances (κ s) between all other languages. Missing ethnic groups are necessarily grouped together, but separately from others, and also given province-specific average distances. We drop foreigners as they represent a minute fraction of the population, but we retain the ethnic Chinese.

Ethnic Residential Segregation: Following [Alesina and Zhuravskaya \(2011\)](#), we use the 2000 census to compute Ethnic segregation by comparing ethnic fractionalization at the sub-district level to that of the district level. Specifically we compute:

$$S = \frac{1}{M-1} \sum_{m=1}^M \sum_{s=1}^S \frac{t_s (\pi_{sm} - \pi_m)^2}{T \pi_m}$$

M is the number of ethnic groups, T is the total population of the district, t_s is the population in sub-district s , π_m is the fraction of group m in the district, and π_{sm} is the fraction of group m in sub-district s . We drop the smallest 1% of ethnic groups so that M remains reasonable (< 25). We compute this for both the 2000 and 2010 boundaries (using 2000 data).

The following measures are constructed only at the original district level:

Δ Ethnic Polarization: To examine changes in diversity at the original district level, we compute the population-weighted average polarization in the new units (children and parent district), subtract the polarization in the original district, and express it in percentage terms. For original district OD becoming parent district d_1 and child(ren) d_2 (d_3 and so forth if multiple children),

with populations $N_{d_1} + N_{d_2} + \dots = N_{OD}$ and ethnic polarization levels P_{d_1}, P_{d_2}, P_{OD} , we calculate $\Delta P = \frac{\sum_{d \in D} \left(\frac{N_d}{N_{OD}} P_d \right) - P_{OD}}{P_{OD}}$.

Δ Ethnic Fractionalization: For original district OD becoming parent district d_1 and child(ren) d_2 (d_3 and so forth if multiple children), with populations $N_{d_1} + N_{d_2} + \dots = N_{OD}$ and ethnic fractionalization levels F_{d_1}, F_{d_2}, F_{OD} we calculate $\Delta F = \frac{\sum_{d \in D} \left(\frac{N_d}{N_{OD}} F_d \right) - F_{OD}}{F_{OD}}$. It is worth noting that Δ fractionalization, computed in this manner, is mechanically less than or equal to 0.

Δ Religious Polarization: For original district OD becoming parent district d_1 and child(ren) d_2 (d_3 and so forth if multiple children), with populations $N_{d_1} + N_{d_2} + \dots = N_{OD}$ and religious polarization levels R_{d_1}, R_{d_2}, R_{OD} we calculate $\Delta R = \frac{\sum_{d \in D} \left(\frac{N_d}{N_{OD}} R_d \right) - R_{OD}}{R_{OD}}$.

A.4 Government Transfers

Total District Revenue Per Capita: District revenue figures come from the World Bank's Indonesia Database for Policy and Economic Research (DAPOER), which in turn obtains data from the Indonesia ministry of finance data. They are given for each district at the time of existence. We aggregate up to the 2000 district boundary and separately also consider only parents. Population data is taken from the same dataset. All figures are inflation adjusted using 2010 as the base year.

DAU/DAK Revenue Per Capita: District revenue in Indonesia is divided into a general allocation grant (*Dana Alokasi Umum*, DAU), some shared taxes, shared natural resource rents, and the special allocation grant (*Dana Alokasi Khusus*, DAK), as well as limited own revenue. DAU/DAK revenue focuses on the portion of revenue not due to natural resources or shared taxes.

Initial Resource Revenue: Natural resource revenue such as that from oil/gas and mines is first transferred to the center and then partly returned to the district (and to a lesser extent nearby districts) based on percentages that vary by product and over the course of the study period. We use the level in 2000 to proxy, albeit imperfectly, for the presence and value of natural resources in the original district.

A.5 Voting

1st Election Period: Direct local elections for district head first occurred in June 2005. Newly split districts typically have an election 1.5–2.5 years after splitting. We collected data on the date of elections in each district and construct an indicator that equals one in the 6 month window around the election date. Most child district's first election is a direct election. The only exception is 2001–2002 during which the split district had their district head elected by the new local parliament, in accordance with practice at the time.

Vote Share Dissimilarity: We use data on vote share by party and subdistrict in the 1999 district parliamentary (DPRDII) elections—the first of the post-Suharto era—to construct a measure of vote share dissimilarity between what ends up as the parent district and what ends up as the child district. Forty-eight parties competed in these elections. We compute dissimilarity in vote shares of the top 5 parties by vote share at the original district level: $\Delta_{vote} = \sum_{c \in C} \pi_c \sum_{i=1}^I |share_{ip} - share_{ic}|$ where $share_{ip}$ is the share of votes for party i in subdistricts within the parent borders, $share_{ic}$ is the same share for party i within the child borders, and $I = 5$ includes the five parties with the most votes in the overall original district. We sum over multiple children in the cases where $C > 1$, and the weight π_c captures the share of the total child population in 2000 that each child makes up.

Political Polarization: We use 1999 subdistrict vote shares to construct a measure of party polarization at the original district level. The measure for a given district is given by $\sum_i \sum_j share_i^2 share_j$.

A.6 Other Variables

Light Intensity: We use night lights in 2000 to proxy for initial GDP (Henderson et al., 2012). We use mean stable light intensity at the village level, which ranges from 0 to 63. This attempts to filter out background noise and unstable sources of light. We compute the (population weighted) average light intensity across villages at the 2000 and 2010 boundary level (using 2000 data).

Cash Crop Share: We use the 2003 administrative village census (*Potensi Desa* or *Podes*) to calculate the value (price \times quantity) of each crop produced within the 2000 and 2010 district borders. To proxy for agricultural resources, we compute the fraction of district agricultural output that is composed of nearly 30 cash crops, the most important among which include palmoil, rubber, coffee, and cocoa.

Agriculture and Forestry Employment Share: From the universal 2000 census we compute the fraction of workers in agriculture and the fraction of workers in forestry, fishing and livestock for the 2000 and 2010 district borders.

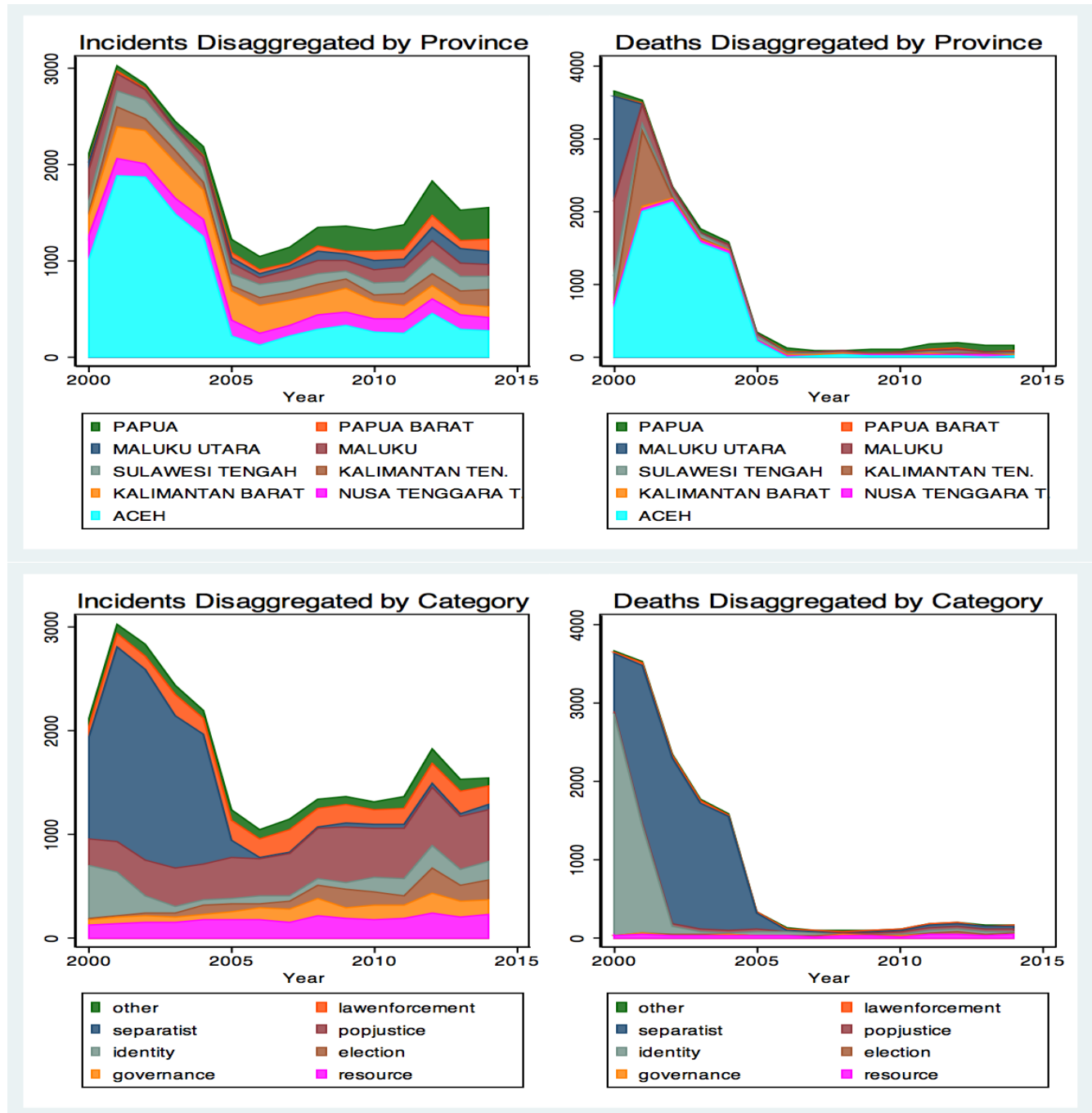
Distance to capital and police post: Using *Podes*, we compute average (population) weighted distance to the district capital and to the nearest police post or police station. We use the 2000 and 2011 rounds of *Podes* to compute these variables for both the 2000 and 2010 district borders.

Number of Health Clinics and Hospitals Per-Capita: Using the 2000 round of *Podes*, we construct the number of health clinics and hospitals per-capita at both the 2000 and 2010 district borders.

Number of post-primary educational institutions: Using the 2000 round of *Podes*, we compute the number of junior secondary schools, senior secondary schools, and universities per-capita at both the 2000 and 2010 district borders.

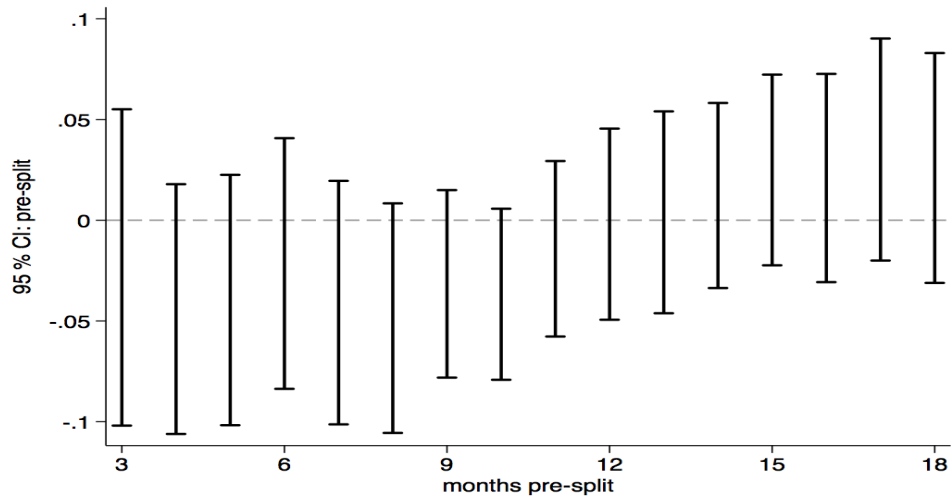
B Additional Results

Figure B.1: Trends in Violence, 2000–2014



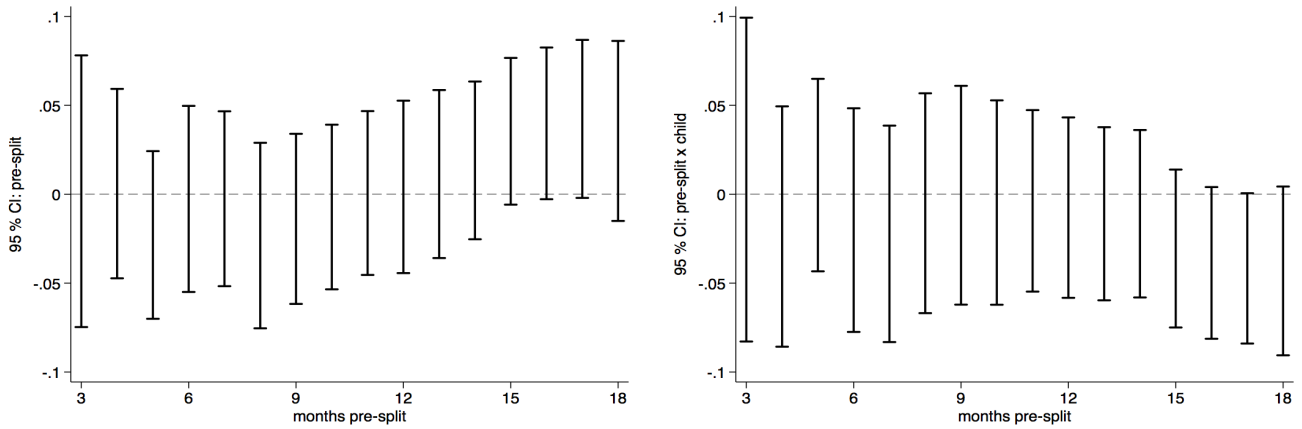
Notes: These figures use SNPK data to plot the evolution of conflict across provinces and across typologies.

Figure B.2: Parallel Trends in the Original District Specification (Table 3)



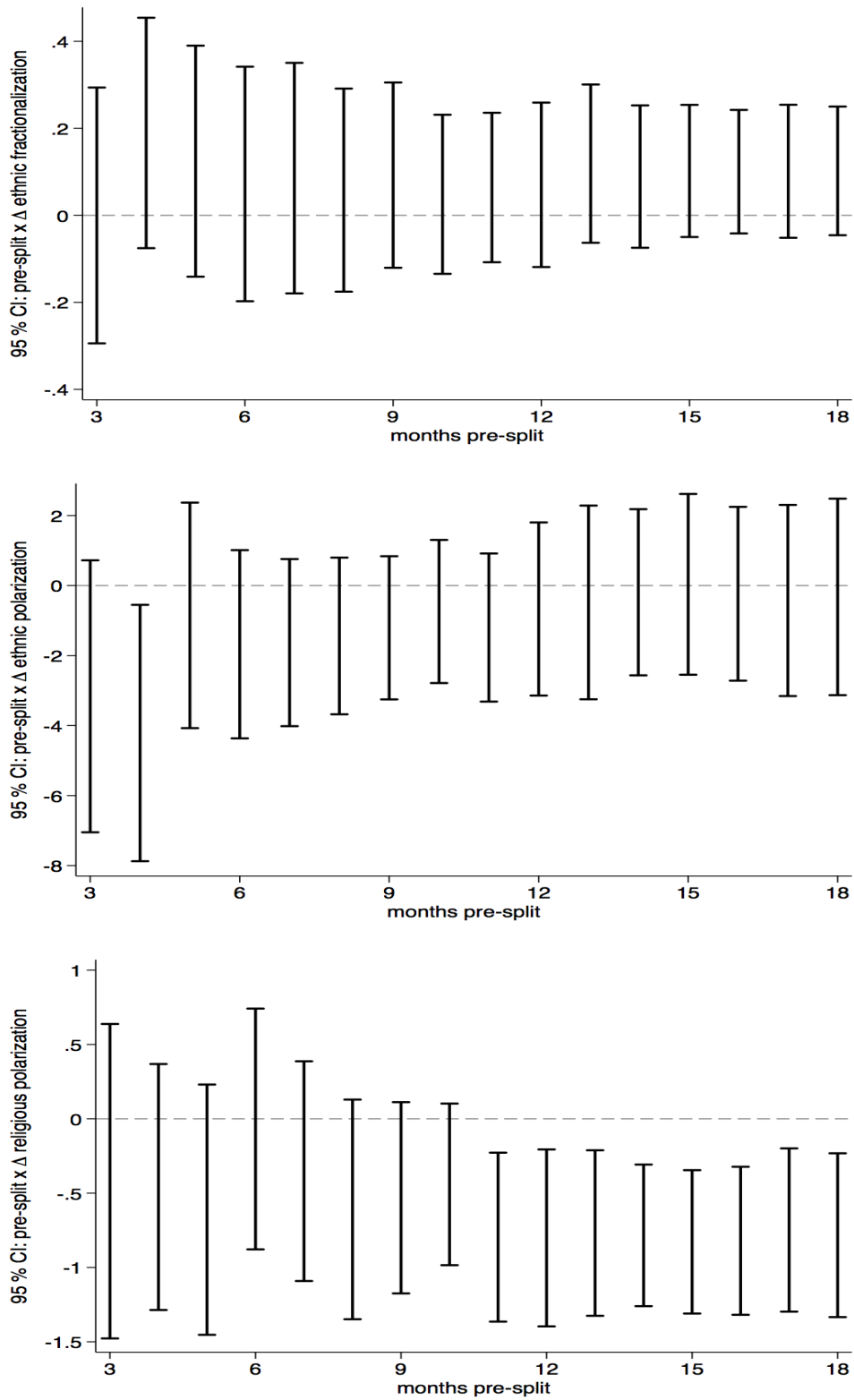
Notes: Each bar shows the 95% confidence interval from a separate regression of an augmented baseline specification in equation (1) with $split_{d,j < s}$, which is an indicator for all months j before the split in month s for rolling $j \in [3, 18]$. The dependent variable equals one if there is any *political* conflict episode at time t in original district d .

Figure B.3: Parallel Trends in the Parent vs. Child District Specification (Table 5)



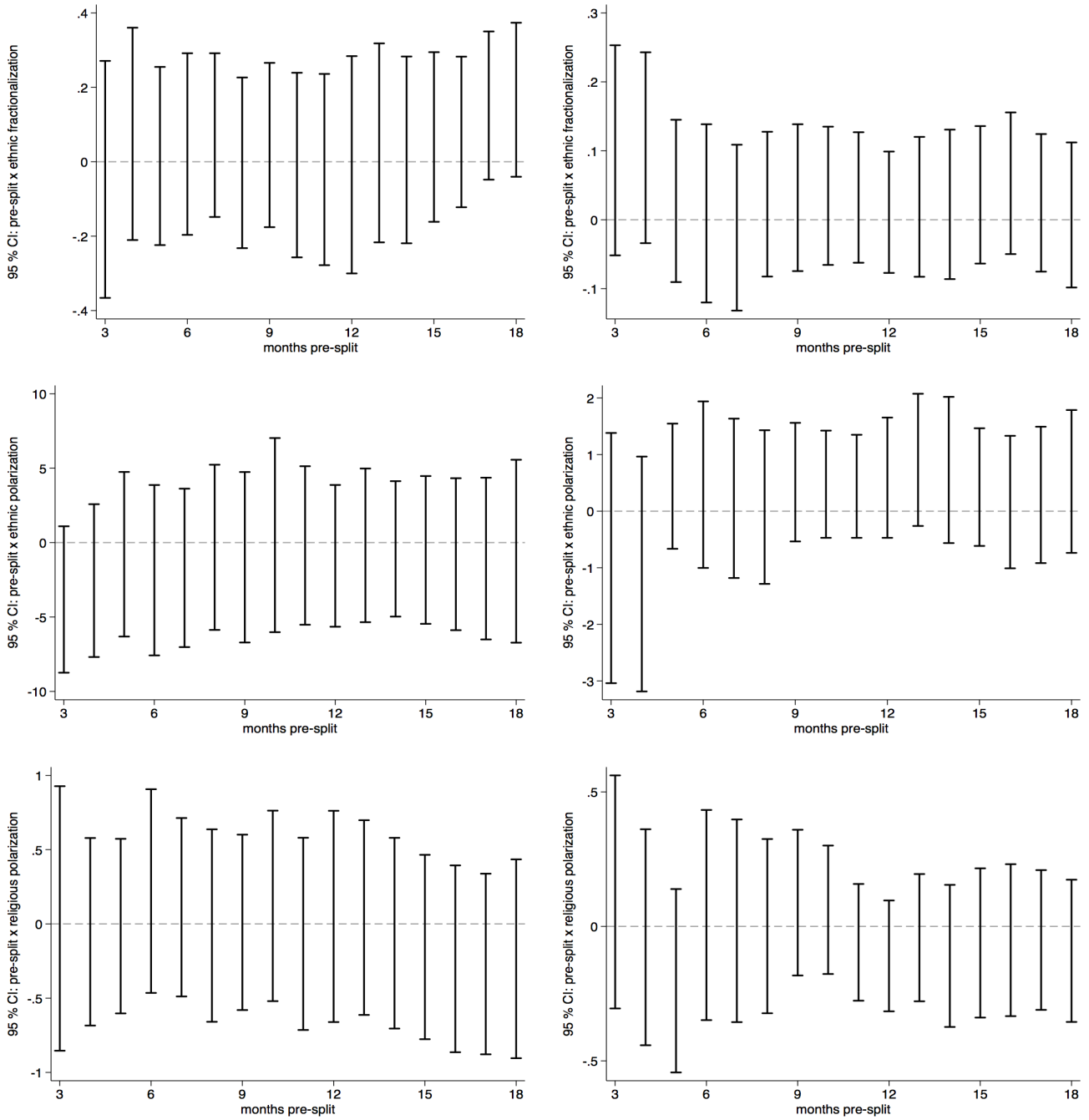
Notes: Each bar shows the 95% confidence interval from a separate regression of an augmented specification in equation (2) with $split_{d,j < s}$, which is an indicator for all months j before the split in month s for rolling $j \in [3, 18]$. The dependent variable equals one if there is any *political* conflict episode at time t in original district d .

Figure B.4: Parallel Trends in the Heterogenous Original District Specification (Table 4)



Notes: Each bar shows the 95% confidence interval from a separate regression of an augmented specification in equation (3) with $split_{d,j < s}$, which is an indicator for all months j before the split in month s for rolling $j \in [3, 18]$. The dependent variable equals one if there is any *political* conflict episode at time t in original district d .

Figure B.5: Parallel Trends in the Heterogenous Parent (left) vs. Child (right) District Specification (Table 6)



Notes: Each bar shows the 95% confidence interval from a separate regression of an augmented specification in equation (4) with $split_{d,j < s}$, which is an indicator for all months j before the split in month s for rolling $j \in [3, 18]$. The dependent variable equals one if there is any *political* conflict episode at time t in original district d .

Table B.1: Changes in Ethnoreligious Diversity Across Districts, 2000–2010

	Δ Ethnic Fractionalization	Average ... Δ Religious Polarization	Δ Ethnic Polarization
Non-Splitters	0 –	0 –	0 –
District Split Since 2000	-0.065 (0.010)	-0.006 (0.003)	-0.001 (0.001)
p-value: Difference-in-Difference	[<0.001]	[0.003]	[0.366]
No. of Districts non-split	223	223	223
No. of Districts split	213	213	213
Mean for 304 Districts in 2000	0.421	0.069	0.015
Mean for 436 Districts in 2010	0.443	0.075	0.016

Notes: This table reports the average difference between each diversity measure in the original district in 2000 and the diversity measures for that districts' parent and child districts that came into being by 2010. Both measures in the difference are based on the populations living within the given boundaries in the year 2000 as reported in the Population Census. The measures of fractionalization and polarization are as defined in the paper. If the original district did not experience any redistricting by 2010, then its difference is zero by definition.

Table B.2: Incident Counts by Category and Sub-Category (2000-2014)

	Category	Sub-Categories							
	ELECTIONS	Other	National	Provincial	District	Sub-District	Village	Other office	In Pol Party
Num of Incidents	1191	38	99	175	664	5	130	32	48
Num of Deaths	29	2	4	5	13	0	3	1	1
Num of Injuries	909	25	77	90	574	4	93	18	28
Num of Buildings Destroyed	203	0	4	7	151	0	39	2	0
Num of Kidnappings	11	0	1	3	5	0	0	0	2
Num of Sexual Assaults	0	0	0	0	0	0	0	0	0

	Category	Sub-Categories							
	GOVERNANCE	Other	Tenders	Corruption	Public Serv	Prices/Subsidies	Programs	Splitting	Law Enforcement
Num of Incidents	1132	1	103	83	227	51	327	97	243
Num of Deaths	36	0	8	1	1	0	2	15	9
Num of Injuries	939	1	48	80	81	37	199	190	303
Num of Buildings Destroyed	160	0	0	2	8	0	10	118	22
Num of Kidnappings	3	0	1	0	0	0	2	0	0
Num of Sexual Assaults	1	0	0	0	0	0	1	0	0

	Category	Sub-Categories						
	RESOURCE	Other	Land	Nat. Res	Man-made Res.	Access	Environment	Salary/Labor
Num of Incidents	2401	25	1284	216	140	410	129	197
Num of Deaths	461	10	298	62	44	25	4	18
Num of Injuries	2790	13	1718	255	101	423	111	169
Num of Buildings Destroyed	1125	0	879	28	47	149	10	12
Num of Kidnappings	32	0	9	1	0	11	0	11
Num of Sexual Assaults	0	0	0	0	0	0	0	0

	Category	Sub-Categories									
	IDENTITY	Other	Inter-Eth	Inter-Rel	Intra-Rel	Migrants	Migrants/Eth	Village	Gender	Sports	School/Uni
Num of Incidents	1479	33	173	625	50	14	13	348	0	87	136
Num of Deaths	3721	1	1037	2603	2	5	5	57	0	4	7
Num of Injuries	3839	45	137	2591	22	11	13	813	0	90	117
Num of Buildings Destroyed	19605	0	2514	16422	50	4	307	308	0	0	0
Num of Kidnappings	94	0	0	93	1	0	0	0	0	0	0
Num of Sexual Assaults	1	0	0	1	0	0	0	0	0	0	0

	Category	Sub-Categories									
	POPULAR RETALIATION	Other	Insult	Traffic Accident	Debt	Theft	Vandalism	Sex Indiscretion	Assault	Vice	Sorcery
Num of Incidents	5977	0	998	99	45	3549	50	302	839	36	59
Num of Deaths	533	0	110	15	16	253	4	8	97	2	28
Num of Injuries	7560	0	1465	116	43	4366	72	397	1029	28	44
Num of Buildings Destroyed	423	0	62	1	0	41	12	1	300	2	4
Num of Kidnappings	60	0	3	0	1	1	0	0	55	0	0
Num of Sexual Assaults	3	0	1	0	0	0	0	0	2	0	0

Category	SEPARATIST VIOLENCE
Num of Incidents	5001
Num of Deaths	5359
Num of Injuries	4923
Num of Buildings Destroyed	3110
Num of Kidnappings	1010
Num of Sexual Assaults	6

Category	OTHER CONFLICT
Num of Incidents	821
Num of Deaths	96
Num of Injuries	1040
Num of Buildings Destroyed	142
Num of Kidnappings	5
Num of Sexual Assaults	0

Category	VIOLENCE DURING LAW ENFORCEMENT
Num of Incidents	3020
Num of Deaths	363
Num of Injuries	3500
Num of Buildings Destroyed	15
Num of Kidnappings	1
Num of Sexual Assaults	2

Category	DOMESTIC VIOLENCE
Num of Incidents	4740
Num of Deaths	868
Num of Injuries	2407
Num of Buildings Destroyed	13
Num of Kidnappings	6
Num of Sexual Assaults	1429

Category	VIOLENT CRIME
Num of Incidents	35061
Num of Deaths	5607
Num of Injuries	18538
Num of Buildings Destroyed	1572
Num of Kidnappings	1248
Num of Sexual Assaults	7718

Notes: All columns are counts. Counts are for the districts in our estimation sample over the period 2000-2014. Our sample consists of 73 (2010 border) districts from 2000-2004 and 133 districts (2010 borders) from 2005-2014. For descriptions of the 10 categories see Section 4. For further details on each sub-category see <http://www.sn timer-indonesia.com>. Other conflict, separatist violence, violence during law enforcement, domestic violence, and crime have no further subcategories.

Table B.3: Accounting for Intergroup Distances in the Fractionalization Index

	Dep. Var.: any ... incidents		
	all (1)	non-crime (2)	salient (3)
lagged conflict	0.081 (0.022)***	0.051 (0.014)***	0.038 (0.012)***
post-split	0.006 (0.029)	-0.014 (0.027)	-0.045 (0.029)
post-split \times Δ Gini-Greenberg index	0.077 (0.253)	-0.091 (0.171)	-0.046 (0.163)
post-split \times Δ ethnic polarization	0.131 (0.166)	0.309 (0.124)**	0.256 (0.124)**
post-split \times Δ religious polarization	0.158 (0.245)	0.477 (0.231)**	0.398 (0.218)*
Observations	7904	7904	7904
District Borders in	2000	2000	2000
No. of Districts	52	52	52
Mean Dep. Var.	0.862	0.631	0.413
Δ conflict, diversity 10th pctile	-0.075 [0.205]	-0.122 [0.017]	-0.146 [0.015]
Δ conflict, diversity 50th pctile	0.003 [0.897]	-0.014 [0.589]	-0.045 [0.097]
Δ conflict, diversity 90th pctile	0.043 [0.268]	0.075 [0.028]	0.029 [0.501]
Time FE	Yes	Yes	Yes
District FE	Yes	Yes	Yes
District Time Trends	Yes	Yes	Yes

Notes: The dependent variable in all columns is an indicator equal to one if there was any violent incidents of the given categorization in that original district-month (see the notes to Table 3). *post – split* is an indicator equal to one for all months after which the original district experiences its first post-2000 redistricting. Δ of the given diversity measure captures the percentage change in diversity between the original district in 2000 and the population-weighted average of initial diversity within the emergent parent and child districts in 2010. All specifications include month FE, district FE, and district-specific monthly time trends. Standard errors are clustered by original district, of which there are 52. Significance levels: * : 10% ** : 5% *** : 1%;

Table B.4: Full Controls Robustness Check on Table 4

	Dep. Var.: any ... incidents		
	all (1)	non-crime (2)	salient (3)
lagged conflict	0.074 (0.027)***	0.045 (0.015)***	0.038 (0.013)***
post-split	0.063 (0.595)	1.005 (0.565)*	0.082 (0.649)
post-split \times Δ ethnic fractionalization	-0.446 (0.262)*	-0.189 (0.257)	-0.293 (0.303)
post-split \times Δ ethnic polarization	0.317 (0.134)**	0.257 (0.099)**	0.288 (0.110)**
post-split \times Δ religious polarization	0.206 (0.246)	0.533 (0.225)**	0.434 (0.221)*
Observations	7069	7069	7069
District Borders in	2000	2000	2000
No. of Districts	47	47	47
Mean Dep. Var.	0.882	0.652	0.428
Δ conflict, diversity 10th pctl	0.012 [0.820]	-0.093 [0.136]	-0.057 [0.422]
Δ conflict, diversity 50th pctl	0.024 [0.076]	0.007 [0.616]	0.014 [0.407]
Δ conflict, diversity 90th pctl	0.091 [0.024]	0.074 [0.012]	0.083 [0.011]
Time FE	Yes	Yes	Yes
District FE	Yes	Yes	Yes
District Time Trends	Yes	Yes	Yes
Full post-split \times time-invariant controls	Yes	Yes	Yes

Notes: The dependent variable in all columns is an indicator equal to one if there was any violent incidents of the given categorization in that original district-month (see the notes to Table 3). *post - split* is an indicator equal to one for all months after which the original district experiences its first post-2000 redistricting. Δ of the given diversity measure captures the percentage change in diversity between the original district in 2000 and the population-weighted average of initial diversity within the emergent parent and child districts in 2010. All specifications include interactions of post-split and *initial* political polarization (vote shares), the extent of resource sharing with and size of transfers from the central government, the relative importance of cash crops in overall agricultural revenue, the share of the labor force in agriculture and forestry, ethnic residential segregation (Alesina and Zhuravskaya, 2011), nighttime light intensity as a proxy for income (Henderson et al., 2012), the number of post-primary educational institutions per capita, the number of health clinics and hospitals per capita, and the average village-level distance to the district capital and security offices. The regressions also include month FE, district FE, and district-specific monthly time trends. Standard errors are clustered by original district, of which there are 52. Significance levels: * : 10% ** : 5% *** : 1%;

Table B.5: Full Controls Robustness Check on Table 6

	Dep. Var.: any ... incidents					
	all (1)	non-crime (2)	salient (3)	all (4)	non-crime (5)	salient (6)
	Child Districts			Parent Districts		
lagged conflict	0.073 (0.014)***	0.070 (0.016)***	0.063 (0.013)***	0.075 (0.018)***	0.050 (0.015)***	0.031 (0.014)**
post-split	0.209 (0.560)	0.446 (0.521)	0.592 (0.468)	0.410 (1.067)	1.628 (0.944)*	-0.068 (0.748)
post-split × ethnic fractionalization	0.151 (0.127)	-0.061 (0.080)	-0.024 (0.067)	0.224 (0.095)**	0.104 (0.074)	0.052 (0.065)
post-split × ethnic polarization	-0.022 (0.859)	2.062 (0.785)**	1.019 (0.405)**	-2.487 (2.987)	-3.191 (2.321)	-3.242 (2.146)
post-split × religious polarization	0.363 (0.402)	0.018 (0.204)	0.149 (0.206)	-0.127 (0.450)	0.183 (0.587)	1.036 (0.273)***
Observations	10990	10990	10990	7427	7427	7427
District Borders in	2010	2010	2010	2010	2010	2010
No. of Districts	74	74	74	49	49	49
Mean Dep. Var.	0.563	0.303	0.159	0.751	0.492	0.288
Δ conflict, diversity 10th pctile	0.014 [0.208]	0.006 [0.394]	0.004 [0.403]	0.016 [0.454]	-0.003 [0.848]	-0.006 [0.628]
Δ conflict, diversity 50th pctile	0.141 [0.081]	-0.009 [0.867]	0.018 [0.637]	0.105 [0.132]	0.052 [0.434]	0.117 [0.018]
Δ conflict, diversity 90th pctile	0.206 [0.072]	0.008 [0.908]	0.040 [0.447]	0.090 [0.430]	0.034 [0.757]	0.175 [0.032]
Time FE	Yes	Yes	Yes	Yes	Yes	Yes
District FE	Yes	Yes	Yes	Yes	Yes	Yes
District Time Trends	Yes	Yes	Yes	Yes	Yes	Yes
Full post-split × time-invariant controls	Yes	Yes	Yes	Yes	Yes	Yes

Notes: The dependent variable in all columns is an indicator equal to one if there was any violent incidents of the given categorization in that original district-month (see the notes to Table 3). *post – split* is an indicator equal to one for all months after which the child district is passed into law or the parent district experiences its first redistricting (i.e., is split out from an original district and loses the child district). The ethnoreligious diversity measures are based on the population residing within the eventual parent and child district boundaries in 2000. There are 52 parent and 81 child districts. All specifications include interactions of post-split and *initial* political polarization (vote shares), the extent of resource sharing with and size of transfers from the central government, the relative importance of cash crops in overall agricultural revenue, the share of the labor force in agriculture and forestry, ethnic residential segregation (Alesina and Zhuravskaya, 2011), nighttime light intensity as a proxy for income (Henderson et al., 2012), the number of post-primary educational institutions per capita, the number of health clinics and hospitals per capita, and the average village-level distance to the district capital and security offices. The regressions also include month FE, district FE, and district-specific monthly time trends. Standard errors are clustered by original district, of which there are 52. Significance levels: * : 10% ** : 5% *** : 1%;

Table B.6: Intensive Margin Conditional FE Poisson version of Table 4

	Dep. Var.: any ... incidents		
	all (1)	non-crime (2)	salient (3)
lagged conflict	0.018 (0.003)***	0.023 (0.005)***	0.064 (0.010)***
post-split	-0.085 (0.063)	0.008 (0.091)	-0.241 (0.133)*
post-split \times Δ ethnic fractionalization	-1.875 (0.571)***	-0.705 (1.006)	-0.692 (0.822)
post-split \times Δ ethnic polarization	1.006 (0.436)**	0.310 (0.531)	1.010 (0.800)
post-split \times Δ religious polarization	1.902 (0.678)***	1.471 (0.845)*	2.110 (1.253)*
Observations	7904	7904	7904
District Borders in	2000	2000	2000
No. of Districts	52	52	52
Mean Dep. Var.	7.594	2.622	0.873
Time FE	Yes	Yes	Yes
District FE	Yes	Yes	Yes
District Time Trends	Yes	Yes	Yes

Notes: The dependent variable in all columns is the number of violent incidents of the given categorization in that original district-month (see the notes to Table 3). The coefficients reported are based on conditional fixed effects Poisson and can be converted to average marginal effects by simply multiplying by the mean of the dependent variable at the bottom of the table. *post - split* is an indicator equal to one for all months after which the original district experiences its first post-2000 redistricting. Δ of the given diversity measure captures the percentage change in diversity between the original district in 2000 and the population-weighted average of initial diversity within the emergent parent and child districts in 2010. The regressions also include month FE, district FE, and district-specific monthly time trends. Standard errors are clustered by original district, of which there are 52. Significance levels: * : 10% ** : 5% *** : 1%;

Table B.7: Intensive Margin Conditional FE Poisson version of Table 6

	Dep. Var.: any ... incidents					
	all (1)	non-crime (2)	salient (3)	all (4)	non-crime (5)	salient (6)
	Child Districts			Parent Districts		
lagged conflict	0.055 (0.005)***	0.089 (0.013)***	0.161 (0.025)***	0.018 (0.002)***	0.026 (0.005)***	0.069 (0.008)***
post-split	-0.101 (0.186)	0.205 (0.226)	-0.299 (0.330)	-0.293 (0.180)	0.086 (0.222)	-0.159 (0.259)
post-split × ethnic fractionalization	0.033 (0.279)	-0.560 (0.421)	-0.014 (0.558)	0.321 (0.395)	-0.042 (0.530)	-0.833 (0.385)**
post-split × ethnic polarization	1.820 (2.065)	6.663 (3.308)**	10.328 (4.242)**	5.162 (6.359)	5.852 (7.814)	-7.182 (10.277)
post-split × religious polarization	1.480 (1.051)	0.100 (1.305)	1.244 (1.561)	-0.090 (1.215)	-2.416 (1.589)	3.398 (1.797)*
Observations	12183	12183	12183	7904	7904	7904
District Borders in	2010	2010	2010	2010	2010	2010
No. of Districts	81	81	81	52	52	52
Mean Dep. Var.	1.645	0.533	0.215	5.059	1.800	0.542
Time FE	Yes	Yes	Yes	Yes	Yes	Yes
District FE	Yes	Yes	Yes	Yes	Yes	Yes
District Time Trends	Yes	Yes	Yes	Yes	Yes	Yes

Notes: The dependent variable in all columns is the number of violent incidents of the given categorization in that original district-month (see the notes to Table 3). The coefficients reported are based on conditional fixed effects Poisson and can be converted to average marginal effects by simply multiplying by the mean of the dependent variable at the bottom of the table. *post – split* is an indicator equal to one for all months after which the child district is passed into law or the parent district experiences its first redistricting (i.e., is split out from an original district and loses the child district). The ethnoreligious diversity measures are based on the population residing within the eventual parent and child district boundaries in 2000. There are 52 parent and 81 child districts. The regressions also include month FE, district FE, and district-specific monthly time trends. Standard errors are clustered by original district, of which there are 52. Significance levels: * : 10% ** : 5% *** : 1%;